

Composite Portraits



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The Photographic Construction of Composite Faces
at the Intersection of Science and the Arts

Doctoral Thesis at the Faculty of Social Sciences and Cultural Studies

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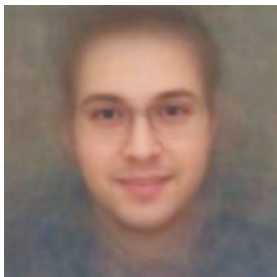
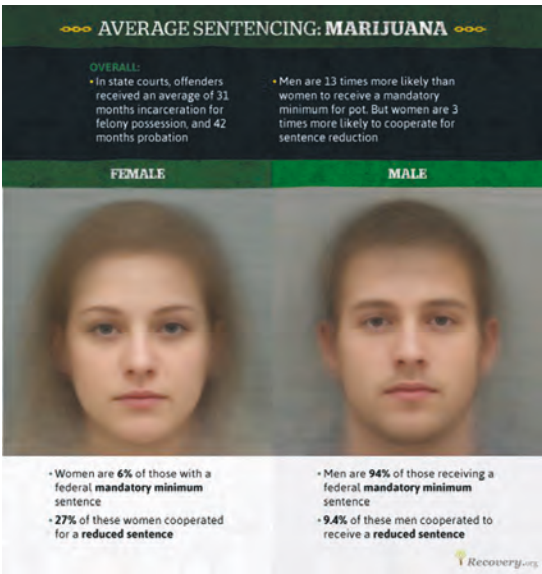
1 | Composite Exposures: Introduction



Gschrey, Raul: Co-Composite of the 2016 Benetton Advertisement Campaign (Berlin, London, Tokyo).

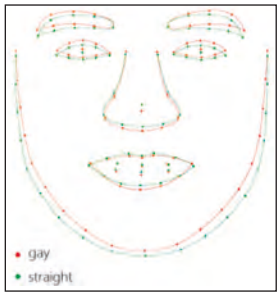
In 2016 the fashion brand Benetton released its worldwide advertising campaign *Face of the City* for the promotion of its new collection. The faces of the models that posed with Benetton’s spring collection were artificially constructed to represent the “typical face” of the respective cities.¹ A year later, a team of social psychology researchers claimed to have found a way to detect homosexuality in the face by means of visual combination and artificial intelligence.² In 2018, an American health service website published *The Average Face of Drug Addiction*, compiled from mug shots of citizens convicted for drug-related offences.³ And in the same year, a *Time* magazine cover showed a mash-up of the faces of Donald Trump and Vladimir Putin produced by the American artist Nancy Burson.⁴ The ongoing project of the German artist Florian Tuercke compiles multiple facial images of socially and politically influential individuals, grouping them into a gallery of *The Good, the Bad and the Ugly*.⁵

¹ See United Colours of Benetton: *Face of the City Campaign*, 2016 and the press release: “Merging Colours, Merging Identities.” <http://www.benettongroup.com/media-press/press-releases-and-statements/united-colors-of-benetton-merging-colors-blending-identities> [15/01/2022].



Recovery.org: *Drug Mugs: The Average Faces of Drug Abuse*. <https://www.recovery.org/learn/average-faces-of-drug-abuse> [15/01/2022].

Wang, Yilun; Kosinski, Michal: *Composite faces and the average facial landmarks built by averaging faces classified as most and least likely to be gay*. (excerpt) In: Wang, Yilun; Kosinski, Michal: “Deep Neural Networks Can Detect Sexual Orientation From Faces.” *Journal of Personality and Social Psychology*, 114 (2), 2018, 246–257.



What all these recent visualisations have in common is their use of composite portraiture or its digital successors. By means of the technique, a number of frontal or lateral portraits are photographically superimposed, each for the fraction of the usual exposure time, to form a singular facial image. The images are gradually losing definition towards the margins, away from the

² See Wang, Yilun; Kosinski, Michal: “Deep Neural Networks Can Detect Sexual Orientation from Faces.” *Journal of Personality and Social Psychology*, 2018. <https://osf.io/zn79k> [15/01/2022].

³ See the project on Recovery.org that is run by an association of market-listed commercial companies of the American health industry specialising in addiction treatment: “Drug Mugs: The Average Faces of Drug Abuse.” <https://www.recovery.org/learn/average-faces-of-drug-abuse> [15/01/2022]. Recovery.org

⁴ See Time Magazine: *The Summit Crisis* (July 30, 2018). Cover art by Nancy Burson.

⁵ See Tuercke, Florian: *the good the bad and the ugly*, 2018, ongoing. <http://www.floriantuercke.net/thegoodthebadtheugly.html> [15/01/2022].



Time Magazine: *The Summit Crisis* (July 30, 2018). Cover art by Nancy Burson. Tuercke, Florian: *the good the bad and the ugly: Queen Elizabeth II*.

eyes as central focal points. The photographic technique became established almost one and a half centuries ago as a rather dubious scientific tool and optical instrument for forming average representations and (often derogative) visual typecasts of groups of people. Composite portraiture sought to condense individual portraits and their particularities into one image, in a visual construction that would bring out common aspects and form a typical, representative portrait. Yet there is more to the images than the technical side of their production; they are artificial constructions whose fuzziness and openness offer surfaces for all kinds of ascriptions. I understand the technique of composite portraiture as an active agent and an ideologically motivated process in the formation of knowledge and social realities, in particular, in the creation of the ontological understanding of the human in relation to the topography of the body and the presumed phenotypical appearance of its genetic makeup.

The technique of composite portraiture was developed by the polymath Francis Galton in the final decades of the nineteenth century. But inspirations and predecessors can be found in earlier sources from arts and science, as the second chapter will show. Composite portraiture appears as a rigid visual form and concept that, however, was open to varied interpretations; a projection screen that allowed for its incorporation in various scientific contexts. These fields range from evolutionary theory and anthropology to criminalistics and

criminology, via physiognomy and phrenology, as well as to Galton's central project: eugenics. The interpretative openness of the photographically constructed facial forms made such images an ideal illustration in these contexts and provided a conceptual aid for the formation of explanatory models in the fields of genetics and human cognition.

But what can these artificially constructed images, these blurry humanoid facial forms, reveal? Composite portraits certainly say more about their creators and their worldview and the socio-political surroundings of their production than about the subjects depicted. It would, however, be too easy to dismiss the technique as an instance of misguided nineteenth-century "pseudoscience."⁶ Composite portraiture was influential in contemporary scientific and popular discourses on criminality, race, and eugenics, and its normative and derogative gazes on human groups directly influenced peoples' lives. This is why the focus of the present diachronic examination of composite portraiture is not on what can be seen *in* the images – but on what can be seen *through* them. Not least, composite portraiture and stereotypical visual assumptions of group identities are still with us: in biometric recognition and racial profiling, in genetic analyses and socio-psychological explanations of human behavior. A historically grounded perspective on the technique of artificial visualisation is important, especially in times of increasing digitisation, big data analysis, and a revival of ideas of genetic determinism and scientific positivism. Such a historical-epistemological perspective and the examination of current visualisations by means of the technique in visual arts and science and popular culture can provide a critical instance for reflecting on both its historical predecessors and on current socio-cultural and scientific developments.

⁶ This designation in my opinion misses its target. After all, scientific interpretations and theories are always subject to cultural constructions and inherit particular historical and ideological surroundings. Nineteenth-century positivist scientific practices and theories were widely accepted as respectable scientific activity at the time. It is important to take these scientific positions seriously – since the techniques also had serious repercussions on the lives of actual people. It seems more useful to try to understand the thinking of the actors in the field and unmask their ideological agendas. See also the works of Amos Morris-Reich, who has observed that the term "pseudoscience" was established in the twentieth century as an ideological venture for discrediting opposing scientific views and that it is a problematic concept, both epistemically and historically. See Morris-Reich, Amos: *Race and Photography. Racial Photography as Scientific Evidence, 1876–1980*. Chicago: University of Chicago Press, 2016, 20.

This extended introduction is structured according to the phases relevant for the production of photographic portraits and their further processing into composite portraits. It provides an overview of my approach to and understanding of composite portraiture. Furthermore, it addresses the scope of the technique in the various fields and contexts in which it has been employed, as well as the current state of research on composite portraiture and its long history of almost one hundred and fifty years. The following part of the introduction serves *to adjust the field size*; it gives insight into my perspective on, approaches to, and understanding of composite portraiture and the photographic medium more generally. The second part is focussing in by outlining the study's aims and agenda. The third part is *adjusting illumination*; it provides a brief overview of the technique's scope and its connection to the work of Francis Galton, as well as on the social and historical circumstances of its development. The following fourth part, by offering initial insights into the reasoning in and with composite portraiture, is *setting the aperture* for the peculiar modes of reasoning and knowledge production and the analytical potential ascribed to the technique. The fifth part casts light on the *exposure* in front of the photographic lens and in the photographic superimpositions: on the power structures involved in the photographic practices, in particular in the production of portraits in the disciplinary institutions of the time. The *developing process* in the laboratory and its experimental and processual nature are scrutinised in the sixth part, which is followed by an overview of the *framing* and discussion of the technique around the turn of the twentieth century. The historical perspective on the reception of composite portraiture is complemented by a short overview of current theoretical positions on composite portraiture and their *re-framing* and evaluation of the photographic technique in the late twentieth and early twenty-first centuries. The final part of this introduction is aimed at *re-adjusting* the lense and introducing an interpretative framework that delineates a set of particular gazes, specific perspectives, foci, ideological backgrounds, and agendas that the technique of composite portraiture developed, over time, in the different fields of its utilisation. This categorisation structures my later in-depth analysis of the images and their historical role, as well as their repercussions in the revival of composite portraiture in science and the arts around the turn of the twenty-first century.

Adjusting the Field Size: Historical Epistemological and Artistic-Curatorial Perspectives

My perspective on composite portraiture is based on my own experience as an artist who has made use of the technique; as a curator who has compiled exhibitions with artistic works and historical artefacts; and as a researcher, who nearly drowned in archival material, as well as on my academic work as a post-colonial and cultural studies scholar and as an art education professional.

In my study, I examine composite portraiture as a lexi-visual⁷ practice that around the turn of the nineteenth century was heavily influenced by contemporary worldviews and period anthropology. This is why my analysis of the resulting photographic representations of the human face explores the images and texts in relation to contemporary discourses and theories. My examination entails an in-depth analysis of historical composite portraits and the phases of their production, as well as the discursive framework that guided the reception of these peculiar images of the human. In the analysis of composite portraiture, I am following an historical epistemological approach to reflect on the conditions under – and the means and technologies by which – knowledge was established during the period in question.⁸ With respect to its practice and impact orientation and its analytical focus on lexi-visual processes and their evolution, I would furthermore qualify my approach as practical historical epistemology. It evolves from the reflection on the effects of (scientific) practices to the theorisation of their epistemological assumptions.⁹

⁷ I use the term "lexi-visual" here to describe the strong and mutual interconnection between an image and its written description that is particularly strong in publications of composite portraits. This includes culturally coded iconographies and discourses produced in the field through the combination of image and text, but also their relationships and tensions between the visual and verbal. This denomination also draws on W.J.T. Mitchell, who argues against the binary logic of text and image, employs the term *imagetext* for the description of synthetic concepts that combine image and text and the term *image-text* to delineate relations of the visual and verbal. He highlights the mixed nature and heterogeneity of the pictorial field and its situation within institutions, histories and discourses. See Mitchell, W.J.T.: *Picture Theory*. Chicago, London: University of Chicago Press, 1994, 89; 98. The term "lexivisual" has been used by Adam Brenthel in a bachelor thesis at Malmö University. See Brenthel, Adam: *The Scientific Gaze: Developing a Theory for the Analysis of Natural Scientific Perception* (2009) <https://muep.mau.se/bitstream/handle/2043/7881/TheGaze.pdf> [15/01/2022].

⁸ See Rheinberger, Hans-Jörg: *Historische Epistemologie*. Hamburg: Junius, 2007.

Here my artistic-curatorial perspective, which I understand as a part of this practical epistemology, comes to the fore. Visual analysis, (re-)contextualisation, and presentation are merged with artistic-curatorial practice, aiming for a multifaceted view on composite portraiture. A curator has an active role in shaping the content and context: to curate and exhibit means to present, to load with meaning, but also to expose to the observation of others, to the viewer's scrutiny, and to discussion.¹⁰ In the same vein, my analytical exploration of composite portraiture can be seen as a structured way to raise awareness of historical and socio-cultural contexts. This provides novel interpretations and perspectives, exposes different positions, but also poses questions and initiates discussions.

I take photographs to be more than mere artifacts. I consider them agents of representation that fashion and negotiate iconographies in a continuous process of presentation and reception. Likewise, archives and museums are more than mere buildings or repositories, but social spaces that form knowledge and perspectives.¹¹ Beyond the academic study of relevant objects, photographs, and texts in the archives of London, Bedford, Paris, Labruguière, Vienna, Baden, Turin, and Lisbon, my artistic-curatorial perspective has led me to embark on more aesthetic forms of exploration: for instance, the performative re-enactment of disciplinary movements, video-collages of panoptic architectures,

⁹ Amos Morris-Reich defines his approach as "practical epistemology," pointedly adopting a bottom-up approach from practices to social superstructures, and describing photographs as a powerful starting point for such practice-oriented analyses. See Morris-Reich: *Race and Photography*, 5.

¹⁰ For a more detailed discussion of the role of curating as research practice see Gschrey, Raul: "Curating as Research." In: *On_Culture: The Open Journal for the Study of Culture* 1 (2016). <http://geb.uni-giessen.de/geb/volltexte/2016/12088/> [15/01/2022].

¹¹ See the groundbreaking work of Tony Bennett: Bennett: Tony: *The Birth of the Museum: History, Theory, Politics*. London: Routledge, 1995.

¹² See for instance exhibitions at the conference "Phantomgesichter," University of Potsdam, Germany, at the (2009); at the conference "Law's Pluralities: Cultures/Narratives/Images/Genders," Justus Liebig University Giessen, Germany and Neuer Kunstverein Giessen (2015); during the event "Utopia Now!," National Theatre Academy in Frederickstad, Norway; at the conference "Andere Räume," Ludwig-Maximilian University Munich, Germany (2019), in the galleries [con]space, AtelierFrankfurt (2015–2016) and JokJok, Frankfurt, Germany (2017), as well as at the Museum of Communication (MfK) in Frankfurt and Berlin, Germany (2013–2014).

¹³ With respect to composite portraiture, Foucault's social and science historical writings are particularly relevant, including his concept of the empirical and clinical gaze, his theories of the disciplinary society and panopticism, as well as of the normalising society and bio-politics. See Foucault, Michel: *The Birth of the Clinic: An Archeology of Medical Perception*. New York: Vintage Books, 1994 [1963]; Foucault, Michel: *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books, 1994 [1975]; Foucault, Michel: *Security, Territory, Population: Lectures at the College de France 1977–1978*. New York: Picador, 2007.

and perimeter walks of Pentonville Prison (London) and Bedford Prison. This work also led to exchange and interviews with contemporary artists, as well as to the participation in and the curating of exhibitions.¹²

These artistic-curatorial insights re-enter my academic work and guide this study as a whole, for instance, in the strategy of multi-perspectival and diachronic readings of the composite technique and in the contextualisation of historical images and artefacts with reference to current artistic positions. My alternative aesthetic perspective influences my understanding of the technique of composite portraiture and its affective nature, its ideological agendas, and the embodiment of power-knowledge regimes in the course of its history.

It would be pointless to criticise nineteenth-century scientists for their utilisation of the composite technique. What remains to be discussed, however, are the aims of nineteenth-century scientists and the desires and concerns addressed in their work. Likewise, the socio-cultural context, ideas, ideals, and anxieties of the public around the turn of the twentieth century, are relevant for the analysis of composite portraiture. Because of this, my practical historical epistemological approach charts contemporary arguments and scientist's sometimes racist, sexist and classist positions. I do so in order to unravel their ideological agendas and the inner workings of the visual representations. This reveals the epistemological assumptions and underlying power structures of composite portraiture – and the medium of photography in general – as well as their historical continuities.

This genealogical orientation, however, does not imply that I see scientific work as a linear and ever-evolving process. My analysis of the composite technique will show that there are certainly elements and perspectives, visual and scientific traditions, which are handed down. Still, the history of science is full of discontinuities and ruptures, and frequently, perspectives that seemed long overcome resurface. Drawing on the work of Michel Foucault: on his conceptualisation of de-individualised power networks and the nexus of power and knowledge, as well as on his work on social theories and governmentality,¹³ my examination of composite portraiture examines the power structures inherent in the production of the component portraits and composites – in their recording, development, sorting and composition, as well as in their contextualisation, and dissemination.

My approach stresses the processual and ambiguous nature of the medium of photography. Photographic prints are understood as material artefacts, which were produced in a particular historical context and whose meaning was constructed – and can be reconstructed – in specific social and cultural environments. Still, they retain a certain indexical quality as referents in time and space. This resonates with Philippe Dubois' concept of the photographic act,¹⁴ which partly maintains ascriptions of an indexical nature regarding the photographic print,¹⁵ but at the same time highlights the cultural construction of the medium as well as its ambivalence and openness towards interpretation and re-interpretation. Dubois argues that the pre- and post-coding of the images, charging them with meaning, were the central prerequisites for their readability and accessibility. This seems particularly true with respect to composite portraiture, where meaning is (re-)inscribed into the de-individualised images by non-visual forms of contextualisation. The belief in the objectivity of the photographic process and in the images as a direct representation of reality, however, was central to nineteenth-century understandings of scientific photography. Precisely this conceptualisation as a non-interventionist, optical-mechanical medium of recording, which was seen as independent from and uncontaminated by prejudices and interests of the scientific observers, turned it into the ideal medium for the production of scientific evidence.

The critique of non-interventionist and evidential attributions to photography is taken further by John Tagg, who argues that there is no historical consistency of photography and that its status changed according to the power structures by which it came into effect.¹⁶ Photographic practices are defined by the technical devices in use, as well as by the people and institutions that employ them and construe their meaning – these, he maintains, are the ones to be explored.¹⁷ My examination of composite portraiture takes this reminder to heart: In order to make sense of the images, it aims to unravel their socio-

¹⁴ See Dubois, Philippe: *Der fotografische Akt. Versuch über ein theoretisches Dispositiv*. Amsterdam/Dresden: Verlag der Kunst, 1998.

¹⁵ This understanding of the indexical nature of the photographic print is rooted in the early analytical writings of the pioneers of photography, such as Henry Fox Talbot and in the later writings of the semiotician Charles Sanders Peirce. It became widely accepted in the natural and social sciences of the late nineteenth century and has found a new immediacy in the identificatory potential of photographic portraits in today's biometric recognition tools. See Talbot, Henry Fox: *The Pencil of Nature*. London: Longman, Brown, Green and Longmans, 1844–1846.

¹⁶ See Tagg, John: *The Burden of Representation: Essays on Photographies and Histories*. Amherst: University of Massachusetts Press, 1988.

historical construction – the power structures and ideological agendas inherent to their production and dissemination. In this I follow the artist, theorist and critic Alan Sekula, one of the protagonists of the current academic discussion of composite portraiture,¹⁸ who argues that the meaning of photographs is not predetermined, but constructed in what he calls “photographic discourse.”¹⁹ Photographic meaning, as Roland Barthes observed earlier, is always formed in a specific social and historical climate and consequently the reading of photography needs to be historical. Furthermore, he mentions the parasitic and naturalising influence of texts on photographs: the text takes advantage of the image in order to inscribe culturally coded messages.²⁰ This lexi-visual approach to composite portraiture is omnipresent – in nineteenth-century science and in current art.

Composite portraits and their component photographs in their complexity can best be understood in relation to the social and historical environments of their creation, dissemination and contextualisation. The inherent power structures in practices of photographic recording and lexi-visual knowledge creation as well as their affective sides require a multi-perspectival approach that can be explored in and through artworks and artistic-curatorial practice. Here a practical epistemological perspective and a processual understanding of composite photography become particularly relevant. This extends from the production of the photographic artefacts to the contextualisations and re-contextualisations that the images, but also the technique as a whole, have experienced over the past century and a half, and which continues in this book.

¹⁷ This echoes the work of Pierre Bourdieu, which was also picked up by Victor Burgin, who described photography as a practice of signification, as the work on specific materials in a specific social and historical context and at a particular point in time, for a specific purpose and in terms of its function in the production and dissemination of meaning. See Bourdieu, Pierre; Boltanski, Luc et al. (eds.): *Eine Illegitime Kunst: Die sozialen Gebrauchsweisen der Photographie*. Frankfurt: Suhrkamp, 1983 [1965]; and Burgin, Victor: “Introduction.” In: Victor Burgin (ed.): *Thinking photography: Communications and Culture*. London: Palgrave, 1982, 1–2.

¹⁸ See Sekula, Allan: “The Body and the Archive.” *October*, 39, 1986, 3–64.

¹⁹ See Sekula, Allan: “On the Invention of Photographic Meaning.” *Artforum* 13:5, January 1975, 36–45. Reprinted in: Victor Burgin (ed.): *Thinking Photography*. London: Macmillan, 1982.

²⁰ See Barthes, Roland: “Die Fotografie als Botschaft.” [1961] In: *Roland Barthes: Der entgegenkommende und der stumpfe Sinn. Kritische Essays III*. Frankfurt: Suhrkamp, 1990, 11–27. Countering the myth of the objective nature of photography, Barthes here also defines photographs as non-natural, constructed objects.

Focussing In: Aims and Agendas of this Study

This study examines the experimental technique of composite portraiture in relation to the works of Francis Galton and other protagonists of the technique in the context of nineteenth-century scientific and social discourses. By starting with an exploration of the development as well as the epistemic nature, understanding, and reception of composite portraiture, I aim to contextualise the photographic technique in nineteenth-century scientific and artistic discourses and analyse its controversial role as artificial construct and material evidence, as a prognostic tool and visual proof for physical, mental and social difference in the human species.

Furthermore, examples from the late twentieth and early twenty-first centuries are discussed – periods when the composite technique experienced a revival in arts, popular culture, and science. Both points in time are characterised by media-historical revolutions, the development of the technique of composite portraiture, shortly after the advent of photography and at the beginning of its mass-dissemination, as well as its revival in the late twentieth century, at a point in time, when computerisation and digitalisation allowed for new ways of data analysis and the construction of new forms of artificial visualisation in science and the arts. At these crossroads, questions about the depiction and representation of the human and its visible and invisible sides, in photography and in genetic sequencing, played a decisive role. This diachronic examination of the technique of composite portraiture offers a reflective position: a position apart but close at the same time, which allows for comparisons and evaluations, while remaining conscious of the dissimilar historical and social circumstances. The examination of current artistic works shows the critical potential of contemporary arts, but it often also reveals uncritical adaptations and disconcerting echoes of the exclusionary, racist, and classist visual logic of composite portraiture.

To further structure the multiple and sometimes conflicting arenas in and functions for which the photographic technique of superimposition has been employed, I propose a classification of different empirical gazes, lexi-visual power-knowledge regimes, expressed in the different fields and contexts.²¹ This provides the framework for my later examination of individual epistemic

fields in which composite portraiture was used by Galton and his successors. Here close analyses of the published and archival material, the component portraits and the composite images as well as a vast array of contemporary textual resources are central to my analysis. I aim to untangle the diverse interests, ideological backgrounds, experimental layouts, and the power-knowledge regimes that were involved in the formation of composite narratives and that became condensed into (highly charged) visual facial forms. Thus my approach can be described as a de-composition of the composite meta-portraits²² and of their discursive formation as representative typecasts for social and biological groups of society.

I also aim to demonstrate that there is several ways of reasoning by means of composite portraiture. It has been employed in a variety of epistemic fields for different purposes and with different but intersecting understandings of and attributions to the technique. For instance, my investigation will show the connections of composite portraiture to older modes of “reading off the face” in physiognomy and phrenology; its involvement in criminology and criminalistics; the technique’s role in the medical field; as a diagnostic and predictive device and as a disciplinary technique of biopolitical management; its role in eugenics and its use as a normative ideal and visual target for a future society. Furthermore the technique was influential in a metaphorical and conceptual way: as a photo-visual re-enactment of visual modes of medical and scientific reasoning, as a conceptual aid in the development of theories of genetic transmission, and as a way of making sense of human perception and the formation of mental images.

In my study, I aim to show the importance of composite portraiture, not only in Francis Galton’s work, but also in the wider fields of research on genetic transmission, statistics, criminology, anthropology, and eugenics. Composite portraiture was far more than the hobby horse of an eccentric Victorian scientist. My examination uncovers a long-lasting preoccupation with this form of photo-visual reasoning in various scientific disciplines, which had repercussions well into the twentieth century. And the technique has been resurfacing recently, in times of digitisation and visual big data analysis, often without the necessary critical distance vis-à-vis its historical predecessors.

²¹ Foucault speaks of “empirical gazes,” and in his analysis of the medical field delineates what he calls a “clinical” or “medical gaze.” See Foucault: *The Birth of the Clinic*.

A diachronic perspective structures the individual chapters that start from historical composite portraits and the formation of the technique's gazes in the respective fields and conclude with recent examples from arts and sciences that allow for a (re-) evaluation of the historical material and a glance into current ways of thinking by means of the composite technique. It is the aim of this study to provide a historical and in-depth analysis of composite portraiture: of the different gazes active in different fields and of the power structures and ideological mechanisms underlying them. Furthermore, the study offers a historical-epistemological, as well as a visual cultural studies perspective on the composite technique and its utilisation over its long history of almost one hundred and fifty years.

Adjusting Illumination: The Scope of Composite Portraiture and the Role of Francis Galton

The technique of composite portraiture is intrinsically tied to the work of the influential Victorian scientist Francis Galton, who was a cousin of Charles Darwin. The explorer and natural scientist became known for his contributions to meteorology, statistics, psychology, medicine, identification, anthropology, and genetics and is seen as a founding father of eugenics, a term he coined in 1883. The scientist's preoccupation with composite portraiture can be traced back to the mid-1860s, and he continued to work and publish on the technique into the early twentieth century.²³ Composite portraiture took centre stage in Galton's 1883 book *Inquiries into Human Faculty and its Development*,²⁴ which, alongside his earlier work on the genetic transmission of genius,²⁵ formed the basis for his project of "eugenics," a term he himself

²² Phillip Prodger refers to composite portraits as artificial meta-portraits. See Prodger, Phillip: *Darwin's Camera: Art and Photography in the Theory of Evolution*. Oxford: Oxford University Press, 2009, 215.

²³ That Galton's preoccupation with photography was not an eccentric visual interlude in the scientist's work is attested by a series of articles, presentations, and exhibitions dating from the late 1870s into the 1880s and beyond. See, among others: Galton, Francis: "Composite Portraits made by combining those of many different persons into a single figure." *Nature*, 18, 1878, 97–100; "Composite Portraits." *The Photographic Journal*, 24 June 1881, 140–146; with Mahomed, F. A.: "An inquiry into the physiognomy of phthisis by the method of 'composite portraiture.'" *Guy's Hospital Reports*, 25, 1882, 275–293; "The Physiognomy of Consumption." *Nature*, 26, 1882, 389–390; "Photographic Records of Pedigree Stock." *Nature*, 58, 1898, 584; "Analytical Photography." *Photographic Journal*, 25, 1900, 135–138.

coined in this collection of essays. In Galton's *Inquiries*, composite portraiture appears as a direct visual-photographic tool and metaphorical concept in the exploration of mental imagery and the development of conceptual thinking as well as in chapters on human memory and dream imagery. Implicitly, the technique is also present in Galton's sketches of heredity and eugenics. In these cases, composite photography was perceived as a visual-typological means of identifying signs of genetic merit and as a technique for the production of visual role-models.²⁶ Furthermore it provided a visual prototype for Galton's theories of hereditary transmission.²⁷ Composite portraiture preoccupied Galton throughout his career and was linked to many of the topics that he was working on, such as cartography, anthropology, criminology, identification, and evolutionary theory, as well as psychology and human perception. In the final years of his life, he returned to the technique in his autobiography²⁸ and incorporated it as a diagnostic and spiritual element in his unpublished utopian narrative, *Kantsaywhere*.²⁹

Composite portraiture constitutes an experimental use of the then relatively new medium of photography in scientific research and the production of empirical knowledge. This raises a number of epistemological questions on the utilisation of photography in late nineteenth- and early twentieth-century science and links composite portraiture to other forms of photo-chemical scientific visualisation, such as x-ray and infrared-photography, astro-photography and chrono-photography, techniques that were described in terms of the creation of mechanical objectivity.³⁰ However, in composite

²⁴ Galton, Francis: *Inquiries into Human Faculty and its Development*. London/New York: J.M. Dent, 1907 [1883].

²⁵ Galton, Francis: *Hereditary Genius. An Inquiry into its Laws and Consequences*. London: Macmillan, 1892 [1869].

²⁶ See chapter 7, "Eugenic Role Models."

²⁷ See chapter 8, "Ideal Family Likenesses."

²⁸ See Galton, Francis: *Memories of My Life*. London: Methuen, 1908.

²⁹ In the biography by Karl Pearson parts of *Kantsaywhere* were published. See Pearson, Karl: *The Life, Letters and Labours of Francis Galton. Vol. 2: Researches of Middle Life*. London: Cambridge University Press, 1924. In 2011 a transcription of the remaining fragments was released by UCL Special Collections and the Wellcome Collection, see <http://www.ucl.ac.uk/library/special-collections/kantsaywhere> [15/01/2022] The original typescript manuscript with annotations is kept among the Galton Papers. Galton Papers, Special Collections, University College London (UCL), GALTON 2/4/19/6/1. See the discussion in chapter 8, "Ideal Family Likenesses."

³⁰ See Daston, Lorraine; Galison, Peter: "The Image of Objectivity." *Representations*, 40, Fall 1992, 81–128; Daston, Lorraine; Galison, Peter: *Objectivity*. New York: Zone Books, 2010 [2007].

portraiture the successive exposure of different standardised, frontal full-face or profile portraits on one photographic plate created artificial facial portraits that sought to visually combine the common physical characteristics of a group of specimens. It thus did not merely aim to show what could be seen by an expansion of optical vision but, by attributing an analytical potential to the photographic medium itself, sought to make visible the invisible by multiplying individual physical aspects, thus producing artificial visualisations³¹ and objectified typecasts.

The synthesis of facial features was primarily employed in the visualisation and analysis of genetic characteristics in the human face and for the establishing of visual prototypes of social, physical, and medical phenomena. Composite portraiture is thus deeply anchored to nineteenth-century taxonomic endeavours, in providing ordering mechanisms and categorisations that would allow for a (re-)positioning of the human in relation to evolutionary thought, which had disrupted claims for a superiority of humanity over nature. In this respect, late Victorian science has been described as a massive semiotic venture directed at the visualisation of human characteristics, based on the conviction that visual traces could be deciphered as signs and read as evidence for the reassessment of the position of the human in relation to the world.³² As a child of the scientific positivism of its time, in particular of anthropometrics, social statistics, and visual anthropology, composite portraiture can be read as an exploration and formation of a hierarchical order of physical difference and similarity in the chaotic appearance of the human crowd. The face and its features appear as a visual code that could be deciphered through the mechanical objectivity of the medium of photography. In composite visualisations and their discussions, the face is treated as a window to a deep genetic substrate as well as to the underlying personal qualities of a pre-defined group of people. These perspectives become united in the paradigm of an equation of physical beauty and inner goodness, of genetic merit and quality of character that became reinforced in nineteenth-century Social Darwinist evolutionary theory.

³¹ Dieter Mersch speaks of "artificial visualisation" in his phase model of media evolution, placing this phase at around the turn of the twenty-first century and linking it to increasing computerisation and digital forms of visualisation, in which the indexical nature of visualisations and references to "reality" have been called into question. With respect to this, composite portraiture could be described as an early practice of artificial visualisation, since it compiles and creates visual constructions from visual raw data through a process understood as an apparative form of visual statistics. See Mersch, Dieter: *Medientheorien zur Einführung*. Hamburg: Junius, 2006.

³² See Scholz, Susanne: *Phantasmatic Knowledge: Visions of the Human and the Scientific Gaze in English Literature, 1880–1930*. Heidelberg: Winter, 2013.

The photographic exploration of facial characteristics in composite portraiture did not take place in a vacuum. The technique was deeply embedded in nineteenth-century scientific theories, such as evolutionary theory, eugenics, as well as physiognomy and phrenology. Social preoccupations and colonial aspirations also informed the choice of corpuses and topics that were scrutinised by means of composite portraiture. Increasing industrialisation and capitalist exploitation brought with them an unprecedented mobility and urbanisation, as well as rising rates of poverty and crime, fanning fears of political and social instability that intensified in a period of economic depression in the 1880s. This apparent internal weakness of Britain and its population was seen in contrast to its role as a colonial power dominating large parts of the world. These concerns of the classist society of the late-Victorian age were pervaded by anxieties about degeneration and social decline. These backgrounds throw light on the choice of the experimental fields of composite portraiture which, from a current perspective, seem like an incoherent mixture: criminality, "race," military and bodily strength, mental illness, tuberculosis, family resemblance, health, and eugenic merit. In particular, Galton's eugenic project – which can be understood in terms of a particularly disconcerting social, moral, and intellectual revolution that sought to foster the improvement of the genetic quality of humankind – forms the backdrop against which the visual studies were conducted.

The impulses for the development of composite portraiture can be linked to a number of sources: to the evolutionary theoretical and photographic work of Charles Darwin; to the chronophotography of Eadweard Muybridge and Étienne-Jules Marey; to the statistical work of Adolphe Quetelet; to the practices of photographic identification of Western judiciary systems and, as well as to earlier mapping exercises of Francis Galton himself. However, the roots of composite portraiture cannot be traced to the field of science alone. Artistic photographers such as Oscar Gustave Rejlander and Henry Peach Robinson had pioneered the technique of multiple photographic superimpositions and must be counted among the protagonists that influenced the establishing of the composite portraiture. The examination of these artistic precursors shows the permeability of visual representation in the seemingly separate fields of arts and science in the nineteenth century. With respect to aesthetics, in particular, shared understandings and common conceptual grounds surface; the equation of beauty and good, expressed in ideal representations of the human body along the lines of a classicist trend that united nineteenth-century arts, sciences, and popular culture. In its quest for the visualisation of the invisible

and the production of a higher order of beauty, composite portraiture can be described as a creative and artistic technique,³³ which also explains its later appeal to artists around the turn of the twenty-first century.

Setting the Aperture: Making Sense of Composite Faces

Composite portraits are fuzzy and ambiguous images. How to “read” the photographic prints and make sense of these visual constructions is anything but straightforward. Their nineteenth-century understanding relied on the contextualisation and coding of the visual results of what was presented as an optically mediated analytical process substantiated by a strictly regulated, objectified production process – but also on a leap of faith. As photographic superimpositions of individual facial portraits on one photographic print, composite portraits were conceived of as a *new entity*, incorporating and bringing out common visual information of the component images. The openness and vagueness of the images, however, invited explanations that went beyond their source material, beyond the objectified, technical mode of their construction. The discussion of composite portraits in the nineteenth century – and today – is as much about what can be seen in the visualisations as about what remains invisible. Immediate emotional reactions to the ambiguous humanoid facial features, which are presented as objectified typecasts, are central to the perception of the images. This highlights the importance of unacknowledged unconscious affectual responses that become aligned with conscious reflections, with prior knowledge and contextualisation.³⁴

³³ Gunnar Schmidt has argued that scientifically oriented composite portraiture, also, could be read as an artistic technique. See Schmidt, Gunnar: “Mischmenschen und Phantome. Francis Galtons anthropologische Fotoexperimente.” *Fotogeschichte – Beiträge zur Geschichte und Ästhetik der Fotografie*, 39, 1991, 13–30. Josh Ellenbogen argues along the same lines and refers to Marey’s and Bertillon’s image-making practices and reads Galton’s photographic practice of composite portraiture as a pursuit of the statistical ideal and its aesthetic form, opening the discussion of the kinship of the images to visual arts and art-historical observations. See Ellenbogen, Josh: *Reasoned and Unreasoned Images. The Photography of Bertillon, Galton, and Marey*. Pennsylvania: Pennsylvania State University Press, 2012.

³⁴ See Massumi, Brian: *Parables for the Virtual*. Durham, N.C.: Duke University Press, 2002.

Nineteenth-century interpretations were dominated by the technique’s inventor, Francis Galton, who frames the technique in relation to human perception and artistic representation:

A composite picture represents the picture that would rise before the mind’s eye of a man who had the gift of pictorial imagination of an exalted degree. But the imaginative power even of the highest artists is far from precise, and is apt to be biased by special cases that may have struck their fancies, that no two artists agree in any of their typical forms. The merit of the photographic composite is its mechanical precision, being subject to no errors beyond those incidental to all photographic productions.³⁵

Composite portraits represent individual sources and visual commonalities in a new way, and they become associated with the artistic capacity to form mental images or typologies. Throughout the nineteenth and twentieth centuries, parallels were drawn between composite photography and artistic visualisations, pointing to the capacity of both to create additional value and reveal the invisible. Here the images enter what from a current perspective would certainly be seen as the property of visual arts. The interpretative and productive power that is ascribed to the technique in forming superior meta-images and visual essences goes beyond the mere collection or condensing of information. Still, composite portraiture was understood as a scientific agent in the construction of comparable and measurable visual knowledge. Made by what was perceived as objective photographic medium, its visual results were presented as unbiased and superior to fallible human perception and artistic representation.

Galton further comments on the surprising nature of these optically produced images:

[T]he photographic process [...] enables us to obtain with mechanical precision a generalised picture, one that represents no man in particular, but portrays an imaginary figure, possessing the average features of any given group of men. These ideal faces have a surprising air of reality. Nobody who glanced at one of them for the first time, would doubt its being the likeness of a living person. Yet, [...] it is the portrait of a type, and not of an individual.³⁶

The composite portraits are described as average, generalised pictures, albeit with an ambivalent relationship to reality. In its equilibrating function, the composite technique is conceived of as producing visual means of a group of

³⁵ Galton, Francis: “Composite Portraits” [1878], 97.

³⁶ Galton: “Composite Portraits” [1878], 97.

people, condensing many individual facial features into one ideal face. Haunted by its air of reality, however, Galton cautions not to read the composite as a face proper, but as an “averaged portrait,”³⁷ as a visual type that has no direct referent in the real world. These artificially constructed images were consistently characterised as “portrait of the invisible”³⁸ by the French photographer, Arthur Batut. Galton, however, following the work of the statistician Quetelet, framed the images as visual-statistical average figures, but also argued that they could be understood as aggregates, and generic images.³⁹ This move away from the emphasis on the average highlights the productive potential and the orientation towards typologies that was attributed to the technique in bringing out common characteristics, while suppressing the “visual-statistical noise” of individuality.

Judged on the basis of the photographs, illustrations, and texts published by Galton, the potential and scope of composite portraiture is wide and not clearly delimited. Its use in the study of the hereditary transmission of features and family resemblance⁴⁰ and of the breeding of cattle⁴¹ clearly shows the main aim and the technique’s relation to Galton’s eugenic project. Galton also advocated for its use in anthropology and ethnology, primarily for the study of racial difference and evolution,⁴² as well as in medicine.⁴³ He also saw potential in the study of likeness and deviation in the field of identification,⁴⁴ as well as in relation to the study of mental imagery.⁴⁵ However, the potential uses of composite photography were not limited to the scientific field: Galton proposed composite portraiture as a means for producing a superior likeness of historical figures⁴⁶ and predicted a bright future for its use in popular photography and as a technical aid to visual artists in “forming [...] a very high order of artistic work.”⁴⁷

³⁷ Galton, Francis: “Note on Composite Portraits” [1891], Galton Papers, UCL, GALTON 3/2/3, f 54.

³⁸ See Batut, Arthur: *La photographie appliquée à la production du type d’une famille, d’une tribu ou d’une race*. Paris: Gauthier-Villars, 1887.

³⁹ See Galton, Francis: “Generic Images.” *The Nineteenth Century*, July 1879, 157–169.

⁴⁰ See Galton: *Inquiries into Human Faculty*.

⁴¹ See Galton, Francis: “Photographic Records of Pedigree Stock.” *Report of the British Society for the Advancement of Science*, 1898, 597–603.

⁴² See Galton: “Composite Portraits” [1878], 99–100.

⁴³ See Galton; Mahomed: “An inquiry into the physiognomy of phthisis.”

⁴⁴ Galton, Francis: “Analytical Portraiture.” *Nature*, 2 August 1900, 320.

The technique shows a *wide aperture* in relation to various scientific fields and popular culture and connectivity to number of questions regarding the essence of human nature. The composite images and their diffuse multiplicity of facial forms offered an almost perfect surface, a “projection screen” for a variety of readings and epistemological ascriptions. This interpretative openness, as well as the sometimes conflicting perspectives, will be addressed in the following chapters, which deal with the different scientific and cultural fields in which the technique was employed.

Exposure: Photographic Power Structures

Composite portraiture was far from a neutral photo-mechanical process. The production of the component portraits was deeply embedded in and shaped by the power structures prevalent in the disciplinary institutions in which the images were taken. These places, their power dynamics, and the regulation of individuals and their bodies in prisons, hospitals, psychiatric clinics, schools, and the army, as well as the family, all sites of the ideological formation of disciplinary society, impressed themselves on the portraits. Already the iconography of the expressionless frontal and profile portraits necessary for the production of composites relied on the docility of bodies in relation to the inquisitive photographic lens. The standardised mode of recording was based on judiciary photography and on the representation of anthropological “specimens” of the time: the sitters were pressed into submission; their bodies and faces reduced to emotional neutrality and stripped of all agency to stage themselves in the disciplinary portraits.⁴⁸ The violence intrinsic to photography as a medium⁴⁹ reaches a new force.

⁴⁵ See Galton: “Generic Images.”

⁴⁶ Galton: “Composite Portraits” [1878], 100.

⁴⁷ See Galton: “Composite Portraiture” [1881], 145.

⁴⁸ Regarding the Foucauldian concept of the panopticon and disciplinary society, I refer to the individual component photographs produced for the photographic compositions as disciplinary portraits. See Foucault: *Birth of the Clinic*; Foucault: *Discipline and Punish*.

⁴⁹ See the work done by Sontag, Edwards, and Tagg; Sontag, Susan: *On Photography*. New York: Anchor Books, 1990 [1977]; Edwards, Elizabeth: *Raw Histories: Photographs, Anthropology and Museums*. Oxford: Berg, 2001; Tagg: *Burden of Representation*.

This de-subjectivising force intensifies in the photographic superimpositions of these disciplinary portraits by means of composite portraiture. The technique itself could be described in terms of a de-individualisation and disempowerment of the persons depicted, as a de-composition of their representations, which were dissolving in the compositions, resulting in visualisations to which most of the sitters would never have access to. As meta-portraits and stereotypes of social and biological phenomena – employed in disciplines that focused on the biopolitical management of the population as whole, such as in medicine, criminology, or eugenics – composite portraits can be described as biopolitical portraits.⁵⁰ As artificial visualisations, they contributed to the ontological understanding of the human and furthered a specific form of epistemological reasoning in which vision as the primary sense of evidential production was maintained – and complemented with a apparatusive hyper-visibility and new forms of photo-chemical perception. My aim is to examine the inherent power structures and relations of this visual regime and the gazes expressed in composite portraiture as a social-technological and transformative practice.

Here Foucauldian perspectives on regimes of power-knowledge and representation⁵¹ can be productively combined with the earlier mentioned concept of the photographic act proposed by Philippe Dubois, who, while maintaining the indexical paradigm of the medium highlights the framing and ideological utilisation of the images. Their reception and (over-)charging with meaning has an emotional dimension that can be addressed with affect theoretical considerations, which attribute to images and their sub-conscious but pre-mediated reception a particularly strong affective power.⁵² The “accumulation of affective value shapes the surfaces of bodies and worlds;”⁵³ it is a force in the formation of hegemonic generalisations, the materialisation of collective bodies, and in the labeling of certain groups as deviant.⁵⁴ In my analysis of

⁵⁰ Foucault uses the concepts of biopower and biopolitics to delineate a mechanism for the management of the population; I refer to the composite portraits as biopolitical portraits. See Foucault: *Discipline and Punish*; Foucault: *Security, Territory, Population*.

⁵¹ See Foucault, Michel: *The History of Sexuality*, vol. I: *The Will to Knowledge*. London: Penguin, 2020 [1976]; Foucault: *Discipline and Punish*. On representation see also the writings of Stuart Hall, who conceptualises representation as a cultural practice and the process by which meaning is produced and exchanged between members of a culture through the use of language, signs, and images which stand for or represent things. See Hall, Stuart: *Representation: Cultural Representations and Signifying Practices*. London: Sage, 1997.

⁵² See Massumi: *Parables for the Virtual*.

⁵³ Ahmed, Sara: “Affective Economies.” In: *Social Text*, 22:2, 2004, 117–139, at 120.

composite portraiture’s specific gazes, the structuralist perspective on the power-knowledge nexus and its mainly textual discursive formation receive a counterpart in the examination of the affectual dimension of the production and reception of the composite faces.

An affect theoretical view reveals the immediacy and force of power-knowledge regimes acting on individual and collective bodies, in what Gilles Deleuze, in an adaptation of Michel Foucault’s concept of the disciplinary society, described as “societies of control.”⁵⁵ Patricia Clough speaks about the construction of a biomediated body, advocating the idea of the body-as-organism whose origins she traces to the nineteenth century.⁵⁶ This seems particularly relevant for today’s composite visualisations in arts, science, and popular culture and their conceptualisation of the human in relation to an outer (facial) surface, in DNA analysis, artificial intelligence systems, biometric recognition, and actuarial justice – the biopolitical management of bodies. In my diachronic perspective, current artistic positions figure as instances of reflection, offering new perspectives, adaptations, and critiques of historical positions and their proliferation in current, uncritical constructions of composite faces.

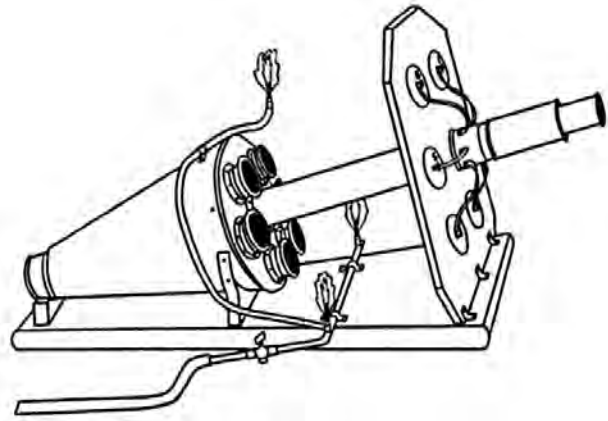
The Developing Process: Experimental Processes and the Black Box Laboratory

The typecasting of facial characteristics through photographic superimposition relied on the reputation of mechanical objectivity attributed to photography as a scientific tool in the nineteenth-century. Composite portraiture constituted an innovative utilisation of the medium and its re-evaluation in terms of an experimental technique and a productive research arrangement.⁵⁷ But the

⁵⁴ Sara Ahmed speaks of affective economies in the construction of (group) identities: Ahmed: “Affective Economies.” On the “labeling approach,” a sociological interpretation of the social construction of delinquency and deviance pioneered by Frank Tannenbaum and Howard Becker, see Tannenbaum, Frank: *Crime and the Community*. Boston: Ginn, 1938; Becker, Howard S.: *Outsiders: Studies in the Sociology of Deviance*. New York: Free Press, 1963.

⁵⁵ Deleuze, Gilles: “Postscript on the Societies of Control.” In: *October*, 59, 1992, 3–7.

⁵⁶ Clough, Patricia T.: “The Affective Turn: Political Economy, Biomedicine and Bodies.” In: *Theory, Culture and Society*, 25:1, 2008, 1–22.



Galton, Francis: Instrument designed for combining up to six photographs to a composite. Illustration in: *Journal of the Anthropological Institute*, vol. VIII, 1878, 132–142.

method of composite portraiture was in turn formed by the properties and *modus operandi* of the medium. Composite portraiture, which developed several exposures into one print, can be conceived of as a process-oriented and complex experimental layout that largely took effect in the black box laboratory.⁵⁸

In scientific publications on the technique, the description of the production process played an important role, with a particular emphasis on the optical and chemical materials used, and the instrumental layout in the establishing of composite portraits. These instructions were aimed at explaining and revealing the processes in question and were supposed to guarantee the adherence to scientific protocols, on which the technique's entire claim to scientific validity rested. Only if the processes in the black box laboratory could be systematised and documented, the non-interventionist nature of the

⁵⁷ Roland Meyer, Gunnar Schmidt, and Susanne Scholz stress the experimental character of composite portraiture. See Scholz, Susanne: *Phantasmatic Knowledge*; Schmidt: "Mischmenschen und Phantome"; and Meyer, Roland: "Kartographien der Ähnlichkeit. Francis Galtons Kompositphotographien." In: Inge Hinterwaldner; Markus Buschhaus (ed.): *The Picture's Image: Wissenschaftliche Visualisierung als Komposit*. Paderborn: Fink, 2006, 160–179.

⁵⁸ Bruno Latour has used this metaphor in his work on the social construction of scientific facts in the laboratory through scientific practices and instruments. See Latour, Bruno: *Science in Action: How to Follow Scientists and Engineers through Society*. Cambridge, Mass.: Harvard University Press, 1987; Latour, Bruno; Woolgar, Steve: *Laboratory Life: The Construction of Scientific Facts*. Princeton: Princeton University Press, 1979.

visualisations and their mechanical objectivity could be maintained. This explains the emphasis Galton placed on relating the exact production procedures, including his delineation of instrumental setups. The increasing mechanisation (and implied objectivisation) of the production process led to the construction of new photographic apparatuses, a development culminating in a futuristic-looking instrument for viewing and producing composite portraits from up to six components.⁵⁹

Francis Galton describes the technique in experimental terms as a process of trial and error.⁶⁰ Still he claims to be following the scientific conventions of conducting experiments that had been codified earlier in the nineteenth century: proposing a hypothesis, adhering to strict experimental arrangements that were to allow for the processes to be reproduced, and, finally, analysing and either verifying or refuting his initial hypothesis. However, the intervention of the scientist as a guiding factor, as well as the influences of the experimental layout and technical instruments is underscored in the knowledge production process. The photographic laboratory was far from neutral but was a productive locus and a co-actor in the creation and construction of composite photographs.⁶¹ The handling of chemicals and emulsions, of papers and lenses, of lighting and exposure offered ample opportunities to *develop* the photographic prints, to adapt, to retouch, and manipulate the photographs. Still, the verification of the results and the power of synthesis were relegated to the supposedly objective realm of the mechanical exposure of the photographic medium by means of specialised equipment. The evidential claims of the images almost solely rested on these technical apparatuses and the productive power ascribed to the photographic technique.

The experimental and processual nature of the technique is further emphasised by the essential prerequisites for and steps in the production of composite portraits. The technique always required an archive, a collection of photographic material of a specific group of people, often produced specifically for the purpose. This collection of material was followed by a second phase that entailed a selection of specimens that were deemed suitable for visual

⁵⁹ A prototype of the apparatus was among the instruments of the Galton Laboratory. See Pearson: *Life, Letters and Labours*, 285.

⁶⁰ See Galton: *Inquiries into Human Faculty*, 221.

⁶¹ Latour, in particular, has shown that the experimental layout, the surroundings and the apparatuses shape the results of scientific inquiries. See Latour; Woolgar: *Laboratory Life*.

composition; these were chosen according to additional information on individual cases, or due to their physical appearance. Often this selection process entailed a self-fulfilling prophecy: what was alike was thought to look alike and was “confirmed” as being alike in the photographic composition process. The actual production in the laboratory was the third step: a standardisation of size and exposure, if required, followed by the superimposition of the portraits under strict guidelines and with exact exposure times. After applying the procedure and developing the photograph, the resulting visualisation were judged and compared to the source images and to other composite portraits of the same genre or group of specimens. In a further step, these composite portraits could again be combined into so-called co-composites of a second or third degree.

The production of co-composites was employed to increase the number of specimens and thereby the proclaimed statistical validity of the visual averages. But these different composites of the same corpus of source material were also devices for comparing different ways of arranging the components in preliminary stages. Individual composite portraits were not treated as finished products, but could be adapted and further expanded. During this process, visual complexity increases, while the image itself gradually drifts out of focus. This can be observed in the collection of Galton’s papers in which composites and co-composites of different stages are preserved, on some of which the scientist made notes on their quality and flaws.⁶² The experimental process and the unfinished nature of the compositions allowed for the correction of “mistakes,” since the respective specimens could be excluded from, or toned down in the next composition. Even the published material was not necessarily seen as a final result; in some instances, Galton continued working on the material and published different versions.

Furthermore, composite portraiture indirectly draws on a second method of knowledge production that became influential in the nineteenth century: the case study, which was also developed under a paradigm of direct observation and adherence to positivist modes of reasoning.⁶³ The experiments with

⁶² Among the composites of criminals, for instance there is the remark: “this man’s nose spoils the composite” written on the back of an individual portrait that is kept together with a composite portrait. Taking into account the importance attributed to the shape of the nose in physiognomic descriptions of the criminal, this must have seemed a serious flaw. See Galton Papers, UCL, GALTON 2/8/1/10/10.

composite portraiture by Galton and his contemporaries made use of the records of penal and medical cases, including the photographic documentation produced in the respective disciplinary institutions. They drew on this personal information but in a second step erased the individual stories and case narratives in order to produce a common, yet typical face of a set of cases. This can be traced in particular in contemporary uses of composite portraiture in the medical context, in the visual studies on the typical physiognomy of tuberculosis and mental illness.⁶⁴

Direct descriptions and analyses of the “visual contents” of the images remain conspicuously underdeveloped. Still, the photo-mechanically validated images represented and advanced classist and racist ideological agendas. In many nineteenth-century publications on the topic, the judgment on the accuracy and explanatory power of the composite representations is delegated to the viewers, the select audience of the economic and intellectual elite. This inclusive gesture seems to involve the audience as experts in reading faces. However, not on an equal ground, as it was anticipating the affective and often negative responses to the vague and uncanny facial forms.⁶⁵ Furthermore, specific readings of the composite faces are implied in the writings, by means of titles and subtitles, but also through their incorporation as illustrations into overarching arguments. The diffuse facial forms offered surfaces on which ideas and ideologies of public and experts could be projected in various contexts.

The *developing* of composite portraits can be described in terms of an experimental setup and as an ongoing process, in which the stable factor was neither the often tautological choice of material, nor the often neglected analysis of the visual results. The technique gained its questionable authentication from

⁶³ Susanne Scholz has observed this relationship of experiment and case narrative in the production of knowledge on the nature of the human in the nineteenth-century. She further argues that the case study provided a means to correlate the individual with the formation of the population, as well as the biological genesis of the species, and was a driving force in processes of normalization. See Scholz, *Phantasmatic Knowledge*, 26.

⁶⁴ These uses of composite portraiture in the medical field are examined in chapter 6, “Visual Pathologies.” Here I argue that composite portraiture could in fact be described as a re-visualisation of visual modes of clinical reasoning and the formation of clinical pictures through the accumulation of and abstraction from individual cases.

⁶⁵ My use of “uncanny” here refers to the experience of the strangely familiar as theorised by Sigmund Freud, who also included composite portraiture in his analyses of dreams. I also read the uncanny in relation to the work of robotics expert Masahiro Mori, who detected an “uncanny valley,” an increasing human aversion towards human-like, but not entirely human representations.

the regulation and standardisation of the instruments as well as from practitioners' adherence to strict protocols in the photographic production process. It was this belief in the objective power of the optical-mechanical process of photography – and of the inherent analytical potential of the technique performed in the black box laboratory – by which the evidential claims of composite portraiture were substantiated.

Framing: The Reception of Composite Portraiture

Francis Galton was not only the founder of the composite technique: he was also the person who used composite portraiture most widely and promoted the technique in various fields and contexts. In the late nineteenth and early twentieth centuries, almost all composite portraits produced in Britain were directly related to Galton's own work or co-operations with other scientists – his writings set the tone for discussion of these images in scientific discourse. However, contrary to Galton's expectations, the photographic method never was crowned with the success, neither in his homeland nor in continental Europe.

In the United States, however, the technique was well received during the 1880s. It was discussed favourably and became widely used in anthropology, medicine, and criminology. The Harvard Medical School professor Henry Pickering Bowditch argued that composite portraits offered “the typical form a truly objective character”⁶⁶ and saw a promising future for the technique's use in scientific inquiries.⁶⁷ Likewise, the New York based psychologist Joseph Jastrow was intrigued by the technique's potential for producing visual averages and types: “Composite photography aims to take this process out of the hands of erring judgement and vague imagination, and reduce the art of type-getting to a mechanical one of combining photographs.”⁶⁸ American criminal anthropologists, who drew on Lombrosian positivist criminology,⁶⁹

⁶⁶ Bowditch, Henry Pickering: “Are Composite Photographs Typical Pictures?” In: *McClure's Magazine*, September 1894, 331–342.

⁶⁷ See chapters 4 and 7.

⁶⁸ Jastrow, Joseph: “Composite Portraiture.” In: *Science*, 6, no. 134, 28 August 1885, 165.

used and further developed Galton's technique, and composite portraits were used as frontispieces in several influential criminological publications such as the work of Havelock Ellis.⁷⁰ In the United States, the technique continued to be used in the fields of anthropology and medicine well into the first part of the twentieth century. This positive reception is also attested to by the use of such images beyond the realm of science. In the popular cultural field, they became used in the self-affirmative depiction of the American scientific community and as a memento of the graduation of students, asserting physical and intellectual fitness. Furthermore, composite photography gained currency in the production of ideal historical portraits of figures such as George Washington and William Shakespeare.

In continental Europe, the technique of photographic composition was not received as well. Even though Bowditch embarked on a lecture tour of Europe exhibiting composite portraits and even producing composites of German soldiers,⁷¹ Europe did not catch the “composite-fever.” Only a few German and French language articles refer to the technique until it received a late update in the work of the German-Swedish experimental psychologist David Katz and his team in the mid-twentieth century.⁷² A notable exception is the work by Arthur Batut, an amateur photographer from the French Pyrenees, who is better known as a pioneer of aerial photography. Batut worked intensively with composite photography, publishing accounts of his experiments and becoming the central proponent of the technique in France.⁷³

One of the very few critical nineteenth-century voices on composite portraiture was Ellerslie Wallace, the author of a manual for amateur photographers. He described composite portraiture as “nonsense” and “absurd quackery”⁷⁴ and objected to the assumption that the photographic technique was able to add or partially destroy visual elements by adding layers of exposures: a composite photograph could not claim to be a picture in any sense, Wallace argued, but

⁶⁹ Cesare Lombroso, the founder of Italian positivist criminology, also used the technique of composite portraiture. See the discussion in chapter 3, “Suspect Identities.”

⁷⁰ See chapter 3, “Suspect Identities.”

⁷¹ Bowditch's composite portraits are discussed in chapter 4.

⁷² See Katz, David: “Durchschnittsbild und Typologie.” In: *Studien zur Experimentellen Psychologie*, Basel: Benno Schwabe, 1953, 11–37.

⁷³ Arthur Batut's composites will be discussed in chapters 4 and 8.

⁷⁴ Wallace, Ellerslie: “Composite Photography.” In: *The Photographic News*, 6 January 1888, 211–212.

merely represented a jumble of disjointed outlines.⁷⁵ The technique also encountered some pushback in French criminology, which countered Italian positivist approaches to the nature of the criminal. The sociologist and criminologist Gabriel Tarde, a leader of the French school of criminology, contended that while it was certainly possible to produce a composite of all criminals in Lombroso's publications, and while there would certainly be a visual result following Galton's procedure, this would "be nothing more than a violent fusion and produced heterogeneous images."⁷⁶ Wallace scoffed that it would be equally valid to attempt photographic compositions of tourist attractions and landscapes and concluded that composite portraits deserved the title: "'Confusion now hath made his masterpiece.'"⁷⁷

This quote foreshadows some of the many adaptations of the technique in the visual arts in the digital age of the late twentieth and early twenty-first centuries. Evidential claims were subverted and the genre of composite portraiture was expanded to include the superimposition of landscapes, buildings, as well as printed materials. Even whole visual archives and cinema productions were condensed into one image.⁷⁸ In popular culture around the turn of the twenty-first century, digital composites and the morphing of faces became fashionable, and such images were widely diffused on the internet, in publications such as *Time* magazine, and in advertisements. In the scientific field the technique was almost forgotten, along with much of its positivist and physiognomic baggage. But in the wake of increasing computerisation, the digital availability of big data sets of portraits, and the advent of artificial intelligence, scientific interest was likewise reawakened around the turn of the twenty-first century. Studies that make use of composite portraiture have been produced in the fields of medicine, psychology, and in the study of attractiveness. Some crude neo-materialist examinations even claim to be able to spot sexual orientation in the face and verify their results by means of composite portraiture.⁷⁹

⁷⁵ See Wallace: "Composite Photography," 11: "I take it that any picture to be a picture must have an outline. A 'Composite' of ten sitters made with ten exposures, no matter how carefully graded, would have ten outlines. It so therefore ten times a picture! Certainly not ten pictures. We have ten outlines, each striving for the dominant position, but we know that two outlines can no more occupy the same place than two bodies can occupy the same space at the same time."

⁷⁶ Tarde, Gabriel: *Philosophie pénale*. Lyon: Strock, 1890, 221.

⁷⁷ Wallace: "Composite Photography," 12.

Re-Framing: Current Academic Perspectives on Composite Portraiture

A number of current theoretical positions have guided the development of my perspective: the work on visual representation and objectivity done by Lorraine Daston and Peter Galison;⁸⁰ the perspectives on modern visuality offered by Jonathan Crary⁸¹ and Martin Jay;⁸² the insights on nineteenth-century visual culture put forward by Kelly Hurley,⁸³ Jennifer Tucker,⁸⁴ and Susanne Scholz,⁸⁵ as well as, more particularly, the work on violence and power structures in photography done by John Tagg⁸⁶ and Elisabeth Edwards;⁸⁷ the studies of racialising representation and physiognomic stereotyping by Amos Morris-Reich,⁸⁸ Sander Gilman,⁸⁹ and Debbie Challis,⁹⁰ and of photography and eugenics by Anne Maxwell;⁹¹ the historical analyses of identification and penal

⁷⁸ The American artist Jason Salavon has produced digital video composites and stills from television series such as *The Simpsons*. See Salavon, Jason: *All the Ways (The Simpsons)* Video composite, still, 23', 2016. The German artist Christian Mahler, in a series entitled *MetaMovies*, has produced composite images, visual arithmetic means of all frames of iconic movies, such as *2001: A Space Odyssey*, *Star Wars*, or *A Clockwork Orange*. ; See Mahler, Christian: "Interconnected Pictures." In: Ulrich Richtmeyer (ed.): *Phantomgesichter. Zur Sicherheit und Unsicherheit im biometrischen Überwachungsbild*. Paderborn: Fink, 2014, 129–145.

⁷⁹ See Wang; Kosinski: "Deep Neural Networks."

⁸⁰ See Daston; Galison: *Objectivity*.

⁸¹ Crary, Jonathan: *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*. Cambridge, Mass.: MIT Press, 1990; Crary, Jonathan: *Suspensions of Perception: Attention, Spectacle, and Modern Culture*. Cambridge, Mass.: MIT Press, 1999.

⁸² See Jay, Martin: "Scopic Regimes of Modernity." In: Hal Foster (ed.): *Vision and Visuality*. Seattle: Bay Press, 1988, 3–23.

⁸³ See Hurley, Kelly: *The Gothic Body: Sexuality, Materialism, and Degeneration at the Fin de Siecle*. Cambridge: Cambridge University Press, 1996.

⁸⁴ Tucker, Jennifer: *Nature Exposed: Photography as Eyewitness in Victorian Science*. Baltimore: Johns Hopkins University Press, 2013.

⁸⁵ See Scholz: *Phantasmatic Knowledge*.

⁸⁶ Tagg: *Burden of Representation*; Tagg, John: *The Disciplinary Frame: Photographic Truths and the Capture of Meaning*. Minneapolis: University of Minnesota Press, 2009.

⁸⁷ See Edwards: *Raw Histories*.

⁸⁸ See Morris-Reich: *Race and Photography*.

⁸⁹ See Gilman, Sander: *The Jew's Body*. New York: Routledge, 1991.

⁹⁰ See Challis, Debbie: *The Archaeology of Race. The Eugenic Ideas of Francis Galton and Flinders Petrie*. London: Bloomsbury, 2013.

⁹¹ See Maxwell, Anne: *Picture Imperfect: Photography and Eugenics, 1870–1940*. Brighton: Sussex Academic Press, 2008.

practices as well as positivist criminology by Michael Ignatieff,⁹² John Torpey,⁹³ Peter Becker,⁹⁴ Valentin Groebner,⁹⁵ Nicole Hahn Rafter,⁹⁶ and Dana Seitler;⁹⁷ the studies on criminalising visualisations and physiognomy by Daniel Pick,⁹⁸ Claudia Schmölders,⁹⁹ and Greta Olson;¹⁰⁰ as well as the more general examinations of visual typecasting by Stuart and Elisabeth Ewen,¹⁰¹ and of norm and normality by Georges Canguilhem¹⁰² as well as by Peter Cryle and Elizabeth Stevens.¹⁰³

There are a number of different positions on the technique of composite portraiture in current research in English, French, and German. These mainly focus on the historical scientific composites produced by Francis Galton around the turn of the twentieth century. The discussion was started by Allan Sekula and Christian Phéline in the mid-1980s, who proposed a reading of the technique in relation to nineteenth-century identification practices and the typecasting of the human body. The photographic practices of Francis Galton and the founder of modern identification, Alphonse Bertillon, are read as positivist

⁹² See Ignatieff, Michael: *A Just Measure of Pain. The Penitentiary in the Industrial Revolution 1750–1850*. London; New York: Penguin, 1978.

⁹³ Torpey, John: *The Invention of the Passport: Surveillance, Citizenship and the State*. Cambridge: Cambridge University Press, 2000; Caplan, Jane; Torpey, John (eds.): *Documenting Individual Identity*. Princeton: Princeton University Press, 2001.

⁹⁴ See Becker, Peter: "The Standardized Gaze: The Standardization of the Search Warrant in Nineteenth-Century Germany." In: Caplan; Torpey (eds.): *Documenting Individual Identity*, 139–163; Becker, Peter; Wetzel, Richard F. (eds.): *Criminals and their Scientists: The History of Criminology in International Perspective*. Cambridge: Cambridge University Press, 2006.

⁹⁵ See Groebner, Valentin: *Who Are You? Identification, Deception, and Surveillance in Early Modern Europe*. New York: Zone Books, 2007.

⁹⁶ Hahn Rafter, Nicole: *Creating Born Criminals*. Urbana: University of Illinois Press, 1997; Hahn Rafter, Nicole: "Criminal Anthropology. Its Reception in the United States and the Nature of its Appeal." In: Becker; Wetzel (eds.): *Criminals and their Scientists*, 159–181.

⁹⁷ See Seitler, Dana: *Atavistic Tendencies: The Culture of Science in American Modernity*. Minneapolis: University of Minnesota Press, 2008.

⁹⁸ See Pick, Daniel: *Faces of Degeneration. A European Disorder, c. 1848–c. 1918*. Cambridge: Cambridge University Press, 1989.

⁹⁹ Schmölders, Claudia: *Der exzentrische Blick. Gespräch über Physiognomik*. Berlin: Akademie Verlag, 1996.

¹⁰⁰ See Olson, Greta: *Criminals as Animals from Shakespeare to Lombroso*. Berlin; Boston: De Gruyter, 2013.

¹⁰¹ See Ewen, Elizabeth; Ewen, Stuart: *Typecasting. On the Arts and Sciences of Human Inequality. Second Edition*. New York: Seven Stories Press, 2008.

¹⁰² Canguilhem, Georges: *The Normal and the Pathological*. New York: Zone Books, 2007 [1966].

¹⁰³ Cryle, Peter; Stephens, Elizabeth: *Normality: A Critical Genealogy*. Chicago: University of Chicago Press, 2017.

efforts regulating social deviance, and as disciplinary practices that are linked to the production of docile bodies and the establishing of an archive. Sekula observes the technique's proximity to physiognomic thinking and the work of the social statistician Adolphe Quetelet. He contends that, while Bertillon's photographic practice sought to embed the photograph in the archive, composite portraiture sought to condense the archive into one photograph.¹⁰⁴ Phéline likewise highlights the effect of synthesis and observes connections between composite photography and the chrono-photography of Eadweard Muybridge as well as other forms of photographic multiplication such as in illustrations in scientific and criminological literature. In relation to these, he describes composite portraits as second-degree forms of representation.¹⁰⁵ Composite portraits are thus conceptualised as meta-portraits and as disciplinary, bureaucratic, and ideological devices, and they can be understood, I argue, as biopolitical portraits. The perspective established by Sekula and Phéline is taken up by Suren Lalvani¹⁰⁶ and Jonathan Finn,¹⁰⁷ who expand the focus towards the formation of modern bodies and current surveillance society. I continue these Foucauldian analyses in particular in my chapters on the origins of the composite technique and on its criminalising gaze. Yet my study offers a more structured and in depth analysis of the constitution and role of the images and the gazes expressed in composite portraiture and expands the perspective by affect theoretical considerations.

David Green, who can also be counted among the pioneers of the current discussion of composite portraits, deals with the images' use in the field of eugenics. His argument focuses on visual examples of negative eugenics, and he stresses the role of composite portraiture in establishing the credibility and public acceptance of eugenics as an objective science in the nineteenth century. Green proposes that in this context, composite portraits could be understood in terms of a translation of class interests into a visual form.¹⁰⁸ Likewise, Anne Maxwell in her study of photography and eugenics stresses the

¹⁰⁴ See Sekula: "The Body and the Archive."

¹⁰⁵ See Phéline, Christian: *L'image accusatrice*. Paris: Les Cahiers de la photographie, 1985, 77.

¹⁰⁶ Lalvani, Suren: *Photography, Vision, and the Production of Modern Bodies*. Albany: State University of New York Press, 1996.

¹⁰⁷ See Finn, Jonathan: *Capturing the Criminal Image. From Mug Shot to Surveillance Society*. Minneapolis: University of Minnesota Press, 2009.

¹⁰⁸ See Green, David: "Veins of Resemblance: Photography and Eugenics." In: *Oxford Art Journal*, 7:2, 1984, 3–16.

exclusionary character of composite portraiture in the field of eugenics, but she also opens the discussion of the corpus of positively connoted composite portraits. Maxwell addresses the use of the technique in examining “degeneration” but also in proclaiming images of supposed racial purity and physical perfection.¹⁰⁹

Susanne Scholz, who also notes the positively read composites as self-affirmative constructions, describes the composite portraiture as a semiotic technique of reading off the face and as a diagnostic tool, stressing its experimental character.¹¹⁰ Focusing on the technique’s use in the production of family resemblance, she conceptualises the images as genealogical pictures, as visual explorations of familial relationships and historical evolutionary development.¹¹¹ Scholz here draws on the work Daniel Pick, who had read composite photographs, with reference to the concepts of degeneration and atavism, as representations of the subjects’ ancestral past and biological history.¹¹² Recent research has not focused on these influences of the composite visualisations on Galton’s theoretical conception of hereditary transmission. Yet composite portraiture provided a visual metaphor and a blueprint for his genetic theories, which became influential in late nineteenth-century and also informed his own eugenic project.¹¹³

Amos Morris-Reich focuses on composite portraiture as a racialising technique and highlights the fact that composite images fused imagination with perception, thus contributing to the construction of imagined racial communities. He traces the continuity of such images in anti-Semitic writings into the Nazi racial laws that prepared the way for the Holocaust.¹¹⁴ Gunnar Schmidt, likewise, discusses composites in relation to nineteenth-century bio-deterministic

¹⁰⁹ See Maxwell: *Picture Imperfect*.

¹¹⁰ Andreas Mayer, also, has stressed the experimental and processual nature of composite portraiture. See Mayer, Andreas: “Von Galtons Mischphotographien zu Freuds Traumfiguren. Psychometrische und psychoanalytische Inszenierungen von Typen und Fällen.” In: Michael Hagner (ed.): *Ecce Cortex. Beiträge zur Geschichte des modernen Gehirns*. Darmstadt: Wissenschaftliche Buchgesellschaft, 1999, 110–143.

¹¹¹ See Scholz: *Phantasmatic Knowledge*.

¹¹² See Pick: *Faces of Degeneration*. See also Mayer: “Von Galtons Mischphotographien zu Freuds Traumfiguren,” on the genealogical nature of family composites.

¹¹³ This line of argument will be followed in chapters 7 and 8 on the eugenicising and genealogising gaze of composite portraiture.

¹¹⁴ See Morris-Reich: *Race and Photography*. Stuart and Elizabeth Ewen likewise read the technique in relation to its racial typecasting function. See Ewen; Ewen: *Typecasting*.

and racial discourses, observing the speechlessness of the authors both in relation to the composite images and in relation to racial representations. In this gap of muteness, he argues, the images themselves achieve authority in representing and essentialising racial typologies, and they provide eugenic fictions.¹¹⁵ The most thorough analysis of racialising composites has been provided by Debbie Challis, who examines the common eugenic positions of Francis Galton and the archeologist Flinders Petrie. She also observes Galton’s admiration of classical aesthetics and of the normative ideals of perfection and beauty derived from ancient sculptures and artefacts that would themselves be scrutinised by means of composite portraiture.¹¹⁶ All of these impulses will be taken up in chapters 4, 5 and 10 on the racialising gaze and the aesthetising gaze of composite portraiture.

While many scholars have commented on composite photography’s aim of “reading off the face,” the proximity of the technique to mapping, its topographical approach to the human face, is underrepresented in the current academic discussion.¹¹⁷ A thorough discussion of composite portraiture as a physiognomic technique is similarly lacking, which is especially viral in its criminalising gaze. In the positivist climate of nineteenth-century science, the composite technique was positioned as a superior form of perception, as a more objective way of forming visual concepts and typecasts, providing novel mappings of the human face that were uncontaminated by subjective human intervention. Apart from the widely quoted origins of the technique in statistical methodology, which are unquestioned, I suggest that the technique can also be described as a form of typological mapping and as a re-visualisation of the visual paradigm of scientific – and more particularly medical – observation and reasoning. Its role in the formation of clinical pictures will be discussed in chapter 6 on the pathologising gaze of composite portraiture. This links in with metaphorical readings of composite portraiture as an explanatory model for human perception, illustrating the formation of ideas and (visual) concepts that had already been addressed by Francis Galton¹¹⁸ before it appeared in the writings of Charles Sanders Peirce, Sigmund Freud and Ludwig Wittgenstein.¹¹⁹

¹¹⁵ See Schmidt, Gunnar: *Anamorphotische Körper. Medizinische Bilder vom Menschen im 19. Jahrhundert*. Köln: Böhlau, 2001.

¹¹⁶ See Challis: *Archaeology of Race*.

¹¹⁷ A notable exception is Roland Meyer, who proposes a reading of composite portraiture and physiognomic analysis in relation to mapping. See Meyer, Roland: “Kartographien der Ähnlichkeit. Francis Galtons Kompositphotographien.” In: Inge Hinterwaldner, Markus Buschhaus (eds.): *The Picture’s Image. Wissenschaftliche Visualisierung als Komposit*. Paderborn: Fink, 2006, 160–179.

A recent media historical publication presents the concept of the composite as an explanatory model for the techniques and practices manifesting in scientific visualisations.¹²⁰

Discussing composite photography, most authors stress the importance of knowledge construction and the role of actors and institutions. Notable exceptions aside,¹²¹ however, there are few in-depth discussions of the composite images and the component portraits, their construction processes, contextualization, and distribution. But there is as yet no comprehensive survey of the various, sometimes conflicting understandings of the photographic technique and its utilisation in different scientific fields. The majority of studies focus on the technique's utilisation in the fields of criminality and "race," as well as on eugenics, while other aspects, such as its role in the medical field, its use for positive representations of eugenic role models, representing ideal beauty, or producing ideal historical likenesses, are underrepresented and will be discussed in chapters 6, 7, 9 and 10. I propose to address these perspectives and ideological formations as exemplifying a set of specific "gazes" dominant in the respective contexts. Along with these visual regimes and their interconnections, intersectional categories such as gender, class, and "race," as well as the nexus of health, beauty, and able-bodiedness will be discussed. These diverse aims and claims expressed in the composite technique find expression in Galton's eugenic project, as does the potential ascribed to the technique as an analytical, diagnostic, and predictive tool in biopolitical and eugenic management.

¹¹⁸ Roland Meyer reads Galton's composite portraiture in relation to the scientist's psychometric experiments on memory and the formation of concepts and visual types and his anthropometric laboratories. See Meyer: "Kartographien der Ähnlichkeit."

¹¹⁹ Roland Meyer has written about composite photography as a metaphor and refers to Freud and Wittgenstein. See Meyer: "Kartographien der Ähnlichkeit." Chiara Ambrosio has examined the role of composite portraiture in Charles Sanders Peirce's work. See Ambrosio, Chiara: "Composite Photography and the Quest for Generality: Themes from Peirce and Galton." In: *Critical Inquiry*, 42, 2016, 547–579. Ulrich Richtmeyer has explored Wittgenstein's concept of family resemblance in relation to composite portraiture. See Richtmeyer, Ulrich: "Die unscharfe Allgemeinheit des Bildes. Wittgensteins Begriff der Familienähnlichkeit und das biometrische Kompositbild." In: Ulrich Richtmeyer (ed.): *Phantomgesichter. Zur Sicherheit und Unsicherheit im biometrischen Überwachungsbild*. Paderborn: Fink, 2014, 107–127. Carlo Ginzburg has described Galtonian family resemblance as a cognitive metaphor. See Ginzburg, Carlo: "Family Resemblances and Family Trees: Two Cognitive Metaphors." *Critical Inquiry*, 30:3, 2004, 537–556. Andreas Mayer has read composite portraiture in relation to Freud's interpretation of dreams. See Mayer: "Von Galtons Mischphotographien zu Freuds Traumfiguren."

¹²⁰ See Hinterwaldner, Inge; Buschhaus, Markus (eds.): *The Picture's Image. Wissenschaftliche Visualisierung als Komposit*. Paderborn: Fink, 2006.

¹²¹ Some notable exceptions are: Challis: *Archaeology of Race*; Scholz: *Phantasmatic Knowledge*; Morris-Reich: *Race and Photography*.

Existing studies deal predominantly with Galton's composite productions and largely omit the corpus of composite portraiture produced by other scientists around the turn of the twentieth century in Europe and North America. My discussion of examples from this extensive corpus shows, however, the pervasiveness and persistence of the technique in various fields as well as the adaptations, re-evaluations, and advancements of composite portraiture over time. Moreover, my examination demonstrates the proximity of the scientific technique to artistic photography and aesthetic theories. In its quest for the visualisation of the invisible and the essence of human nature, composite portraiture can indeed be described as an artistic technique.

In the course of my slightly encyclopaedic endeavour, the first comprehensive study of composite portraiture, I will examine the large corpus of historical composite portraits and individual component portraits, their production and contextualisation. At the same time, my examination takes into account the more recent production of composite portraits, often by digital means, in science, the arts, and popular culture, which is often neglected in current literature.¹²² This diachronic reading of composite portraiture opens new perspectives on present uses of the technique but also on the historical images and their modes of reasoning¹²³ as well as on the role of composite photography in the construction of a particular epistemic picture of the human.

Re-Adjusting the Lense: The Gazes of Composite Portraiture

In order to illuminate the wide-ranging and sometimes conflicting aims, claims, and perspectives of composite portraiture in different epistemic fields, I base the structure of my analytical framework on the concept of the gaze. My examination reveals divergent but interlinked gazes, historically shaped visual regimes that have been adopted by the practitioners of composite

¹²² I see no fundamental functional difference in the production of digital composite portraits as compared to analogue photographic superimpositions. The process might vary, it has become easier and automated systems might be employed, but the nature of the images as artificial representations of a group of people in a single facial portrait remains as does the intransparent nature of the production process.

portraiture. I have identified this set of specific gazes expressed in composite portraiture according to the topics scrutinised by means of the technique in each case, but also according to their socio-political orientation and historical ideological formation. These respective foci, objectives, and ideological functions, their social norms and cultural ideals, are discussed in the following chapters. The elucidations of the specific gazes will provide the organisational structure of my individual case studies in the different fields in which the technique has been used.

The act of gazing creates a subjective power difference in which that which is gazed on is perceived as an object, not as an active and empowered subject. This includes the pleasure of looking and voyeurism, which are also relevant with respect to composite portraiture.¹²⁴ The objectifying visual regimes thus create power structures that are constructed in and through social and discursive surroundings – and which in turn shape social realities. The discriminating power structures of the gaze, already present in photography, become intensified through the de-individualising character of the composite technique.¹²⁵ Composite photography further objectifies and abstracts from individuals, asserting the existence of a common, typical appearance, an appearance that was analysed and evaluated by male white scientists around the turn of the twentieth century. This gaze of scientific actors was conceptualised by Michel Foucault in terms of an empirical gaze and, with respect to the field of medicine more specifically, as a medical gaze.¹²⁶ The specific forms of the gaze that I have observed in relation to composite portraiture can be understood as sub-divisions of and additional foci of this empirical gaze. The choice of the participial form in my designations of the respective phenomena (e. g., *criminalising gaze*) expresses my understanding of the

¹²³ There are only few current authors who also examine current artistic works produced by means of the composite technique. Some mention individual artists such as Nancy Burson, Krystof Pruszkowski, and Thomas Ruff in passing. See Schmidt: *Anamorphotische Körper*; Phéline: *L'image accusatrice*; Sekula: "The Body and the Archive."

¹²⁴ This conceptualization of the gaze is proposed in the work of Jean-Paul Sartre and was brought into focus with respect to the heterosexual male perspective in film and popular culture by Laura Mulvey in her concept of the so-called male gaze. See Sartre, Jean-Paul: *Being and Nothingness: An Essay in Phenomenological Ontology*. New York: Citadel Press, 2001 [1943]; and Mulvey, Laura: "Visual Pleasure and Narrative Cinema." In: *Screen* 16:3, 1975, 6–18.

¹²⁵ Susanne Scholz has observed that the scientific gaze of photography entails specific protocols of seeing: the presumption of an unmediated relation of seeing and knowing, a de-contextualisation of its objects, and a re-contextualisation that results in an atemporal understanding of the depicted as representative object for scientific inquiry. See Scholz: *Phantasmatic Knowledge*, 99.

¹²⁶ See Foucault: *Birth of the Clinic*.

composite portraiture as an active agent and ideologically motivated process in the formation of epistemic and social realities.

What I describe as the **criminalising gaze** of composite portraiture sought to reveal hereditary signs of criminality on the body of individuals and aimed to construct specifically "criminal" group identities. The construction of this criminalising perspective was made possible by photographic advances in the judiciary identification system, whose archives provided the basis for the first experiments with the composite technique. The criminalising gaze of composite portraiture focused on a social phenomenon and a specific social group locked away in disciplinary institutions. The composites it produced appear as a form of visual evidence of the abnormality and fundamental difference of convicts in relation to the rest of society. By means of a retrospective ascription of social deviance to the prison population, such images were used to justify the increasing institutionalisation of groups of society in prisons and penal colonies. In the classist climate of nineteenth-century Britain, this suspicion was extended towards other groups marked as deviant that made up the population of poor houses, asylums, and clinics. The evidential claims of these visual constructions of the archetypical criminal relied on theories of positivist criminology that focused increasingly on individual criminals and their bodies as expressions of moral deviance and degeneration. These new explanatory models drew on older physiognomic conceptions of criminality and criminal-animal analogies, revealing the criminalising gaze to be an essentially physiognomic gaze. Furthermore, its visual regime was based on Social-Darwinist evolutionary theory and proto-eugenic thought that opted for the containment of social evil. This attests to the proximity of the criminalising gaze to the eugenicising gaze of composite portraiture.

In the technique's criminalising gaze, fears of social chaos and ideas of bio-political management and identification merge in a climate of general suspicion. Composite portraiture in this field gains an acutely unsettling connotation when its predictive quality and future orientation are stressed and individuals' propensity to commit crime becomes a topic of inquiry. This links in with the analysis of future risks that, like composite portraiture, has its roots in statistics and is currently seeing a revival in theories of so-called actuarial justice, actuarial criminology, and new penology that redirect the focus away from the individual offender and the crime, and back to the analysis of groups and types.¹²⁷ In the nineteenth century, the composite technique proved

influential in the field of criminology and criminal anthropology, in particular in the United States. The role of the technique in these fields and its specifically criminalising gaze will be the focus of chapter 3, *Suspect Identities*.

The **racialising gaze** of composite portraiture focuses on the genetic constitution and evolutionary development of groups of people. The technique here presupposes and perpetuates racial difference and, historically, sought to visualise genetic composition through the agglomeration of phenotypical appearances. The composites function as visual proofs of racial difference and of the inherent superiority or inferiority of specific groups of people. The images thus manifest the concrete social practice of a racist ideology that contributed to the subjugation of groups of society and were used as a justification of colonialism. The technique originated in and contributed to the contemporary scientific discourse on “race” and its evolutionary origins that was played out in ethnology, (visual and physical) anthropology, anthropometry, and craniometry. In the racialising gaze of composite portraiture – the construction of national and ethnic typecasts – its essentialising of phenotypical characteristics is particularly pronounced. In this particular case, its practitioners employed composition and visual averaging to achieve the reverse: the de-composition of genetic code and the fabrication of visual prototypes along the lines of dominant stereotypes and power structures. In its racialising gaze, the analytical potential ascribed to the technique is extended; it is not merely directed at capturing inner character and moral disposition (as in its criminalising gaze) or genetic predisposition to diseases (as in its pathologising gaze), but it performs an investigation into the past, where it claims to find an ancestral genetic image as well as the essences and hierarchy of “races.” This temporal dimension of the technique, employed to navigate through human phylogenetic history and into the future, is particularly relevant with respect to Galton’s eugenic project. The racialising gaze of composite photography, as applied to European as well as on colonial populations, will be examined in chapter 4, *Racial*

¹²⁷ Actuarial justice approaches perceive crime as natural element of society and adopt a statistical and future-oriented rather than a rehabilitative approach to crime and criminals. They focus on the management of criminal behavior and criminals and establish risk profiles, aggregate group categories, and classifications that locate and track actual and potential offenders. Corresponding views are expressed in a so-called “new penology” that normalises crime and aims to counter criminality through technological and statistical approaches. See Robert, Dominique: “Actuarial Justice.” In: Mary Bosworth (ed.): *Encyclopedia of Prisons and Correctional Facilities*. London: Sage, 2005, 11–14. See also Brown, Michelle: “New Penology.” In: Gerben Bruinsma, David Weisburd (eds.): *Encyclopedia of Criminology and Criminal Justice*. New York: Springer, 2018. https://doi.org/10.1007/978-1-4614-5690-2_313 [15/01/2022].

Prototypes. The study of skulls by means of composite portraiture, which can also be subsumed as an element of the technique’s racialising gaze, will be discussed in chapter 5, *Cranial Composites*.

The **pathologising gaze** of composite portraiture, which will be discussed in chapter 6, *Visual Pathologies*, zooms in on deviations from health in human bodies and minds and on their presumed pathological condition. The technique presents itself as a diagnostic tool for uncovering the genetic predisposition of the body to diseases. The composite visualisations of physical and mental illnesses presume the unity of mental and physical health, their genetic grounding, and the visibility of any impairments on the body and face. Even more than the criminalising gaze, the pathologising gaze of composite portraiture focuses on deviance and expresses a normative position in its judgement on deviations from the healthy norm as well as in its construction of exemplary clinical pictures of illnesses for education, research, and diagnosis.

With respect to this perspective, composite portraiture can be seen as a re-visualisation and actual execution of the medical-visual diagnostic paradigm, which consisted in the formation of a clinical picture that was archived through a combination of observations on individual patients into a general, composite “type” of a given disease. However, contrary to its proponents’ assertions of photographic neutrality and objectivity, the pathologising gaze of composite portraiture constructed images of diseases based on their prevalent social perception, as well as on earlier diagnoses and descriptions. This contributed to the further exclusion of already marginalised groups of patients in asylums and clinics, resulted in an increasing pathologisation of social conditions and physical impairments, and served to reproduce and foster the dynamics of power in the class system of nineteenth-century Britain. In this context, the composite technique can be read in terms of what Michel Foucault described as “biopower” or “biopolitics.”¹²⁸ With its focus on the population of disciplinary institutions as well as on the assumed proximity of mental illnesses and criminality, the similarities between the pathologising gaze and the criminalising gaze become obvious; with respect to the segregation and intended “population control” of the deviant groups, proximities to the negatively formulated eugenicising gaze are revealed.

¹²⁸ See Foucault, Michel: *Society Must Be Defended. Lectures at the Collège de France, 1975–1976*. London/New York: Penguin, 2004; and Foucault: *Security, Territory, Population*.

Following the eugenic agenda proposed by Galton for the “advancement” of humanity, the **eugenicising gaze** of composite portraiture was mainly directed at members of respected groups of society, such as soldiers, academics, and students. In this case, the technique worked as a classist diagnostic device that sought to categorise individuals in relation to their supposed genetic quality and social status. It was aimed at producing normative ideal images of human beauty, health, strength, intellect, and morality: (phenotypical) targets towards which eugenic interventions should be geared. Furthermore, the images produced affirmative role models that were oriented at the educated elite, bolstering their self-perception in terms of eugenic ideals. This popularising function of composite portraits as eugenic identification figures was played out in articles in scientific and popular journals as well as in eugenic exhibitions.

Harnessing the beautifying effect of composite portraiture, this perspective prescribed classist and racialised aesthetic ideals. The positive eugenicising gaze formed counter-images to the ones shaped by the criminalising gaze, the racialising gaze, and the pathologising gaze of composite portraiture, and constructed images of an inherently superior white Anglo-Saxon elite. With its focus on population management and improvement, which was supplemented by an inherently disciplinary function, eugenicising composite portraiture represented a biopolitical technique and a power-knowledge paradigm organised around the norm of the average and a prescriptive aesthetic ideal that was, by necessity, exclusive. Especially in its function of establishing a common identity for a white, able American elite and giving this community a face, in opposition to other bodies and faces construed as deviant or degenerate, the technique reveals its discriminatory force as well as a negative eugenic perspective. The popular reception of the eugenicising gaze focuses predominantly on women, a group that was otherwise largely ignored in nineteenth-century composite portraiture. Female virtues such as attributes of care and comfort were ascribed to the composite faces of college students, merging physical beauty with moral qualities and intellectual capacity, exhibiting a male gaze.¹²⁹ Furthermore, the eugenic composite faces had adopted a religious quality, as spiritual collective figures, combining genetic ancestor worship with a projection into the eugenic future.

¹²⁹ See Mulvey: “Visual Pleasure and Narrative Cinema.”

The **genealogising gaze** of composite portraiture was directed at the analysis of family likeness and the visualisation of the genetic relationship between the members of a family. The public viewed the genealogical composites as novel, intriguing family portraits, and from a genetic and eugenic perspective, they could be understood as specialised (genealogical) portraits of a family. Their aim was not to depict any particular biologised socio-cultural group within society, or to reveal a telltale physiognomy, but to provide an analytical tool for investigations into the genetic makeup of a family, as an indicator of a genetic continuity that goes beyond the individual and extends into the common genetic past of the human species. The family is conceptualised, in this context, as an organism moving through time, and the composite technique seeks to decipher its genetic configuration. Family composites were thus seen as a form of visual genetics and must have seemed a useful means for the eugenic project. To Galton, however, the family composites were more than just a diagnostic and predictive tool. The visual reasoning in and with composite portraiture reveals a close proximity to the scientist’s theories of hereditary transmission and to the concept’s epistemological basis in visual, photo-chemical reasoning, for which the composite technique itself provided a blueprint.

Family composites were accepted as suitable icons for collective identification, and, from a eugenic perspective, as confirmations of genetic fitness. This identification extended beyond the family as a collective organism to a larger social collective, a well-educated and wealthy bourgeoisie, revealing again the popularising potential and class consciousness of composite photography already observed in the discussion of its eugenicising gaze. Its genealogising gaze, however, relied on the cooperation of the families and the public and led to institutionalised programmes of collective investigation to achieve biometric mass data collection. At this nexus, the technique for the bio-political management of the population aligns with the formation of technologies of the self, with the transformative practices of self-management in relation to social norms.¹³⁰ The genealogising gaze of composite portraiture will be discussed in chapter 8, *Ideal Family Likenesses*.

¹³⁰ This draws on Foucault’s thoughts on technologies of the self and self-management. See Foucault, Michel: *Technologies of the Self: A Seminar with Michel Foucault*. Eds. Luther H. Martin, Huck Gutman, and Patrick H. Hutton. Amherst: University of Massachusetts Press, 1988.

The **reconstructing gaze** of the composite technique carries the promise of the (re)construction of more accurate and “truthful” portraits of persons living before the advent of photography through the superimposition of their representations in different non-photographic media. These images cater to the desire for an encounter with historical idols and role models. Thus the reconstructing gaze of the technique returns to physiognomic explanatory models and their earlier use as devices for evaluating inner predispositions. In Galton’s work on ideal historical likenesses, the reconstructing gaze of composite portraiture did not remain limited to individual personages. Rather, it became linked to the broader context of his work on exceptional characteristics and their genetic transmission. This shows an expansion of the physiognomic reconstructing gaze towards a genealogical perspective, extending it to the construal of difference in physique along “racial” lines. The reconstructing gaze of composite portraiture furthermore carries spiritualist connotations; it seems aimed at evoking a ghost, in order to bring the obscure historical characters into a face-to-face encounter with a nineteenth-century audience. It could almost be seen as a form of a visual séance or spirit photography, which constituted a popular genre that grasped the (spiritualist) public imagination in the late nineteenth and early twentieth centuries. This peculiar reconstructive perspective on historical figures will be discussed in chapter 9, *True Likenesses and Composite Idols*.

Finally, I will consider the **aestheticising gaze** of composite photography. From the outset, it became clear that the technique tended to even out irregularities and that the “composed” faces were perceived as more attractive than their component images individually. In nineteenth century, this beautifying effect has been discussed in relation to artistic practice and contributed to the use of composite images in popular culture exemplifying the self-affirmative dimension of the technique, such as in composite portraits of families and college graduates. At the same time, ancient ideals of female beauty and their artistic representation were scrutinised by means of the technique in order to extract supposedly timeless forms of a sublime aesthetics. Substantiated by genetic and statistical arguments, the aestheticising gaze of composite portraiture merged physical attractiveness and inner beauty, in the evolutionist climate of the late nineteenth-century, and the argument here returns to physiognomic thought and racialising theories.

Beauty was conceptualised as the representation of physical and mental health, of moral integrity, genetic purity, and intellectual ability. With its roots in conceptions of a physiognomic equation of outer and inner beauty and the assumption of their genetic disposition, as well as in the adaptation of a neo-classicist composite aesthetics, composite portraiture assumed an aestheticising gaze that was appealing to scientists and artists around the turn of the twentieth century. And the appeal of composite aesthetics continues today: the idea of a superiority of composite beauty lives on in current constructions and perceptions of attractiveness and in questionable scientific analyses of (largely female) human beauty. This form of a mechanical and photo-chemical aesthetics has a strong normative dimension and served to construct an ideal that could not be embodied by any individual. This ideal figure, its aesthetic characteristics, and the equation of outer beauty and inner genetic fitness they implied, also informed the eugenicising gaze of composite portraiture. Any deviation from the predefined ideal, prescribed by the aestheticising gaze of composite portraiture, could be measured and evaluated, in a continuum that at its outer borders revealed the reverse of beauty – the ugly and monstrous. The aesthetic qualities of the technique and its quest for ideal and beautiful representation are examined in chapter 10, *Attractive Averages and Composite Beauty*.



White Light
Transilluminator



050

051

2 | Encyclopedic Surfaces and Mental Metaphors: The Origin of Nineteenth-Century Composite Portraiture at the Intersection of Science and the Arts

Composite portraiture is more than just a novel, supra-individual form of portraiture. And it is more than a complex photo-mechanical technique. In fact, it could be described as a thought system and as a form of world-making.¹ In order to describe the multi-faceted backgrounds and ways of making sense of the diffuse yet affective images composite portraiture creates, this study will examine its sources and inspirations as well as the objects, examples, and voices that inspired the origins of the technique. Two main strands of utilisation and understanding, one, visual-descriptive, the other, metaphoric, characterise the genesis and evolution of composite portraiture, both of them constantly conditioning each other.

My exploration starts with the immense collection of Galton's papers, books, letters, and photographic prints, as well as other artefacts and objects, such as glass negatives and instruments, which is housed in two separate archives at University College London. The handling of the papers and objects during my repeated visits, and the classification and contextualisation of the often poorly documented materials required an active involvement with the artefacts from an academic but, at the same time, from an artistic-curatorial perspective. This included descending into the archives, unpacking, illuminating, and replicating glass negatives and later transforming them into positives; re-enacting the several steps of their production processes in the dark room and by means of digital image processing tools. It meant literally looking through the very stereoscopic lenses Galton had used. This way of retracing the development of the composite technique and making sense of composite reasoning comprises elements which could best be described as artistic-curatorial research.

¹ See Nelson Goodman's concept of worldmaking: Goodman, Nelson: *Ways of Worldmaking*. Cambridge: Hackett Publishing, 1978. See also: Nünning, Ansgar; Nünning, Vera; Neumann, Birgit (eds.): *The Aesthetics and Politics of Cultural Worldmaking*. Trier: WVT, 2010.

This chapter examines different impulses and inspirations for the development of the technique and indicates its connections to evolutionary theory, cartography, and statistics, as well as aesthetics and physiognomic thinking. It furthermore explores the connection of composite portraiture to modes of visual identification in the disciplinary and administrative apparatuses, to the techniques of stereoscopy, chronophotography, and combination printing, as well as its roots in artistic photography. The second strand will be addressed in a brief examination of the metaphorical understandings of composite portraiture and of its use as an explanatory device in the works of Immanuel Kant, Adolphe Quetelet, and Francis Galton.

Mapping Evolutionary Facial Typologies

In Galton's books and articles, of which copies are kept (some of them annotated) among the collection of his papers at University College London, the scientist acknowledged a number of sources and inspirations for the development of composite portraiture. What is initially described as a neutral instrument of visual comparison soon reveals its roots in evolutionary theory as well as in a taxonomic description of humankind that also seems indebted to physiognomic thought. At this point, a relationship of composite portraiture to cartography and mapping comes to the fore, revealing an understanding of the face as a topographical surface to be studied by evolutionary taxonomy and physiognomic character reading.

In what could be described as a founding myth of composite portraiture, Galton refers to a conversation with Herbert Spencer about optically extracting typical facial characteristics from a set of portraits.² Spencer, an influential anthropologist, biologist, sociologist, and philosopher, who was a powerful advocate for Social Darwinist evolutionary theory,³ is credited with having developed an instrument with which to trace mechanically sections of heads on transparent paper in order to superimpose them to obtain an average result.⁴ This mode of scientific deduction, of seeing and describing the general and common

² In Spencer, Galton found a like-minded thinker who showed interest in his projects and whose critical input he cherished. Galton highlights Spencer's ability for abstract generalisations. See Galton, Francis: "Personal Reminiscences." In: David Duncan (ed.): *Life and Letters of Herbert Spencer*. New York: Appleton, 1911, 262-264, at 263.

within the multitude, was an essential feature of visual anthropology and nineteenth-century taxonomy, in particular in the field of then nascent evolutionary theory. The invention of a photographic technique for the accurate visual comparison of general physical characteristics and the establishing of visual types must have seemed more than desirable.

A further impulse for the development of the technique came from another prominent figure: Charles Darwin, who with his evolutionary theory not only provided the scientific basis for the method of visual reasoning, but also forwarded a letter to Francis Galton that proved of consequence for his photographic work.⁵ In response to Darwin's book *The Expression of Emotion in Man and Animals*,⁶ A.L. Austin from New Zealand described a method of combining portraits of different persons with a stereoscope and proposed experiments with the superimposition of faces of the "races of mankind," but also of family members, as well as of animals, for purposes of breeding.⁷ Austin, an avid reader of Darwin's work, thus not only anticipated composite portraiture, but also proposed its utilisation in many of the fields in which the technique later became employed. The immediate influence of Darwin's work, also, cannot be overrated. For his influential study on emotional

³ Based on Lamarckian theories of evolution Spencer argued for a continuous, linear process of evolution, through partly acquired characteristics, towards ever more heterogeneous forms. Today Spencer is probably best known for coining the expression: "survival of the fittest" and for applying evolutionary theory on social systems according to the doctrine of 'Social Darwinism,' according to which evolution and natural selection also apply to society, social classes, and individuals. See Spencer, Herbert: *Principles of Biology*. London; Edinburgh: Williams and Norgate: 1864; Burrows Acton, Harry: "Herbert Spencer." In: *Encyclopedia Britannica Online*. <http://www.britannica.com/biography/Herbert-Spencer> [15/01/2022].

⁴ Galton, Francis: "Composite Portraits." [1878], 97.

⁵ See Austin, A.L.: Letter addressed to Charles Darwin, 6 November 1877. Galton Collection, UCL GALTON/2/8/1/1/2.

⁶ Darwin, Charles: *The Expression of Emotions in Man and Animals*. London: John Murray, 1872.

⁷ See Austin: Letter to Darwin, 6 November 1877.

⁸ Thomas Henry Huxley helped Darwin collect photographs. For his research on the universality of emotional expression, Darwin sent out a questionnaire to colonial outposts in the British Empire in 1867. This, interestingly, links in with Huxley's project of a visual survey of the "races" of the British Empire in 1869, for which he was developing an anthropometrical photographic standard for the depiction the human body. See Prodger: *Darwin's Camera*; Edwards: *Raw Histories*.

⁹ Among Darwin's collection is a portrait of a patient from Bethlem Asylum that was taken by Henry Hering in 1858-59. The professional studio photographer apparently was commissioned by the asylum authorities to take before-and-after images of some patients in order to document the success of moral treatment, the possibility of their regaining social respectability, and the general impact of the work of the institution. See Hering, Henry: „Portrait of E.C., a female patient diagnosed with acute mania." 1858-1859, HPA-17, Bethlem Royal Hospital Archives and Museum, London.

expression Darwin collected commercial studio photographs, but also portraits from ethnographic⁸ and medical contexts.⁹ Darwin drew, for instance, on the photographic archive of the French neurologist Duchenne de Boulogne, who had been stimulating the facial expressions of psychiatric patients using electric current and published the first photographically illustrated book on human facial expressions.¹⁰ Darwin also commissioned the artistic studio photographer Oscar Gustave Rejlander, who can be considered a founder of combination photography, to produce photographs for his publication.¹¹ The photographer himself posed in different emotional states, and many of these "staged emotions" were eventually used as illustrations for the book.¹²

Galton, who describes learning about Darwin's evolutionary theory as the founding moment of his career, was certainly familiar with this work on facial expression.¹³ His experiments with composite portraiture can be seen as a further advance in the direction of deciphering the human face and its evolutionary "deep structure" by photographic means. Galton, however, followed a different agenda: while Darwin's book had focused on the shifting emotional expressions of the human face and body, his own aim was to produce generalised, neutral facial typologies. Only at first glance, this seems conflictive; Darwin understood emotional expression as a type of acquired behavior that affects evolutionary survival, and in order to deduce common origins, he was studying generalised universal expressions in individual portraits. Galton's

¹⁰ Duchenne used electric current as a means to activate and contract certain muscles to show facial expressions of patients mainly from Salpêtrière Hospital in Paris. He was the first scientist who managed to photograph these expressions. Photography in those days required long exposure times, and through this process Duchenne could "freeze" the activity of his subjects, rather than accelerating the speed of exposure. He also used his results to criticise certain works of art, for instance Greco-Roman statuary, for their anatomical inaccuracy. This critique of a faultiness of artistic production is a recurring feature of scientific photography, also of composite portraiture. See Duchenne De Boulogne, G.-B.: *The Mechanism of Human Facial Expression, or an Electro-physiological Analysis of the Expression of the Passions Applicable to the Practice of the Fine Arts*. [1862] Paris: Librairie J.-B. Baillière et Fils, 1876.

¹¹ For a more detailed discussion of the connection of Rejlander's and Darwin's work see Prodger: *Darwin's Camera*. For Rejlander's role in composite photography see Gschrey, Raul: "'A surprising air of reality' – Kompositfotografie zwischen wissenschaftlicher Evidenzbehauptung und künstlerischer Subversion." In: Ulrich Richtmeyer (ed.): *PhantomGesichter: Zur Sicherheit und Unsicherheit im biometrischen Überwachungsbild*. Paderborn, Fink, 2014, 85–105.

¹² See Prodger: *Darwin's Camera*.

¹³ Galton does not mention Darwin's illustrated scientific publication on human emotions and their evolutionary constitution in relation to his photographic work, but notes on the topic can be found among the Galton Papers. Notes on "Betrayal of Feelings by Gesture and Expression", Galton Papers, UCL, GALTON/2/12/47.

work with composite portraiture, by contrast, focused on the face in repose, and on the inscribed history, as it were, of inherited physiognomic appearance. His superimpositions were intended to deconstruct individual physiognomic peculiarities in order to produce general images that would allow for the type-casting of certain groups of people. Basically Galton and Darwin were looking at different sides and properties of the face, while arguing from a common evolutionary perspective.

In the writings of Francis Galton, the development of the composite technique can also be traced back to experiments on new ways of stereoscopic cartographic representation. He sketched how, by photographic means, different images could be superimposed and how this process could be used in the visualisation of different layers of data in maps.¹⁴ The article published in 1865 refers to a series of the earliest photographic slides preserved in the Galton Collection, a box of stereoscopic slides of maps that were produced by Francis Galton's cousin Robert Cameron Galton.¹⁵ The stereoscopic viewer is also conserved there. Looking through the original lenses and at a bird's eye view of the Alps, one can imagine the Victorian scientist's exalted feeling of looking down on earth, long before aviation. Twelve years later he returned to the subject, but his thoughts went beyond the problems of navigation. He speaks of the technique in terms of "combining data"¹⁶ and observes that, redirecting the light with mirrors "by means of a telescope we are able to superimpose two or even more separate pictures on the same field of view."¹⁷ This combination and variable superimposition of images partly anticipates the composite technique, and following this line of argument composite portraiture can be described as a "mapping" of human facial features.¹⁸ The

¹⁴ Galton, Francis: "On Stereoscopic Maps, taken from Models of Mountainous Countries." In: *Journal of the Royal Geographical Society* 1865 (35), 99–104.

¹⁵ See GALT 376, Galton Collection, University College London.

¹⁶ Galton, Francis: "On means of Combining Various Data in Maps and Diagrams." In: *South Kensington Museum. Conferences held in Connection with the Special Loan Collection of Scientific Apparatus*. London: Chapman and Hall, 1877, 312.

¹⁷ Galton, Francis: "On means of Combining Various Data in Maps and Diagrams." In: *South Kensington Museum. Conferences held in Connection with the Special Loan Collection of Scientific Apparatus*. London: Chapman and Hall, 1877, 312.

¹⁸ Galton also mentions using the stereoscopic lenses on portraits to produce composite views. Galton, Francis: "Composite Portraits, Made by Combining Those of Many Different Persons Into a Single Resultant Figure." In: *The Journal of the Anthropological Institute of Great Britain and Ireland*, 8, 1879, 132–144, at 132.

face is understood as an intricate topographic surface, as a complex collection of data, and as unfaltering expression of underlying truth. This reading is supported by Charles Darwin's reasoning, who presented the body as a palimpsest,¹⁹ a compendium in which the whole history of the species was inscribed, as in an evolutionary map.

In order to decipher these strata of evolutionary deep time, layers of information are accumulated in composite photography to achieve a synthesis, a map that would allow for the navigation through the typical characteristics of humanity.²⁰ A position of power is established by means of an aerial perspective. The practices of depicting, analysing, and simplifying "terrain," but also of establishing privileged access, are shared characteristics of mapping and composite portraiture. There is a common urge to master nature, to condense information, and to form new entities that go beyond what is possible to grasp at one glance – and to record it in one plane.²¹ The enthusiasm of measuring and mapping guided Galton from early on in his career as an explorer in southwest Africa, where he was charting the territory, the mountains and ridges of the desert and veld, but also provided information on the physiognomies of the people inhabiting these landscapes.²² So easily did Galton switch from these two roles of colonial exploration that he used instruments designed for cartographical purposes on the physiognomy of the local population.²³

Here the proximity of composite portraiture not only to the strategies of cartography but also to physiognomy becomes obvious: the analysis of the

¹⁹ See Norris, Margot: *Beasts of the Modern Imagination: Darwin, Nietzsche, Kafka, Ernst and Lawrence*. Baltimore: Johns Hopkins University Press, 1985, 39–40. See also the discussion in: Hurley, : *The Gothic Body*, 90–91.

²⁰ In relation to materialist evidence production Susanne Scholz speaks about the introduction of deep time into the study of humankind. See Scholz, Susanne: *Phantasmatic Knowledge: Visions of the Human and the Scientific Gaze in English Literature, 1880–1930*. Heidelberg: Winter, 2013, 16.

²¹ Interestingly it is the missing vantage point and aerial perspective, mainly in landscape photography, that is described by Rejlander as an important impulse in his development of the artistic technique of photographic composition.

²² See Galton, Francis: *Narrative of an Explorer in Tropical South Africa*. London: Murray, 1853.

²³ See Gillham, Nicholas Wright: *A Life of Sir Francis Galton. From African Exploration to the Birth of Eugenics*. New York: Oxford UP, 2001, 76.

²⁴ Claudia Schmölders observes that the face in physiognomy is treated like a landscape and that physiognomy oscillates between psychology and geography. See Schmölders, Claudia: *Das Vorurteil im Leibe. Eine Einführung in die Physiognomik*. Berlin: Oldenbourg, 1995, 133f.



Galton, Francis: Glass negatives and positives and stereoscopic glasses from the Galton Collection, University College London, GALT 376; GALT 042. Courtesy of UCL science collections.

surface provided a means of navigation through the landscape of the human face, reading the characteristics and character off its surface.²⁴ The physiognomic “science” of phrenology, as a topographical way of making sense of the human face and head, was received enthusiastically in the nineteenth-century. Craniological maps and busts that defined the regions and organs of the mind, pioneered by Franz Josef Gall and diffused by Johann Gaspar Spurzheim, and George Combe, as well as by Lorenzo and Orson Fowler, were widely distributed. However, extending phrenological and physiognomic ideas that sought to decipher a status quo of individual inner characteristics,²⁵ composite portraiture can be understood as a generalised evolutionist mapping of the past, a charting of the embodied genetic characteristics of ancestral generations, and as a means for projecting guidelines for the future.

²⁵ The proximities and differences of physiognomic and anthropological perspectives are discussed in the following chapters, in particular in relation to the criminalising gaze in chapter 3.

Extrapolating Disciplinary Iconographies

Composite portraiture was not only indebted to cartography and evolutionary theory, as well as to physiognomic thought, but also the field of identification, and the archives of the penal system played a decisive role in its formation. The incentive for the first experiments with composite portraiture was the intervention of the British Inspector of Prisons, Edmund Du Cane, who provided Galton with a large number of frontal judiciary portraits, for which Galton sought a suitable way of comparison.²⁶ The iconography of the “mug shot” and the visual archives of the judiciary and penal system were a prerequisite for the development of the technique.²⁷ Also the later component portraits produced for the compilation of composite portraits were following a similar iconography and were, almost without exception, produced in disciplinary contexts, in schools, hospitals, the army, and the family. Galton took part in advancing the iconography of what I refer to as “disciplinary portraits.”²⁸ His depiction of the human head, in full-frontal view and profile, with a neutral expression and in a fixed size, under similar illumination, was further normalising the current British practices of judiciary photography.²⁹ It was oriented at the photographic iconography of the French Judiciary Service developed by Alphonse Bertillon, whose combination of anthropometric and photographic documentation revolutionised late nineteenth-century identification practices. Galton visited the Judiciary Service in Paris in 1888 and Bertillon guided his guest through the procedures of the anthropometric recording of the “Bertillonage,” which included the production of a judiciary photograph that was presented to the visitor.³⁰

²⁶ See Galton, Francis: *Memories of My Life*. New York: Dutton, 1909, 259f.

²⁷ See chapter 3.

²⁸ In relation to Michel Foucault’s concept of the disciplinary society, I use the term disciplinary portraits to refer to the photographic portraits that were produced in disciplinary institutions such as prisons, hospitals, mental asylums, schools, and the military. These portraits were produced chiefly for identification or diagnostic purposes, but also as visualisations of societal cohesion and for promotional purposes. The portraits were usually produced without the consent of those depicted, or they only had very limited possibilities to oppose the photographic recording. The depicted subjects usually, at the moment of the exposure, lost the power over their representation and the contexts in which the portraits were used. The secondary uses were often further de-individualising the sitters, treating them as representatives of a group and concealing their individual identities.

²⁹ In an article in *Nature* Galton delineates a special form of disciplinary photography, the combination of views from front, side and top by means of mirrors. In this article he also mentions composite portraiture for the first time. See Galton, Francis: “Section D. Biology. Department of Anthropology. Address by Francis Galton.” In: *Nature*, 23 August 1877, 346.

The *Musée de la Préfecture de Police* in Paris exhibits a photographic studio and measuring instruments used by Bertillon and his Judiciary Service in the late nineteenth century, and the *Archives de la Préfecture de Police* keep to this day the surviving records of Bertillon's archive. Similar instruments and photographic materials are kept among the Galton Collection in London and in the *Museo di Antropologia Criminale Cesare Lombroso* in Turin. Through these instruments made for surveying the human frame, individuals were forced into shape by measuring tapes, scales, and compasses in order to gain access to their "suspect identities". In the "Bertillonage," people were made to perform a veritable ballet;³¹ movements that I later brought back, as a performance, to the building which, in Bertillon's day, used to house the Judiciary Service in Paris.³² This measuring access to the body was intended to throw off balance suspects brought before the anthropometric machine. My (re-)performance focused on the destabilising sensation of losing one's foothold as well as the affective side of this materialisation of power. This bodily experience offers an alternative artistic form of access; an aesthetic experience, that, through a process of reflection, offers differential experiences and can initiate a re-evaluation of contexts and individual positionings.³³ Likewise, the physical experience of taking a seat on a Bertillon posing-chair in the collection of the *Judiciary Police Museum Lisbon*, the sensation of the cold, sharp metal and the uncomfortable headrest more thoroughly guided my understanding of the material and the power-knowledge nexus in disciplinary society than the cumbersome descriptions in nineteenth-century handbooks.

Christian Phéline and Allan Sekula have convincingly linked Galton's photographic composites with the identification work of Alphonse Bertillon and the criminological work of Cesare Lombroso.³⁴ Their photographic practices were oriented towards an indexical reading of the medium and were employed in

³⁰ This special carte de visite mug shot of Galton is preserved in the Galton Papers, UCL, GALTON/1/2/5/4/2. For an account of the meeting see Galton's biography: Galton, Francis: *Memories of my Life*. New York: Dutton, 1909, 251.

³¹ With respect to the practice of the anthropometric measurements of the "Bertillonage," Simon Cole speaks of a dance choreographed by Bertillon and Josh Ellenbogen, of a "ballet" of thirteen steps. See Cole, A. Simon: *Suspect Identities: A History of Fingerprinting and Criminal Identification*. Harvard: Harvard University Press, 2001, 36.

³² The score that I developed from the structured movements of the "Bertillonage" was performed in the hallway of the building that formerly housed the Judiciary Service in 2015.

³³ See: Jäger, Jutta; Kuckherrmann, Ralf: *Ästhetische Praxis in der Sozialen Arbeit: Wahrnehmung, Gestaltung, Kommunikation*. Weinheim: Belz, 2004.

the constitution and typecasting of the human body, followed by its integration into an archive. Sekula argues that these collections of visual and non-visual data and the development of ordering mechanisms were the driving forces in the establishing of a categorisation of bodies and human taxonomies. These ordering mechanisms in the making can be seen in the interlinking archives of the British prison administration; in registry books and albums of judiciary portraits that are kept in both local and metropolitan, as well as in the National Archives; and in the countless, neatly ordered frontal portraits that look at the viewer from the pages of volume after volume. Sekula describes the camera as an instrument that could be integrated into a broader bureaucratic, statistic, and identifying structure. In their combination of optics and statistics, Galton's and Bertillon's projects are described as extremes of positivist endeavours of defining and regulating social deviance, since both projects, judiciary identification and eugenics, were aimed at the demographic regulation of society.³⁵

However, the outcomes and the conclusions reached by means of the different photographic techniques could not have been more dissimilar. While Bertillon's identification practice was strictly aimed at establishing personal characteristics and an individual's identity within an archive, Galton's superimpositions of human faces were directed at "erasing" individualities in order to produce a visual archetype, an approach that is closer to Lombroso's criminal-anthropological project. Galton's technique was designed to visualise the extra-visual, both the common inner and outer characteristics of a group of specimens and their shared genetic history. Bertillon expressed his concerns regarding the ambiguity of the medium of visual recording and strived for clarity and accuracy in photography. Galton on the contrary relied on the haziness of his images, treating the convergence of the fuzzy outlines as the indication of a common type. Galton's experiments depended on the assumption of physical similarities of groups, or classes, of people and on the careful viewing of hundreds of photographs, followed by the (tautological) selection of samples according to visual characteristics of a relatively small number of component portraits. Bertillon, in contrast, could not afford to believe in "typical" criminal facial features, as he had to manage tens of thousands of photographs in his system

³⁴ See Phéline, Christian: *L'image accusatrice*. Paris: Cahiers de le Photographie, 1985; Sekula: "The Body and the Archive."

³⁵ Sekula: "The Body and the Archive."

of identification that was based on the assumption of the uniqueness of physical appearance. Bertillon was, however, not disinclined to secondary uses of the material produced in judiciary photography; in a manual on systematic photography he even mentions composite photography and proposes an archive of composites or average profiles for anthropological purposes.³⁶ Interestingly, moreover, it was in the field of identification, where Galton, through his systematisation and propagation of dactyloscopy, succeeded in replacing Bertillon's complex anthropometric system with the analysis and comparison of fingerprints, a system of identification that is still in use today.³⁷

In a remarkable instance of composite portraiture – that preceded Galton's experiments – claims for individual identification and the visualisation of common characteristics became united. In a prominent court case of the 1860s and 1870s, in which a person claimed to be the missing heir of the Tichborne baronetcy, a composite portrait was produced from a photograph of the young baron taken before his disappearance and another taken of the older man who claimed to be the family's long lost son.³⁸ The superimposition was produced through the combination of separate sectors of the individual portraits and the result was judged by experts – photographers, print sellers and carvers – as: “palpable and unimpeachable union in a mathematical basis of the Tichborne Portraits.” Even though it was produced by a slightly different process, the final print is essentially a composite portrait. Galton must have been familiar with the case that was immensely popular in the decades before he embarked on his own experiments with photographic composition.³⁹ These “blended photographs”⁴⁰ may have been another, unacknowledged and as yet overlooked inspiration for Galton's photographic invention. The direct superimposition of facial features clearly anticipates Galton's process and even the dissection of the portraits by lines linking the eyes shows a striking similarity to the visual aids that Galton later used for the production of composite portraits.

³⁶ Bertillon, Alphonse: *La photographie judiciaire avec un appendice sur la classification et l'identification anthropométriques*. Paris: Gaulthier-Villars: 1890, 4–5.

³⁷ See Galton, Francis: *Finger prints*. London: MacMillan & Co, 1892.

³⁸ The claimant eventually failed to convince the courts and served a long prison sentence.

³⁹ At a later stage, at least, he certainly was aware of the image, since a printed version, published by the biographer of the supposed Tichborne heir, is among the collection of Galton's personal papers. See Mathews, William: *The Identity Demonstrated of Sir Robert Tichborne*. Illustrated memorandum, 1874. GALTON/2/8/1/12/2, Galton Collection, University College London.



Mathews, William: *The Identity Demonstrated of Sir Robert Tichborne*. Illustrated memorandum, 1874. Galton Collection, University College London, GALTON 2/8/1/12/2.

This position of composite portraiture between identification and typecasting and the availability of suitable photographic material in various disciplinary institutions contributed to the technique's success in the area of criminology. The positivist criminological publications of the time made frequent use of composite portraiture in the sense proposed by Galton: in order to synthesise criminal or suspect physiognomies to explore the origins of crime, or as a practical aid in the categorisation and “treatment” of different groups of criminals. Composite portraiture can thus be counted among the repertoire of disciplinary and biopolitical control around the turn of the twentieth century. As the discussion of the criminalising gaze of the technique in chapter 3, *Suspect Identities*, will show, the treatment of this deviant group of society drew heavily on earlier conceptions and visual iconographies of moral deviance as developed in the long history of physiognomy and then current phrenology.

The Quest for the Invisible: Artistic and Scientific Compositions

Impulses from the artistic field likewise exerted an important influence on the genesis and contemporary reception of composite portraiture. Artistic forms of photographic portraiture and the technique of combination printing challenged the conventions of traditional portraiture and developed new perspectives on the genre by means of the new medium. The artworks technically partly anticipate composite portraiture and they are engaged in similar interests: the “truthful” representation of the human face, its typicality and emotional expression; as well as a quest for family likeness. Artistic expertise, as well as artistic photography and the techniques of stereoscopy and combination printing contributed to the development of composite portraiture. An artistic reading of the technique suggests itself in particular in the special composite aesthetics and their discussion in relation to beauty, as well as in the quest of the visualisation of the invisible in and beyond the human face.

Through Darwin’s publication on the expression of emotions, Galton was most probably aware of the artistic photographic work of Gustave Rejlander, who regularly employed a different sort of composite photography. In his dark room, the photographer compiled photographic collages from more than thirty negatives, which lead to relatively large combination prints like *The Two Ways of Life*.⁴¹ The iconography of these artistic compositions follows established conventions of paintings; scenes, poses and facial expressions seem to be directly adopted from (art-)historical examples.

These composite photographs are not superimpositions of individual physical features: they are combinations of motifs and scenes, with layering limited to the edges in order to create the illusion of a coherent whole. The technical side, however, of adding negatives onto a single photo-sensitive surface – exposure by exposure – is not unlike the production of a composite portrait. While based on a different epistemological grounding, aiming for objective explanatory value, composite portraiture, like the combination printing and

⁴⁰ See Mathews, William: *The Identity Demonstrated of Sir Robert Tichborne*. Illustrated memorandum, 1874.

⁴¹ Rejlander, Oscar Gustave: *The Two Ways of Life*. Composite photograph, 76,2 cm x 40,6 cm, 1857.



Rejlander, Oscar Gustave: *The Two Ways of Life*, 1857.

artistic portraiture of the time, strived to create a coherent whole and was aimed at the visualisation of the invisible in the human countenance. At the same time, the scientific composites retained an aesthetic quality, based on their soft-focus effect that could be read in terms of the photographic pictorialism that was an influential movement in artistic photography around the turn of the century.⁴²

Rejlander’s artistic composite photography also addressed issues of typification and identification and examined phenomena of likeness and difference that are relevant for composite portraiture. For instance, in the composite self-portrait *O.G.R. the Artist Introduces O.G.R. the Volunteer*,⁴³ we can see the artist on the right-hand side standing in front of an easel, looking directly into the camera. A huge canvas can be seen leaning against the right-hand wall. The photographer’s left hand rests on his chest while his right hand is extended, as if presenting another version of himself to the audience. On the left-hand side of the double portrait Rejlander is clad in his reserve uniform of the Artists Rifles, gun and cap at hand, posing in front of stairs, as if he was destined to march outside in performance of his duty. The soldier is turned, with a serious look on his face, in the direction of his artist-self, while

⁴² See Meyer, Roland: „Kartographien der Ähnlichkeit. Francis Galtons Kompositphotographien.“ In: Inge Hinterwaldner; Markus Buschhaus (ed.): *The Picture’s Image: Wissenschaftliche Visualisierung als Komposit*. Paderborn; München: Fink, 2006, 173.

⁴³ Rejlander: *O.G.R. the Artist Introduces O.G.R. the Volunteer*. Composite photograph, 1871–72.

this other impersonation seems to humbly request the recognition of his alter ego. The upper part of the artist's body is bend forward, his arm partly concealing the image placed on the easel, as if to diminish its importance and indicating his real allegiance and mission. The image half-glanced on the easel is the most widely distributed of Rejlander's works.⁴⁴ It became known as *Ginx Baby*, a portrait of a crying baby that was produced through the combination of photography and drawing and became used in Darwin's book on emotional expression. The composite-photograph double self-portrait not only acknowledges the different and seemingly conflicting identities and social roles of its producer, it also implies a critique of typecasting according to visual criteria. Costume and posture can completely change the perception of a person, and also the face, so cherished by Galton as the site of manifest truth, fluctuates in emotional states. It here presents as a highly ambiguous sign, subject to the self-representation of the artist.

In another self-portrait⁴⁵ that was probably taken with a stereoscopic camera, exposing the two parts in succession,⁴⁶ *Ginx Baby* takes centre stage. The artist poses next to his famous work, imitating the facial expression and posture of the baby. Rejlander sent the photograph to Darwin, noting on the back that in one of the exposures he imitated laughing, in the other crying, coming up with very similar expressions.⁴⁷ Stereoscopic lenses would show a composite portrait of Rejlander's faces and staged emotions. Interestingly, in his early articles on composite photography, Galton also speaks about the superimposition of emotional expressions; the stereoscopic superimposition of a stern expression and a smile, however without following up on the subject.⁴⁸

⁴⁴ It is estimated that Rejlander sold around 300.000 copies of this image and it became further distributed as the cover of a popular contemporary musical composition. For an extensive discussion of Rejlander's work and his collaboration with Charles Darwin. See Prodger: *Darwin's Camera*, 111–112.

⁴⁵ Rejlander Oscar Gustave: "Laughing/Crying", composite stereo photograph, 1871/72.

⁴⁶ Prodger observes that Rejlander, outside of his project with Darwin, did not use a stereo camera and that he adapted the stereo process for his use, covering the lenses alternately in order to produce sequential exposures of subjects in one sitting. See Prodger: *Darwin's Camera*, 198–200.

⁴⁷ See Prodger: *Darwin's Camera*, 127.

⁴⁸ See Galton, Francis: "Composite Portraits." [1878], 98. There is no photographic material in the Galton collections at University College London indicating further research on the topic. Emotional expression in composite portraiture was, however, taken up by a later protagonist of the technique, the psychologist David Katz, who experimented with different facial expressions. See Katz, David: "Durchschnittsbild und Typologie." In: *Studien zu Experimentellen Psychologie*, Basel: Benno Schwabe, 1953, 11–37.

⁴⁹ Rejlander, Oscar Gustave: *Family Resemblance*. Fotografie, 1866–68.



Rejlander, Oscar Gustave: *O.G.R. the Artist Introduces O.G.R. the Volunteer*, composite photograph, ca. 1865.



Rejlander, Oscar Gustave: *Laughing / Crying*, stereoscopic photograph, ca. 1872.

Rejlander also produced photographs on a topic that must have been even more interesting for Galton. *Family Resemblance*⁴⁹ shows a daughter next to the painted portrait of her mother, an obvious comment on the controversy of the merits of the different artistic media and in a broader sense the paragon debate initiated in the Renaissance. But the image likewise carries other connotations: the painted surface of the mother's portrait seems to be working as a mirror – a mirror in which the image of the older generation and hence of the past, the hereditary lineage, and its visual likeness reflect on the



Rejlander, Oscar Gustave: *Family Resemblance*, photograph, 1866–68.

younger generation. Mother and daughter wear similar clothes and adopt the same pose; both take half of the frame and their faces have the same size and can thus easily be compared. The photograph indeed looks like a stereo photograph. Taking to hand stereoscopic glasses to study the image, it seems only a small step from this to the first composite portrait, to the direct superimposition of faces, and the first genealogical composite.⁵⁰ The influence of stereo photographs for the development of composite portraiture cannot be overrated; it was the viewing devices for these special photographs that allowed for the first, temporary, superimpositions of portraits.⁵¹

The issues of emotional expression, truthful representation, and (family) likeness were, however, not the only shared interests of Rejlander and Galton, the artist and the scientist. Rejlander published articles on sequential photographs of horses⁵² and the depiction of criminals,⁵³ both subjects Galton, also,

⁵⁰ I have made this observation earlier. See Gschrey: "A surprising air of reality".

⁵¹ Another artistic technology may also be counted among the precursors of composite portraiture. The camera lucida is an optical instrument developed the first decade of the nineteenth century. The double reflection in a prism allowed for the perception of two perspectives at the same time. Looking down on the drawing area, a draftsman could see a fainter version of the surroundings and use this as a drawing aid. Erna Fiorentini has described this as a dynamical experience and conditional composite, but while it allowed for the quasi-superimposition and comparison of two views, the modes of creation of the resulting images that maintained in the hands of the drawer is fundamentally different. See Fiorentini, Erna: "Instrument des Urteils. Zeichnen mit der Camera Lucida als Komposit." In: Inge Hinterwaldner; Markus Buschhaus (ed.): *The Picture's Image: Wissenschaftliche Visualisierung als Komposit*. Paderborn: Fink, 2006, 44–58.

worked on and that were examined by means of composite portraiture. This shows the proximity and common ground of scientific and artistic approaches in early photography, but also hints at the conflicting terrain of the attribution of evidence in the early days of the new medium. Artistic photography that experimented with early means of manipulation was attacked from a traditional fine arts community that saw photography as an upstart rival, as well as from the scientific sphere that strived to maintain the objective and evidential status of photography as a mechanical medium of recording. In his *Apology for Art Photography*⁵⁴ Rejlander relates his understanding of photography "not [...] as an ultimate art, or art depending on itself,"⁵⁵ but as handmaid to artists, for instance as models, or as a medium in testing the accuracy of naturalistic representations in painting. He nevertheless pleads for the legitimacy of photography as artistic expression and advocates the use of the medium for artistic compositions that go beyond the mere depiction of reality. He rejects the harsh criticism of religious authorities and art critics in relation to composite photography and rejects being described as operator or manipulator.⁵⁶ A "brother in arms" and skillful producer of composite photographs, Henry Peach Robinson, in his seminal work on pictorialism, articulated the position of artistic photography more radically: "truth in art may exist without an absolute observance of facts"⁵⁷ and "any 'dodge,' trick, or conjuration of any kind is open to the photographer's use 'so that it belongs to his art and is not false to nature.'"⁵⁸

⁵² See Rejlander, Oscar Gustave: "On Photographing Horses." In: *The British Journal Photographic Almanac*, 1873, 115.

⁵³ See Rejlander, Oscar Gustave: "Hints Concerning the Photographing of Criminals." In: *The British Journal Photographic Almanac*, 1872, 116–117.

⁵⁴ See Rejlander, Oscar Gustave: "An Apology for Art Photography." Read at a meeting of the South London Photographic Society, 12 February 1863. Excerpts reproduced in: Goldberg, Vicky: *Photography in Print: Writings from 1816 to the Present*. New York: Simon and Schuster, 1981, 141–147.

⁵⁵ See Rejlander, Oscar Gustave: "An Apology for Art Photography." Read at a meeting of the South London Photographic Society, 12 February 1863. Quoted in: Goldberg, Vicky: *Photography in Print: Writings from 1816 to the Present*. New York: Simon and Schuster, 1981, 144.

⁵⁶ See Rejlander: "An Apology for Art Photography," 146.

⁵⁷ Henry Peach Robinson: *Pictorial Effect in Photography*. London: Pieper & Carter, 1869, 75.

⁵⁸ Robinson: *Pictorial Effect in Photography*, 76.

Composite photographs disseminated in popular photographic journals and presented to amateur photographers, also need to be understood in relation to this aesthetic movement in photography, which was oriented towards the artistic realm, in particular towards painting and drawing. The fuzziness and soft focus that can be observed in composite portraits finds a counterpart in the practice of Victorian photographic portraitists, such as Julia Margaret Cameron.⁵⁹ Here the division between arts and science in composite photography cannot be upheld: Gunnar Schmidt has observed that the composite portrait embodies the archive, as Sekula had argued, but also expresses “poesies” and a special aesthetics and that the technique could also be interpreted as inherently artistic, in composing fragments of truth into a new visual reality.⁶⁰ This may have appealed to Robinson, who was one of the strongest advocates of photography’s independence from factual representation, but nevertheless provided Galton with portraits of himself and members of his family for the production of a genealogical composite portrait.⁶¹

Galton had an ambiguous relationship to the aesthetic qualities of his photographic compositions; he often comments on the smooth texture and the beauty of composite faces and draws on these seductive effects to increase the diffusion of the technique and to extract ideals of beauty,⁶² while precisely these qualities were downplayed when arguing for a scientific and neutral reading of the photographic compositions. Repeatedly in the history of composite portraiture artists are fashioned as experts in the explanation and judgement of the finished compositions, from Galton, who attributed to artists a higher ability for pictorial imagination, as well as abstraction and generalisation,⁶³ to the experimental psychologist David Katz, who invited artists to comment on his composite portraits.⁶⁴

⁵⁹ The work of the amateur photographer Julia Margaret Cameron, who moved in the same circles as Darwin and Galton, was rediscovered in the mid-twentieth century and is now seen as an important contribution to early artistic photography. She produced portraits with a shallow depth of field and especially those of her portraits that are taken full face, the protagonist looking into the camera, show a striking resemblance to Galton’s composite portraits. Even though these are only portraits of one person, through the soft focuses and diffuse lightening facial features blur, and an ambiguity arises, similar to that which often occurs while viewing composite portraits. Artistic photographers were exploring the possibilities of the medium, experimenting with focus and light and thereby emphasising the relationship of photography to older and artistically accepted ways of representation in painting and drawing. On the work and the late reception of Cameron see Lukitsch, Joanne: *Julia Margaret Cameron*. London: Phaidon, 2001. For a reading of composite portraiture in relation to Cameron’s photographic aesthetics see Ellenbogen: *Reasoned and Unreasoned Images*, 133–134.

⁶⁰ See Schmidt: “Mischmenschen und Phantome,” 22.

⁶¹ The composite portrait of the Robinson family will be discussed in chapter 8.

In composite portraiture the paths of arts and science cross. This proves true not only for an understanding of the technique in terms of a mechanical rendering of mental and artistic processes of visual typecasting, or regarding the origins of combination printing in the work of early artistic photographers. Artistic practice was understood in terms of combination and abstraction, as blending together individual characteristics in order to arrive at an ideal, universal type that would best represent the subjects of the artwork in question.⁶⁵ Nineteenth-century artistic photographs explore the depiction of the human body and face and its emotional states and hereditary disposition, they negotiate the evidential role, both commenting on and contributing to the scientific use of photography. Furthermore photographers directly intervened in the contemporary discourse on the medium, publishing books, and articles in the numerous photographic journals of the time. The drive towards a clear demarcation between the different fields of photography and their respective ways of knowledge production was strong. But even though composite portraiture has been positioned as a non-interventionist, mechanical process of typecasting, throughout the technique’s history, the resulting images can be seen as essentially artistic in nature. Also the proclaimed difference in artistic and scientific forms of reasoning and knowledge creation begins to unravel here: with respect to a nineteenth-century understanding of the equation of beauty with inner and outer health and moral good, as well as in their ultimate proximity of the forms of facial representation.

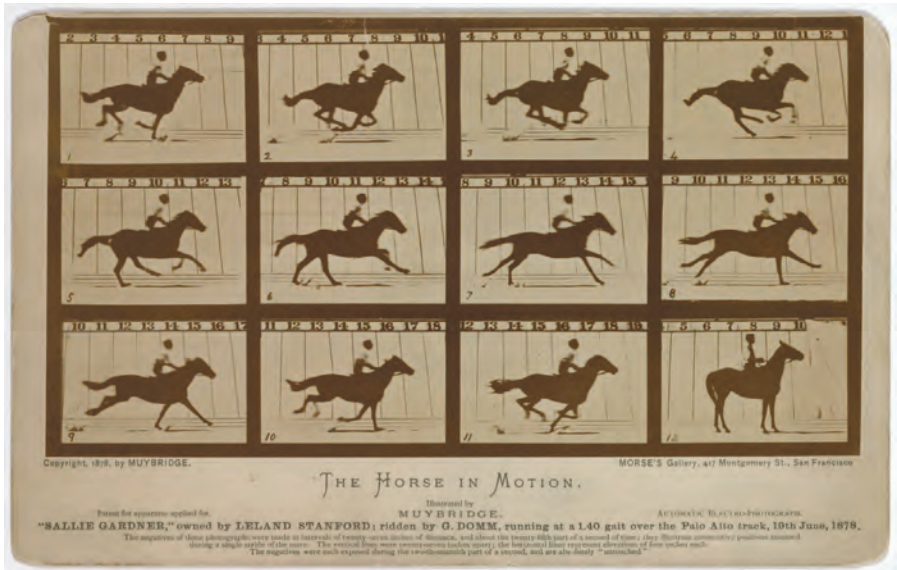
⁶² For composite portraiture’s role in the examination of attractiveness, see chapter 10.

⁶³ See Galton, Francis: “Generic Images” In: *The Nineteenth Century*, July 1879, 161.

⁶⁴ David Katz questioned several artists, sculptors and painters on their perception of his composite portraits; his respondents commented on the aesthetic qualities and ideal beauty of the images, but also on the enigmatic and mysterious air of the visual constructions, comparing them to artistic masterpieces. See Katz, David: “Durchschnittsbild und Typologie.” In: *Studien zu Experimentellen Psychologie*, Basel: Benno Schwabe, 1953, 31–32.

⁶⁵ This similarity of artistic practice to composite portraiture was hinted at by Galton and further developed by David Katz. Among recent academic contributions, this relationship has been emphasized by Josh Ellenbogen. See Katz, David: “Durchschnittsbild und Typologie.” In: *Studien zu Experimentellen Psychologie*, Basel: Benno Schwabe, 1953, 31–32; Ellenbogen: *Reasoned and Unreasoned Images*, 133–134.

Temporal-Locomotive Composites:
Chronophotographs of Muybridge and Marey

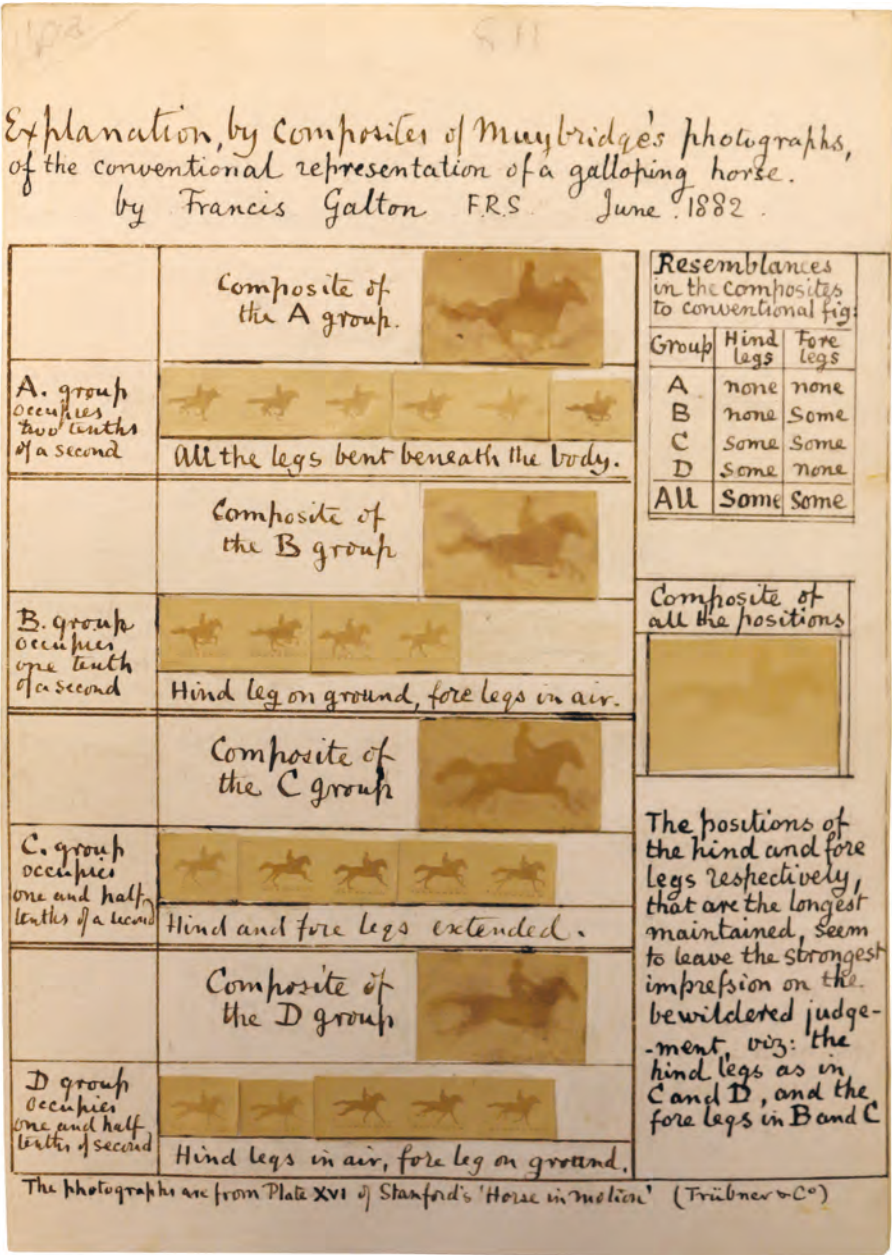


Muybridge Eadweard: *The Horse in Motion*: "Sallie Gardener," owned by Leland Stanford; ridden by G. Domm, running at a 1.40 gait over the Palo Alto track, 19th June, 1878. Chart of chronophotographs, Library of Congress Prints and Photographs Division.

The chronophotographic approaches of Eadweard Muybridge and Étienne-Jules Marey, which have been described as precursors to film,⁶⁶ were developed at about the same time as composite photography and can likewise be counted among the stimuli for the technique.⁶⁷ In 1878, the year of the first publication of a composite portrait, Muybridge published his first series of sequential photographs, capturing the motion of horses. This technique, which relied on complex experimental structures and multiple cameras, resulted in smaller individual prints that depict successive stages of motion which in turn were

⁶⁶ See among others Monaco, James: *Film verstehen. Kunst Technik Sprache; Geschichte und Theorie des Films*. Hamburg: Rowohlt, 1980, 66.

⁶⁷ This has been noted by Josh Ellenbogen and Elisabeth Stevens. See Ellenbogen: *Reasoned and Unreasoned Images*; Stevens, Elisabeth: *Francis Galton's Composite Portraits: The Productive Failure of a Scientific Experiment*, unpublished manuscript, June 2013, https://www.researchgate.net/publication/323275029_Francis_Galton's_Composite_Portraits_The_Productive_Failure_of_a_Scientific_Experiment [15/01/2022].



Galton, Francis: *Explanation by Composites of Muybridge's photographs of the conventional representation of a galloping horse*. Galton Papers, University College London, GALTON 2/8/10/1.



Galton, Francis: Chart of composite photographs, 1882. Galton Papers, University College London, GALTON 2/8/10/1.

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assembled in larger charts. The special photographs made it possible, for the first time, to record the actual movements of animals that had earlier been too fast to notice, such as the horse in gallop.

Marey produced chronophotographs of a different nature in the 1880s. His successive exposures of sequences of movement on the same photographic plate resulted in dynamic syntheses of the movement of objects, animals,⁶⁸ and human bodies. Marey's images can indeed be described as chrono-composite photographs. In 1882 he presented an instrument of high-speed recording, a so-called chronophotographic gun that could "shoot" twelve images per second.⁶⁹ In both chronophotographical approaches, the camera is producing data that can be seen as autonomous from human perception and that, like composite portraiture, only exist as the result of imaging technologies.⁷⁰

In 1882, Francis Galton picked up Muybridge's equine chronophotographs and produced a series of composite photographs from the material, calling it an "Explanation by Composites of Muybridge's photographs of the conventional representation of a galloping horse." Some of the composite images were published as engravings as part of an article in *Nature*.⁷¹ Galton's visual analysis aimed to show that the horse's extended legs leave the most lasting impression on human perception, thus explaining the conventional, artistic (mis-)representation.⁷²

⁶⁸ Among his chronophotographic works, too, were images of horses. See Marey, Étienne-Jules: "Analyse des mouvements du cheval par la chronophotographie." In: *La Nature* No. 1306, 1 June 1898.

⁶⁹ See Marey, Étienne-Jules: "Le Fusil Photographique." In: *La Nature* No. 464, 22.04.1882, 326–330. See also: Valiaho, Pasi: "Marey's Gun: Apparatuses of Capture and the Operational Image." In: Annie van den Oever (ed.): *Téchn / Technology*. Amsterdam: Amsterdam University Press, 2014, 169–176.

⁷⁰ See Ellenbogen: *Reasoned and Unreasoned Images*, 3.

⁷¹ Galton, Francis: "Conventional Representation of the Horse in Motion." In: *Nature*, July 6, 1882, 228–229.

⁷² See the discussion in: Prodger, Phillip: *Muybridge and the Instantaneous Photography Movement*. Oxford, Oxford University Press, 2003.

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Metaphoric Composites: Aesthetic Ideals of the Average, Mental Imagery and the Statistical "Average Man"

Two other strands relevant for the genesis and understanding of composite portraiture are its metaphorical use and its utilisation as an explanatory model. In Galton's writings, composite portraiture was charged with high expectations and positioned as a synthetic device with inherent analytical qualities that was able to emulate and even surpass processes of human visual perception and reasoning in the formation of mental concepts and ideas. For this understanding of composite portraiture, the influences of Immanuel Kant's philosophical work on aesthetics and in particular his concept of the normal idea of beauty are relevant.

Drawing on human perception and mental processes of forming archetypes, Kant argued that the normal idea of a living species could be constructed by extrapolating from the individual object, combining the average characteristics, a normal idea that could be represented as an aesthetic ideal in a concrete model.⁷³ This formed the basis for Galton's understanding the human mental conception of objects as molded from the repeated quasi-optical combination of individual aspects to form a common archetype. Likewise did the idea of merging images in order to establish a deeper visual truth, which probably reached Galton via Quetelet.⁷⁴ Kant's concept of a normal idea of beauty, however, argued against universal criteria of taste in the perception of beauty and furthermore distinguished between physical ideas and moral ideals of beauty,⁷⁵ while Galton expanded the materialistic normal idea of beauty, positioning his composite archetypes as definite models for the evaluation of physical and moral merit or deviance.

⁷³ Kant, Immanuel: *Critique of Judgment* (1790). Bernard J. H. (ed.): *Kant's Kritik of Judgement*, London/New York: Macmillan, 1892, 87.

⁷⁴ A widely distributed English version of Kant's *Critique of Judgment* only appeared in 1891, after the invention of composite portraiture, but it is likely that Galton directly or indirectly had access to the work. Galton had a basic knowledge of German and even spent some time in Giessen, Germany, to study with Justus Liebig. See Reulecke, Jürgen: "Galton in Gießen. Eine Viertage-Episode aus dem Jahre 1840 um Justus Liebig (mit einem Ausblick bis in die 1930er Jahre)." In: Helmut Knüppel et al. (ed.): *Wege und Spuren: Verbindungen zwischen Bildung, Wissenschaft, Kultur, Geschichte und Politik*. Berlin: Verlag für Berlin-Brandenburg, 2007, 687–689.

⁷⁵ Kant: *Critique of Judgment*, 84, 88–89.

Reversing the analogy, moreover, Galton used composite portraiture, the re-translation of a metaphor into the optical-photographic realm, as an explanatory model for his perception of the theoretical delineations of human cognitive processes. He used it to describe the formation of mental imagery and of general impressions, highlighting their deficiency: "My argument is that the generic images that arise before the mind's eye, and the general impressions which are faint and faulty editions of them, are the analogues of these composite pictures."⁷⁶ Composite portraits, thus Galton's reasoning, cannot only explain mental processes, but the images are actually superior in their photographic objectivity. He proposes to understand the formation of mental generalisations and abstract ideas not in terms of representative cases, but to understand them as cumulative ideas: "The ideal faces obtained by the method of composite portraiture appear to have a great deal in common with these so-called abstract ideas."⁷⁷ He even goes as far as comparing his process of selection and technical adaptation in the production of composite portraits to the mental processes of the pre-selection of examples from which abstract ideas are formed,⁷⁸ as well as to the processes of the formation of ideas in general.⁷⁹ Galton also employs the metaphor of the composite portrait for the descriptions of recollections and blended memories in dreams,⁸⁰ an impulse that was picked up by Sigmund Freud in his reflections on the analysis of dreams.⁸¹

Contrary to this metaphorical understanding, in nineteenth-century discourse, composite portraiture was often described as a visual form of statistics, and Galton acknowledges the role of the work of the statistician Adolphe Quetelet and the figure of the "average man" for his own photographic invention.⁸²

⁷⁶ See Galton, Francis: "Generic Images." Extended reprint from the 'Proceedings of the Royal Institution,' 1879, 1–10, at 6.

⁷⁷ Galton: *Inquiries into Human Faculty*, 132.

⁷⁸ See Galton: *Inquiries into Human Faculty*, 133.

⁷⁹ See Galton: *Inquiries into Human Faculty*, 148.

⁸⁰ See Galton: *Inquiries into Human Faculty*, 125.

⁸¹ See Freud, Sigmund: *Traumdeutung*. Leipzig/Vienna: Franz Duedicke, 1900, 96. See also the discussion of the treatment of composite portraits by Wittgenstein and the relationship to Freud's and Galton's reasoning in chapter 8.

⁸² This part is based on an article on composite portraits as "everybody figures." See Gschrey, Raul: "Facing Everybody? Composite Portraiture as Representation of a Common Face." In: Anna Schober (ed.): *Popularisation and Populism in the Visual Arts*. London: Routledge, 2019, 94–109.

Quetelet pioneered statistical reasoning in the nascent field of the social sciences; he studied the human body as well as social phenomena such as criminality, poverty, and education, and was convinced that it was possible to measure mental and moral features just like physical characteristics. Drawing on the normal distribution of human characteristics, he introduced the concept of the “average man.” His statistical inquiries, Quetelet argued, allowed for the abstraction from the individual – understanding it as a fraction of the whole species. In analogy to visual perception, in this process of “zooming out” individual peculiarities disappeared, revealing general results and a general picture of the human.⁸³

Following this line of argument, Galton refers to composite portraiture as a process of “pictorial statistics, suitable to give us generic pictures of man, just as Quetelet obtained in outline by the ordinary numerical methods of statistics.”⁸⁴ Compared to statistical graphs, however, composite portraits did not result in a mere outline, but in a full picture.⁸⁵ Where the contours were sharpest and darkest in the superimpositions, Galton argues, the average features were emerging, whereas the individual peculiarities left little or no visible trace; the breadth and blur of the outlines were evidence for the measure of deviation of the components from the general type.⁸⁶ The composite portraits were even credited with providing more information than statistical averages, since they contained whole the visual raw data: “They are the pictorial equivalents of those elaborate statistical tables out of which averages are deduced.”⁸⁷ This goes along with Alan Sekula’s reading of composite portraits as an endeavour to “embed the archive in the photograph,”⁸⁸ “the single image attempt[ing] the authority of the archive, of the general, the abstract proposition.”⁸⁹ The individual composites, however, were usually drawing only on a small sample of much larger archives. In this light, the visualisations could rather be described as tautological micro-archives of characteristics judged representative within the ideological framework of the time.

⁸³ See Quetelet, Adolphe: *A Treatise on Man and the Development of His Faculties* (1835). Edinburgh: Chambers, 1842, 5.

⁸⁴ Galton: “Generic Images.” In: *The Nineteenth Century*, July 1879, 162.

⁸⁵ See Galton: “Generic Images” [*The Nineteenth Century*], 162.

⁸⁶ See Galton: “Composite Portraits” [1878], 97.

⁸⁷ Galton: “Generic Images” [*The Nineteenth Century*], 163.

⁸⁸ Sekula: “The Body and the Archive”, 55.

Understood as a visual statistical representation, the composite portrait could be described as the photographic equivalent of a binomial curve.⁹⁰ Galton’s relationship to the normal distribution and its aesthetics verged on worship.⁹¹

I know of scarcely anything so apt to impress the imagination as the wonderful form of cosmic order expressed by the ‘law of error.’ A savage, if he could understand it, would worship it as a god. It reigns with serenity in complete self-effacement amidst the wildest confusion. The huger the mob and the greater the anarchy the more perfect is its sway. [...] an unsuspected and almost beautiful form proves to have been present all along.⁹²

Notwithstanding the unruly physical individualities, despite all visual confusion and anarchy, Galton was convinced that characteristics not conforming to the norm were to dissolve and disappear in the binomial curve’s visual equivalents. This aesthetic reading of statistics and the sublime beauty of the average finds its counterpart in observations regarding an advance in beauty and attractiveness in composite portraits. Quetelet’s statistical ideal of the average man, by means of composite portraiture, seems to have gained a face,⁹³ or rather a set of faces of pre-defined sub-groups and types of society and humankind. The praise of the norm of the average and its aesthetic quality seems familiar from Immanuel Kant’s notion of normal idea of beauty, which, via Quetelet, had entered Galton’s visual reasoning. In fact, Kant, in his aesthetic writings, had forecast the composite technique; it appears as a literal translation of Kant’s optical analogy into the novel medium of photography.⁹⁴

However, fundamental differences between Quetelet’s and Galton concepts also come to the fore. While Quetelet positioned the average as a common ideal, Galton by contrast argued precisely against a common ground, proposing

⁸⁹ Sekula: “The Body and the Archive”, 54.

⁹⁰ Allan Sekula has observed this relationship of the composite portrait to the binomial curve. See Sekula: “The Body and the Archive”, 48.

⁹¹ Josh Ellenbogen points out this almost religious enthusiasm. See Ellenbogen: *Reasoned and Unreasoned Images*, 9.

⁹² Galton, Francis: “The President’s Address: Hereditary Stature.” In: *Journal of the Anthropological Institute* 15, 1886, 494–495.

⁹³ Allen Sekula notes that: “[...] Galton believed he had translated the Gaussian error curve into pictorial form. The symmetrical bell curve now wore a human face.” Sekula: “The Body and the Archive”, 48.

⁹⁴ See Kant: *Critique of Judgment*, 87. This will be further discussed in chapter 10.

visualisations of the extremes of deviance and excellence.⁹⁵ Nevertheless, Adolphe Quetelet's statistical everybody figure and Francis Galton's pictorial statistics of the common face were considered scientific instruments that were to allow for the description and management of collective bodies on a societal level. They sought to contain the anarchy of the crowd in ever more chaotic and overcrowded urban surroundings in an increasingly biologist and nationalist environment. This perception of the human population as a statistically measurable and governable mass links Quetelet's social statistics with Galton's work on eugenics and composite portraiture.

Galton's scientific project is strongly bound up with this visual-metaphorical epistemology and the quasi-aesthetic reasoning that is exemplified in composite portraiture. It is indebted to Kant's normal idea of beauty and Quetelet's normative statistics of the average. This orientation also becomes apparent in the treatment of composite portraits in Galton's numerous publications. The images are almost always presented as self-sufficient explanatory devices, and there are few actual analyses of the visual structures of the composite faces. Still, the images need to be translated and are contextualised to define the potential range of their reading. The images are presented as speaking for themselves, while they clearly presuppose a guided enactment of a normative aesthetics.

Between Materialist Visual Reasoning and Metaphorical Abstraction

As these perspectives on the genesis of composite portraiture show, the technique is far from being a neutral instrument for objective comparison, as Galton had initially proclaimed it to be. It is a culturally coded (classist and racist) technique and an active agent in the formation of knowledge about the human face and nature. It drew on the photographically authenticated idea of forming generalised pictures as a form of visual empirical reasoning and on the evolutionary understanding of anthropological development. It

⁹⁵ On the differences between the average man and the composite portrait, as well as the differences between the ontological pictures of the human in Quetelet and Galton, see Gschrey: "Facing Everybody?"

rested on the materialist conviction of the visibility and measurability of inner and invisible characteristics on the human body and its understanding as encyclopedic surface. Within the framework of nineteenth-century positivist scientific reasoning, composite portraiture became understood as an analytical tool of evolutionary and physiognomic analysis, as well as an instrument for the taxonomic mapping of the human species and the formation of visual types.

Furthermore, the discussion of impulses from the field of judiciary identification and its use of the new medium of photography indicates the importance of disciplinary iconographic conventions for the development of the composite technique. This initial focus on the prison population set the physiognomic emphasis of composite photography, and predetermined its further use on institutionalised groups marked as deviant. Impulses for the development of the technique also came from other optical and photographic techniques, such as stereoscopy and chronophotography, but also from the realm of arts, in particular from contemporary artistic photography and combination printing. Here similar questions of identification, typecasting, and the truthful representation of human characteristics in portraiture were negotiated and the boundaries between the fields conventionally perceived as distinct were called into question. Composite portraiture here appears as an artistic-aesthetic technique whose suggestive vagueness and ambiguity turned it into an opaque visual form, an ideal projection screen for various ascriptions, world views, and ideologies.

The metaphorical understanding of composite portraiture shows another strand in the development and advancement of the technique. From its origins in the optical exemplifications found in the influential philosophical writings of Immanuel Kant, it was transmitted via the statistical translation of the ideal of the average in Adolphe Quetelet's work, leading to its re-translation into the optical-mechanical medium of photography at the hands of Francis Galton. Composite portraiture became elevated to the exalted position of an active-analytical agent in knowledge production: the condemnation of social and physical deviance its one extreme, and an almost spiritual ideal of eugenic perfection, the other. Yet again, composite portraiture also became used as an optical-materialist explanatory model for Galton's theories on human perception and on the formation of mental images and abstract concepts, as well as his theories on hereditary transmission.⁹⁶

These diverse impulses find expression in the multiple gazes of composite portraiture –the various fields and contexts, the purposes and agendas for which the technique played a role – whose analysis forms the central part of my study. Arguing on the basis of visual artefacts from the late nineteenth and early twentieth century, and their presentation, framing, and contextualisation within scientific discourses, I establish an artistic-curatorial and multi-perspectival framework that seeks to give consideration to the technique of composite portraiture in its full complexity.

⁹⁶ For the influence of composite portraiture on Galton's theories of genetic transmission see chapter 8.





3 | Suspect Identities:¹ The Criminalising Gaze of Composite Portraiture

The advent of composite portraiture was intimately connected both with advances in criminal identification and with the penal system of late nineteenth-century Britain. Not only had crime been the earliest subject and impulse for Francis Galton's development of the photographic technique in 1877; the process of standardisation of the registration, identification and photographic documentation of prisoners also was a prerequisite for experiments with composite portraiture.² The visualisations by means of composite portraiture drew on the contemporary scientific discourse on crime and criminality and contributed to the consolidation of positivist criminology. The peculiar productive power-knowledge and visual regime that I have identified as the criminalising gaze of composite portraiture is interconnected to the technique's other perspectives, its pathologising, racialising and eugenic gazes that will be explored in the following chapters.

The criminalising gaze of composite portraiture is characterised by extreme inequalities of power. It was directed at a group of people confined in panoptic structures and subjected to a tight disciplinary regime. The photographic technique sought to establish a visual typology of a group of people exhibiting a deviation from "proper" moral and social behavior and to reveal the composite physiognomy of "the criminal face." Hereditary signs of criminality, carved into the body of individuals through the accumulation of "criminal markers" across generations were meant to be exposed. This construal of visual types of criminals was achieved through the retrospective ascription of signs of criminality to the already institutionalised prison population. Composite portraiture thus served to construct deviant identities and criminal typecasts in what could be described as a form of visual labeling. It thereby reproduced and reinforced prevalent physiognomic stereotypes of criminals as well as hereditary explanatory models.³

¹ The chapter title is inspired by the title of the book: Cole, A. Simon: *Suspect Identities: A History of Fingerprinting and Criminal Identification*. Harvard: Harvard University Press, 2001.

The advent of composite portraiture is linked to developments in nineteenth-century criminal anthropology and positivist criminology in which the focus increasingly shifted: away from the crime itself, towards the mind and body of the criminal. This view was epitomised by Cesare Lombroso's theory of atavism and his figure of the "born criminal" that was described as a primitive, sub-human being, characterised by physical anomalies.⁴ Influenced by these contemporary theories of criminal anthropology, the composite portraits of criminals can be described as visualisations of atavistic physiognomies. Composite portraiture, as a seemingly objective means of photographic typecasting, in turn fostered the influential career of the newly established positivist school of criminal anthropology in the late nineteenth and early twentieth centuries. These new perspectives to the nature of crime relied on older preconceptions of the visibility of an immoral character and of a criminal physiognomy that often drew on physiognomic explanations and animal analogies. These conceptions were nourished by recent scientific explorations in evolutionary theory and genetic transmission, as well as by eugenic reasoning.

This genetically and physiognomically substantiated, subject-centered perspective on the social phenomenon of criminality found its expression in the criminalising gaze of composite portraiture, a gaze based on and reproducing the power structures of the disciplinary mechanisms and institutions of confinement. On a meta-level, the technique became linked to efforts towards the detection and containment of social evil, acting as a means to bring order to the inscrutable mass of the population by providing facial types and physiognomic markers for governmental¹ and biopolitical intervention.⁵ The photographic and scientific re-construction of older physiognomic stereotypes provided a basis for social

² In an address to the Department of Anthropology of the British Association for the Advancement of Science, Francis Galton speaks about photography and the methods of judiciary portraiture. He proposes a set of mirrors that would allow for taking four perspectives of a human head in one photographic shot. See Galton, Francis: "Anthropometry. Address to the Department of Anthropology, Section H." In: *Nature*, 20, 23 August 1877, 344–347, at 346.

³ The term criminalising gaze is used in current publications on the disciplinary mechanisms of the state and the police, especially in relation to the discrimination of people of colour, sex workers, and migrants. See Phillips, Coretta; Webster, Colin (eds.): *New Directions in Race, Ethnicity and Crime*. London: Routledge, 2014; Back, Les; Solomos, John (eds.): *Theories of Race and Racism: A Reader*. London: Routledge, 2000; Ben-Moshe, Liat et al.: "Critical Theory, Queer Resistance, and the Ends of Capture." In: Adelsberg, Geoffrey et al (eds.): *Death and Other Penalties: Philosophy in a Time of Mass Incarceration*. New York: Fordham University Press, 2015, 266–296.

⁴ See Lombroso, Cesare: *Criminal Man*. New York, London: G.P. Putnam's Sons, 1911 [1876].

discrimination within the increasingly mobile society of nineteenth-century Britain and a justification for the class divide and increasing institutionalisation of certain groups of society in prisons, penal colonies, poor houses, and asylums.

In this chapter, the discussion of the composite technique and its criminalising gaze commences with a description of nineteenth-century anxieties concerning criminality, the contemporary prison system, and early practices of photographic identification. Exemplary nineteenth-century observations on the physiognomy of criminals lead to an examination of Galton's experiments with composite portraiture and reveal its proximity both to earlier physiognomic thought and to contemporary advances in criminology. The following sections allow for glimpses into the institutions in which the photographs needed for the process of photographic composition were produced, and explore the technique's role in the rise and demise of criminal anthropology in the United States and Britain. The concluding part summarises the findings regarding the application of the composite technique and explores late twentieth and early twenty-first-century composite portraits produced in science, visual arts and popular culture.

Carceral Architectures and the Fixing of Photographic Doubles

The technique of composite portraiture was developed in a time of increasing social tensions in late nineteenth-century Britain. Rising rates of criminality and poverty due to increasing industrialisation and labour migration to the cities were a pressing social problem. A fear of "vagrants" and their growing mobility, as well as the formation of a so-called "criminal class" dominated public discourse.⁶ This led to a strengthening of the disciplinary apparatus of the police and penal systems as well as to the introduction of criminal registers, which provided the basis for the establishing of the criminalising gaze of

⁵ In this respect, the eugenicising gaze of the technique is relevant that is discussed in chapter 7.

⁶ These figures and descriptions were constructed in fictional and journalistic publications, such as in George W.M. Reynold's and Henry Mayhew's writings: Reynolds, George W. M.: *The Mysteries of London, Containing Stories of Life in the Modern Babylon*. London: The Booksellers, 1890 [1845]; Mayhew, Henry: *London Labour and the London Poor. A Cyclopædia of the Condition and Earnings of Those That Will Work, Those That Cannot Work, and Those That Will Not Work*. London: Griffin, Bohn, and Company, 1861 [1851–1861].

composite portraiture. The strengthening of the moral and visual orientation of penal practice can be traced in the architectures of confinement epitomised by London's two model prisons, Millbank and Pentonville, where most of the component portraits for Galton's composite "criminal face" were produced.

Perceived as elements of an uncontrollable social and moral evil, criminals and criminal acts sparked veritable moral panics in the 1860s, such as the London "garroting scare."⁷ This phenomenon was, however, not necessarily attributed to the disruption of family ties and a more general loss of societal cohesion, both now thought consequences of industrialisation and capitalist exploitation. Many contemporaries understood criminality as a moral or hereditary defect, and thus in terms of a process of degeneration; some described it in terms of an epidemic that seemed to overwhelm social order and traditional norms.⁸ These views were shared by Francis Galton, who presented crime as a genetically predisposed moral deficiency that had to be contained on a national level:

Moral monsters are born among Englishmen, even at the present day; and, when they are betrayed by their acts, the law puts them out of the way, by the prison or the gallows, and so prevents them from continuing their breed.⁹

This deterministic position, denying any room for betterment or reform and even humanity to convicts, provides evidence for the heated debate on criminality in the nineteenth century and already hints at the scientist's later eugenic project of "improving" the genetic composition of English society.

⁷ The so-called "garroting scare" or garroting panic refers to the medial reception of violent robbery by strangling in London that peaked in 1862. The concept of moral panic is used to describe the occurrence of media-related events of unjustified criminalising ascriptions and the ways in which social anxieties are created about types of individuals or groups. See O'Brien, Martin; Yar, Majid: *Criminology. The Key Concepts*. London: Routledge, 2008, 110.

⁸ The reformist writer Henry Mayhew published what could be described as early sociological explorations of London society and London's prison system. In his portrayal of London society and its underworld, he argued that Britain was infested with "a criminal epidemic—a very plague, as it were, of profligacy – that diffuses itself among the people with as much fatality to society as even the putrid fever or black vomit." See Mayhew, Henry; Binny, John: *Criminal Prisons of London and Scenes of Prison Life*. London: Griffin, Bohn, and Company, 1862; Mayhew, Henry: *London Labour and the London Poor*.

⁹ Galton, Francis: "Hereditary Character and Talent." In: *Macmillan's Magazine*, 12, 1865, 157–166 and 318–327, at 324.

¹⁰ See de Leeuw, Karl Maria Michael; Bergstra, Jan (eds.): *The History of Information Security: A Comprehensive Handbook*. Amsterdam: Elsevier, 2007, 251.

Both public concerns about criminality and the corresponding anxieties regarding a moral and societal demise were fanned by articles and publications, and ultimately led to the passing of the Habitual Criminals Act of 1869. This piece of legislation prescribed the transfer of responsibilities for policing and crime detection from local village constables to the centrally governed police forces of Victorian Britain. It also led to the introduction of a centralised criminal register of convicts and repeat offenders, which included the collection of their photographic identification portraits at the Metropolitan Police headquarters, Scotland Yard.¹⁰ This tightening of policing and judiciary and penal discipline, that had in fact had its precursors in the late eighteenth and early nineteenth centuries, went along with a reform of the prison system and resulted in the construction of new, state-run institutions of detention and punishment. The model prisons of London, Pentonville and Millbank, where most of the photographs for Galton's early composite portraits were taken, adopted specific architectural layouts to implement "reformatory" penal ideals. These means of moral punishment were based on a disciplinary regime of the complete separation of prisoners, as well as on compulsory labour and religious education in absolute silence. At Pentonville,¹¹ inmates lived under this "separate system," in which the prisoners were kept in separate cells, without any possibility of communication. At Millbank, authorities practiced the so-called mixed system that kept the fundamental principles of separation and silence, but allowed for the coming together of convicts for periods of work, exercise, or worship.¹²

Both penitentiary institutions were intricately linked with late eighteenth- and early nineteenth-century ideas of reformatory prisons and, in particular, with the "panopticon" proposed by Jeremy Bentham. As Michel Foucault pointed out, this plan for a model prison and workhouse that depended on the constant visibility of the individual inmates to a centralised authority represents a model of a general disciplinary mechanism in society. The panopticon's windowed cells were supposed to be built concentrically around a central watchtower

¹¹ The "model prison" Pentonville is still in operation in North London and in recent years has been repeatedly criticised for overcrowding, deficient hygiene, and misconduct among the insufficient staff. In June 2015, the conditions at Pentonville deteriorated even further: the prison held 350 more prisoners than it had been designed for, cells were overcrowded and dirty, and often even basic provisions such as clean bedding and pillows were lacking. See <http://www.prisonphone.co.uk/pentonville-prison-squalor-violence-and-cockroaches-the-implications-of-a-poorly-managed-prison/> [19/10/2019].

¹² From a current perspective these forms of imprisonment and solitary confinement can be considered as opposed to basic human rights.

which allowed for the constant supervision of the individual cells, the prisoners backlit by the distribution of windows. This arrangement of light would make the inmates visible at any time, while it prevented them from returning the gaze. The secluded individuals, internalising the constant supervisory gaze, were to become their own over-seers and were expected to self-regulate their behavior.¹³ In many ways, this architectural layout epitomised the ideals of early prison reformers such as of John Howard,¹⁴ who wanted to dispense with harsh disciplinary measures and physical violence in order to initiate a climate of self-reflection and moral reform.

Even today some of the prisons built in Britain during this period that incorporate the ideas of panoptic structures are still in operation. During my research visits, I performed perimeter walks¹⁵ of Pentonville Prison London and Bedford Prison, along the high walls of the disciplinary institutions, sprayed with messages about the oppressive force of state power. Since being built, these structures have become increasingly complex, in contradiction to their initial panoptic simplicity. The historical parts were extended with annexes in different architectural styles, new walls were erected, new corners formed, as if demonstrating an architectural history of the containment of crime. The impermeability of the walls and the sensation from the worm's-eye-view prompted me to compile a video collage of bird's-eye views of these institutions of confinement. In this animation, the architectural layouts, maps, and plans of disciplinary institutions are rotating around a central, "sublime" spot, the heart of the panoptic structures, from which super-vision was thought to ensure omniscient control.¹⁶

¹³ See Foucault: *Discipline and Punish*, 195.

¹⁴ John Howard, prison reformer and "father of the penitentiary," was involved in drafting the Penitentiary Act of 1779 that was issued following the Declaration of Independence in northern America and the resulting cessation of deportations of convicts to the colonies. This piece of legislation proposed reformatory imprisonment as an alternative to transportation or the death penalty. It introduced ideas of solitary confinement and religious instruction, as well as compulsory labor, and led to the construction of the first modern prisons in London: Millbank (1816) and Pentonville (1842). See Ignatieff: *A Just Measure of Pain*, 47–48; and Dixon, Hepworth: *John Howard and the Prison World of Europe. From Original and Authentic Documents*. New York: Robert Carter and Brothers, 1850.

¹⁵ Perimeter walks are a performative strategy used in the arts to experience enclosed spaces and to raise awareness of (sometimes invisible) boundaries.

¹⁶ See Gschrey, Raul: *panopticon*, video animation, 2016, <https://vimeo.com/156247272> [15/01/2022].

The reformist disciplinary regime that found expression in the architectures of "total institutions"¹⁷ – directed at the body and mind of the prisoners – was deeply influenced by visual metaphors and practices of surveillance and control. It was creating an ever more finely woven system of identification that made use of the then relatively new medium of photography for the production of what can be called disciplinary portraits.¹⁸ And indeed, to extend the concept of the panopticon, its individual cells, with their windows to one side and a spyhole to the other, resemble small photographic studios, their inhabitants under constant supervision. Photography in such institutions constituted a form of fixing visual doubles of individual convicts in time and space – and arranging those likenesses between the covers of a registry book. By analogy, the modern penitentiary, with its separate confinement and well-timed routines, can be conceived of as a well-ordered temporary archive of bodies – assembled in their individual studios – that corresponded to the respective entries in the photographic archives.

The panoptic disciplinary structures likewise constituted a place of scientific examination and social reform, a system of power-knowledge that circled around the abstraction from and the personification of the embodiment of crime. In this context, Foucault proposed the term "carceral system" to denote the combination of discourses and architectures, coercive measures and scientific reasoning, real social effects and utopian ideas at work in the nineteenth-century penal context and the broader society.¹⁹ With its focus on the human body, its fixation in cells and on photographic plates, Foucault's observations of a "body politic" are relevant, that he describes as a "set of material elements and techniques that serve as weapons, relays, communication routes and supports for the power and knowledge relations that invest human bodies and subjugate them by turning them into objects of knowledge."²⁰ The utilisation of photography in the judiciary context can be understood as a form of body politic, a power-knowledge nexus that becomes exemplified in the composition of these frontal views into meta-images by means of composite photography.

¹⁷ See Goffman, Erving: *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates*. New York: Anchor Books, 1961.

¹⁸ I refer to the individual component photographs produced in disciplinary institutions (such as prisons, hospitals, the army, schools, universities, and the family) that were used for the photographic compositions as disciplinary portraits. This is based on Michel Foucault's writings on the disciplinary society and panopticism.

¹⁹ See Foucault: *Discipline and Punish*, 271.

The disciplinary portraits followed an increasingly systematic iconography that can be traced in the photographs taken in Bedford Prison in the 1860s²¹ and in the records of the Habitual Criminal Register set up in the 1870s.²² This vast archive of increasingly formalised “mug shots” produced in the British disciplinary machinery formed the inspiration and source material for the photographic compositions that were published by Galton as typologies of criminal physiognomy.

The vast numbers of individual portraits staring at the viewer from the registry books have a strangely magnetic, affective quality. While inspecting and sorting the material in the Galton Collection and Papers and in the other archives, I experienced a sense of a loss of ground, a loss of time, while I was looking into the eyes of individual portraits. My mind seemed to play tricks on me, as general contours dissolved and became reduced to mere shapes. Then again, some faces became strangely familiar, and I suddenly seemed to recognise individuals in the frontal shots that had once sought to establish identification in the nineteenth-century carceral apparatus. This led to artistic experiments analogous to my architectural video of panoptic structures. In the animations that I compiled a single central eye “shared” by all the portraits remained the only fixed point of the dissolving and circling facial shapes.

The development of composite portraiture and its criminalising gaze is based on a peculiar iconography of depicting the suspect face in the mid- to late nineteenth century. The frontal depiction of faces with a neutral expression in front of a neutral background and their inclusion in criminal registries already had a criminalising effect that became augmented in the typologies of the criminal face by means of composite portraiture. The criminalising gaze of the technique appears to aim for two contradictory goals at once: by multiplying and accumulating individual physical aspects of the portraits that were produced for individual identification, the technique sought to establish a common type, a universally valid composite face of a social phenomenon whose sources, in turn, were sought in genetic disposition. The resultant meta-portraits were no longer directed at disciplining the individual, but addressed society at a macro level and functioned as devices in the biopolitical management of the population. Following this reasoning,²³ composite portraits could indeed be described as biopolitical portraits.²⁴

²⁰ See Foucault: *Discipline and Punish*, 28.

Carceral Congregations and Criminal Physiognomies

The quest for images of the criminal face was not an innovation introduced by the criminalising gaze of composite portraiture. Physiognomic interpretations of criminality were omnipresent in nineteenth-century Britain and Europe. Folk-knowledge, physiognomic handbooks, and phrenology had all long asserted the visibility of criminal character, often drawing on the works of the physiognomist Johann Caspar Lavater and the phrenologist Franz Joseph Gall. Similar interpretations were common in the nineteenth-century scientific discourse on criminality and also found their way into the visual characterisations compiled by means of composite portraiture.

A typical description of such views is given by the writer and reformer Hepworth Dixon, who argues that “[u]gliness has some intimate connexion with crime”²⁵ and observes a general resemblance of the prisoners:

A man who has not seen masses of men in a great prison cannot conceive how hideous the human countenance can become. Looking in the front of these benches, one sees only demons. [...] [T]he vast mass of heads and faces seem made and stamped by nature for criminal acts. Such low, misshapen brows – such animal and sensual mouths and jaws – such cunning, reckless, or stupid looks – hardly seem to belong to anything that can by courtesy be called human.²⁶

This derogative description of the congregation in a prison chapel exhibits an openly hostile position towards the convicts, comparing them to animals and denying them human status.

²¹ The Bedford Prison registry book, containing the earliest judiciary portraits produced in Great Britain between 1859 and 1876 is kept at Bedfordshire and Luton Archives, Bedford: Bedfordshire Archives and Records Service, Bedfordshire Gaol Register, BLARS QGV12/1.

²² The records are kept at the National Archives, Kew. Home Office and Prison Commission: Prisons Records (PCOM 2) and Home Office: Prison Registers and Statistical Returns (HO 23, HO 24, HO 140).

²³ The concept of biopolitics and its role in what he defined as normalising society was delineated by Foucault in his lectures at the Collège de France. See Foucault: *Society Must Be Defended*, 242–243.

²⁴ My understanding of composite portraits as biopolitical portraits is discussed more thoroughly in the chapter 6, “Visual Pathologies.”

²⁵ Dixon, Hepworth: *The London Prisons: With an Account of the More Distinguished Persons who Have Been Confined in Them. To which is Added, a Description of the Chief Provincial Prisons*. London: Jackson and Walford, 1850, 138.

²⁶ Dixon: *The London Prisons*, 244–245.

In their account of a mass conducted in the special architecture of the chapel constructed for separate penal confinement at Pentonville, the social researchers and reformers Henry Mayhew and John Binny take a more sympathetic position. With reference to Lavater and Gall, they reject a physiognomical reading of the faces present²⁷ and emphasise the social causes of criminal behavior.²⁸ The verdict of the social reformers against criminal facial typology seems impressive. Yet the text barely hides the authors' class prejudice and does not actually challenge the principles of physiognomic interpretation. Their descriptions and characterisations remain influenced by the assumption of an outer visibility of inner characteristics, such as when they observe peculiarities of expression in supposedly different "types" of criminals. In their examination of the convict population of Pentonville, Mayhew and Binny note a "certain kind of dogged and half-sullen expression, denoting stubbornness and waywardness of temper"²⁹ and a "peculiar cunning and sidelong look, together with an odd turn at the corners of the mouth"³⁰ in habitual thieves. The "violent class of criminals" is described as being "mostly remarkable for that short and thick kind of neck which is termed 'bull,' and which is generally characteristic of strong animal passions."³¹ Such physiognomic readings of facial features seem to be oscillating between: on the one hand, animalistic representations of a permanent nature, building on the work of Giambattista Della Porta,³² and, on the other, on an analysis of fluctuating emotional expression as proposed by Charles Darwin.³³

²⁷ "[T]he general run of the countenances and skulls assembled in Pentonville Chapel are far from being of that brutal or semi-idiotic character, such as caricaturists love to picture as connected with the criminal race. [...] There are few countenances [...] to which the convict garb — despite our study of Lavater and Gall — does not lend what we cannot but imagine, from the irresistible force of association, to be an 'unmistakably' criminal expression. [...] [E]ven the keenest eye for character would be unable to distinguish a photograph of the criminal from the noncriminal congregation." See Mayhew; Binny: *Criminal Prisons of London*, 164.

²⁸ "They were of all ages—from mere boys to old men of between fifty and sixty. Nor were their expressions of features less various; some looked, as a physiognomist would say, 'really bad fellows,' whilst others appeared to have even a 'respectable' cast of countenance, the features being well formed rather than coarse, and the expression marked by frankness rather than cunning, so that one could not help wondering what hard pressure of circumstances had brought 'them' there." Mayhew; Binny: *Criminal Prisons of London*, 147–148.

²⁹ Mayhew; Binny: *Criminal Prisons of London*, 164.

³⁰ Mayhew; Binny: *Criminal Prisons of London*, 164.

³¹ Mayhew; Binny: *Criminal Prisons of London*, 164.

³² See Della Porta, Giambattista: *De Humane Physiognomonica*. Paris: Aux Auteurs de Livres, 1990 [1586].

The crowded "divine theatre,"³⁴ the congregation assembled in the prison chapel built under the separate model described by Dixon, Mayhew and Binny, are recurring themes in contemporary writing on prisons: the heads of the prisoners brought together in their individual compartments, their full faces directed towards the moral authority preaching from the central pulpit. A lithographic representation was published in Mayhew's book and Galton was certainly familiar with this special arena of physiognomic analysis and might even have witnessed a mass at either Millbank or Pentonville when he was granted access to those "model institutions" by the prison authorities.³⁵

The ideal architectural layouts of this disciplinary machine – the architecture of the prison chapel, as well as the model prison panopticon in general and its cells that resemble photographic studios – were the built translation of visual strategies and metaphors of confinement and separation. Here the perspective of exercising individualised surveillance and control over the bodies of prisoners was expanded with a comparative perspective of a "separation in unity" represented by the individualised congregation in the prison chapel. This amalgamation of the individual aspects of disciplinary identification, as well as the typification of groups in the penal system, can be seen as impulses for the development of the photographic technique of composite portraiture and its criminalising gaze. The then "state-of-the-art" observations and classifications made possible by photography were based on century-old physiognomic stereotypes that were accepted, even by critics of the harsh disciplinary penal system.

Composing Criminal Countenances: The First Composite Portraits

In April and May 1877, Francis Galton received 600 photographic prints of convicts detained at Millbank and Pentonville prisons from the Home Office.³⁶ Galton had gained access to the portraits through Edmund Du Cane, who was

³³ See Darwin: *Expression of the Emotions*.

³⁴ These divine theatres that have been described as the "brain of the penitentiary machine" were to make sure that the religious and moral messages, but also the power relations embodied in the penitentiary, were not lost on the inmates. See Ignatieff: *A Just Measure of Pain*, 5.

the highest-ranking authority in the British penal administration under whose superintendence many of the reforms of the early nineteenth century were abandoned.³⁷ Instead, a regime of “salutary terror”³⁸ was established that was aimed at breaking the convicts and exploiting their work force.³⁹ As “Director of Convict Prisons,” he had asked Galton to examine this special collection of portraits “in order to discover and to define the types of features [...] that are associated with different kinds of criminality.”⁴⁰ Since, he argued, “popular ideas were known to be very inaccurate, [...] he thought the subject worthy of scientific study.”⁴¹ This impulse from within the panoptic total institution led to Galton’s first experiments on the photographic composition of portraits and the development of the technique of visual typecasting. And already here, the central aspects of the criminalising gaze of composite portraiture are all present: the physiognomic equation of physique, character and (moral) disposition; a focus on social deviancy and marginal groups of society under a tight disciplinary regime, as well as the genetic explanation and potential eugenic solutions of the phenomena perceived as problematic.

The reproductions and duplicates of the judiciary portraits preserved among the Galton Papers and in the Galton Collection are anonymised; the names, initially added for purposes of identification, have been crossed out manually. On some portraits from Millbank, production dates between 1874 and 1876 are still visible, indicating that the majority of the prints must have been produced in the mid-1870s.⁴² The prisoners wear identical uniforms, their top buttons closed and hands placed below in front of the trunk, holding onto the open sides of their uniform coats. On the back of the prints the letters M for murder, L for larceny, and R for rape have been inscribed, indicating the nature of their respective criminal convictions. Among the Galton Papers some sets of

³⁵ See Galton: *Memories of My Life*, 259.

³⁶ Joseph, C.S. (Home Office): Letters dated 18 April and 22 May 1877 addressed to Francis Galton. Galton Papers, UCL, GALTON/2/8/1/1/1.

³⁷ See Fox, Lionel W.: *The English Prison and Borstal Systems*. London: Routledge, 1952, 50.

³⁸ This description was coined by the contemporary Duke of Richmond in relation to the deterring value of the new penitentiary system in relation to the poor. See Ignatieff: *A Just Measure of Pain*, 97.

³⁹ Galton counted Du Cane as a like-minded thinker and described him as “an extremely accomplished man, with high and humane views, and [who] sympathised with not a few of the subjects on which I have been engaged.” See Galton: *Memories of My Life*, 259.

⁴⁰ Galton: *Memories of My Life*, 259.

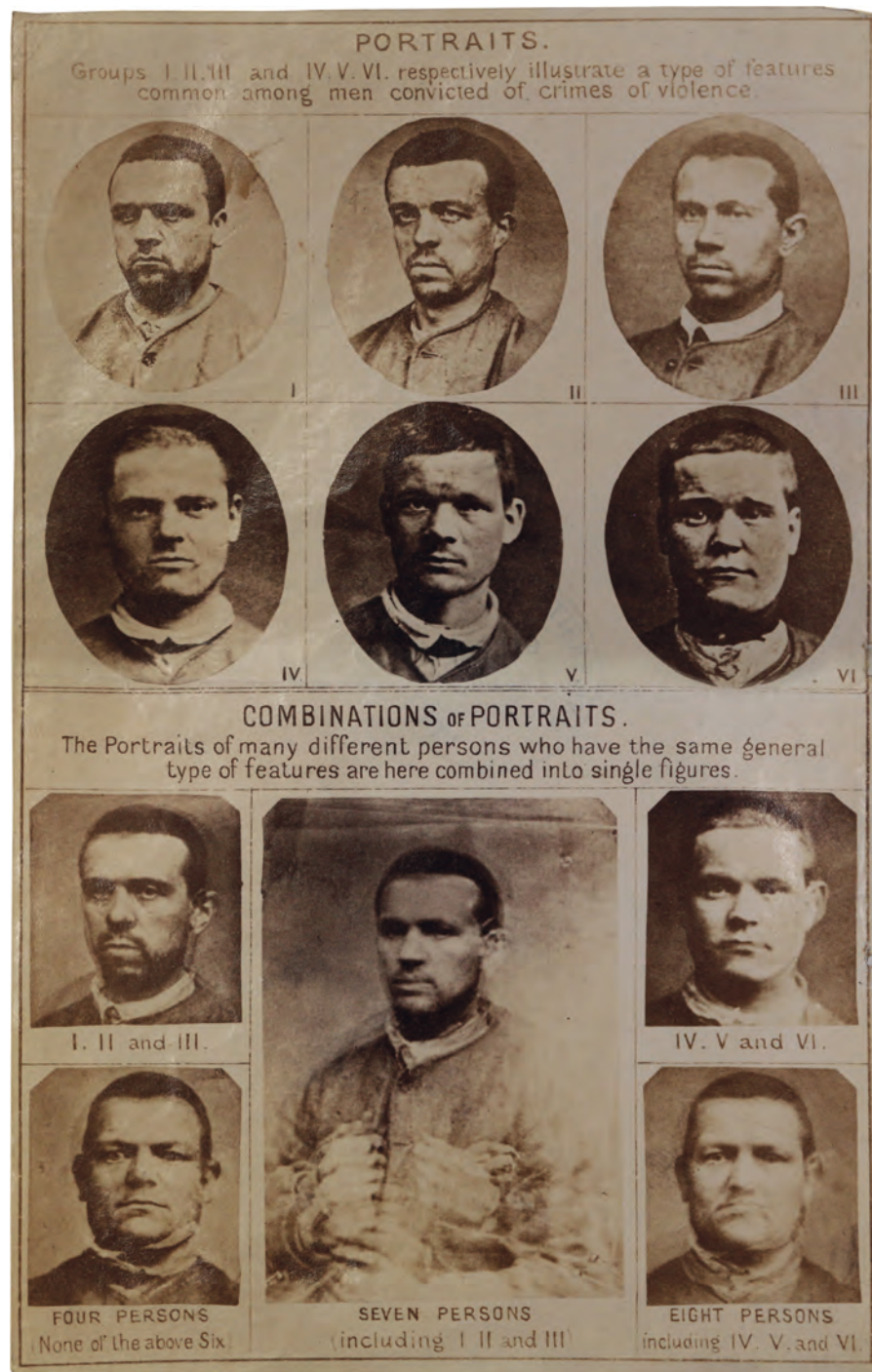
⁴¹ Galton: *Memories of My Life*, 259.



Galton, Francis: Composite booklets. Galton Papers, Special Collections, University College London, GALTON/2/8/1/1/2/8; Galton, Francis: glass positives for lantern presentations, ca. 1878. Galton Collection, University College London, GALT 378, courtesy of UCL science collections.

portraits are kept separately, held together by rivets or glue, the first print of which is the composite portrait of the following individual components. Browsing through these small booklets resembling flip books; one can imagine how Galton tried to compare and mentally merge them by viewing them in quick succession.⁴³ He describes the long process of sorting and binding the components as an initial production step of composite portraits,⁴⁴ which were later produced by the commercial photographer H. Reynolds.⁴⁵

⁴² The photographic portraits taken at Millbank and Pentonville, as well as a number of compositions, are preserved among the Galton Papers, UCL, GALTON 2/8/1/10; GALTON 2/8/1/4.



Galton, Francis: *Combinations of Portraits*. Galton Papers, Special Collections, University College London, GALTON/2/8/1/1/2/1.

From the huge corpus of disciplinary portraits, these eventually were the ones selected by Galton as typical specimens. Considering the mass of judiciary portraits that were at his disposal, this low number of only about two dozen from 600 portraits is striking. Also, it remains unclear what ultimately guided Galton's choice. Some portraits in the individual booklets exhibit a visual likeness, others do not seem to resemble each other particularly closely. This limited selection, however, represents the essence of the types of criminals that the accomplished explorer and anthropologist chose to represent. Here his role as an impartial scientific observer seems to waver, and it appears likely that Galton was guided by historically developed and still prevailing stereotypes of criminal facial features, by the nineteenth-century repercussions of physiognomy, and the relatively new doctrine of phrenology.

The composite portraits of what Galton described as examples of the "coarse and low types of face found among the criminal classes"⁴⁶ were published as lithographic reproductions in several journals, shown as lantern slides in lectures,⁴⁷ and exhibited as arrangements on charts, sometimes including the individual portraits. One of the earliest charts is divided into two parts. The upper half consists of vignette versions of individual portraits that are described as "[g]roups [...] respectively illustrat[ing] a type of features common among men convicted of crimes of violence."⁴⁸ The first three portraits show relatively slim faces and a broad forehead; the others broader features and a pronounced jaw. The lower half shows one bigger and four smaller composite portraits. Two are compositions with three components each. Furthermore, it contains a photographic composition of four different convicts, whose individual portraits are not part of the illustration, as well as a co-composite of the initial composites. The chart indicates the existence of two major recurring types of facial features, an observation that is presented by Galton as follows:

There is much interest in the fact that two types of features are found much more frequently among these than among the population at large. In one the features are broad and massive, like those of Henry VIII, but with a much smaller brain. The other [...] is a face that is weak and certainly not a common English face. Three of these composites, though taken from entirely different sets of individuals, are as alike as brothers, [...] the result may be accepted as generic in respect of this particular type of criminals.⁴⁹

⁴³ This observation of the possibility of viewing the images in quick succession links in with the argument put forward by Josh Ellenbogen, who has read the technique in relation to chronophotography. See Ellenbogen: *Reasoned and Unreasoned Images*.

The comparison with the facial features of Henry VIII, the prototypical self-absorbed, brutal ruler originating from a Welsh dynasty, suggests a physiognomic character reading. The physiognomic-nationalistic overtone already implied intensifies in the second observation in which Galton challenges the Englishness of his subjects' facial features, while observing a family likeness and implied genetic similarity in his photographic constructions. He however fails to comment on the nature of the crime of the groups of convicts and seems to leave the categorisation to the viewers, while clearly setting a physiognomic and hereditary focus for the criminalising gaze of composite portraiture.

The irregular outlines suggest that the photographic compositions of the chart received their framing when mounted – as a rectangle with clipped upper corners – while the individual portraits were cropped photographically, using an oval vignette which in the late nineteenth century was frequently used in civic portraiture. This serves to intensify the contrast between the upper and lower parts of the chart: providing the component portraits with an air of individuality, largely excluding the markers of the penal contexts in which the photographs were taken. These markers, however, are taken up, and even highlighted, in the central composite portrait of the lower section that combines photographs of seven persons, including the first group. It shows a wider section of the image, almost the whole frame of the original judiciary portraits. The subjects' hands and fingers are blended irregularly in a manner reminiscent of a surreal composition; these are remnants of the compulsory pose that was enforced in the prison's photographic studios. It must have been a deliberate choice not to crop the pictures and instead show those visual relics. This could be seen as an attempt to authenticate the mode of their production or to demonstrate that the combined faces really belong to convicts. In any case, the men's arms and hands look disfigured, almost as if tied together – bound by their inherent physiognomies to their inevitable fate and rightful punishment, emphasising the criminalising function of composite portraiture.

⁴⁴ See Galton: *Inquiries into Human Faculty*, 6.

⁴⁵ See Galton: "Composite portraits" [1878], 97.

⁴⁶ Galton: *Inquiries into Human Faculty*, 10.

⁴⁷ A number of these lantern slides are preserved in the Galton Collection, University College London.

⁴⁸ See the chart *Combinations of Portraits*, Galton Papers, UCL, GALTON/2/8/1/1/2/1.

⁴⁹ Galton, Francis. "Generic Images." In: *Proceedings of the Royal Institution*, 9, April 1879, 165.

Animal Analogies and Atavistic Abnormalities

A number of composite portraits that were produced by Galton from this material to be published and exhibited over the following years expand on this physiognomically and genetically substantiated reading. Here, the physiognomic and historical basis of the criminalising gaze of composite portraiture, come to the fore, its adoption of animal analogies in the description of criminals and its proximity to theories of degeneration and atavism, among others by the positivist criminologist Cesare Lombroso. Lombroso's fascination with skulls led to his use of the technique on these de-faced specimens. He produced atavistic composites, syntheses of historical genealogies and future prognoses inscribed in the skeletal structure.⁵⁰

In two charts posthumously published by his disciple and first biographer Karl Pearson, Galton returned to the division of criminals according to the nature of their offence.⁵¹ One chart, with eight oval vignette composite portraits of "Criminals convicted of Murder, Manslaughter, or Crimes of Violence,"⁵² is dominated by three larger composites in the upper row, exhibiting the broad features already displayed in the first plate. In the second row, a co-composite portrait is flanked by its two component composites of slightly slimmer faces, while the third row proposes two additional physiognomic typologies of violent criminals. The layout, expanding from the bottom, resembles the common representation of a family tree and reminds of arguments regarding the formation of a so-called criminal class and criminal families.⁵³

The second chart deals with criminals convicted for non-violent crimes, larceny and property related offences. Among the four facial typecasts slim, rather pointed faces dominate. The chart gains tension through the juxtaposition of these criminal physiognomies with the respectable portion of society, or as the capture reads, the "Normal Population, Officers and Men of Royal Engineers."⁵⁴

⁵⁰ In her discussion of the construction of the atavist body, Dana Seitler has noted: "The body, atavism indicates, is reversible, changing, and susceptible to decline; it is affected by an endless cycle of decomposition and re-composition, futurity and return." See Seitler: *Atavistic Tendencies*, 7.

⁵¹ See Pearson: *Life, Letters and Labours*, plates XXVIII and XXIX.

⁵² See the caption of Plate XXVIII in Pearson: *Life, Letters and Labours*.

⁵³ See among others the influential study of Richard Louis Dugdale on the "Jukes Family." See Dugdale, Richard Louis: *The Jukes: A Study in Crime, Pauperism, Disease and Heredity. Also Further Studies of Criminals*. New York, London: G.P. Putnam's Sons, 1877.



Galton, Francis: plate XXVIII; plate XXIX. Published in: Pearson, Karl: *The Life, Letters and Labours of Francis Galton*. Second Volume. Cambridge: Cambridge University Press, 1924.

The contrast between the different groups is emphasised also by virtue of their presentation, through the choice of vignettes and framing: the smooth, circular composites of the military men are fully focused on the face, while the square-cut details of the criminal composites show sections of the subjects' coarse prison uniforms and overall exhibit a higher level of irregularity.

This form of a visual binary argument is also employed in further presentations of composite portraits, such as in the chart "Specimens of Composite Portraiture" that was prepared for the publication of *Inquiries into the Human Faculty and its Development* in 1883.⁵⁵ In this illustration, the two compositions described as "2 Of the many Criminal Types" are juxtaposed with the ones representing "Disease" and "Health."⁵⁶ The upper is an oval vignette version of the co-composition of eight portraits with broad, heavy-jawed faces that also featured on the earlier charts; the lower is a composition of four portraits exhibiting more pointed features that might have been described as "canine-like." The ears are prominently visible on both sides of the head, and this is the most irregular example among the set of non-violent composites. Here the indebtedness of composite portraiture to earlier physiognomic depictions of criminal features and animal analogies becomes obvious, a tradition dating back to the physiognomic thought of classical antiquity and the early modern period.⁵⁷

⁵⁴ See the caption in Pearson: *Life, Letters and Labours*, plate XXIX.

⁵⁵ See Galton: *Inquiries into Human Faculty*.

Greta Olson has argued that these criminal-animal metaphors contributed to the justification of the subjugation of both criminals and animals and that the concept of the criminal was, through these analogies, made concrete in specific figurations as a category of sub-human existence.⁵⁸ The animalisation of human faces, for instance the attribution of "canine" features and the visualisation of these traits play a decisive role in the work of Giambattista della Porta,⁵⁹ who is credited with transferring classical physiognomic knowledge into (early) modern times.⁶⁰ As the nineteenth-century interest in physiognomy and phrenology attests, this did not remain a short-lived, purely early modern fashion. *The Pocket Lavater*,⁶¹ including excerpts from Della Porta, was literally in many people's pockets, while the contemporary phrenologists Franz Josef Gall, J. C. Spurzheim, and later L. N. Fowler toured Europe and the United States, and Samuel Wells' *New Physiognomy*⁶² became a veritable best-seller.

The physiognomic study and analysis of facial features and the character traits supposedly corresponding to them often employed animal analogies. In the *New Physiognomy*, the features of the fox were associated with dishonesty and thievery: "He is a wild schemer, and prefers to gain his ends by cunning rather than by force. What the real fox is among poultry, the foxy counterfeiter, gambler, lottery dealer, mock-auctioneer, pocket book dropper, and thief is among honest men."⁶³ Features resembling a wild dog are characterised as indicative of destructiveness, a lack of kindness and intelligence; those of the wolf are seen as signs of brutal ferocity and malignant treachery.⁶⁴ In particular, broad and

⁵⁶ See the chart "Specimens of Composite Portraiture" In: Galton: *Inquiries into Human Faculty*, facing page 8.

⁵⁷ See Olson: *Criminals as Animals*.

⁵⁸ See Olson: *Criminals as Animals*, 20.

⁵⁹ See Della Porta: *De Humane Physiognomonia*, 56–57.

⁶⁰ A number of nineteenth-century publications in the field contain this observation See Wells, Samuel R.: *New Physiognomy or Signs of Character, as Manifested through Temperament and External Forms, And Especially in "The Human Face Divine"*. New York: S.R. Wells and Co Publishers, 1880 [1866]; Ellis, Havelock: *The Criminal*. London: Walter Scott, 1890.

⁶¹ See one of the many English language editions: *The pocket Lavater, or, The science of physiognomy: to which is added, an inquiry into the analogy existing between brute and human physiognomy, from the Italian of Porta: embellished with 44 copperplate heads*. New York: Van Winkle and Wiley, 1817.

⁶² Wells: *New Physiognomy*.

⁶³ Wells: *New Physiognomy*, 614.

⁶⁴ Wells: *New Physiognomy*, 610.

bulky heads were associated with inherent and inherited criminality and archetypal evil: “when it presents a prominent base supporting an inclined pyramid, more or less truncated, this head announces the monstrous alliance of the most eminent faculty of man, genius, with the most pronounced impulses to rape, murder, and theft.”⁶⁵ Prominent lower jaws, also, were raising suspicion; so-called prognathism was thought to be characteristic of violent criminals.⁶⁶ Looking back at Galton’s composite typologies, which had been classified according to the nature of the respective crime, the fox-like face dutifully falls in the category of larceny and other property offences, while the broad, heavy-jawed, “bull” face represents violent criminal countenance.

Composite portraiture was by no means the only nineteenth-century approach to the “faces of crime” that referred to physiognomic thought, phrenology, and animal analogies in order to align the outer structure of the human body and face with an inner disposition to criminal behavior. Cesare Lombroso and other protagonists of criminal anthropology and positivist criminology studied the formation of the head, in order to decipher criminal predispositions, stigmata that would reveal what they saw as the atavistic, genetic retrogression of the criminal.⁶⁷ Lombroso’s theory of atavism drew on evolutionary theory, on Ernst Haeckel’s recapitulation theory,⁶⁸ as well as on Max Nordau’s⁶⁹ and B. A. Morel’s⁷⁰ work on degeneration. His so-called “born criminal” was described as a degenerated variety of the human species, biologically predisposed to anti-social behavior. The criminal-animal trope already alluded to, provided another inspiration for the construction of Lombroso’s “born criminal.”⁷¹ These discourses constituted the basis on which the argument of a retrogression of the human frame, along with moral characteristics, to earlier stages of evolutionary deve-

⁶⁵ Lauvergne quoted in: Ellis: *The Criminal*, 50.

⁶⁶ See Ellis: *The Criminal*, 63–64.

⁶⁷ See Lombroso, Cesare: *L'uomo delinquente*. Milan: Ulrico Hoepli, 1876.

⁶⁸ See Haeckel, Ernst: *Anthropogenie: oder, Entwicklungsgeschichte des Menschen (Anthropogeny: Or, the Evolutionary History of Man)*, Leipzig: Verlag von Wilhelm Engelmann, 1874.

⁶⁹ The English-language edition of Lombroso’s *Crime, Its Causes and Remedies* is dedicated to Max Nordau who in turn dedicated his book *Degeneration* to Lombroso. In Lombroso’s preface, Ellis is noted among his “brothers in arms.” See Lombroso, Cesare: *Crime, Its Causes and Remedies*. London: Heinemann, 1911 [1899], XXXV.

⁷⁰ See Morel, Bénédict Augustin: *Traité des dégénérescences physiques, intellectuelles, et morales de l'espèce humaine*. Paris: J.B. Ballière, 1857.

⁷¹ See Olson: *Criminals as Animals*, 278.

lopment could be constructed, stages that were identified with animals, apes, and “primitive tribes.” Atavistic stigmata were sought in the features of the individual criminal body and in particular in the skull, which was thought to reveal most readily the primitive and violent nature of the criminal. In an eclectic summary of the typical physiognomic traits of atavistic “born criminals,” Lombroso notes:

In general, many criminals have outstanding ears, abundant hair, a sparse beard, enormous frontal sinuses and jaws, a square and projecting chin, broad cheekbones, frequent gestures, in fact a type resembling the Mongolian and sometimes the Negro.⁷²

The items of this visual characterisation, as well as the comparison with creatures regarded as “savage” and animal-like, appear more than a little familiar. Lombroso’s racist and classist criminology and his theory of atavism are, in this respect, re-inscriptions of physiognomic stereotypes and animal metaphors into a peculiar branch of positivist social science against the background of a thriving evolutionary discourse.

Cesare Lombroso had also experimented with the technique of composite portraiture; his studies, however, focused not on the faces but on the skulls of criminals.⁷³ Skulls that he had amassed together with a great number of other human bones and casts that became the core of his Museum of Criminal Anthropology, established at Turin in 1892 and opened to the public only recently, commemorating the centenary of Lombroso’s death. Considering the author’s interest in photography and in measuring the human frame and in particular the head, it is no surprise that the atlas accompanying the 1888 French edition of Lombroso’s *Criminal Man* contains a plate with five composite portraits of skulls of criminals⁷⁴ that are specifically mentioned in the introduction. The composite technique, endowed with the attributes of objective photographic recording, is here employed as an authentication device in establishing the difference between the skulls of criminals and those of members of the “normal population.” It also served as a visual counterargument to anthropological studies that denied precisely those differences. The reference of the

⁷² Lombroso: *Crime, Its Causes and Remedies*, XVIII.

⁷³ The use of composite portraiture on skulls is an often overlooked practice that was pioneered by Galton himself and that was also taken up in American racial anthropology. This is further explored in chapter 4, “Racial Prototypes.”

⁷⁴ Lombroso, Césaire: *L'Homme Criminel. Atlas, Deuxième édition*. Rome; Turin; Florence: Bocca Frères, 1888, plate XXXVIII.

technique as “Galtonian composite photography,”⁷⁵ including the name of the inventor, who was by the end of the nineteenth century an accomplished figure, could be read as a way of lending additional authority to these visualisations and the theory of atavism as a whole.

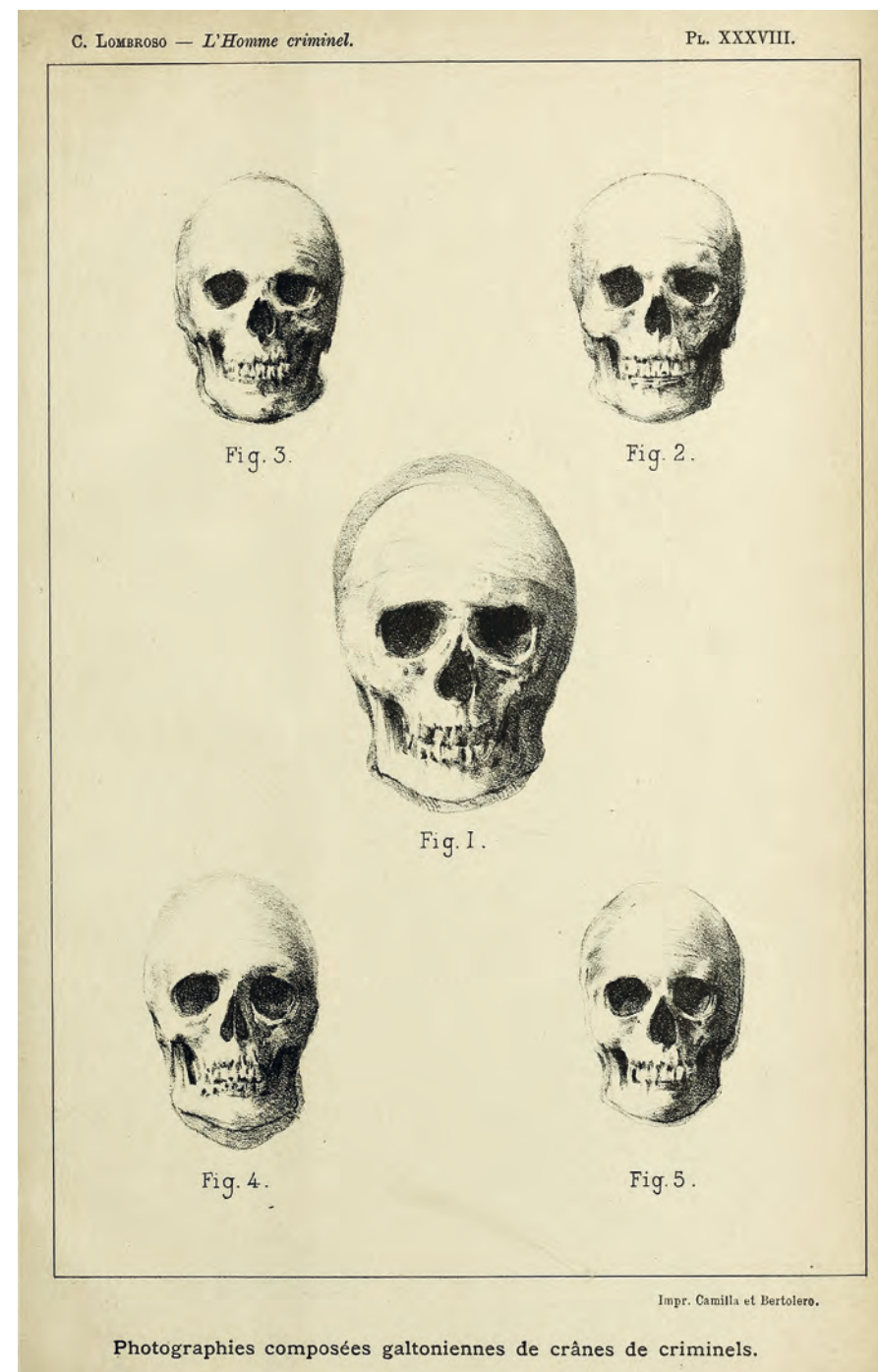
The first two composites on the plate are described as a combination of six skulls each, the first of murderers and the second of highway thieves. The caption notes that these provided good examples for the criminal types: well developed cheekbones, enormous jaws, and an asymmetry of the nasal cavities; a characteristic that could also be observed in the co-composite of both groups. Another figure combines six skulls of “cheats and swindlers,” whose average skull formation is described as thin and pointed, again recapitulating the prevalent animal tropes regarding criminals. The central composite is a combination of all 18 skulls that, in Lombroso’s view, were exhibiting a true family likeness of the criminal physiognomies, resulting in the “typical” composite skull of atavism.⁷⁶

Their origins and the mode of their selection remain unclear, but presumably the specimens used were chosen from Lombroso’s large collection of 684 skulls. The photographs must have been produced for that specific purpose, since other photographic depictions of skulls, also among the illustrations of the atlas, were taken from a slightly different angle, in the position usually adopted for anthropometric photography. The photographs might also have been retouched before their superimposition, since the majority of the specimens in the collection had previously been “opened” on the forehead to study the inside of the skull, the central area in which Lombroso detected his “atavistic features.”⁷⁷

Seen in this light, the broad-faced, heavy-jawed composite portraits frequently used by Galton in the dissemination of his technique seems stunningly pre-constructed and heavily influenced by visual patterns established in the long history of physiognomy and reiterated in contemporary criminal anthropology. By consequence, Galton’s initial claim of revising inaccurate popular ideas using scientific and objective photographic means appears more than questionable. He was clearly guided by his own emotional reactions and strong aversions to his “criminal subjects” and the sub-human status he saw repre-

⁷⁵ Lombroso: *L'Homme Criminel*, 3.

⁷⁶ See Lombroso: *L'Homme Criminel*, 8.



Lombroso, Césaire: *Photographies composées galtoniennes de crânes de criminels*. In: Lombroso, Césaire: *L'Homme Criminel*. Atlas, Deuxième édition. Rome; Turin; Florence: Bocca Frères, 1888, Plate XXXVIII.

sented in their faces.⁷⁸ Both prevalent stereotypes and Galton's photographic work contributed to the further development and visual extrapolation of these and similar typecasts. Here the criminalising gaze of composite portraiture is also a physiognomic and a racialising gaze that contributed to the stigmatisation of whole groups of society.

The perspective established by composite portraiture's criminalising gaze is largely oriented towards physiognomic role-models as well as theories of genetic degeneration postulating a reversal to more primitive, animal-like evolutionary stages. Its seemingly neutral scientific position was deeply influenced by a long history of "reading" a person's character and inner disposition based on the outer features of the face. The images fabricated to this end often highlight asymmetries and deformities, both in the photographic compositions, as well as in the faces of individual criminals. Their suspect identity is constructed as physical deformity and in opposition to other, more valued groups in society. In this way, composite portraiture contributed to the construal and justification of class divisions in British society by means of moral and hereditary arguments. Furthermore, the visual evaluation and degradation of those caught in the carceral system of poor houses, asylums, prisons, and penal colonies also implied a eugenic perspective: a negative eugenic gaze that could also appear in its inverted, positive form through the production of composite ideal images of eugenic desirability.⁷⁹

⁷⁷ See the skulls in the collection and museum "'Cesare Lombroso's Museum of Criminal Anthropology'" in Turin and the depictions in the visitor's guide. See Bianucci, Piero; Cilli, Cristina; Giacobini, Giacomo, Malerba, Giancarla; Montaldo, Silvano (eds.): *'Cesare Lombroso' Museum of Criminal Anthropology. Visitor's Guide*. Turin: edizioni libreria cortina, 2011.

⁷⁸ See Galton: *Inquiries into Human Faculty*, 13.

⁷⁹ See the discussion of eugenic role models in chapter 7.

⁸⁰ Galton: *Inquiries into Human Faculty*, 42–43.

⁸¹ See Despine, Prosper: *Psychologie naturelle: étude sur les facultés intellectuelles et morales dans leur état normal et dans leurs manifestations anormales chez les aliénés et chez les criminels*. Paris: 1868.

⁸² Galton: *Inquiries into Human Faculty*, 10.

⁸³ See Galton: *Inquiries into Human Faculty*, 42–43.

⁸⁴ See Galton, Francis: "The Possible Improvement of the Human Breed, under the Existing Conditions of Law and Sentiment" (1901). In: *Essays in Eugenics*. London: The Eugenics Education Society, 1909, 1–34.

⁸⁵ The concept of a social self-defense against crime was also promoted by the Italian School of positivist criminology. See Ferri, Enrico: *Criminal Sociology*. London: Fisher Unwin, 1895.

Solving the Criminal Problem: Continuous Incarceration and Preventive Screening

Galton had a low opinion of criminals and he probably would have regarded the criticisms of the contemporary prison system voiced by reformers like Henry Mayhew as the ravings of tender, blindly philanthropic do-gooders. Galton claimed that the typical criminal was deficient in conscience and vicious in instinct – lacking self-control and unwilling to work.⁸⁰ Even though Galton refers to the work of Prosper Despine, who had argued from a socio-psychological perspective,⁸¹ he makes clear that in his view, the criminal character was not of an acquired, social nature, but the result of hereditary predispositions. He asserts that distinct types of criminals had become established, propagating their vicious character to the coming generations,⁸² and that the legal system was acting in self-defense.⁸³ In his later eugenic writings, Galton divided society into different "sub-races" and classes (including criminals) embodying specific stages of evolutionary development,⁸⁴ attesting to the proximity of his eugenic thinking to positivist criminology and theories of atavism.

Galton's emphasis on the relativity of socially defined moral codes in combination with his propagation of evolutionary determinism and eugenics had alarming implications for penal institutions and their management. After all, the mechanisms of a social self-defense against crime⁸⁵ meant a separation of the "criminal class" from as yet uncontaminated society, a standpoint on which, in a later work on eugenics, Galton became more explicit:

Many who are familiar with the habits of these people do not hesitate to say that it would be an economy and a great benefit to the country if all habitual criminals were resolutely segregated under merciful surveillance and peremptorily denied opportunities for producing offspring.⁸⁶

No specific emphasis would have to be placed on education and moral reform, since criminal behaviour, again following along Lombrosian lines, could be understood as an incurable emotional and physical stigma – characteristic of a human sub-species whose reproduction would have to be limited.

With respect to this reasoning, the criminalising gaze of composite portraiture and its visualisation of typical criminal physiognomies could be brought into the service of British society and its governmental institutions. Indeed, Galton's

assessment of the technique hints in this direction, even as he cautions against a decisive interpretative value of the visualisations while highlighting their explanatory power in relation to a potential predisposition to crime. He notes that “special villainous irregularities [...] have disappeared and the common humanity that underlies them has prevailed,” arguing that the composite portraits “represent not the criminal, but the man who is liable to fall into crime.”⁸⁷ The Director of Convict Prisons, Du Cane, opted for exploring the technique of visualising criminal types in precisely this vein:

In considering how best to repress crime, it occurred to me that we ought to try and track it out to its source and see if we cannot check it there instead of waiting till it has developed and striking at it. [...] It seems to me a correct inference that if criminals are found to have certain special types of features, that certain personal peculiarities distinguish those who commit certain classes of crime, the tendency to crime is in those persons born or bred in them, and either they are incurable or the tendency can only be checked by taking them in hand at the earliest periods of life. Mr. Galton's process would help to establish this point, because if there is any such distinguishing feature it would come out in his mixed photographs [...]⁸⁸

This reveals the preemptive quality of the criminalising gaze of composite portraiture and its biopolitical implications: Lurking right behind this corner are precautionary measures of visual diagnosis and a preventive control of the whole population. The logical consequence for those who carry the “criminal mark” would be preemptive “treatment” in penal institutions – in other words: indefinite incarceration within the prison system. As it turned out, the visual drag-nets of composite portraiture were never cast in this manner to seize the

⁸⁶ Galton: “Possible Improvement of the Human Breed,” 20.

⁸⁷ Galton: “Composite portraits made by combining those of many different persons into a single resultant figure,” 97–98.

⁸⁸ Du Cane, Edmund: “Discussion on ‘Composite Portraits’ by Francis Galton.” In: *Journal of the Anthropological Institute*, 8, 1879, 142–143.

⁸⁹ A year after his initial publication Galton already relativises the explanatory power of the criminal composites, but does not change his views regarding their predictive value: “I have also various criminal types, composed from the photographs of men convicted of heinous crimes. They are instructive as showing the type of face that is apt to accompany criminal tendencies, ‘before’ (if I may be allowed the expression) the features have become brutalised by crime. The brands of Cain are varied, therefore the special expressions of different criminals do not reinforce another in the composite, but disappear. What remains are types of faces on which some of the many brands of Cain is frequently destined to be set.” See Galton: “Generic Images,” 161–162.

criminal population of Britain. This might have been due to the ambiguity of the visual constructions and the impossibility to deduct meaningful visual characteristics in the blurry images. This did apparently not escape Galton's notice⁸⁹ and in a later assessment the inventor sounds decidedly less enthusiastic, noting that “the common humanity of a low type is all that is left.”⁹⁰

Even though the evidential value of composite portraits of criminals experienced a re-evaluation and the technique did not find a wide practical application, the photographic visualisations became influential in scientific discourse on criminality and the criminal. And the criminalising gaze of composite portraiture entered a number of influential criminological and eugenic publications, both as illustration and as visual argument. The writings of criminal anthropology, a field that claimed an objective methodology and unbiased scientific measurements as the basis for its theoretical work, are characterised by a mixture of extensive references and statistical material, case studies and personal anecdotes, folk wisdom and illustrations and was often based on tautologies. It has been described as an eclectic pastiche of styles and devices that allowed for the adoption of its theories in many discourses⁹¹ and also facilitated the inclusion of the visual arguments of composite portraiture. The composite portraiture, in this positivist discourse on criminal deviancy, constitutes a form of visual labeling.⁹² As one of the pioneers of the labelling approach has observed: “The process of making the criminal [...] is a process of tagging, defining, identifying, segregating, describing [...] The person becomes the thing he is described as being.”⁹³ By merging moral and hereditary explanations, the images took part in and constructing the convicts as delinquent outsiders, even as a genetically deviant “sub-race” of the human species and in further marginalising the prison population.

The technique of composite portraiture provided visualisations with remarkable interpretative openness, providing images of faces that sparked emotional readings and raised aversion towards the social group. Rather than directly

⁹⁰ Galton: *Inquiries into Human Faculty*, 11.

⁹¹ See Olson: *Criminals as Animals*, 278.

⁹² This refers to the labelling approach, a sociological interpretation of the social construction of delinquency and deviance pioneered by Frank Tannenbaum and Howard Becker. Becker observed that “[t]he deviant is one to whom that label has been successfully applied; deviant behaviour is behaviour that people so label.” See Becker: *Outsiders*, 9.

interpreting and analysing their visual constructions, Galton and other protagonists in the field stressed the independence of images as self-sufficient explanatory devices, thus retaining their ambiguity.⁹⁴ Composite portraiture created a form of open demonstrative evidence that, sometimes as illustrations, sometimes as a supposedly direct source of information, contributed to the discourses of criminology, anthropology, and medicine. As indicated, the criminalising gaze of composite portraiture drew on physiognomic thought and was propagating the physical and genetic difference of criminals. Repercussions of this criminalising anthropometric reasoning can be traced in criminology and penal practice in the United States of early twentieth century in what Nicole Hahn Rafter has referred to as “eugenic criminology,”⁹⁵ which went as far as the imposition of indeterminate sentences on so-called “defective delinquents” and their placement in special eugenic prisons.⁹⁶

Composite Criminology and Criminalistics

In order to trace the influences of criminal anthropology in Britain and America and the role played by composite portraiture, it proves useful to examine late nineteenth and early twentieth-century publications in the field. Composite portraiture played an influential role as an undisputable form of visual evidence for the fundamental difference of criminals and the embodiment of this deviance. A central work from the period in question is Havelock Ellis’ *The Criminal*, which has a composite portrait for its frontispiece. Following a largely Lombrosian argument, Ellis highlights the necessity to focus on the criminal – not on the crime – and introduces theories of atavism and its outward signs that could be found on the whole body, but primarily on the human head, skull, and face. In order to assist the judicial system, Ellis proposes to make “criminal physiognomy a very exact science, [to establish] unfailing criteria by which our crimes may be read upon our faces.”⁹⁷

⁹³ Tannenbaum: *Crime and the Community*, 19–20.

⁹⁴ Gunnar Schmidt discusses blank space in relation to the interpretative openness of composite portraits. See Schmidt: *Anamorphotische Körper*.

⁹⁵ Hahn Rafter: *Creating Born Criminals*, 6.

⁹⁶ See Hahn Rafter: *Creating Born Criminals*, 188–189.

⁹⁷ Ellis: *The Criminal*, 87.

Ellis also responds to criticism of the deterministic Lombrosian perspective. With reference to Prosper Despine he acknowledges that it was “impossible to over-estimate the importance of the social factor in crime”⁹⁸ but argues that the different views on the origins of criminality could be productively combined, in particular regarding the “management” of penal institutions.⁹⁹ The established prison system, he contends, was misled in not discriminating between different types of criminals and was in need of a prison reform along criminal anthropological principles that would allow for the application of appropriate “treatments” in each individual case.¹⁰⁰ As a positive example, Ellis refers to the educational method employed in Elmira Reformatory in New York State, which combined strict discipline with physical and industrial education, as well as moral and aesthetic training. In a description of the short-term results, the prison doctor at Elmira, Hamilton Wey is quoted, asserting that it had immediate influence on the bodily constitution of inmates and even on their facial features: “The faces parted with the dull and stolid look they had in the beginning, assuming a more intelligent expression, while the eye gained a brightness and clearness that before was conspicuous by its absence.”¹⁰¹

Three composite portraits that were produced in the US prison Elmira are among the abundant visual material in Ellis’ publication. The other illustrations are mainly derived from Lombroso’s work and French and British sources. Even though the composites have a strong visual role in the publication – as the frontispiece, one is literally staring at the reader opening Ellis’s book –, there are no direct references to the photographic constructions in the text. The only information on the images can be found in the appendix, where their origin and author, Hamilton Wey, as well as the number of their components are noted. The two other composite portraits are placed, equally uncommenced, in one of the final chapters on the aims of criminal anthropology,¹⁰² alongside a description of the physical and psychological characteristics of criminals.

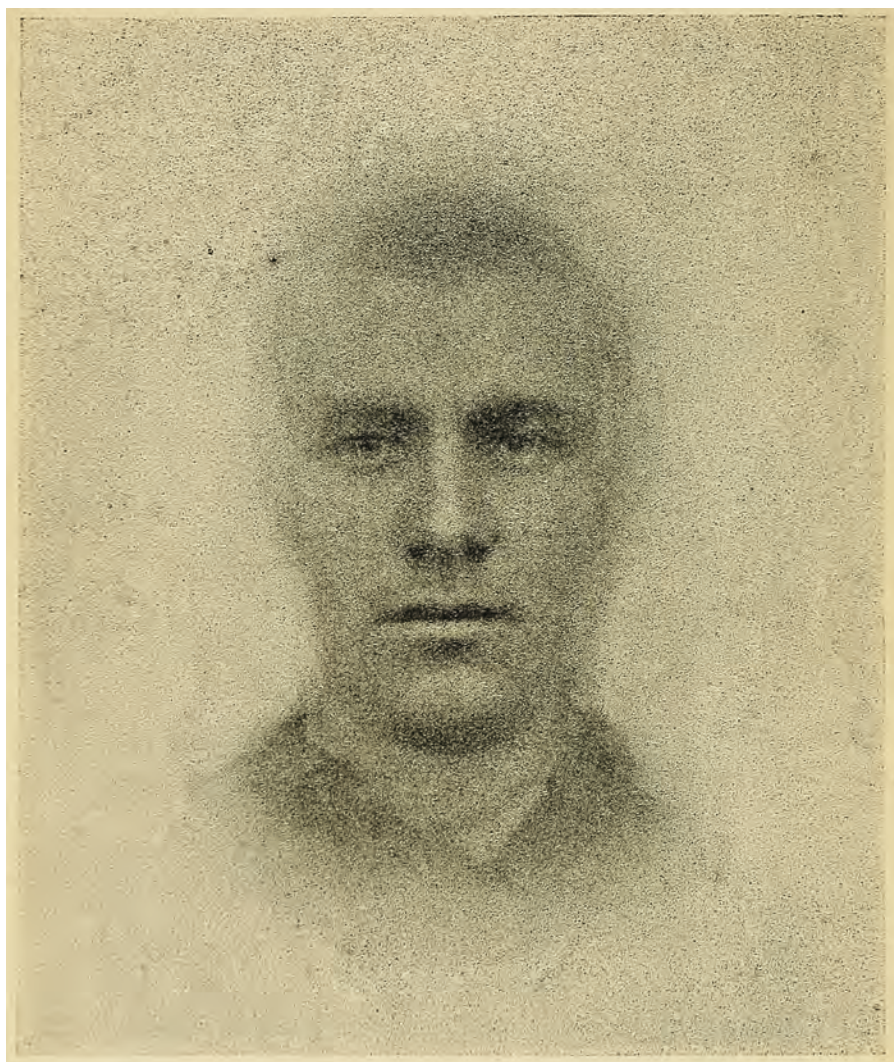
⁹⁸ Ellis: *The Criminal*, 24–25.

⁹⁹ Ellis follows the widespread degenerationist assumption that acquired characteristics could be passed on, but that a moral and healthy lifestyle could hinder, or even reverse, this process, emphasising the possibility of penal treatment.

¹⁰⁰ Ellis: *The Criminal*, 258.

¹⁰¹ Wey, Hamilton quoted in: Ellis: *The Criminal*, 258.

¹⁰² Ellis: *The Criminal*, 202–232.



Wey, Hamilton: *Composite photograph of twenty criminals – 'dullards' – in the Elmira Reformatory*. Frontispiece in: Ellis, Havelock: *The Criminal*. London: Walter Scott, 1890.

The composite portraits here seem to figure as illustrations of a general image of the criminal face. Their ambiguous, indiscriminate openness allows for the projection of all kinds of ascriptions. In relation to Galton's understanding of visual statistics, composite photography, with its fuzzy outlines, yet greater density and clarity towards the centre, is presented as a potential means in the empirical repertoire of criminal anthropology.¹⁰³ Ellis argues that although its outlines were blurred – and he cautions that clear divisions were rare –, composite portraiture could serve as a visual technique for deciphering and comparing

the criminal face, for sorting criminals into categories and types before administering the appropriate "penal treatment." And again, preemptive uses also come to mind, when Ellis demands that "[a]ll education must include provision for the detection and special treatment of abnormal children. We cannot catch criminals too young."¹⁰⁴

Ellis's appreciation of Galton's ideas went beyond the adoption of visual techniques and statistics. Like Galton, he published on the (hereditary) constitution of genius¹⁰⁵ and on so-called "Social Hygiene"¹⁰⁶ and became a central proponent of the eugenics movement well into the 1930s. And the appreciation seems to have been mutual: In a review, Francis Galton praises *The Criminal* as the most important contribution to British criminology since Prosper Despine's work.¹⁰⁷ He seconds Ellis's description of criminals as physically and morally insensible and emotionally instable, before claiming that "[i]t is well ascertained that many persons are born with such natures that they are almost certain to become criminals."¹⁰⁸ In Ellis's composite portraits, Galton sees a fresh indication of frequent malformation in criminals' heads, while he misses indications for a "special deformity of head and features"¹⁰⁹ in the hazy outlines of the composites; this he attributes to the heterogeneity of the component portraits. This review is a rare reference to criminal anthropology and Lombrosian thought in the work of Galton, who followed his own positive eugenic line of argument on the heredity of visual and inner characteristics and their eugenic management. However, judging from the common assumptions and conclusions, he was sympathetic to the eugenic penal system in the United States and also encouraged examinations of American police officers, which were meant to further refine his visual typologies with respect to practical police work.¹¹⁰

¹⁰³ Ellis: *The Criminal*, 21.

¹⁰⁴ Ellis: *The Criminal*, 300.

¹⁰⁵ See Ellis, Havelock: *A Study of British Genius*. London: Hurst and Blacket, 1904.

¹⁰⁶ See Ellis, Havelock: *The Task of Social Hygiene*. Boston/New York: Houghton Mifflin, 1912.

¹⁰⁷ See Despine: *Psychologie naturelle*.

¹⁰⁸ Galton, Francis: "Criminal Anthropology." In: *Nature*, 22 May 1890, 75.

¹⁰⁹ Galton: "Criminal Anthropology," 76.

¹¹⁰ Galton allowed the use of his composite portraits in the publication by the police officers Eldridge and Watts. See Eldridge, Benjamin P.; Watts, William B.: *Our Rival, the Rascal. A Faithful Portrayal of the Conflict between the Criminals of Our Age and the Defenders of Society – the Police*. Boston: Pemberton, 1897.

In their book *Our Rival, the Rascal*, Benjamin Eldridge and William Watts, two high-ranking Boston police officers, provide a collection of criminal cases and illustrations for police work. Among the visual material are reproductions of convict portraits as well as a series of composite portraits of different groups of criminals. In an alarmist tone, they stress the opposition between the police force and the inscrutable mass of criminals and their appearance in judiciary photography:

As we sit in our office chairs, our rival, the rascal, leers down at us through a thousand masks. He is reckless, gay, demure, stolid, dogged, sullen, surly, th'eatening, desperate. He has the smirk of the confidence man, the furtive glance of the sneak thief, the scowl of the burglar, the menace of the murderer. The moulds of every vice and crime which the world knows are ranged before us in a single group of pictures – the photographs which compose the Rogues' Gallery.¹¹¹

In a lurid and somber tone evocative of crime stories of the same period, the police officers comment on different types of criminals and argue for alternative modes of identification. Eldridge and Watts consider their "Rogues' Gallery" an archive whose importance extends beyond mere purposes of identification and offers the base for readings of inner characteristics and predispositions. The authors position themselves against some of the deterministic devolutionist analyses of criminal anthropology and stress the importance of environmental influences. Drawing on the work of Louis Proal,¹¹² a French critic of Lombrosian criminology, they question materialist readings of the criminal physique and caution against employing physiognomy as a support in court cases, as proposed by Ellis and Lombroso. Nevertheless, they largely remain convinced of the explanatory power of facial features, in particular for police practice. Drawing on Galton's thoughts on human perception and fallible sub-conscious processes of comparison and classification, they propose photographic composites as an objective means for the detection and prevention of crime:

As a possible substitute for the inaccurate mental image in practical application to the inspection of criminals and the determination of criminal characteristics and types he [Galton] has suggested the use of the photographic camera. He has undertaken to give in place of the composite mental impression the composite photograph.¹¹³

¹¹¹ Eldridge; Watts: *Our Rival, the Rascal*, VII.

¹¹² See among others: Proal, Louis: *Le crime et la peine*. Paris: Félix Alcan, 1892; Proal, Louis: *Passion and Criminality in France. A Legal and Literary Study*. Paris: Carrington, 1901.



Eldridge; Watts: Composite Chart. In: Eldridge, Benjamin P.; Watts, William B.: *Our Rival, the Rascal. A Faithful Portrayal of the Conflict between the Criminals of Our Age and the Defenders of Society – the Police*. Boston: Pemberton, 1897.

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Convinced of the practical importance of these impartial photographic representations of criminal physiognomies, Eldridge and Watts produced six composites, compiled from the “representative portraits”¹¹⁴ in their book. These are presented on a chart, together with four composite portraits by Galton. They further develop Galton’s earlier categorisation of offenders as either violent or non-violent criminals and provide a more refined division into specific types of crimes: forgers, bank sneaks, burglars, hotel thieves, and pickpockets. Following Galton’s example, they also provide a co-composite of all 28 “criminal faces.”

In their discussion of the composite technique they stress the importance of the union of general mental images and unconscious emotional reactions in the detection of crime and in police practice, as well as the importance of the trained eyes of the policeman in detecting criminals.¹¹⁵ The procedure they describe is based on suspect behaviour and initial suspicion as well as on external characteristics such as facial expression, posture, gait, and clothing, but also on the presumption of a visible difference in the facial appearance of the criminal individual as a part of the phenotypical group of criminals per se. Seen this way, the composite technique could function in police work as a visual aid for detection and as a means to check the subconscious assumptions and emotional reactions that guide identification practice in practical investigative work. Once again, this highlights the criminalising potential of composite portraiture, which in this case could be described as a form of physiognomic profiling.

¹¹³ Eldridge; Watts: *Our Rival, the Rascal*, 349.

¹¹⁴ Eldridge; Watts: *Our Rival, the Rascal*, 353.

¹¹⁵ Eldridge; Watts: *Our Rival, the Rascal*, 354.

¹¹⁶ Tarde: *La philosophie pénale*, 221 (my translation).

¹¹⁷ See Tarde: *La philosophie pénale*, 220–221.

¹¹⁸ See Tarde: *La philosophie pénale*, 52.

¹¹⁹ The anthropological work with composite portraiture by Arthur Batut, a photographer who worked in the French and Spanish Pyrenees, will be discussed in chapter 4, “Racial Prototypes.”

Challenging Positivist Criminology

Even during its heyday in the late nineteenth century, Lombrosian criminology was not uncontroversial: in France, in particular, the school of thought received strong criticism by the leading proponents of criminology, who argued for an explanation of crime in relation to social and environmental factors. In his critique of Italian positivist criminology, Gabriel Tarde accused Lombroso’s theories and his endeavours to devise a criminal typology based on physical characteristics of being opposed to scientific reasoning. He did so, however, with a visual argument based on composite portraiture. He proposed the thought experiment of producing a composite portrait of all criminals that were depicted in the atlas accompanying Lombroso’s *Criminal Man*. Even though this “violent and artificial fusion of heterogeneous elements”¹¹⁶ was undoubtedly possible, he argued that its results would be meaningless and by no means true to nature, since it did not account for other more valid physical differences, such as “race” or nationality.¹¹⁷

In an earlier publication Tarde had raised the question why the criminal should be the only “career” that has the privilege of a characteristic physique. He taunts that, if the reader considered the Galtonian generic portrait of the criminal man proposed by Lombroso distinct and precise, he would have to inadvertently assume an equally vivid typical appearance of the fisherman, the hunter, the worker, and the salesman and eagerly await their photographic portrait.¹¹⁸ Although Tarde argues against the use of composite portraiture on specific groups of society, such as criminals, he does not question the explanatory value of the technique itself and even highlights the significance of the anthropological experiments of Arthur Batut, a French protagonist of composite portraiture.¹¹⁹ This use of the technique “against the grain” and against positivist criminal anthropology, however, without questioning its evidential claims, is a recurring pattern. Rather than discrediting the technique of visualisation, composite portraiture retains its importance as an authenticating device and visual argument in the newly emerging field of criminal anthropology at the turn of the twentieth century.¹²⁰

¹²⁰ Christian Phéline observes that Tarde’s work maintains visual typologies and does not contradict a visual diagnostic of criminality. See Phéline: *L’image accusatrice*, 69. Allan Sekula points out that the use of the composite technique by Charles Goring opposed the Lombrosian School, but remained tied to positivist readings of the criminal’s physique. See Sekula: “The Body and the Archive,” 53.

What remains a thought experiment in Tarde's writings was put to the test by Charles Goring, an opponent to Lombrosian criminal anthropology and medical officer at Parkhurst Prison on the Isle of Wright.¹²¹ In his study *The English Convict* that compiled anthropometric and statistical information on the prison population in England, he takes up visual material earlier published in Ellis's publication. The profile drawings of prisoners were reproduced from the mid-nineteenth-century sketchbook of Vans Clarke, physician at Pentonville Prison, who considered the results as successful likenesses of the physiognomies that he generally came across in his work.¹²² The sketches show deformed heads, often with protruding chins, receding small heads and were described by criminal anthropologists as well-marked examples of cranial and facial characteristics.¹²³

Charles Goring produced a composite portrait of thirty – in his words – “imaginative portraits” of criminals. This composite is contrasted with a composition of silhouettes, traced from a random selection of the same number of judiciary portraits taken at Parkhurst Prison. In the accompanying text, Goring notes that an “examination of these contrasted outlines shows most strikingly the difference between ‘criminal types,’ as registered by the mechanical precision of the camera, and as viewed by the imagination of an enthusiastic, but uncritical observer.”¹²⁴ To further corroborate his findings, Goring produced another series of what could be described as composite charts, graphs displaying the average head contours of 108 members of the Royal Engineers, which he compared to the head contours of 802 convicts, detecting no significant difference.¹²⁵ Most likely this choice was indebted to Francis Galton, who had contrasted his composite portraits of criminals with a composition of the faces of precisely this group of military men as typical representatives of health and racial superiority.

This comparison of composite portraits stands as a kind of visual prefix to Goring's study. The composite technique here is used as a visual counter-argument, setting the tone for the influential criminological work, which sought to criticise then

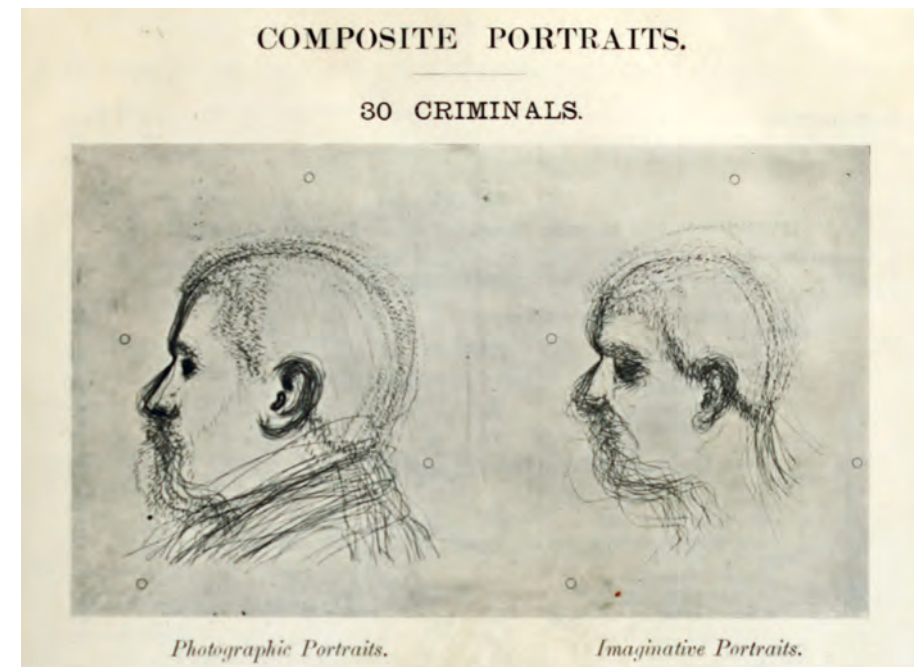
¹²¹ See Goring, Charles: *The English Convict. A Statistical Study*. London: His Majesty's Stationary Office, 1913.

¹²² See Ellis: *The Criminal*, 53–54.

¹²³ See Ellis: *The Criminal*, 54.

¹²⁴ Goring: *The English Convict*.

¹²⁵ See Goring: *The English Convict*, 172.



Goring, Charles: *Composite Portraits. 30 Criminals*. Frontispiece in: Goring, Charles: *The English Convict. A Statistical Study*. London: His Majesty's Stationary Office, 1913.

current preconceptions and biases as well as the reasoning of contemporary criminal anthropology, while defending the positivist empirical and anthropological approach to the study of criminality. Strikingly, Goring employs composite portraiture to argue against the authority of its criminalising gaze and the superstitious physiognomic readings that went along with it, while its evidential value remains unquestioned – just like current preconceptions regarding the difference and explanatory power of anthropological measurements, which largely remain intact. In his study Goring argues against positivist criminal anthropology and its “conventional prejudices and unfounded beliefs [...] that the inward disposition of man is reflected and revealed by the configuration of his body.”¹²⁶ After the presentation of seemingly endless anthropometric data, complex calculations, tables, charts and statistical visualisations, Goring concludes that “this anthropological monster has no existence in fact. [...] There is no such thing as an anthropological criminal type.”¹²⁷

¹²⁶ Goring: *The English Convict*, 11.

¹²⁷ Goring: *The English Convict*, 370.

Ellis work was celebrated as liberating criminal anthropology from its Lombrosian superstitions. Still, not only in its uncritical application of the technique of composite portraiture, his study remains deeply tied to central claims and aims of the positivist school. Goring largely denies the impact of environmental influences, emphasises heredity as a main cause of crime, and proposes eugenic solutions.¹²⁸ This was not lost on the disciples of the Lombrosian School, who argue that despite his obvious attack on Lombrosian orthodoxy, “Goring becomes more Lombrosian than Lombroso”¹²⁹ and even recommend the his study for precisely this reason: “We absolutely agree with our opponent; I even want to thank him for his wonderful expression of our ideas.”¹³⁰ Regardless of its opposition to the positivist school, then, the criminalising perspective opened by composite portraiture continued to flourish in early twentieth-century criminology and beyond.

Recapitulating Visions of Criminality

In summary, the criminalising gaze of composite portraiture was derived from a moral-historical background that in turn argued from a physiognomic basis, included derogative animal analogies and was aimed at typifying social group identities that were construed to be grounded in genetic difference. The production of photographic compositions in the field of criminology was based on a kind of visual ad-hoc reasoning that developed into self-fulfilling prophecies regarding the visibility of deviance and moral degeneration that was read from the faces and bodies of people already convicted for crimes. Criminalising composite portraits were produced from existent photographic material, disciplinary portraits produced in the prison system of the time. The method of photographic composition turned photographic pieces of individual identification into devices for typification. These composite faces were proposed as bio-political portraits for the management of the population and can be seen as a site where disciplinary and normalising mechanisms coincide.

¹²⁸ For a more detailed analysis of Goring's role as critic of Lombrosian criminology see Pick: *Faces of Degeneration*, 186–188.

¹²⁹ Lombroso-Ferrero, Gina: “Charles Goring's the English Convict a Symposium.” In: *Journal of Criminal Law and Criminology*, 5:2, 1914, 207–223, at 210.

¹³⁰ Lombroso-Ferrero: “Charles Goring's the English Convict a Symposium,” 210.

In the late nineteenth century, composite portraiture was frequently used as a means towards the visualisation of criminal characteristics. In two influential publications in the field of positivist criminology, composite faces were used as frontispieces, and many pioneers of the technique in the United States can be counted among the protagonists of a devolutionist theory of criminality.¹³¹ Joseph Jastrow, who worked with and published on composite portraiture, disseminated Lombrosian thought in his article *A Theory of Criminality*¹³² and William Noyes, who used composite portraiture in the field of mental illness, in his book *The Criminal Type*¹³³ advocated Italian-school positivist criminology. Hamilton Wey, whose composite portraits of criminal types were discussed above, in the 1880s and 1890s complemented European sources by Galton, Lombroso, and Ellis with positivist research at his own institution.¹³⁴ Criminal anthropologists in the United States, whose positivist methodology also drew on composite portraiture, argued in favour of eugenics. Suggestions for a eugenic “treatment” of criminals included the prevention of reproduction through indefinite sentences or by means of sterilisation, or even the ultimate solution of “negative eugenics,” that is, the execution of criminals.¹³⁵

Composite portraiture and its criminalising gaze were involved in the short, but influential career of criminal anthropology in the United States and Europe. The deterministic assumptions of positivist criminal anthropology became, at least partly, dismissed by main-stream criminology of the first decades of the twentieth-century. But these reformers likewise made use of empirical data collections, statistical surveys and anthropometrics, as well as visualisations, among others by means of the technique of composite photography. The work of Earnest Albert Hooton in the late 1930's and early 1940's and re-issues of his work in the 1970's attest that biological and positivist anthropological theories on crime long survived the turn of the century.¹³⁶ Earnest Hooton

¹³¹ Their work with composite portraiture will be discussed in relation to the technique's utilisation in the fields of mental disease and eugenic role models (chapters 3.3 and 3.5).

¹³² Jastrow, Joseph: “A Theory of Criminality.” In: *Science*, 8, 1886, 20–22.

¹³³ Noyes, William: “The Criminal Type.” In: *Journal of Social Science*, 24, April 1888, 31–42.

¹³⁴ Hamilton Wey's composite portraits were published in: Ellis: *The Criminal*.

¹³⁵ See Hahn Rafter, Nicole: “Criminal Anthropology in the United States.” In: Stuart Henry; Werner Einstadter (eds.): *The Criminology Theory Reader*. New York; London: New York University Press, 1998, 78–91, at 90.

¹³⁶ See Hooton, Earnest Albert: *Crime and the Man*. Cambridge, Mass.: Harvard University Press, 1939; Hooton, Earnest Albert: *Apes, Men and Morons*. London: George Allen & Unwin Ltd., 1938.

defended and further racialised Lombrosian thought and produced visual types of criminals, not only according to offence groups, but also according to their origin within the US and their ethnic background. Even though he explicitly stated that his illustrations of criminal faces constituted “no portraits at all, not even composites, but only mosaics of facial features and proportions,”¹³⁷ the proximity to earlier visualisations of the criminal countenance are overwhelming. Here again, tainted with eugenic thought, facial compositions and typecasts are presented as result and resource, as illustration and representation for an inherent inferiority in race and class and a moral decadence of individuals, who had come into conflict with the law.

The different roles composite portraits played in the publications in the field of crime – as the result of an apparently objective visual statistical technique on the one hand and as an illustration and exemplification of anthropological difference on the other – bear testimony to the ambiguity inherent in the photographic visualisations that was already noted by Francis Galton. Even though, from the earliest experiments, its explanatory power remained dubious, it was still used and further developed by practitioners in the field as visually appealing and emotionally grasping argumentative devices.¹³⁸ The success of composite portraiture might have been precisely due to their indecisiveness and interpretive openness as well as their affective power.¹³⁹ The visualisations’s sub-conscious, affective readings rested both on a deeply rooted trust in the mechanical objectivity of photography and the belief that a fundamental difference between “born criminals” and the “normal population” found its expression in the human body and face. As influential figurations of criminality, the composite visualisations were taking part in processes of retrospective and accretive criminalisation and in visually labelling and constructing “the criminal.”

¹³⁷ Hooton: *Crime and the Man*, VIII.

¹³⁸ Nicole Hahn Rafter has argued that the images used in positivist criminology were excellent fictions that were stimulating strong emotions and that the visualisations constituted part of the appeal of the then new field. See her “Criminal Anthropology: Its Reception in the United States,” 176.

¹³⁹ Sara Ahmed has argued that “emotions play a crucial role in the ‘surfacing’ of individual and collective bodies through the way in which emotions circulate between bodies and signs.” In what she describes as affective economy, “fear gets contained in a body, which henceforth becomes an object of fear.” This diffuse, culturally and historically grounded affective response becomes located not in individual bodies, but on the surfaces of collective bodies. This links affect theory with socio-logical oriented labelling approaches to the construction of criminality and the criminal. See Ahmed: “Affective Economies,” quotations at 117, 127.

The technique was proposed as a scientific instrument for visualising criminal characteristics after conviction, as scientific proof of the deviance of the social and (supposedly also) biological group under observation, and as sort of a justification, on the part of the justice and penal system, for treating criminals as less than human. In the penal system, the visualisation of criminal types through composite portraiture was considered an aid in categorising convicts and as a diagnostic tool for the administration of appropriate punishments and the presentation of the visible results of moral treatment. This reveals the technique’s entanglement with penal practices and the ideas of prison reformers and counter-reformers. Furthermore, the technique was discussed as a practical tool and visual aid in detecting suspects in police work, and as potential evidence in courts. Extending the forensic perspective, the technique was also considered as a preventive tool and preemptive strategy: in predicting criminal behavior and for the screening of future deviants. Yet even though composite portraiture was recommended in these diverse arenas – in criminology, police work, and the penal and judiciary system – its inherent ambiguity, the diffuse unruliness of the resultant visualisations, prevented a wide-ranging practical application of the technique.

Current Criminal Countenances

The “synthetic” representation of criminality and the presentation of “archetypal evil” by means of composite portraiture has also become the subject of recent artistic works, as well as of scientific studies. Around the turn of the twenty-first century, the German artists Thomas Ruff and Gerhard Lang produced composite photographs with technical equipment formerly used in the creation of identikit identification portraits. In their compositions of artificial faces and landscapes, however, Ruff and Lang use their equipment “against the grain,” questioning the evidential claims ascribed to such technologies in facilitating recognition and familiarity.¹⁴⁰ The Polish artist Krzysztof Pruszkowski has not only compiled a composite from actual mug shots of one of the iconic criminals of all time, Al Capone, but has also used a the photo-

¹⁴⁰ See Ruff, Thomas: *Andere Porträts* (1996) and Lang, Gerhard: *New Reports from the Countryside*, Identikit Photographs of Landscapes Created with the Identikit of the German Federal Criminal Police Office (BKA) (1998–2001).



Pruszkowski, Krzysztof: *Alphonse Gabriel (Al) Capone*, FOTOSYNTTEZA (composite portrait), 2010. Courtesy of the artist.

graphic technique to superimpose images of political leaders, resulting in composite faces that highlight the ambiguity of the characters and question the binary visual logics of good and evil. Likewise in series of composite portraits by Alejandro Almaraz and Nancy Burson, viewers' suspicion is redirected at the very centre of power – at political leaders and heads of state whose faces, in portraits displayed in embassies and official buildings, figure as representatives for nations and governments. In these artworks the traditionally criminalising gaze of composite portraiture focuses on the sometimes dubious deeds and responsibilities of political decision makers. Examples from current science, however, do not share this critical perspective on the visibility of criminality on the face and reproduce physiognomic stereotypes.

Merging frontal and lateral “mug shots” of Al Capone, Krzysztof Pruszkowski produced a contemporary composite of historical judiciary portraits. In this artwork, the notorious gangster is transformed into a strangely flat, yet still multi-perspectival presence. As beholders' perception oscillates between frontal and lateral views, their eyes only seem to rest on the sole point of cohesion and orientation discernible in the image: one eye, which seems to be looking back at the viewer from both perspectives. In this monstrous, Cyclopean figure, facial



Pruszkowski, Krzysztof: *Le President: De Gaulle, Pompidou, Giscard, Mitterrand*, FOTOSYNTTEZA (composite portrait), 1984; Pruszkowski, Krzysztof: *President: Kennedy, Johnson, Ford, Nixon, Carter, Reagan*, FOTOSYNTTEZA (composite portrait), 1984. Courtesy of the artist.

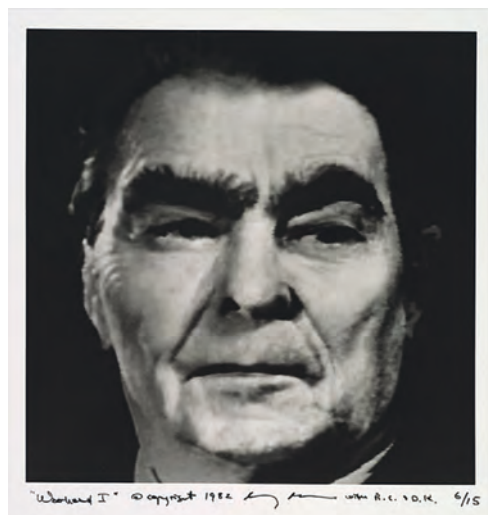
features become doubled and transposed and all endeavours to establish a coherent surface must fail. Pruszkowski's work addresses the quest for a presence, an identity, and the desire to establish access to a subject's body and soul via the aggregation and accumulation of their external characteristics. The criminalising gaze of composite portraiture here becomes reversed: the technical apparatus, which had been trusted to facilitate a deeper form of recognition, collapses, exposing any effort at typification as ludicrous.¹⁴¹

In earlier works, Pruszkowski had used the portraits of political leaders to produce composite faces of post-war presidents of France and the USA, respectively. These composite portraits also enhance irregularity and result in strange, yet strangely familiar, deformed countenances. Relicts of the hands of the French presidents are raised in a gesture of determination. Yet they are also reminiscent of the hands forced into submission in the composites produced by Galton of

¹⁴¹ The work of the American artist Larry Chait likewise plays with the accumulation of identification photographs and the dis-identification achieved through the composite technique. Chait has produced a series of composite portraits entitled *The Changing Face of Crime*, superimposing all mug shots from the FBI's 10 most wanted list from each decade from the 1950s to the 2000s. See Chait, Larry: *The Changing Face of Crime* (2013). Video <https://www.youtube.com/watch?v=YKtKeUul1VI> [15/01/2022].



Time Magazine: *The Summit Crisis* (July 30, 2018) Cover art by Nancy Burson; Burson, Nancy: *Warhead I* (Regan 55%, Brezhnev 45%, Thatcher less than 1%, Mitterrand less than 1%, Deng less than 1%), digital composite portrait, 1982. Courtesy of the artist.



prison inmates. The American presidents composite has a broad jaw and a flat nose, displaying irregular teeth and an evil grin. In this work, questions of political legacy, of (mis-)deeds and responsibility, as well as the relativity of good and evil, come to mind.¹⁴²

Questions of the responsibility and (im)moral behavior of heads of state are addressed more explicitly in a series of composite portraits by the US-based artist Nancy Burson, entitled *Warhead* and produced in the early 1980s.¹⁴³ In these digital composites, the artist compiled the faces of the protagonists of the Cold War, mainly the heads of state of the USA and the Soviet Union, as well as a lower percentage of European and Asian statesmen. In the scenario

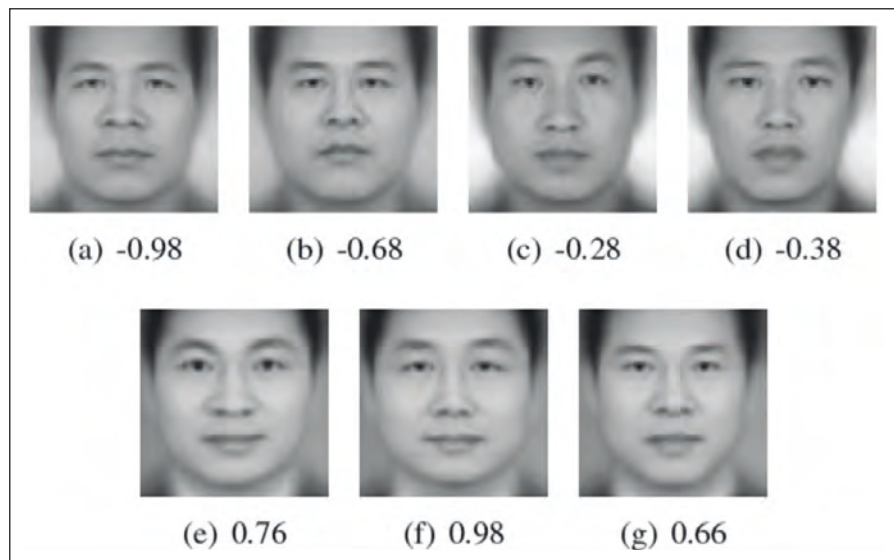
¹⁴² The more recent works of the Argentinian artist Alejandro Almaraz, in his superimpositions of heads of state of various countries seems to continue this work. The series *Portraits of Power* merges portraits of the head of states, prime ministers and presidents of countries such as the United States, Argentina, Great Britain, Denmark, Vietnam, the Soviet Union, China, South Africa, and Japan in specific times of their national history. These images, however, seem to exhibit a more affirmative standpoint: the composite portraits here assume the role of creating iconic images of historical periods and their representative faces.

¹⁴³ After her initial composite of 1982, Burson actualised the work in 1985 using portraits of then contemporary leaders. See Burson, Nancy: *Warhead IV* (52% Reagan and 48% Gorbachev), digital composite portrait, 1985.

of the Cold War that was on the verge of turning hot under the hands of the political leaders depicted, this fusion of portraits seems an attempt to give a face to an impalpable threat. The conflict seems to be carried out on the surface of facial features created by the composite form.¹⁴⁴ The artist has updated this perspective recently in a common portrait of the current presidents of the United States and Russia. The Cold War has long been over, but new tensions are arising and new friendships are being forged. The image, compiled by Burson, was published on the cover of Time magazine after the meeting of presidents Trump and Putin in Helsinki in 2018 and the controversial statements regarding the involvement of Russia in the US elections of 2016. The composite face here returns to the presumption of suspicion: What is the real relationship between the two statesmen? Who “made” the American president, and was Russia involved? How far does the political autonomy of Donald Trump really go?

In the scientific field the fascination with picturing the criminal and its suspect identity continues as well. In 2016 the IT-engineers Xiaolin Wu and Xi Zhang published a paper arguing for the visible and detectable facial difference of criminals and suggesting that their algorithm could detect a convicted criminal with an accuracy of 90%. In their analysis, carried out by means of artificial intelligence, of the portraits of inmates from Chinese prisons, they not only produce new visual prototypes of “criminal faces” and argue for a fundamental difference between these and what they call “normal persons,” but also assert the predictive possibilities of their computerised detection of criminal markers – in effect, a preventive screening of the population. What seems like a bad joke or the fiction of a particularly sombre dystopia is substantiated by a mass of data and a number of digital composite portraits of “criminal faces” and physiognomic sub-types. The images that look like caricatures remind the viewer of Galton’s criminalising visualisations, physiognomic stereotypes, and the “advances” of nineteenth-century positivist criminology that seemed long overcome. And, as the authors of the website *Calling Bullshit* have shown, the

¹⁴⁴ The quest for an image of archetypal evil is addressed in another composite portrait by Nancy Burson. In 1983 she compiled the portraits of Hitler, Stalin, Mussolini, Mao, and Khomeini into a digital composite entitled *Big Brother*. The pursuit of the incarnation of evil and moral corruption results in face that seems thoughtful, insecure, melancholic – rather than display of the essence of violent dictatorship. The work seems to contradict physiognomic readings of the morally corrupt and criminal face. Only the relicts of the uniforms and the toothbrush moustache of Hitler hint at the military and historical context of the component images. See Burson, Nancy: *Big Brother* (Hitler, Stalin, Mussolini, Mao and Khomeini), compoiste portrait, 1983.



Wu, Xiaolin; Zhang, Xi: *Purported subtypes of criminal (top) and non-criminal (bottom) faces*. (Fig. 5) In: Wu, Xiaolin; Zhang, Xi: "Automated Inference on Criminality Using Face Images." 2016.

researchers were trapped in a self-fulfilling prophecy and have neglected social issues and the special nature of their source images, which as disciplinary portraits prohibited smiles. This prescribed lack of emotional expression is exposed as the fundamental difference, which must have guided the decision of the black box of the artificial intelligence.¹⁴⁵

Likewise Mahdi Hashemi and Margeret Hall have recently explored the possibility of reading personality and criminality off facial images by means of artificial intelligence.¹⁴⁶ The researchers even credit Lombroso's work as their inspiration, reproducing uncritically his racist and classist theories which have long been disproved. They also refer to Wu's and Zhang's work and include composite images of facial features. After initial unsubstantiated remarks, the largest part of the article focuses on the technical specifics of their machine-

¹⁴⁵ See Bergstrom, Carl; West, Jevin: "Criminal Machine Learning" (2017). https://www.callingbullshit.org/case_studies/case_study_criminal_machine_learning.html [15/01/2022]. See also: Agüera y Arcas, Blaise; Mitchell, Margaret; Todorov, Alexander: "Physiognomy's New Clothes" (2017). <https://medium.com/@blaisea/physiognomys-new-clothes-f2d4b59fdd6a> [15/01/2022].

¹⁴⁶ Hashemi, M., Hall, M: "Criminal tendency detection from facial images and the gender bias effect." In: *Journal of Big Data*, 7:2, 2020 (retracted article). The text was retracted due to the intervention of the ethics committee of their university. <https://doi.org/10.1186/s40537-019-0282-4> [15/01/2022].

based processes of analysis. Finally, Hashemi and Hall present relatively diffuse facial visualisations and call for the advancement of this technology. This structure is striking in its reproduction of lines of argument in many nineteenth-century publications on composite portraiture. The technique's social construction and inherent biases are not addressed, and their paper leaves readers to draw their own conclusions, while at the same time invoking physiognomic readings and stereotypical representations.



Cirio, Paulo: *Obscurity*, camouflaged portraits, video, installation, 2016. Courtesy of the artist.

The criminalising gaze of composite portraiture and its lexi-visual labelling practices still seems to be with us one and a half centuries after the initial experiments with photographic superimpositions of disciplinary portraits. And so is the quest for the visualisation of evil and ideas of its inbred quality and physical manifestation. The criminalising perspective and the naturalisation of a social phenomenon and its ascription to a manifest group appear to be experiencing a revival in a new form: as a kind of computer-enhanced scientific positivism made possible by means of artificial intelligence networks. Current actuarial justice and so-called "new penology," instead of focusing on the (social) causes of crimes and the effects of labelling and forms of deviance amplification,¹⁴⁷ the management of crime is expanded as a form of statistical and technological suspicion at the whole population and as a calculation of – and the categorisation in – specific risk profiles.

¹⁴⁷ See the work of the critical criminologists Becker and Wilkins: Becker: *Outsiders*; Wilkins, Leslie T.: *Social Deviance*, London: Tavistock, 1964.

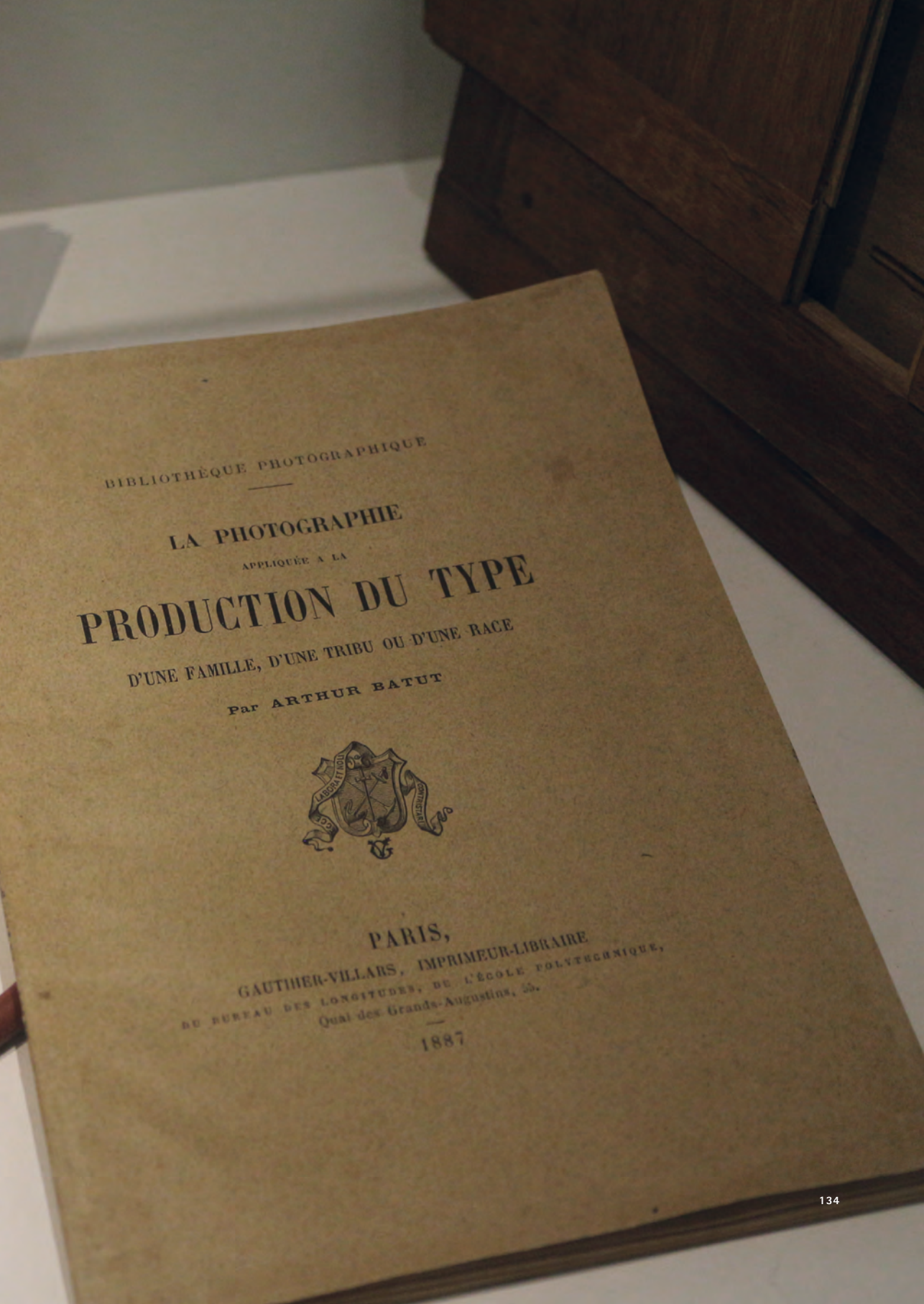
The piece *Obscurity* by the New York-based artist Paulo Cirio addresses the publication of mugshots in publicly accessible online repositories. For his installation he apprehended and camouflaged over fifteen million criminal records of six mug-shot websites by cloning them, blurring their pictures and shuffling the data, so that individual records could no longer be found easily. While the images presented here are not composite portraits in the strict sense, the whole project could be described as a composite assemblage, merging visual and non-visual information. Furthermore, the images used by Cirio draw on the iconography and the aesthetics of diffusion familiar from composite portraiture. The project was threatened legally by the mug-shot websites' owners, but was supported by victims' and civil liberty unions. It raised questions on information ethics and advocated for a legal right to remove personal information from search engines and against the policies of the "digital pillories" which make visual big-data analyses possible in the first place.

Nineteenth-century protagonists of composite portraiture, as well as current researchers in positivist visual criminology can be described as "moral entrepreneurs," agents who bring a problem to the wider society, call for legal suppression and take part in the production of deviant identities.¹⁴⁸ Current artworks, on the other hand, cast a doubt on the reliability of such forms of visualisation and question the visibility of crime in outer facial signs. By exaggerating deformities and inconsistencies, they redirect the viewer's perspective and implicitly broach the issues of current actuarial justice and future oriented criminology.¹⁴⁹ And through performative interventions in the digital sphere by means of strategies of diffusion and (re-)composition to guarantee fundamental rights to privacy, artworks question the external view on moral deviance by turning the discriminating algorithms against themselves.

¹⁴⁸ Howard Becker coined the expression "moral entrepreneurs" and observed that through labelling practices social groups and specific behaviours are constructed as deviant. See Becker: *Outsiders*.

¹⁴⁹ The concept of actuarial justice that was developed by Jonathan Simon in the late 1980s highlights the statistical and future-oriented perspective of criminal justice, aimed at evaluating and reducing the risk of crime. It does not focus on the causes for criminal actions but on their prediction and management. Such statistical models and probability aggregates increasingly determine criminal-justice practice. See O'Brien; Yar: *Criminology*, 3.





4 | Racial Prototypes: The Racialising Gaze of Composite Portraiture

From the time of its invention, composite photography was positioned as a means of fundamental scientific research on “race” and human descent, as well as for the comparative evaluation of the supposed racial characteristics of various peoples and nationalities. It provided visual arguments for a hierarchical conception of racial and social difference in humankind; it reproduced inequality and enabled discrimination and thus constituted a form of scientific racism. The racialising gaze of composite portraiture presupposed and construed racial difference, while seeking to visualise genetic composition through the photographic analysis of phenotypical appearance. Racist ideology here manifests as a concrete social practice through which knowledge about persons and groups was constructed and which contributed to their marginalisation. The technique originated in and contributed to the contemporary scientific discourse on “race” that was played out in ethnology, physical and visual anthropology, anthropometry, as well as in archaeology.

The racialising gaze of composite portraiture de-individualises and essentialises phenotypical characteristics; it employs the technique of photographic composition to achieve the reverse: a de-composition of the genetic code and the fabrication of a visual prototype along the lines of dominant stereotypes and power structures. Functionally, the analytical potential ascribed to the technique becomes extended, it is not merely directed at capturing inner character and moral disposition, such as in its criminalising gaze, or genetic predisposition to diseases in its patholo-gising gaze. Rather, it intends to undertake an investigation into the past, asserting ancestral genetic images as well as the essence and hierarchy of “races.” I consider the racialising gaze of the technique of composite portraiture to be a specific mode of observation and analysis that entails, facilitates, and reaffirms processes and structures of the categorisation, stereotyping and hierarchisation of humans according to biologised physical markers. By these means it is constructing racial difference and reproducing racist understandings of human difference.¹

The racialising gaze of composite portraiture was initially directed at the London Jewish community, but in late nineteenth-century the technique also focused on aboriginal peoples such as Native Americans, as well as on communities in France and Spain. In this arena, it did often not stop at outer facial features; skulls were also superimposed, introducing the technique into the field of physical anthropology as a peculiar form of scientific racism directed at mortal remains.² Racial considerations were also central in a number of composite portraits of soldiers of different national and ethnic origin, such as German soldiers of Wend and Saxon origin or members of the British Royal Engineers. In this context, the demand for a comparative series of composite portraits of different nations was raised³ – and taken up as late as in the 1950s by David Katz, who endeavoured to visualise genetic differences of groups in Scandinavian and European countries.⁴

As Amos Reich and Dirk Rupnow have observed, the concept of race is not primarily concerned with physical but rather with culturally constructed differences and that, as a deep structure organising human history and culture, it is set in a grey area between the visible and the invisible.⁵ In this sense and in their visual immediacy, racialising composite portraits assumed a direct access to the human face, as a means to visualise these invisible, hidden characteristics in meta-portraits of “racial essence.” My definition of the racialising gaze is influenced by the work of the early post-colonial author Frantz Fanon, who in his book *Black Skin, White Masks* speaks of the over-determining power of the white gaze and the realities of socially constructed historico-racial and epidermal racial schemata, which in turn are involved in processes of othering and in producing “black essence.” This also includes the

¹ The term “racial gaze” is used in critical race studies, in particular in relation to studies on a reversal of the racial gaze in contemporary multi-ethnic societies. In the same arena also, the expression “racialising gaze” has been used by Carolin Howarth and Derek Hook. See Howarth, Caroline; Hook, Derek: “Towards a critical social psychology of racism: points of disruption.” In: *Journal of Community and Applied Social Psychology*, 15:6, 2005, 425–431; Paragg Jillian: “What are you?” Mixed race responses to the racial gaze.” In: *Ethnicities*, 17:3, 2017, 277–298; Habibis, Daphne; Taylor, Penny; Walter, Maggie; Elder, Catriona: “Repositioning the Racial Gaze: Aboriginal Perspectives on Race, Race Relations and Governance.” In: *Multidisciplinary Studies in Social Inclusion*, 4:1, 2016, 57–67.

² This will be discussed in the chapter on “Cranial Composites.”

³ See Bowditch “Are Composite Photographs Typical Pictures?,” 336.

⁴ See Katz: “Durchschnittsbild und Typologie.”

⁵ Morris-Reich, Amos; Rupnow, Dirk: “Introduction.” In: Amos Morris-Reich; Dirk Rupnow (ed.): *Ideas of “Race” in the History of the Humanities*. London: Palgrave Macmillan, 2017, 12–13.

internalisation of the racialising gaze by those groups of society thus discriminated against, a perspective reminiscent of Michel Foucault’s theory of panopticism and his understanding of the gaze as a fusion of scientific and popular discourses, legislation, and socio-political practices assuming an authoritative power that fixes the position and perception of human groups in terms of assumed racial differences.⁶

The discussion of the racialising gaze of composite portraiture starts with an examination of Galton’s views on race and racial origins, moving then to consider the “eugenic responsibility” the Victorian scientist attributed to this national and racial perspective. The examination of the composite portrait of the “Jewish Type” as a common endeavor of Francis Galton and the Jewish social scientist Joseph Jacobs includes a presentation of the circumstances – and contemporary anti-Semitic perception – of London’s Jewish community, as well as an exploration of the institutions in which the component portraits were produced. This is followed by an in-depth discussion of contemporary scientific perspectives on the visibility of the Jewish character and composite portraiture’s role in the visualisation of the “essence of Jewishness.” These controversially interpreted composite constructions are then contraposed with other series of composite portraits, focusing on soldiers and students, which predominantly championed positive images of “racial” and national characteristics. These images of European and white American superiority are again contrasted with a series of composite portraits of Native American women that reveals an anthropological but also colonialist and racist perspective. A more local, ethnographical approach, realised by Arthur Batut in the South of France, completes the discussion of historical composite portraits in the field. The conclusion returns to the discussion of the relevance of the photographic technique in the field of “racial science,” anthropology and ethnology. An examination of current composite portraits demonstrates the continuity of visual racial stereotypes and the racialising gaze of composite portraiture in the arts and popular culture of the late twentieth and early twenty-first centuries, but it also reveals positions that oppose these continuities.

⁶ See Fanon, Frantz: *Black Skin, White Masks*. London: Pluto Press, 1986 [1952]. For the connections between Fanon’s and Foucault’s work see also: Nielsen, Cynthia R.: “Resistance through re-narration: Fanon on de-constructing racialized subjectivities.” In: *African Identities*, 9:4, 2011, 363–385.

"Racial Origins" and Composite Constructions of Difference

From the outset, Francis Galton positioned his photographic superimpositions as an ethnological and anthropological technique for the visualisation of "racial characteristics" and the comparison of physiognomic differences between peoples:

I am sure that the method of composite portraiture opens a fertile field of research to ethnologists [...] I heartily wish that amateur photographers would seriously take up the subject of composite portraiture as applied to different sub-types of the varying races of men.⁷

The photographic lens and optical technique of composite portraiture were directed both at the biological, genetic constitution of the human species and its phenotypical appearance, resulting in a racialising gaze shared by an influential branch of nineteenth-century visual knowledge production – visual anthropology. It was relying on the modes of standardised depiction and on theories of racial hierarchies and evolution established in the field.

In the nineteenth century, the comparative study of human anatomy was an accepted scientific endeavour. The illustrations of representative specimens of various ethnicities and "racial types" in ethnological publications and the conventions established in judicial photography formed the foundation for modes of standardised depiction that in turn laid the iconographic ground for composite portraiture.⁸ The fields of anthropology and ethnography can be seen as theoretical as well as practical, prerequisites and inspirations for Galton's photographic innovation. Galton was convinced that his technique, in turn, could contribute to advance anthropological research in its capacity to detect and represent more accurate "racial types:"

The physiognomical difference between different men being so numerous and small, it is impossible to measure and compare them each to each, and to discover by ordinary statistical methods the true physiognomy of a race. The usual way is to select individuals who are judged to be representatives of the prevalent type, and to photograph them; but this method is not trustworthy, because the judgment itself is fallacious. It is swayed by exceptional and grotesque features more than by ordinary ones, and the portraits supposed to be typical are likely to be caricatures.⁹

⁷ Galton: *Inquiries into Human Faculty*, 13.

The technique is presented not only as a visual aid for physical anthropologists and ethnologists, but as a revolutionary scientific means in producing reliable visual types, untainted by expectation and prejudice. Needless to say, the presumed neutrality of the photographic gaze that was positioned as an enhancement and verification of prevalent scientific methods was deeply influenced by racist ideologies of the time. By postulating an objective and visible racial difference, composite portraiture constituted an appealing technique that was fostering nineteenth-century scientific racism and can itself be considered a racist technique.

Nineteenth-century scientific racism became further amplified by colonial expansion, which relied on the postulate of a fundamental racial difference between peoples and a firm belief in European supremacy as a legitimation for colonial rule. Francis Galton subscribed to this view that he, like many of his contemporaries, translated into a form of eugenicist colonial responsibility.

The recent attempts by many European nations to utilize Africa for their own purposes gives immediate and practical interest to inquiries that bear on the transplantation of races. They compel us to face the question as to what races should be politically aided to become thereafter the chief occupiers of that continent. [...] Some of them must be more suitable than others to thrive under that moderate civilization which is likely to be introduced to Africa by Europeans, who will enforce justice and order [...] Or it may prove that the Negroes, one and all, will fail as completely under the new conditions as they have failed under the old ones, to submit to the needs of a superior civilization to their own; in this case their races, numerous and prolific as they are, will in course of time be supplanted and replaced by their betters.¹⁰

Galton's worldview was infused with racial prejudice and a deeply rooted feeling of British superiority which already comes up in the preface of his first book on heredity, where he states: "The natural ability of which this book mainly treats, is such as a modern European possesses in a much greater average share than men of the lower races."¹¹

⁸ See for instance the depiction of "racial types" in the anthropological publication by Alphonse Bertillon, who in his later career became the central protagonist in personal identification and introduced frontal and lateral judiciary portraits into police practice. See Bertillon, Alphonse: *Les Races Sauvages*. Paris: Masson, 1882. See also: Pinney, Christopher: *Photography and Anthropology*. London: Reaktion Books, 2011.

⁹ Galton: *Inquiries into Human Faculty*, 4.

¹⁰ Galton: *Hereditary Genius*, XXVI.

Even though Galton took a monogenist stance that, in contrast to polygenist theories, assumed a common descent for all of humankind, he also subscribed to a hierarchical conception of human sub-races. In *Hereditary Genius*, he sketched his ideas of a racial hierarchy and the “comparative worth of different races,” referring to photographic portraiture as a means to discovering racial status.¹² Galton positioned the “Negro” two grades below the “English race;” the Australian one grade below; the Northern English and Lowland Scots slightly higher.¹³ In Galton’s model, Ancient Greece is defined as the pinnacle of “racial development,” ranking two grades above the contemporary “English race.”¹⁴ Galton believed that this physical and mental pre-eminence of the English was endangered by processes of degeneration, and he observed a weakness of the “race” in relation to the rapid pace of changes in the modern world.¹⁵ In the Darwinian, and Galtonian, view, “race” was not defined as static, but as a historically variable biological category.¹⁶ By way of consequence, already in this first publication on heredity, Galton took a proto-eugenicist position. He advocated for measures to advance the genetic abilities of the British population¹⁷ and proposed the breeding of a “race [...] superior mentally and morally to the modern European.”¹⁸

Adolphe Quetelet, who with his figure of the average man had constructed a statistical prototype for Galton’s composite faces, likewise assumed racial differences within the human population, arguing for the comparison of “racial types” and the establishment of a shared “point of commencement.”¹⁹ With reference to racial typologies and their development, the average man is presented as this point of origin; as the central reference in comparing individuals and their characteristics with their respective “racial” group, as well as comparing groups with reference to their respective stages of development.²⁰

¹¹ Galton: *Hereditary Genius*, XI.

¹² See Galton: *Hereditary Genius*, 335.

¹³ Galton: *Hereditary Genius*, 327–328.

¹⁴ Galton: *Hereditary Genius*, 329.

¹⁵ See Galton: *Hereditary Genius*, 333.

¹⁶ See Morris-Reich; Rupnow: “Introduction,” 13.

¹⁷ See Galton: *Hereditary Genius*, 332.

¹⁸ Galton: *Hereditary Genius*, XI.

¹⁹ Quetelet: *Treatise on Man*, 98.

Quetelet was convinced that physical beauty was proportionate to the development of intelligence and drew on research in comparative anatomy that gave pre-eminence to the “Caucasian race.”²¹ His hierarchical conception, based on visual appearance and aesthetics, was shared by Francis Galton, who was convinced of the comparative potential of composite portraiture in the field: “to define photographically the direction and degrees in which any individual differs from the race to which he belongs, the race being represented by a composite picture of many individuals belonging to it.”²²

The comparison of individuals thus depended on the definition of an average type or composite counterpart. It has been argued that Galton’s racialising composite images represented a “picture of zero.”²³ This appears to be true in several ways. On the one hand, composite photography, with reference to Quetelet’s point of commencement was conceptualised as a neutral reference point, the picture of the average racial type, against which individuals could be measured. However, it was also directed at a very different point zero: namely, the analysis of genetic origins and the descent and essence of “races,” merging a historical view into genetic history with positively connoted assumptions of purity and equilibrium.

Composing the “Jewish Type”

In what could be described as a racialising-anthropometrical project, Francis Galton and Joseph Jacobs produced frontal and profile composite portraits of Jewish school boys. The choice of the Jewish community as the initial subject for the racialising gaze of composite portraiture was linked to the scientific discussion of definite physical markers of the “Jewish race,” including phenotypical and genetic indications for its alleged purity. These discussions took place in times of increasing immigration of Eastern European Jews to London amid a climate of growing anti-Semitism, to which the Jewish community reacted with the foundation and extension of charitable institutions. Among

²⁰ See Quetelet: *Treatise on Man*, 98.

²¹ See Quetelet: *Treatise on Man*, 98.

²² Galton: “Analytical Portraiture,” 320.

²³ Ellenbogen: *Reasoned and Unreasoned Images*, 166.

these were the Jew's Free School and the Jewish Working Man's Club in the poor East London Jewish quarter, where the component portraits of the boys and men were taken. These institutions, as well as the relevant social developments and scientific and public discussions will be examined alongside the composite portraits of male Jews, their publication and their reception in Jewish and non-Jewish circles.

In retrospect, Galton described these as his most successful composite portraits and his disciple and biographer, Karl Pearson, enthusiastically praised that "Galton's portraiture brings [the Jewish boy] before us in a way that only a great work of art could equal – scarcely excel, for the artist would only idealise from 'one' model."²⁴ This view was also shared by Joseph Jacobs, who had instigated their joint production and provided the component portraits. Jacobs, a Jewish writer, social scientist, historian, and literary critic, had studied under Francis Galton at the statistical laboratory at University College London in the 1880s. He published widely on Jewish history and nineteenth-century Jewish life and became known as one of the early protagonists of a Jewish racial science.²⁵ The composite of the "Jewish Type" can be seen as a collaborative project of Galton and Jacobs. Both published the picture as part of their articles and books, but they offer divergent readings of the photographic visualisations. Still, their interpretations were based on common positivist conceptual ground: on the presumption of an essential and measurable, hereditarily transmitted racial difference in humankind, as well as on the assumption of an alignment between external physical signs and internal genetic and psychological dispositions.

The Jewish quarter had become a poverty-stricken district in the second half of the nineteenth-century, when the wealthier and well-integrated Anglo-Jewish community of Sephardic Jews that had arrived in the sixteenth century moved west and large numbers of poor Ashkenazi Jews arrived, who were fleeing poverty and persecution in Central and Eastern Europe. In the early 1880s an ever-larger number of Jews fled anti-Semitic sentiment and pogroms in Russia, Poland, Austria, and Prussia, which caused the size of London's Jewish

²⁴ Pearson: *Life, Letters and Labours*, 293.

²⁵ See Langdon, Daniel: "Jewish Evolutionary Perspectives on Judaism, Anti-Semitism, and Race Science in Late 19th Century England: A Comparative Study of Lucien Wolf and Joseph Jacobs." In: *Jewish Historical Studies*, 46, 2014, 37–73.

community to triple in the two final decades of the century.²⁶ This resulted in disastrous living conditions, rising rents, and increasing poverty in the overcrowded East End. As contemporary observers note, the situation also caused tensions within the Jewish community of London, which was struggling to maintain coherence in the face of the influx of new arrivals.²⁷ Joseph Jacobs took part in this public debate and published on the social position of London Jews and the unequal distribution of wealth and poverty in particular in the East End and formulated the obligation for the well-integrated Anglo-Jewish community to Anglicise and integrate the foreign Jews into British society.²⁸ A large number of Jewish charities and institutions were established, such as the Jewish Working Man's Club, which in the 1880s was an important secular organization in London.²⁹ These were, on the one hand, to alleviate the immediate effects of poverty, and, on the other, to educate the new arrivals and transform them into good British citizens.

At the same time, the Jew's Free School was expanded in order to accommodate more pupils. The charitable institution had an immense power over its pupils and in the Jewish quarter in general. In 1883 over 3000 pupils were inscribed at the school. By the end of the nineteenth century it had become the largest elementary school in the world with over 4000 pupils and at the time one-third of Jewish youth passed through the institution. Apart from education, it offered free meals, clothing, and health care to poor students, and constituted a strict but reliable refuge from the chaos of the surrounding overcrowded and destitute quarter. Through its mixture of Jewish religious and cultural education and British secular schooling, its Jewish pupils were to be integrated into the British (Jewish) society, without losing touch with their cultural and religious origins. These endeavours to "iron out the ghetto bend" were directed likewise at the outer appearance and a healthy athletic body, as well as at the inner faculties, straightening out language and accent and fostering Anglo-Jewish moral values and loyalty to the Crown and the British Empire.³⁰

²⁶ See White, Jerry: *London in the 19th Century*. London, Vintage Books, 2008, 153–154.

²⁷ See Booth, Charles: *Life and Labour of the People in London*. Vol. 1. London: Macmillan, 1889, 567.

²⁸ See Jacobs, Joseph: *Studies in Jewish Statistics: Social, Vital and Anthropometric*. London: D. Nutt, 1891, 21.

²⁹ See Pollins, Harold: *A History of the Jewish Working Men's Club and Institute 1874–1912*. Oxford: Ruskin College Library, 1981, 3.

In order to describe the transformative power of the school, Rabbi Simeon Singer evokes the metaphor of photography and the genre of before-and-after portraits reminding of the practice in yet another disciplinary institution, the mental asylum:

If one could photograph the mental features and spiritual condition of most of the children when they entered and again when they left, it would be no easy matter to recognize them; so complete is the transformation. [...] It is short of a marvel that, from material so unpromising, educational results so extraordinary are produced [...] Rough and uncouth or cowed and spiritless when they enter, they issue bright, smart, animated, self-sustained.³¹

The writer Isa Zangwill, a former pupil and later teacher at the school, presumably also when the portraits were taken for the production of the Jewish type, likewise utilises a photo-visual comparison to portray the heterogeneous crowd of pupils, their physique and facial features, in contrast to the powerful institution that was striving to stamp and remodel the Jewish youth: "The folk who compose our pictures are children of the Ghetto."³² The visual nature of this crowd, of these faces that passed through the school gates, was what Galton and Jacobs sought to capture in their composite portraits of the Jewish schoolboys.

Anti-Semitism became viral in the late 1880s and the 1890s, when, through economic competition and the struggle for affordable living space, tensions were rising between the Jewish and the non-Jewish population. No large-scale pogroms occurred in the London East,³³ however, anti-Semitic sentiment is attested to by the harsh language that also surfaces in social studies of the time, such as that by the social scientist and pioneer of urban research, Charles Booth. Contributors to his study speak of "East London parasites"³⁴ and reproduce racist physical and cultural stereotypes when characterising Eastern European Jews in London:

³⁰ See the nineteenth-century study of Charles Booth as well as the more recent studies of the history of Jewish educational facilities and Jewish history in Britain: Booth: *Life and Labour*, 218. Gregory, Eve; Williams, Ann: *City Literacies: Learning to Read across Generations and Cultures*. London; New York: Routledge, 2000, 52. Black, Gerry: *JFS: A History of the Jews' Free School, London since 1732*. London: Taysder Publishing, 1998, 4; Endelman, Todd M.: *The Jews of Britain, 1656 to 2000*. Berkeley: University of California Press, 2002, 175; White: *London in the 19th Century*, 157.

³¹ Rabbi Simeon Singer quoted in Black: *JFS*, 126.

³² Zangwill, Isa: *Children of the Ghetto, being Pictures of a Peculiar People*. Philadelphia: The Jewish Publication Society, 1892, 5.

The Polish or Russian Jew represents to some extent the concentrated essence of Jewish virtue and vice; for he has, in his individual experience, epitomized the history of his race in the Christian world. [...] For the most part they are men between 20 and 40 years of age, of slight and stooping statue, of sallow and pinched countenance, with low foreheads, high cheek bones and protruding lips. [...] Stamped on the countenance and bearing of the men is a look of stubborn patience; in their eyes an indescribable expression of hunted, suffering animals.³⁵

This anti-Semitic statement delineates physical characteristics in order to explore the so called "essence" of (Ashkenazi) Jewishness, focusing on the face and the eyes. These are, however, denied human expression, reminding of the animalisation of human physiognomy and expression and the de-humanising function already discussed in relation to the criminalising gaze of composite portraiture.³⁶

Nineteenth-century science constructed Jews and the Jewish body as inherently different. The Scottish physician and anatomist Robert Knox was one of the first to describe the physical appearance of Jews in relation to their supposed historical descent and racial categories. His work was influential in constructing typecasts that later developed into anti-Semitic stereotypes.³⁷ Further extensive studies focused on skin colour,³⁸ the shape of head and nose, so-called "nostrility,"³⁹ deformations and size of the feet,⁴⁰ and other bodily markers. Apart from these physical stigmata, Jews were described as dirty, greedy, and psychologically weak; they were denied creativity and intellectual ability, characteristics that often became connected to alleged physiological difference in processed of physiognomic othering.⁴¹ Anti-Semitic racist presumptions in

³³ See White: *London in the 19th Century*, 155–156.

³⁴ Potter, Beatrice: "The Jewish Community." In: Booth, Charles: *Life and Labour*, 564–590, at 582.

³⁵ See Potter: "The Jewish Community," 580–581.

³⁶ See chapter 3, "Suspect Identities."

³⁷ Knox, Robert: *The Races of Men: A Fragment*. Philadelphia: Lea & Blanchard, 1850.

³⁸ Virchow, Rudolf: "Gesamtbericht über die Farbe der Haut, der Haare und der Augen der Schulkinder in Deutschland." *Archiv für Anthropologie*, 16, 1886, 275–475.

³⁹ See among others: Warwick, Eden: *Notes on Noses*. London: Richard Bentley, 1864; Jacobs: *Studies in Jewish Statistics*.

⁴⁰ See Rohrer, Joseph: *Versuch über die jüdischen Bewohner der österreichischen Monarchie*. Vienna: n. p., 1804.

the late nineteenth-century were increasingly expressed with reference to heredity and genetic disposition, and phrased in terms of an implied racial weakness and degeneration.⁴² In particular, the pathologisation of the Jewish eyes and gaze, as Sander Gilman points out, had a prominent place in nineteenth-century racial science, extending to the wholesale pathologisation of Jewish scientists and scholars.⁴³

Galton and Jacobs's plates showing frontal and lateral composite portraits of the "Jewish Type" were published in the most popular British photographic journal of the time, the *Photographic News*, in 1885. The plates that were presumably compiled specifically for this publication each contain ten component portraits on the right and four composites on the left side. An emphasis is placed on the boys, with only two composites of men and no component portraits of that second group. The layout of the page suggests that the composite photograph "A" combines the upper five individual portraits, composite "B," the lower five. In Galton's notes, composite "D" is referred to as "Full faces adults," and "C," as a co-composite of thirteen individual portraits of boys.⁴⁴ The plate of profile portraits is structured in a similar way, the components being composed to form two composite portraits that are yet again merged into a co-composite. Probably for aesthetic reasons, one profile of the boys is inverted, facing the adult composite. At the same time, the layout suggests the relationship between "older" and "younger" representations of the Jewish type, offering a glance into the future of what will become of the boys when reaching maturity.

⁴¹ Sander Gilman argues that "[t]he Jew's body can be seen and measured in a manner which fulfils all of the positivistic phantasies about the centrality of physical signs for the definition of pathology. It can be measured as the mind cannot." Gilman: *The Jew's Body*, 49. For a discussion of the iconography of depicting Jewishness, see also: Hart, Michael: "Picturing Jews: Iconography and Racial Science." In: Peter Y. Medding (ed.): *Studies in Contemporary Jewry XI: Values, Interests, and Identity: Jews and Politics in a Changing World*. New York/Oxford: Oxford University Press, 1995, 159–175.

⁴² See Gilman: *The Jew's Body*, 39.

⁴³ This extension to the pathologisation of the gaze and perspective of the Jewish scientists themselves has been observed by Sander Gilman. See Gilman: *The Jew's Body*, 69.

⁴⁴ See Galton, Francis: Notes, undated. Galton Papers, UCL, GALTON 2/8/11/7.



Galton, Francis: *The Jewish Type: Full Face*, plate, 1885. Galton Papers, Special Collections, University College London, GALTON 2/8/11/2.



Galton, Francis: *The Jewish Type: Profile*, plate, 1885. Galton Papers, Special Collections, University College London, GALTON 2/8/11/3.

Francis Galton's interpretation of the composite portraits in the *Photographic News* focused on the eyes and gaze:

They were children of poor parents, dirty little fellows individually, but wonderfully beautiful, as I think in these composites. The feature that struck me the most, as I drove through the adjacent Jewish quarter, was the cold scanning gaze of man, woman, and child, and this was no less conspicuous among the schoolboys. There was no sign of diffidence in any of their looks, nor of surprise at the unwonted intrusion. I felt rightly or wrongly, that every one of them was coolly appraising me at market value, without the slightest interest of any other kind.⁴⁵

Galton here reproduces common stereotypes about the commercial affinity of Jews. The racialising gaze of the technique here becomes focused on the eyes, as a character study that continues on the streets. But Galton's analysis comes to a halt here, and he motions to his partner Jacobs for the further interpretation of the racial characteristics as shown in the composite portrait. It is unclear whether Galton ever set foot into the Jew's Free School, and it is likely that he did not get closer to his "subjects of study" than being driven through the Jewish East End.

For the pupils, however, the experience of the school and the shooting of the photographs must have felt decidedly less remote. For over 50 years, 1840 until 1891, Moses Angel, who is favourably mentioned by Galton in his article, was the headmaster of *Jew's Free School*. Angel was characterised by his contemporaries as a stern and autocratic leader who believed in (mild) corporal punishment. With an excessive devotion to duty, he is said to have reigned over the school, enforcing a strict discipline and keeping pupils, teachers and staff under close supervision, noting even trivial misdemeanors in a log-book.⁴⁶ The production of the photographs did certainly not escape his attention and most probably he would have been present in person, overseeing the procedure. This emotional situation must have likewise inscribed itself into the glances of the pupils lined up to be photographed front and profile, in the manner of mug shots. The calculating gaze of the boys directed at the intruding photographic lens, commented on by Galton, might have been mirroring the power structures in the benevolent disciplinary institution. The photographic act of the production

⁴⁵ Galton, Francis: "Photographic Composites." In: *The Photographic News*, 17 April 1885, 243.

⁴⁶ See Black: *JFS*, 47–49.

and reception of the portraits and the affective dimension, both on the sides of the depicted individuals, as well as on the side of the viewers, still make the examination of the portraits and their compositions an emotionally charged encounter.

De-Composing the "Essence of the Jewish Race"

In contrast to Galton's views on the "essence of the Jewish race," Joseph Jacobs provided a different interpretation of the composite portraits. His perspective on the racialising gaze of the technique can be seen as emblematic for the Jewish racial science of the time, which often used findings from mainstream visual and physical anthropology for alternative interpretations. The controversial discussion of the purity of the "Jewish race" plays a central role in the Jewish perspectives on Jewish visual typologies and composite portraits. Understood as essence of "pure Jewishness," the photographic constructions are even attributed with a spiritual quality. This anthropometrically and photo-visually construed difference, in which composite portraiture took part also has a much darker side. It was used to justify anti-Semitism and, eventually, the persecution of Jews under the Nazi regime and in the Holocaust.

Jacobs read the "piercing gaze," which had been observed as a characteristic in the composite portraits and that developed into a central motive in the analysis of supposed Jewish racial difference, in another way: "I fail to see any of the cold calculation which Mr. Galton notices in the boys at the school. [...] There is something more like the dreamer and thinker than the merchant."⁴⁷ This re-interpretation of scientific observations countering, or rather replacing, stereotypes constituted a strategy of Jewish scientists and led to at times paradoxical modes of Jewish "self-defense:" Jews were not only objects of social science, but Jewish scientists were active protagonists in the production of a racist ideology that was preparing the ground for twentieth-century anti-Semitism. Just like their non-Jewish counterparts, Jewish social scientists relied on seemingly objective techniques used in physical anthropology and "racial science" such as craniometry, anthropometry, and statistical methodology.⁴⁸ While arguing against anti-Semitic scientific racism, they contributed to the construction of a (visual) typology of Jewishness as well as to the construal of racial difference.⁴⁹

Jean-Paul Sartre on the contrary has argued that the Jew and Jewishness was defined by an external gaze, by persons, who look at “the Jews” and define them as such.⁵⁰ This othering of the Jewish body and character, however, can be aligned with the Jewish self-ascriptions with reference to the insights on the white colonial gaze that were introduced by Frantz Fanon. The post-colonial writer argued that the external racialising gaze inscribed an inferior position to the non-white colonial subjects, a gaze which was internalised by persons of colour, who became co-actors in their own subjection.⁵¹ This highlights the affective dimension of the racialising gaze as a form of painful fragmentation, which breaks down self-perception of the subjects defined as other and re-structures it along external ascriptions; ascriptions against which Jewish scientist sought to position themselves and their community.

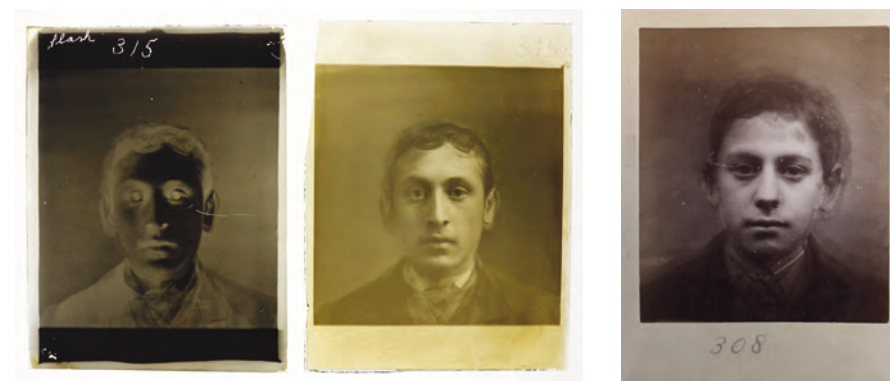
Joseph Jacobs’s *Studies in Jewish Statistics: Social, Vital and Anthropometric*,⁵² which includes a reprint of Galton’s frontal composite portraits of Jewish youths as frontispiece, may also be read in this way. In his essays, Jacobs offers revised readings of (anti-Semitic) statistical studies on Jews and their physical and mental conditions, as well as on the influence of heredity on the Jewish community.⁵³ While Jacobs stresses the social constitution and argues for a more nuanced interpretation of the influence of heredity, including acquired social behavior,⁵⁴ he nevertheless remained convinced of the special physical and psychological qualities of Jews as a people. He was certain that “[m]ost people can tell a Jew when they see one,”⁵⁵ and that this peculiar Jewish appearance became manifest in a “cast of face in which the racial so dominates the individual.”⁵⁶ In these publications the racialising gaze of composite portraiture becomes proof for “racial” and physical difference, and a justification for racialising arguments that depended on the construction of a group identity of Jewish people.

⁴⁷ Jacobs: *Studies in Jewish Statistics*, XXXIII.

⁴⁸ The practitioners of Jewish social science relied on techniques of investigation used in racial science. Craniometry and anthropometry signified that establishing racial categories of humankind was not something that could be successfully undertaken by ordinary people, but only trained experts with specialized instruments and procedures. Statistics also signified access to technical knowledge that enabled objective scientific statements by neutral observers of the human condition. The texts of Jewish social science are filled with declarations of mathematical proofs; columns, charts and graphs; rate percentages and proportions. Knepper, Paul: “Lombroso and Jewish Social Science.” In: Paul Knepper; P.J. Ystehede (ed.): *The Cesare Lombroso Handbook*. London; New York: Routledge, 2013, 175.



Galton, Francis: Component portraits of Jewish boys and men commissioned by Galton, c. 1883. Galton Collection, University College London, GAL 381, courtesy of UCL science collections.



Galton, Francis: Glass negatives and positive c. 1883 that later became “D”, the adult composite on the plate *The Jewish Type: Full Face*, Galton Collection, University College London, GALT 381, courtesy of UCL science collections. 308, co-composite of 13 c. 1883, a smaller version is depicted as composite “C” on the plate *The Jewish Type: Full Face*. Galton Papers, Special Collections, University College London, GALTON 2/8/1/3/9.

⁴⁹ See among others: Gilman: *The Jew’s Body*; Knepper: “Lombroso and Jewish Social Science”; Novak, Daniel: “A Model Jew: ‘Literary Photography’ and the Jewish Body in *Daniel Deronda*”. In: *Representations*, 85:1, 2004, 58–97; and Hart: “Picturing Jews,” 159

⁵⁰ See Sartre, Jean-Paul: *Anti-Semite and Jew: An Exploration of the Etiology of Hate*. New York, Schocken Books, 1948 [1944].

⁵¹ See Fanon: *Black Skin, White Masks*.

⁵² See Jacobs: *Studies in Jewish Statistics*, Frontispiece.

⁵³ See Jacobs: *Studies in Jewish Statistics*, III.

⁵⁴ “Thus throughout our review of Jewish biostatics we have failed to find any phenomenon which was uniformly present in all Jews that could not be referred to social causes.” Jacobs: *Studies in Jewish Statistics*, X.

⁵⁵ Jacobs, Joseph: “The Jewish Type and Galton’s Composite Photographs.” In: *The Photographic News*, 24 April 1885, 268–269, at 268.

⁵⁶ See Jacobs: *Studies in Jewish Statistics*, I–XXVIII.

The Galton Collection preserves the original glass negatives of component and composite portraits taken under Joseph Jacobs's supervision.⁵⁷ The boys are photographed seated on a wooden chair in front of a light backdrop presumably on the school premises. They wear similar coats and shirts, probably a school uniform. It seems that the men of the Jewish Working Men's Club were likewise photographed at the school.⁵⁸

The two plates of frontal and profile composites of "the Jewish face" discussed earlier had a relatively wide circulation. Apart from their initial publication in the *Photographic News*, they were later reprinted in the form of an engraving as a frontispiece in the *Journal of the Anthropological Institute*, which contained Joseph Jacobs's articles on "The Racial Characteristics of Modern Jews" and on "The Comparative Distribution of Jewish Ability."⁵⁹ In his 1891 publication *Studies in Jewish Statistics*, the plate of profiles was reproduced, again as the frontispiece.⁶⁰ In his analysis of the plate of composite portraits, Jacobs only in passing mentions the measurement of individual facial characteristics, such as nose and eyes, but chooses to highlight a general Jewish expression.¹ Jacobs's notion of "expression", however, is not the same as Charles Darwin's, who had used the term to denote the fleeting emotional expressions of the face,⁶² but rather refers to a more or less static general appearance and physiognomy. Jacobs was convinced that composite portraiture, as a scientific instrument which could obtain averages of expression no conventional measurements could supply,⁶³ would allow for a visualisation of this unique countenance and the "essence of Jewishness."⁶⁴ Enthusiastically, he concludes his discussion of the composite portraits: "Of the fidelity with which they pourtray [sic] the Jewish expression there can be no doubt."⁶⁵

⁵⁷ The collection also contains some photographic positives of composites that might have been used as lantern slides in which the frame zooms in on the face. See Galton Collection, University College London, GALT 381.

⁵⁸ This is indicated by the same chair and backdrop visible in the original glass negatives in the Galton Collection. See Galton Collection, University College London, GALT 381.

⁵⁹ See *Journal of the Anthropological Institute*, 15, 1886, 23–62.

⁶⁰ See Jacobs: *Studies in Jewish Statistics*, 1891.

⁶¹ Jacobs, Joseph: "On the Racial Characteristics of Modern Jews." In: *Journal of the Anthropological Institute*, 15, 1886, 23–63, at 38.

⁶² See Darwin: *Expression of the Emotions*.

⁶³ See Jacobs: *Studies in Jewish Statistics*, I–XVI.

But this focus on the whole countenance does not keep Jacobs from commenting on particulars of "the Jewish face." He observes accentuated nostrils, a largish mouth, thick lips, a heavy chin, and a broad forehead as characteristic of the Jewish composite face.⁶⁶ And he furthermore notes "large brilliant dark eyes set close together, with heavy upper and protuberant lower lid, having a thoughtful expression in youth, transformed into a keen and penetrating gaze by manhood." Jacobs here effortlessly jumps from a descriptive tone into a physiognomic-psychological argument again focusing on the eyes, while also adding a temporal and social dimension. On the one hand, this reveals his focus on social conditions and acquired behavior under the influence of centuries of isolation that he had described as "Semitic features with ghetto expression."⁶⁷ On the other hand, he subscribes to the existence of hereditary dispositions over time translated into facial features that are open to physiognomic and racial readings of the composite faces:

If these Jewish lads, selected almost at random, and with parents from opposite parts of Europe, yield so markedly individual a type, it can only be because there actually exists a definite and well-defined organic type of modern Jews. Photographic science thus seems to confirm the conclusion I have drawn from history, that there has been scarcely any admixture of alien blood amongst the Jews since their dispersion.⁶⁸

Composite portraiture and its racialising gaze, endowed with the evidential attributions of scientific photography, are here employed as visual proof for the purity of "the Jewish race." Jacobs, along with another protagonist of Jewish racial science, Maurice Fishberg, later argued in the *Jewish Encyclopedia* that these typical features, as laid bare in the composite faces, could also to be found in historical depictions of Jews: "the marked Jewish type [...] is found in the Assyrian bas-reliefs as well as in the ghetti of to-day."⁶⁹

⁶⁴ Sander Gilman argues that the composite portrait of the Jewish Type is an "image of the 'essence' of the Jew – not just the Jew's physiognomy, but the Jew's very nature." Gilman: *The Jew's Body*, 64.

⁶⁵ Jacobs: *Studies in Jewish Statistics*, I–XXXI.

⁶⁶ See Jacobs: *Studies in Jewish Statistics*, XXXV.

⁶⁷ Jacobs: *Studies in Jewish Statistics*, XXIX.

⁶⁸ See Jacobs: *Studies in Jewish Statistics*, XXXI–XXXII.

⁶⁹ Jacobs, Joseph; Fishberg, Maurice: "Types, Anthropological." In: *The Jewish Encyclopedia XXII*. New York, London: Funk & Wagnalls Company, 1906, 291–295, at 294.

Extending his form of archeologically informed “racial science,” Jacobs goes even further in his reading of the blurry composition of Jewish faces. Apart from a biological racial typology, the face and its gaze are attributed with a spiritual quality:

The thing, person, spirit, ghost, idea, type or what you will that looks at us [...] has no bodily existence; and yet there is life in its eyes [...] In the present instance, as the components can in all probability trace back to a common ancestor, the composite face must represent, if it represents anything, this Jewish forefather. As the spectroscope has bridged over the abysses of space and has hold the composition of Orion’s Belt, so the photographic lens seems, in these composites, to traverse the aeons of time and bring up into visible presentment the heroes of the past. In these Jewish composites we have the nearest representation we can hope to possess of the lad Samuel as he ministered before the Ark, or the youthful David when he tended his father’s sheep.⁷⁰

In this line of argument, the technique of composite portraiture develops an unexpected potential as a spiritual medium.⁷¹ The images created are praised as mystical reincarnations of heroes from the Hebrew Bible, whose ghostly personification in composite portraits allows for a face-to-face encounter with idols from the remote past, subverting the strict aniconism of orthodox Judaism. This special form of an ideal likeness, expressed in the assumed racial purity of the composite face, relies on the help of scientific techniques of seeing and the new medium of photography; techniques that provided the visualisations with an air of objective validity. Composite portraiture and its racialising gaze are attributed a mystic quality, the photographic technique becomes a veritable visual time-machine.⁷² The rays of light transcend time and space and, just like features from outer space, the inborn qualities and the essence of Jewishness become manifest on the photographic print.

Published more than two decades later, the entry on anthropological types in the 1906 edition of the *Jewish Encyclopedia*, written by Jacobs and Fishberg, includes a composite portrait of ten Jewish boys produced in New York. The

⁷⁰ Jacob, Joseph: “The Jewish Type,” 269.

⁷¹ Daniel Novak argues that for Jacobs the composite portraits provided “access to a visionary typology of spirits. The Jewish composites represent at once biological fact and biblical specter, in inherited racial body and a mystical ghostly inheritance.” Novak, Daniel: *Realism, Photography and Nineteenth-Century Fiction*. Cambridge: Cambridge University Press, 2008, 103.

⁷² See Scholz: *Phantasmatic Knowledge*, 127.



J. E., Vol. XII. Copyright, 1905, by Funk & Wagnalls Company. From photographs by B. Hellmich, New York.

THE JEWISH TYPE.

COMPOSITE PORTRAIT OF TEN JEWISH LADS, NEW YORK.

(A=composite of a¹ a² a³ a⁴ a⁵. B=composite of b¹ b² b³ b⁴ b⁵. C=co-composite of A and B.)

B. Hellmich: *The Jewish Type. Composite Portrait of Ten Jewish Lads*, New York. (1905) In: Jacobs, Joseph; Fishberg, Maurice: “Types, Anthropological.” In: *Jewish Encyclopedia* XI, 1906, facing 294.

plate that was manufactured by the photographer B. Hellnuch is compiled of two slightly inclined rows of five individual portraits in the upper and lower part.⁷³ In the middle row, two marginally larger composite portraits combine the respective groups of individuals. The centre is dominated by an again slightly larger co-composite of the two intermediary facial constructions on each side. This later attempt of visualising the “Jewish Type,” on another continent shows the ongoing fascination of Joseph Jacobs and other Jewish scientists with the technique of composite portraiture and its racialising gaze. And it attests to the untarnished belief in the capacity of photographic superimposition to visualise “typical” anthropological and racial characteristics. In their discussion, the authors observe that “[t]he result is remarkably Jewish in appearance.”⁷⁴ They note that eyes, noses, and lips, as well as cheek-bones, all contribute to this typical form and general expression, stressing the possibilities of composite portraiture to merge multiple characteristics and amalgamate them into a complete and ideal likeness.⁷⁵

In the *Jewish Encyclopedia* article on “anthropometric types” – as well as in the larger context of the encyclopedia, which sought to compile and portray essential aspects of “The History, Religion, Literature, and Customs of the Jewish People from the Earliest Times to the Present Day”⁷⁶ – the composites become racialising meta-portraits of Jewishness – a Jewishness defined in terms of a historical continuity, emphasising the permanence of physical and psychological characteristics, and the stability of the Jewish race, but they also represent a projection into the future and a prescriptive agenda for maintaining racial purity.⁷⁷ This construction of visual resemblance into a common Jewish identity, an overarching sameness of the Jewish people despite geographical and temporal differences, has been identified as a basic principle and aim of Zionism.⁷⁸

⁷³ Compared with the boys from the Jews’ Free School, the students are wearing decidedly better clothes, dark coats, and white shirts, many also are wearing ties or bow ties. The origin of the component portraits and the circumstances of their production are unknown, but the formal clothes hint at a festive occasion or a higher-class educational institution with a strict dress code. The portraits might have been produced for a different reason, such as a graduation ceremony or a year book, and may have been used for the photographic superimpositions only at a later stage.

⁷⁴ Jacobs; Fishberg: “Types, Anthropological,” 294.

⁷⁵ See Jacobs; Fishberg: “Types, Anthropological,” 293–294.

⁷⁶ See the subtitle of the *Jewish Encyclopedia*. Joseph Jacobs was working as a coordinator for the mammoth project, contributing four hundred articles and procuring many of the illustrations.

⁷⁷ For the discussion of the composite portrait of the “Jewish Type” see also: Novak: “A Model Jew.”

⁷⁸ See Hart: “Picturing Jews,” 160.

Twenty-five years after the initial publication of the photographic visualisation of the “Jewish Type,” the already elderly Galton was interviewed in the *Jewish Chronicle*. His composite portraits are mentioned, and he is praised for having devoted his life to the “pursuance of a high ideal – that of improving the fitness of the human race.”⁷⁹ In the interview, Galton seconds the claim expressed in the introduction that “[i]t may be said that from the days of Moses Jews have been ‘eugenicists.’”⁸⁰ This unrestrained praise for eugenic ideas and racial purity in an influential Jewish newspaper, from a current perspective, appears bitter. After all, precisely these arguments and the visual stereotypes about Jewishness going along with them were used as “evidence” in anti-Semitic persecution and in Nazi propaganda to justify the Holocaust.⁸¹

Via the writings of anti-Semitic scholars such as Houston Stewart Chamberlain⁸² and Rudolph Martin, who also mentions composite portraiture,⁸³ the racialising gazes on the Jewish body and face entered Nazi racist thought, but no new composite portraits seem to have been produced during the regime. This might be explained by the role of the leading author for Nazi anti-Semitic and Aryan racial theory, Hans Günther, who in his influential book on the “Jewish race” reprinted and discussed Jacob’s and Galton’s composite portraits of the Jewish school boys, but argued that the technique was of little worth for racial science, since it constructed “faces” that were not actually present in individual specimen.⁸⁴ The author nevertheless used the images as an impulse to delineate general characteristics of “Jewishness,” including Jacob’s argument on “nostrili,” the peculiar shape of the Jewish nose. It seems true, as Amos Morris Reich argues, that Rudolph’s work suggests that individual type photography fitted the Nazi anti-Semitic argument better than composite portraits,⁸⁵

⁷⁹ Jewish Chronicle: “Eugenics and the Jew. Interview for the Jewish Chronicle with Sir Francis Galton.” In: *The Jewish Chronicle*, 29 July 1910, 16.

⁸⁰ Jewish Chronicle: Eugenics and the Jew, 16.

⁸¹ For an elaborate discussion of racial photography and the application of visual techniques of knowledge production in the late nineteenth century and the Third Reich, see Morris-Reich: *Race and Photography*.

⁸² See Chamberlain, Houston Stewart: *Die Grundlagen des neunzehnten Jahrhunderts*. München: F. Bruckmann, 1899.

⁸³ See Martin, Rudolph: *Lehrbuch der Anthropologie in systematischer Darstellung: mit besonderer Berücksichtigung der anthropologischen Methoden*. Jena: Gustav Fischer: 1914, 41–42.

⁸⁴ See Günther; Hans Friedrich Karl: *Rassenkunde des jüdischen Volkes*. München: Lehmann, 1930, 209.

⁸⁵ See Morris-Reich: *Race and Photography*, 121–122, 139–140.

and Rudolph indeed countered the composite images with the reprint of a group photograph of a Jewish school class in New York. But this rather prominent presentation of the photographic technique in the central reference for Nazi anti-Semitic propaganda and legislation during the Third Reich, attests to the importance of composite portraiture for this ideology, if only as visually more appealing general images that were superseded by individual deformed racist figurations used in propaganda against Jews.

British and German Soldiers and the Quest for Racial Ideals

The racialising gaze of composite portraiture also fell on British and German soldiers, a group within society that since the early days of modern anthropology and anthropometric statistical surveys had stood as representative for positive national physical attributes. Francis Galton had presented his composite portraits of Royal Engineers as prototypes of health and genetic fitness. In contrast to the composites of the “Jewish Type” these can be seen as racial ideals of “the English race,” as well as different ethnic communities of Germany. This perspective, in which composites acted as a physiological ideal of national and racial identity and as the model for eugenic intervention, will be further discussed below.⁸⁶ With respect to their racialising gaze, the composite portraits were presented as an important visual reference in studies of ethnic origins and were used to further plans of the British Ethnographic Society for a photographic survey of the inhabitants of the British Isles.

With the aid of the German general Bernhard von Funcke,⁸⁷ the American medical professor Henry Pickering Bowditch produced composite portraits of German soldiers of Saxon and Wend⁸⁸ origin. The corpus of 108 portraits was taken in Dresden, and sets of twelve of the portraits assigned to each ethnic group were superimposed in composites framed by smaller versions of the component portraits. In an article published in 1894, which compared composites of college students from the United States with the German military examples, Bowditch notes:

⁸⁶ This is discussed in chapter 7, “Eugenic Role Models.”

⁸⁷ Bernhard von Funcke was married to May Emerson Brooks, originally from New York. The couple later lived in Dresden and was presumably visited by H.P. Bowditch in 1890.

A study of the faces here presented certainly suggests the conclusion that there must be some racial peculiarities showing themselves in the composite portraits. The two composites of each race are clearly more like each other than like those of the other race, and the squarely cut jaw and brow of the Wend composites give the impression of greater vigor and strength of character than the more rounded features of the Saxons.⁸⁹

Bowditch forwarded his results to Galton, who was impressed by the soldier composites and likewise noted the conspicuity of their “racial difference” from American, but also from English “types,” congratulating Bowditch on his contribution to the collection of typical forms.⁹⁰ Just like Bowditch, Galton focused on observations of racial peculiarities, but in relation to his composite portrait of the English soldier, the images were seen through a eugenicist lens, in terms of the production of models for eugenic intervention.⁹¹



Bowditch, Henry Pickering: *A group of Saxon soldiers and their composite*, c.1892; *A group of Wend soldiers and their composite*, c.1892. Harvard Medical School Archives, Center for the History of Medicine: OnView. <https://collections.countway.harvard.edu/onview/items/show/6213>; <https://collections.countway.harvard.edu/onview/items/show/6214>. [15/01/2022]

⁸⁸ The Wends or Wendish, today better known as Sorbs, are a West Slavic minority community that from the eighth century onward settled in territories that later became part of Germany (mainly in Lusatia or “Sorbia” in present-day Saxony and Brandenburg).

⁸⁹ Bowditch: “Are Composite Photographs Typical Pictures?,” 340–341.

⁹⁰ See Galton, Francis: Letter addressed to Henry Pickering Bowditch, 2 August, 1892. Harvard Medical Library, Papers of Henry Bowditch, H MS c5.2.

The German reception of the composite technique was mainly influenced by the racialising perspective and by Bowditch's comparative approach to national composite physiognomies. As the German doctor, anthropologist, and editor of the photographic journal *Photographische Rundschau*, Richard Neuhauss, argued, the technique was undoubtedly useful for the scientific study of the characteristics of national populations and for the construction of average portraits of different races.⁹² Following Bowditch's argument, Neuhauss claims that "it should be possible to construct the typical head of the German student to contrast the American one, but that the German soldier was probably even more suitable for such an endeavor."⁹³

The archeologist and art historian Georg Treu was likewise convinced that the composites of the German soldiers succeeded in presenting typical racial features and observed that in these, "the Germanic rounded head is contrasted with the square shape of the Slavic skull. The Saxon type shows more fluid contours, more 'beautiful' proportions and a more refined intellectual expression."⁹⁴ The Wend composite features, by comparison, are characterised as broader, angular and rough, to which Treu ascribes a stronger, tougher congenital disposition.⁹⁵ The comparative view expressed in the comments on the composite portraits is based on an ethnological perspective that in the nineteenth century was often aligned with hierarchical conceptions of races. Furthermore, the evaluations drew on physiognomic explanatory models for the construction of racial difference. In order to facilitate these visual racial comparisons, however, archives of racialising composites from different regions would have to be compiled.

Galton prompted Bowditch to continue his visual studies in the racial field and notes that "[o]ne really ought to get a large collection in this way of racial types."⁹⁶ He forwarded the German racialising composites to an exhibition

⁹¹ Examples of the eugenicist use of composite portraits in the United States are preserved in the archive of the *Eugenics Record Office* at Truman State University among the Papers of Harry H. Laughlin, a leading eugenicist and opinion maker in the early twentieth century. The composite portraits of female American high school students that try to delineate particular physiognomic characteristics of the population of Irish and German descent will be discussed in detail in chapter 7.

⁹² See Neuhauss, Richard: "Kombinierte Portrait-Photogramme." In: *Zeitschrift für Ethnologie*, 22, 1890, 253–254.

⁹³ Neuhauss, Richard: "Kombinierte Portrait-Photogramme," 254, my translation.

⁹⁴ Treu, Georg: "Durchschnittsbild und Schönheit." In: *Zeitschrift für Ästhetik und allgemeine Kunstwissenschaft*, 9, 1914, 433–448, at 438.

⁹⁵ See Treu: "Durchschnittsbild und Schönheit," 438.

at the Portrait Association of Edinburgh in order to support the plan of an ethnographic photographic survey of the United Kingdom that was prepared by the British Anthropological Society, "obtaining photos of the inhabitants of selected typical villages in various parts of the British Isles where from historical reasons, the breed is likely to have been local for a long time."⁹⁷ The committee that included Francis Galton and Joseph Jacobs, among other notable anthropologists and scientists of the day, set out to record the traditions and beliefs, dialects, artifacts, and monuments, but also the *physical types* of the British Isles. This collection was supposed to preserve rural specificities in a quickly industrialising and urbanising society, as well as to produce historical evidence for the continuity of the Anglo-Saxon and Teutonic "racial characteristics" in the British population.⁹⁸ This survey, wrote Edward Brabrook, anthropologist and folklorist, would have to be conducted soon, since change was "fast effacing all special local peculiarities, and inextricably mixing the races of which the population is composed."⁹⁹ The racial history of Britain, so John Beddoe, a prominent ethnologist, who had published *The Races of Britain*¹⁰⁰ and was also involved in promoting the ethnographic survey, could be solved through an interdisciplinary effort, "so that so much of the blurred and defaced prehistoric inscription as is left in shadow by one light may be brought into prominence and illumination by another."¹⁰¹ This aim was shared by Galton, who saw anthropometrics and the photographic recording of typical specimens as central elements in this endeavor. Composite portraiture would, he hoped, illuminate racial origins and physiognomies, and would help to "disentangle" the roots of the "British race" by composing "typical" historical faces. The complex study that was to be conducted by amateur scientists and members of ethnographic and folklore societies eventually failed. Not enough suitable photographic material and no composite portraits of the population of the British Isles were produced.¹⁰²

⁹⁶ Galton: Letter to Bowditch, 2 August 1892.

⁹⁷ See Galton: Letter to Bowditch, 2 August 1892.

⁹⁸ See Urry, James: "Englishmen, Celts and Iberians: The Ethnographic Survey of the United Kingdom, 1892–1899." In: G. Stocking (ed.): *Functionalism Historicized (History of Anthropology II)*. Madison: University of Wisconsin Press, 1984, 83–105; Petch, Alison: *Pitt-Rivers and the Ethnographic Survey of the UK: Rethinking Pitt-Rivers*, Oxford: Pitt-Rivers Museum, 2011. <https://web.prm.ox.ac.uk/rpr/index.php/article-index/12-articles/502-ethnographic-survey.html> [15/01/2022].

⁹⁹ Brabrook, E. W.: "Ethnographical Survey of the United Kingdom." In: *Science*, 21, no. 518, 6 January 1893, 5.

Native American Racial Typologies and Colonial Obligations: Fletcher's Dakota Composites

The racialising gaze of composite portraiture was also directed at the indigenous population of North America. Alice Cunningham Fletcher, an American anthropologist, ethnographer, and native rights activist, who published widely on Native Americans,¹⁰³ produced composite portraits of the Dakota and Omaha People of South Dakota.¹⁰⁴ Her work exhibits a preservationist, ethnographic orientation that is mixed with racialising arguments on the fitness of the native tribes to survive in mainstream American society. What also becomes apparent upon examination is the involvement of ethnographers and their work in colonialist and racist governmental policies, and the ambivalent role of early native rights activism.

When Fletcher conducted her photographic experiments, most Dakota were already living on reservations such as Crow Creek and Lower Brulé on the banks of the Missouri River, where Fletcher's component portraits were taken. Often these areas were not original tribal lands, since the Dakota were forced to resettle into those reservations after the so-called Dakota War in 1862. Their inhabitants were living under difficult economical and sanitary conditions, a great majority of them merely subsisting on government aid.¹⁰⁵ Missionary

¹⁰⁰ See Beddoe, John: *The Races of Britain: A Contribution to the Anthropology of Western Europe*. Bristol: W. Arrowsmith, 1885.

¹⁰¹ Beddoe: *Races of Britain*, 271.

¹⁰² Elizabeth Edwards argues that the protocols and processes for photographic data collection were too complex for the amateur scientists. See Edwards, Elizabeth: "Straightforward and Ordered: Amateur Photographic Surveys and Scientific Aspiration, 1885–1914." In: *Photography and Culture*, 1, 2008, 185–210. James Urry likewise suggests that the reliance on amateurs hindered the effective execution of the survey. See Urry: "Englishmen, Celts and Iberians."

¹⁰³ Alice Fletcher published extensively in the *Journal of the American Association for the Advancement of Science*, she wrote reports for the American government, and published on the music, myths, rites, and ceremonies of various First Nation peoples. See among others: Fletcher, Alice C.: *Indian Education and Civilisation. Bureau of Education Special Report 1888*. Washington, Government Printing Office, 1888, 258; Fletcher, Alice: *Indian Story and Song from North America*. Boston: Small Maynard & Company, 1907; Fletcher, Alice; La Flesche, Francis: "The Omaha Tribe." In: *27th Annual Report of the Bureau of American Ethnology 1905–1906*. Washington: Government Printing Office, 1913.

¹⁰⁴ In her article she credits Jenness Richardson (Washington) with the production of the photographic compositions.

¹⁰⁵ At the reservations Crow Creek Agency and Lower Brulé Agency in 1886, 67% and 85% respectively of the population were receiving government rations. See Fletcher: *Indian Education and Civilization*, 258.

activities of various Christian denominations in the adjacent reservations were strong. At the same time, the integrity of the territory of Crow Creek and Lower Brulé was continuously threatened by expansionist settler politics.¹⁰⁶ Shortly before the publication of the composite photographs, the *General Allotment (Dawes) Act* of 1887 was passed, which allowed the US authorities to divide Native American tribal land into allotments for individuals and families, who were then granted US citizenship. This legislation, which also prescribed the creation of federally funded boarding schools, was aimed at assimilating Native Americans into the settler society – and it allowed for the sale of native lands to settlers.¹⁰⁷ Fletcher, who spent time living as an ethnographer with the Dakota tribes in the 1880s, became an advocate for Native American rights and was involved in the advancement of education and in government policy concerning land-ownership in the already diminished tribal areas. Fletcher was respected among the tribes and worked closely with Native Americans in the Indian rights movement; still, she remained tied to the world view of white American settler culture and was eager to advance her career as an anthropologist and educational reformer.¹⁰⁸

The article accompanying the reproductions of two composite portraits in *Science* exhibits Fletcher's sympathetic but paternalistic standpoint. She observes that the composite portraits were a visual confirmation of the results of her long study of tribal life, customs, and rites of war and religion, by "showing them to be a people, intellectual rather than brutal, unawakened rather than degraded."¹⁰⁹ In other words, Fletcher saw the Dakota as a people that could be "reformed" and integrated into American society.¹¹⁰ This reflects a prevailing opinion among political stakeholders of the time that only by leaving

¹⁰⁶ A controversial executive order issued in 1885 that was nationalising large parts of the territory, but was withdrawn by presidential order in the same year. See Fletcher: *Indian Education and Civilization*, 261–262.

¹⁰⁷ See Ruppel, Kristin T.: *Unearthing Indian Land: Living with the Legacies of Allotment*. Tucson: University of Arizona Press, 2008.

¹⁰⁸ See Mark, Joan T.: *A Stranger in her Native Land: Alice Fletcher and the American Indians*. Lincoln, Nebr.; London: University of Nebraska Press, 1988.

¹⁰⁹ Fletcher, Alice C.: "Composites of American Indians." In: *Science*, 7, no. 170, 7 May 1886, 408.

¹¹⁰ Although Galton had a definitive opinion about Native Americans, his verdict was less nuanced and rather derogative but he likewise attributed "the minimum of affectionate and social qualities compatible with the continuance of their race." See Galton: "Hereditary Character and Talent," 321. See Reyhner, John; Eder, Jeanne: *American Indian Education. A History*. Norman: University of Oklahoma Press, 2004.



FIG. 1.—COMPOSITE FROM PHOTOGRAPHS.



FIG. 2.—COMPOSITE FROM DIRECT SITTINGS.



FIG. 3.—RULING FACE IN FIG. 1.



FIG. 4.—RULING FACE IN FIG. 2.

COMPOSITE PORTRAITS OF THREE DAKOTA WOMEN, SHOWING THE EFFECT OF THE METHOD OF PRODUCTION.

Fletcher, Alice: *Composite Portraits of three Dakota Women*. In: Fletcher, Alice C: "Composites of American Indians." In: *Science* 7/170, May 7, 1886, 408.

¹¹¹ See Reyhner, John; Eder, Jeanne: *American Indian Education. A History*. Norman: University of Oklahoma Press, 2004.

¹¹² Fletcher: "Composites of American Indians," 408.

¹¹³ See Ruppel: *Unearthing Indian Land*.

behind customs and tribal structures, Native Americans could become full members of United States society.¹¹¹ In order to archive this "civilisation programme," obstacles had to be overcome and individuals had to be "freed from the shackles" of their tribal identity, which Fletcher saw inscribed into the composite faces:

The portraits indicate the stamp of tribal fixity, and reveal the unconsciousness within the individual of the analytical powers of mind by which man masters nature, – a peculiarity which is the key to so much in Indian sociology and religion.¹¹²

The "awakening" through (Christian) education and missionary activities, and the destruction of the integrity of tribal lands, however, proved to be devastating to Native American communities, whose culture was undermined as US hegemony over native lands and their inhabitants grew.¹¹³ The integration of the indigenous population into mainstream American society and its economic and educational ideals for the most part remained unsuccessful. By the 1930s, two thirds of the land allotted to Native Americans fifty years earlier had passed into white hands, a circumstance which perpetuated and, in fact, worsened the dependency of the indigenous population.¹¹⁴ This also proved true in the case of the Omaha, whose customs were initially described by Alice Fletcher and whose fate was traced by the influential cultural anthropologist Margaret Mead in 1932.¹¹⁵

The presentation of the composites and the component portraits of the Dakota women in the scientific journal constitute a remarkable visual and moral statement. Rather than highlighting visual and presumed racial differences, the sitters are presented as morally reformed colonial subjects, as well-groomed, demure women in their best western garb, high-cut striped and patchwork dresses and scarves. This contrasts with anthropological photographs of indigenous populations from around the same time which were either representing the subjects naked or in their traditional or in fact folkloristic clothing. This might indicate Fletcher's political agenda of presenting a different image of (female) Native Americans as adjustable to mainstream society. It is noteworthy that Fletcher presents anthropological composites of female faces, while

¹¹⁴ For an extensive study on the results of the Dawes Act of 1887, as well as of legal, educational, and missionary activities in general, see Ruppel: *Unearthing Indian Land*, 30.

¹¹⁵ See Mead, Margaret: *The Changing Culture of an Indian Tribe*. New York: Capricorn Books, 1966 [1932].

women were usually excluded from composite photography.¹¹⁶ The anthropologist also produced composites of Dakota and Omaha men, but chose not to publish them. Her decision might have been guided by her research on Native American customs and its matrilineal family structure that assigned to women extensive rights in the preservation and propagation of the family.¹¹⁷ Or it might have been an implicit rejoinder by the sole female protagonist of composite portraiture, who entertained contacts with leading feminists of the time, to the dominant focus of composite portraiture on male faces, produced by male scientists and photographers.

In the illustration, Fletcher contraposed the composites with two individual portraits of what she perceived as the visually dominant, “ruling” faces in each composition. This shows the reading of the technique in relation to ethnographic photography of the time, which sought to capture racial essence in portraits of representative individuals. And here the technique and its racialising gaze function as a medium to facilitate the difficult selection of representative “ethnographic specimens.” The composite portraits produced by Fletcher on the one hand demonstrate the historical, preservative function of the colonial racialising gaze, documenting the physiognomies of the tribes endangered with extinction, but at the same time, its forward-looking orientation as a visual indication of Native American adaptability. This is transforming the racialising into a moralising perspective and Fletcher’s composite portraits seem to contrast the prevalent images of the inscrutable indigene or the noble savage with that of a morally reformed and religiously awakened Native American subject.

Visual Ethnographies: Arthur Batut’s Composite Types of the Pyrenees

The Pyrenees, in the border region of France and Spain, became another arena for anthropological visualisation by means of composite portraiture. Arthur Batut, who is better known as a pioneer of aerial photography, experimented extensively with the technique that he considered, first and foremost, an ethnographic tool. He produced all of the component portraits himself in his studio

¹¹⁶ Francis Galton dealt with female faces only in his photographic research on families and on beauty.

¹¹⁷ See Fletcher: *Indian Education and Civilisation*, 17–18.

in Labruguière (Tarn) and on trips through the French Pyrenees and Eastern Spain. Among his works are composite portraits of inhabitants of villages in the area around his home village: women from Les Gaux, Sémalens, Agde (Hérault), and Arles-sur-Tech; men and women from Les Auriolles (Hérault), Huesca en Aragon (Spain), and Vic (Spain), as well as men from Laprade (Aude). Batut published a small volume about the technique containing two composites and the respective component portraits.¹¹⁸ This French perspective reveals a different treatment of the racialising gaze of composite portraiture in a more locally oriented way and as a means of forwarding a form of visual European ethnography.

Batut’s most challenging project was a composite of fifty inhabitants, men and women, from his home town, Labruguière.¹¹⁹ The Arthur Batut Collection¹²⁰ holds a chart in which the component portraits of the 18 men and 32 women are arranged in two semi-circles around a composite with an oval vignette. In another reproduction, the central composite is surrounded by rows of component portraits. The portraits of men and women of various ages, each wearing their Sunday best, are arranged in no discernible order. The reason for the unequal number of male and female faces remains unclear; it might have been due to an uneven willingness of sitters to participate, or, in case the photographs were indeed taken before or after a church service, the predominantly female attendance at Mass. The result is a soft, but relatively clear composite face; the edges are only slightly blurred, and the eyes are distinct and well-defined. Considering the large number of components and the limited possibilities of contemporary photographic laboratories, Batut must have worked with remarkable precision.

Although most of the Batut’s composites clearly express a racialising gaze, he uses the technique in a more local ethnographic way. Batut’s aim was to show the typical appearance, or average physical characteristics, of the communities

¹¹⁸ See Batut: *La photographie appliquée*.

¹¹⁹ In 2013 the composite representation of inhabitants of Labruguière received an update. The *Espace Photographique Arthur Batut* commissioned the artist Emese Miskolczi to produce composite portraits of citizens of Labruguière. She took videos of altogether 148 inhabitants of different groups in the village, such as seniors, fishermen, children, rugby players, and composed composite videos of about a dozen faces each. See the catalogue for the exhibition: *Présences* (Espace Photographique Arthur Batut, 2013).

¹²⁰ The *Arthur Batut Collection* is housed as part of the *Musée Arthur Batut* in a multi-purpose building at the centre of Labruguière, in the south-west of France.



Batut, Arthur: *Portrait-type obtenu avec 50 habitants de Labruguière (Tarn)*, 1887. Collection Espace Photographique Arthur Batut / Archives Départementales du Tarn.

settling in the Pyrenees. In a publication, he contradicted Galton's understanding of the composite technique as an indicator of non-visible, inner characteristics but stressed its value for his ethnographic visualisations of typical physical traits.¹²¹ Here Batut followed the model of ethnography and visual anthropology of his time, which made extensive use of the medium of photography to depict and classify physical appearances of tribes, cultures, and peoples.¹²²

This approach becomes obvious in his portrayal of the community of charcoal burners of the Black Mountains, at the south-western end of the Massif Central. He takes the photographs as part of what could be described as fieldwork in



Batut, Arthur: *50 habitants de Labruguière, portrait-type*, 1887. Collection Espace Photographique Arthur Batut / Archives Départementales du Tarn.

unchartered territory, but contrary to many contemporaries, the portraits are not used to prove their "subjects'" deficiencies and claim their subhuman status. Batut employs the material to cast a benevolent glance on what he calls the "ideal family type"¹²³ of the group. What seems most conspicuous, however, is not so much a likeness of the facial features, but the striking head-gear of the female sitters. In the composite portraits, the traditional garment turns into a halo, relicts of cloth and jewelry give the image a spectral air reminiscent of "spirit photography" *en vogue* at the time.

¹²¹ See Batut: *La photographie appliquée*.



Batut, Arthur: *Charbonniers de la Montagne Noire et portrait-types*, 1887. Collection Espace Photographique Arthur Batut / Archives Départementales du Tarn.

¹²² See Edwards: *Raw Histories*.

¹²³ Batut: *La photographie appliquée*, 18.

¹²⁴ See Batut: *La photographie appliquée*, 19.

¹²⁵ Batut: *La photographie appliquée*, 20, my translation.

¹²⁶ In the publication the composite portrait is described as "Inhabitants of the feet of Montagne-Noire." In the *Arthur Batut Archive* I could identify it as a composite of the inhabitants of the small village Les Auriolles.



Batut, Arthur: *Habitants du Pied de la Montagne-Noire. Issus de la Race du Pays*. In: Batut, Arthur: *La photographie appliquée à la production du type d'une famille, d'une tribu ou d'une race*. Paris: Gauthier-Villars, 1887, Plate I.

In a description, Batut highlights the secluded nature of the specific mountain community that, due to socio-economic reasons and the preservation of the secrets of their trade, had entertained little contact with the surrounding communities dating back as far as the thirteenth century,¹²⁴ which resulted in "conserving the purity of the race that had come to the Pyrenees."¹²⁵ The typical physiognomies of the different groups living in the Pyrenees, Batut elaborates, were easily visible when comparing the composition to a composite portrait of the people living at the feet of the mountain region that is also included in the publication.¹²⁶

When Batut speaks of "race," he means specific variety, rather than fundamental difference, and he mentions social reasons for these specificities. This approach is decisively different from the aims and reasoning of Galton, who sought to visualise types within society, classes and sub-groups, on the one hand, and national-racial types on the other, but generally with an implied hereditary grounding and in connection with his eugenicist project. The perspective of Batut, by contrast, resembles that of a participant observer, an observer in his neighbouring communities. In his hands the composite technique is not one

of dissociation but of association, and thus the racialising gaze of composite portraiture loses some of its discriminatory and exclusionary effects, assuming a positive, affirmative quality that also included female protagonists.¹²⁷ In this respect, his work could be understood as an example of early European ethnography by means of the new and fascinating technique of photography.

Ethno-Nationalistic Physiognomies in Post-War Europe

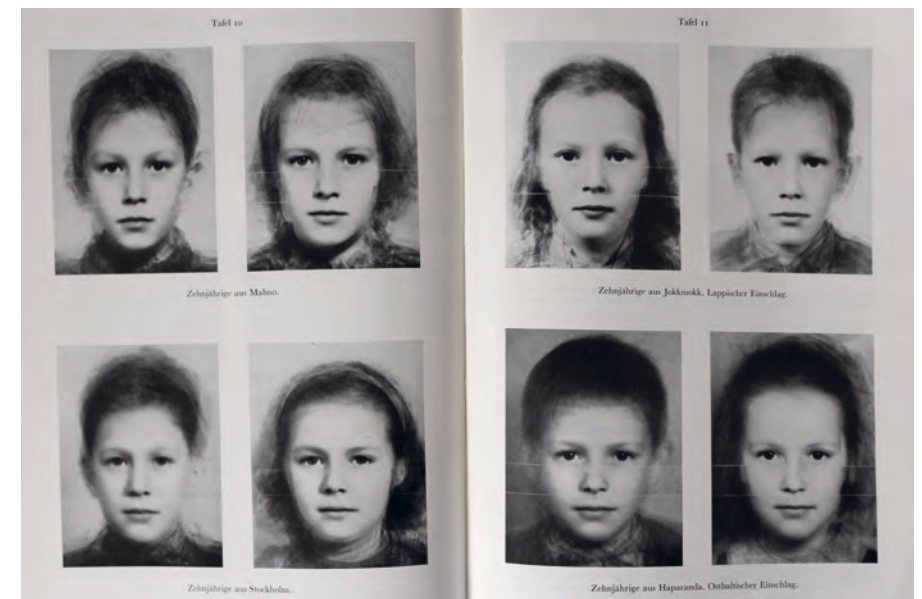
The technique of composite portraiture was used and further developed by the German-Swedish psychologist David Katz and his assistants, who conducted extensive studies by means of the technique on children and young adults in Scandinavia. He mentions that the research had started at his institute in Germany in 1928 with the work of his assistant, H. Friesenhahn, and was resumed in 1940 at Stockholm University, where Katz held a chair in psychology. In their utilisation of the technique, the racialising gaze seems to intensify due to its focus on young children and minority groups, and adopts a ethno-nationalistic perspective. In another composite study, Katz extends this comparative perspective to students from Scandinavia and Europe and produces composite faces proclaiming national and implied racial visual ideals.

The racialising gaze is central to the utilisation of the technique by David Katz and his team. They composed portraits of children of different cities and regions of Sweden in order to visualise the “racial properties of the Swedish people.”¹²⁸ This created the possibility, so Katz, of exploring, visually and directly, the homogeneity of a distinct population.¹²⁹ These portraits, to which he attributes “Nordic” and “East-Baltic” ethnicity, are contrasted with composites of children from the indigenous group of Sámi and children of so-called “gypsies” living on Swedish territory. These frontal and lateral composites of girls and boys aged ten include fourteen components each.

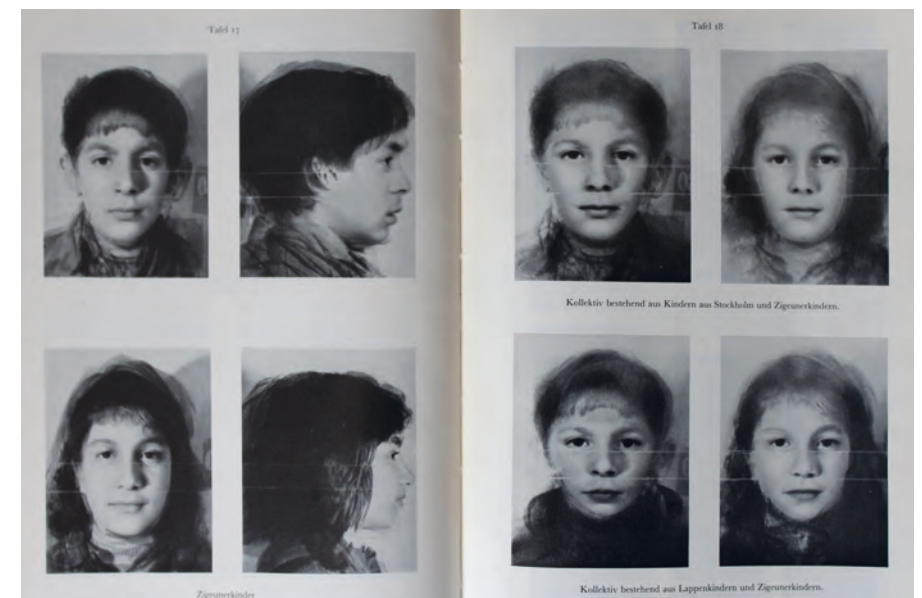
¹²⁷ This attitude shows itself in the choice of Batut's material. He produced more female than male composite portraits and he often unites the portraits into gender-neutral compositions. This stands in contrast with Galton, who tended to exclude women from his work with composite portraiture – and his theoretical thinking in general.

¹²⁸ Katz: “Durchschnittsbild und Typologie,” 23.

¹²⁹ See Katz: “Durchschnittsbild und Typologie,” 22.



Katz, David: *Zehnjährige aus Malmö; Zehnjährige aus Stockholm; Zehnjährige aus Jokkmokk, Lappischer Einschlag; Zehnjährige aus Haparanda, Ostbaltischer Einschlag*. In: *Studien zur Experimentellen Psychologie*. Basel: Benno Schwabe & Co., 1953, plates 10; 11.



Katz, David: *Zigeunerkind; Kollektiv bestehend aus Kindern aus Stockholm und Zigeunerkindern; Kollektiv bestehend aus Lappenkindern und Zigeunerkindern*. In: *Studien zur Experimentellen Psychologie*. Basel: Benno Schwabe & Co., 1953, plates 17; 18.

On the pages of Katz's book that was published in German in 1953 to commemorate the author's death, they produce a haunting "incarnation" of racial theory and racist ideology, as well as eugenic thought¹³⁰ presented by a scientist who himself had been forced to flee Nazi-Germany and its racist policies because of his Jewish heritage. The choice of a young age group appears an expression of the future orientation ascribed to the composite technique; the particular aesthetics of composite photography produces angelic, blonde-haired faces, the nucleus of the future population of the country. Even though Katz seems to maintain a relatively neutral stance, the co-composites "crossbreeding different races from Sweden"¹³¹ seem far from impartial; they present decidedly less coherent faces, which seem to figure as a reminder of the disadvantage of "racial mixture."¹³² The images visually construct phenotypical racial arguments, and they, maybe unintentionally, foster models of northern racial purity, and serve to stigmatise minority groups by marking them as different.

Seen from a gestalt psychological perspective, which Katz mentions in his examination of composite portraiture, the visual experiments might be understood differently. Gestalt theory assumes that human perception works along patterns and that the whole or combination is able to tell more and different things than its elements, revealing the inner and invisible set-up and its structural laws. Here the appeal of composite portraiture as an analytical technique that constructed new multi-elemental combinations becomes clear. In the holistic understanding of gestalt theory, elements that exhibit likeness, visual coherence, and smoothness were classified as related. Visual incoherencies in this model seem to hint at a reading of the images as imprecise and as unnatural combinations that contradict the ideal of a common resemblance and a balanced and good form. While gestalt theory is certainly not a racist ideology¹³³ and many of its proponents had to flee Nazi Germany, still, its utilisation in this sphere and Katz's ethno-nationalistic and racial categories and arguments are problematic.

¹³⁰ Katz mentions Galton's project of eugenics favourably in the introduction to the publication. See Katz: "Durchschnittsbild und Typologie," 11.

¹³¹ Katz: "Durchschnittsbild und Typologie," 24.

¹³² In these composites Katz produced mixtures of composites of children from Stockholm, a region that in the accompanying maps of Sweden visualising the "racial components" are marked as predominantly "nordic," with the minority groups of Sámi and "gypsy" origin. Katz here, even after the decline of the Nazi regime and himself in Swedish exile, uses terminologies that reinforce racial difference and hint at a hierarchical conception of humankind. This is reminiscent of the research of Jewish racial scientists from the nineteenth century, who argued for a purity of racial origins.



Katz, David: *Durchschnittsbild der siebzehnjährigen Dänen; Durchschnittsbild der siebzehnjährigen finnisch sprechenden Finnen; Durchschnittsbild der siebzehnjährigen Engländer*. In: *Studien zur Experimentellen Psychologie*. Basel: Benno Schwabe & Co., 1953, plates 32; 34; 35.

The racialising gaze turns into a form of visual nationalism when in another series of frontal composite portraits young adults of different Nordic and European countries are compiled and compared. In addition to the composites produced in Sweden, the experimental psychologists in Katz's team compiled

¹³³ The Leipzig School of gestalt psychology, however, showed proximities to Nazi thought and proclaimed a normative and racist understanding of "good form" that was used to discriminate against groups that did not fit the ideal of the Aryan body politic, such as Jews, homosexuals, and disabled persons. See Geuter, Ulfried: "Das Ganze und die Gemeinschaft — Wissenschaftliches und politisches Denken in der Ganzheitspsychologie Felix Kruegers." In: C.F. Graumann (ed.) *Psychologie im Nationalsozialismus*. Berlin, Heidelberg: Springer, 1985, 55–87; Wittmann, Simone: "Zur 'Paradoxen Doppelnatur des Intellektuellen' – Der Fall Friedrich Sander." In: *Psychologie und Geschichte*, 10, 2003, 309–322.

portraits of male and female seventeen-year-olds from Norway (Oslo), Finland (Helsinki), the Netherlands (Amsterdam), Denmark (Copenhagen), England (Leeds), and Italy (Turin). Echoing the demands of the nineteenth-century protagonists of racialising composite portraiture, Katz describes “the production of an atlas of the average images of all races and peoples of the world as an ideal of anthropological research.”¹³⁴

Katz invites artists to evaluate the composite portraits which he defines as experts on “reading” images, for instance quoting the artist and pioneer of the technique of holography Hans Weil:¹³⁵

A correspondence with traditional conceptions of national character seems to be visible. The Danes are exhibiting an affective personality, the Finns appear to be naïve, rural, and close to nature, and compared to the Danes, they seem aloof from narcissism. The Finns appear friendly, but do not exhibit a humorous character. The young, self-confident Englishman, who closely observes his counterpart, will not be easily taken advantage of. The young English girl veils her charms through elegant conversation and, ladylike, keeps the admirer at bay.¹³⁶

The description based on national-character ascriptions follows established clichés, and it reveals more about the authors and their time, reiterating stereotypical national ascriptions, as well as gender stereotypes, than it does about the composite portrait’s presumed ethno-national background. Furthermore, it shows the pervasiveness of national-physiognomic character reading in mid-twentieth-century science.

Racial Composite Typologies and Contemporary Repercussions

The exploration of the racialising gaze of composite portraiture has shown the role played by the technique in essentialising racial difference. The facial compositions that were discussed in this chapter constructed racialised and “national” physiognomies that linked up with hierarchical conceptions of race and theories on racial descent. The composites of Jewish boys and men became a visual

¹³⁴ Katz: “Durchschnittsbild und Typologie,” 28, my translation.

¹³⁵ Hans Weil, likewise was forced into Swedish exile from his hometown Frankfurt am Main and died in Sweden in 1998.

¹³⁶ Katz: “Durchschnittsbild und Typologie,” 29, my translation.

argument in scientific debates on Jewish origins and “racial purity” and their discussion reveals anti-Semitic sentiment, as well as counter-reactions of Jewish “racial scientists,” who, through their positive self-definitions of Jewishness, likewise played a role in the construction of (anti-) Semitic visual stereotypes. Furthermore, in analyses of central protagonists in the field, composite portraiture assumed the role of a transcendental, quasi-archeological technique and the images developed an almost spiritual quality. And the fascination with the production of national and local composite faces still continues in present-day art and popular culture. Some of these visual constructions reiterate racial thinking and racist conceptions, while others challenge nineteenth-century claims and perspectives.

Beyond the focus on the Jewish ethnic-religious community, the racialising gaze of composite photography reiterated and advanced visual national prototypes of the European population that contributed to advancing nationalistic sentiment. In these cases, a comparative approach is taken, such as in the work of the experimental psychologist David Katz. Maybe inadvertently, his work with the composite technique continued to mark racial difference that marginalised minority groups and celebrated national coherence as late as in the 1950’s. In its early days, as the utilisation of composite portraiture in Great Britain and the United States shows – and as the examination of racialising skull composites will support¹³⁷ – the technique was influential in advancing hierarchical conceptions of races and, in the colonial context, contributed to discriminating against indigenous populations. However, divergent approaches can be noted, ranging from ethnographic-reformist to racialising-eugenicist positions. A more local, ethnographic approach was adopted in France by the photographic pioneer Arthur Batut. Still, in particular in the case of the production of national physiognomies, the racialising gaze of composite portraiture constructed visual prototypes, potential eugenicising role models, and racialised counter-images – models for discrimination on the basis of visual characteristics. Here proximities to the technique’s eugenicist perspective surface, as do common ideological functions.¹³⁸

In art and popular culture around the turn of the twenty-first century, interest in composite portraiture as an expression of national and ethnic belonging has remained strong. However, fine arts and popular culture reveal diverging per-

¹³⁷ See chapter 5.

¹³⁸ See chapter 7.

spectives on the racialising gaze of the technique: uncritical and unreflected utilisations in constructing nationalising and racialising typecasts continue, but artists also engage critically with the racialising and essentialising presuppositions of composite portraiture.



Gschrey, Raul: Co-Composite of the 2016 Benetton Advertisement Campaign (Berlin, London, Tokyo).

An example of a recent uncritical adaption of the racialising gaze of the technique in popular culture is the *Face of the City Campaign*, launched in 2016 by the fashion label Benetton and published in a global campaign in print media and online as well as on posters and billboards.¹³⁹ The composite faces of the models for the campaign were created by the advertising agency 180 Amsterdam on the basis of ethnic analyses of the respective cities. Women¹⁴⁰ who were judged representative of the “city’s mix of races and cultures”¹⁴¹ were photographed and their portraits were digitally combined, representing typical facial features such as skin tone and hair type, as well as the shape of facial contours, eyes, and nose.

¹³⁹ The campaign seems inspired by the project *The Face of Tomorrow* by the South African photographer Mike Mike, who in the 2010’s produced a series of composite portraits of the inhabitants of various countries, regions, and cities.

¹⁴⁰ The agency used the very select group of fashion models for the shooting of the component images.

¹⁴¹ United Colours of Benetton: *Merging Colours, Merging Identities*, online press release. <http://www.benettongroup.com/media-press/press-releases-and-statements/united-colors-of-benetton-merging-colors-blending-identities> [15/01/2022].

The campaign’s short video clip begins with a slow zoom, closing in on a well-lit but empty photo set. The caption reads: “Our new models do not exist. They are statistically accurate representations of all the ethnicities living in some of today’s key cities. Created by a custom algorithm.”¹⁴² The process of the composition of the faces is animated; it starts with individual portraits and their superimposition; layers of biometric markers and triangulation patterns are added and the image gradually merges into the representative face labelled “This is the Face of London/Berlin/Milan/Paris/ New York/Tokyo,” respectively. Statistical percentiles of ethnic, racial and national composition are added to the animation, emphasising the scientific objectivity and the evidential character of the composite method for the creation of the typical faces of the cities. The animation retains artefacts of the superimposition, irregular frames of the photographic background – relics of a production process that were often eliminated before publication in the nineteenth century. This deliberate choice is more than a matter of design; it emphasises the origin of the composite faces in individual portraits and authenticates the production process. The relics were also part of the print versions of the advertising campaign, forming a frame around the head of the composite models whose bodies are cropped from the background. The press release introducing the campaign also focused on the production process:

The resulting face for each city was then composited [...] into the final image, giving life to the capital’s ideal resident. All together, the six faces are stunning portraits coming from a world in which the melting pot, so revered in thirty years of Benetton’s images, has finally become the norm. Surely a software may have helped to reveal it, but there’s little space for doubt: that world is finally here and diversity is even more beautiful than we imagined it to be.¹⁴³

The press release highlights the connection with the company’s cosmopolitan celebration of diversity and its image as an influential and controversial popular cultural actor. And the message of the statistically validated composite faces of European, American, and Japanese fashion metropolises seems clear: the campaign is aimed at involving the public by letting an ethnically averaged face of the respective cities wear the new collection.¹⁴⁴ But the composite celebration of diversity and “the melting pot” has a problematic downside. The

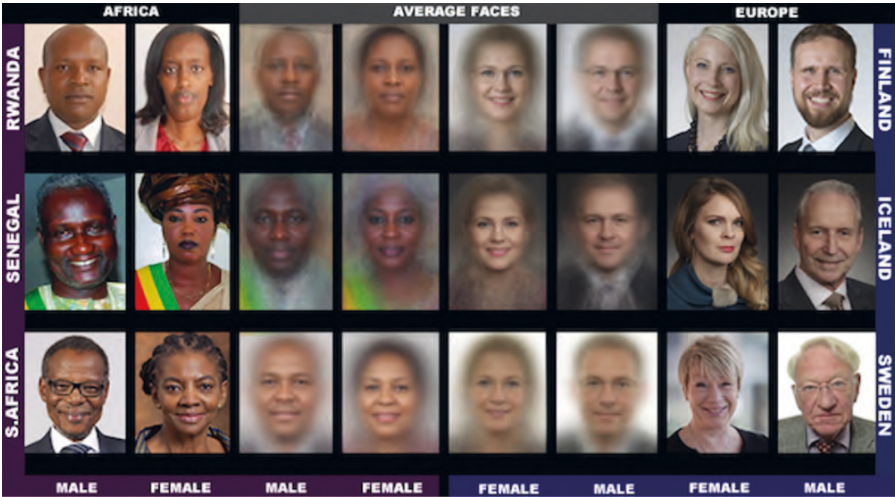
¹⁴² See Benetton’s promotional video *Faces of the City Case Study*. <https://vimeo.com/154965758> [15/01/2022].

¹⁴³ United Colours of Benetton: *Merging Colours, Merging Identities*.

company refers to the images in terms of “ideal residents,” while arguing with highly questionable racial ascriptions and the unquestioned equation of the measurement of facial features with ethnic belonging. Particularly problematic are the disputable and inconsistent labels for the ethnic compositions in the various videos, which intermix “racial,” cultural, and national terminologies, such as Caucasian, Latin, Arab, Black, Asian, and Middle Eastern, as well as Japanese, Korean, and Chinese.¹⁴⁵

Is it really an inclusive “Face of the City;” a “Collection of US” looking at us from the billboards, as proclaimed by the clothing manufacturer? Rather, the campaign appears to be publicising the fashion industry’s self-affirmation in the guise of singularly beautiful artificial female faces. However, and more problematically, it is also a reaffirmation of the empirical validity of physiognomic and racial arguments, employing the racialising gaze created by the historically anything but unproblematic technique of composite portraiture. Contrary to Benetton’s “post-racial marketing ideology,” the campaign does not represent and advance diversity and individuality. Probably unintentionally, it proclaimed a beauty ideal of normalised average features that is not unlike Galton’s work, who sought to picture ideals of classical female beauty by means of composite portraiture.¹⁴⁶ This recent revival of composite portraiture in the Benetton campaign is a confession of failure, even though presented as a celebration of difference. The composite fashion faces condone racial readings of facial features; they accept the racialising gaze and the validity of a highly dubious late nineteenth-century racist endeavour.

Other projects from computer science, popular culture, have also dealt with the production of local composite faces of cities and regions. In the 2010s, the South African photographer Mike Mike produced a series of composite portraits of the inhabitants of various countries, regions, and cities,¹⁴⁷ and the computer scientist Michael Zhang published a series of female composite faces of women from various countries.¹⁴⁸ While these projects were certainly not aimed at constructing racial difference, their utilisation of the technique remains problematic. The projects still seem to subscribe to the evidential claims ascribed to the technique and the authors attribute to their artificial composite constructions a power to express national physiognomies.



Gender Shades: *Pilot Parliament Benchmark*, 2018. <http://gendershades.org/> [15/01/2022].

At a time when biometric facial recognition has become a factor of increasing relevance in law enforcement and immigration control, these new efforts to make “racialised physiognomies” visible can have consequences that further marginalise groups according to racial and other intersectional characteristics. Studies have shown that facial recognition systems have strong racial and gender biases that are particularly intense with respect to women of colour.¹⁴⁹ The Gender Shades project,¹⁵⁰ which has evaluated the accuracy of artificial intelligence-powered gender classification systems, uses composite portraits as

¹⁴⁴ I have discussed the campaign in detail in relation to the production of “everybody” figures by means of the composite technique. See Gschrey, Raul: “Facing Everybody? Composite Portraiture as Representation of a Common Face.” In: Anna Schober (ed.): *Popularisation and Populism in the Visual Arts*. London: Routledge, 2019, 94–109.

¹⁴⁵ See Benetton’s promotional video *Faces of the City Case Study*. <https://vimeo.com/154965758> [15/01/2022].

¹⁴⁶ See chapter 10, “Attractive Averages and Composite Beauty.”

¹⁴⁷ See MikeMike: *The Face of Tomorrow*, 2004. The website of the project is no longer online.

¹⁴⁸ The computer scientist Michael Zhang, also, has published a series of female composite face of women of various countries. See Zhang, Michael: *Average Faces of Women in 40 Countries*. (2011) <https://petapixel.com/2011/02/11/average-faces-of-women-in-40-countries> [15/01/2022].

¹⁴⁹ See Drozdowski, Pawel; Rathgeb, Christian; Dantcheva, Antitza et al.: “Demographic Bias in Biometrics: A Survey on an Emerging Challenge.” In: *IEEE Transactions on Technology and Society*, Vol. 1, 2020, 89–103; Grother, Patrick; Ngan, Mei; Hanaoko, Kayee: Face Recognition Vendor Test (FRVT) Part 3: Demographic Effects. U.S. Department of Commerce, 2019. <https://doi.org/10.6028/NIST.IR.8280> [15/01/2022]

¹⁵⁰ See the website: <http://gendershades.org/> [15/01/2022].

illustrations and has been presented at the Austrian media festival *Ars Electronica* in 2021. The scientists' use of composite portraiture certainly leaves room for critique,¹⁵¹ but the study and its visualisations were influential in minimising this new kind of algorithmic inequality.¹⁵² Still, the inaccuracies in current biometric recognition – based on a white, male model – result in a higher probability for people of colour to be (wrongfully) tracked, controlled, and arrested. Artificial intelligence reproduces racist assumptions and forms of racial profiling that have long been common in police practice.

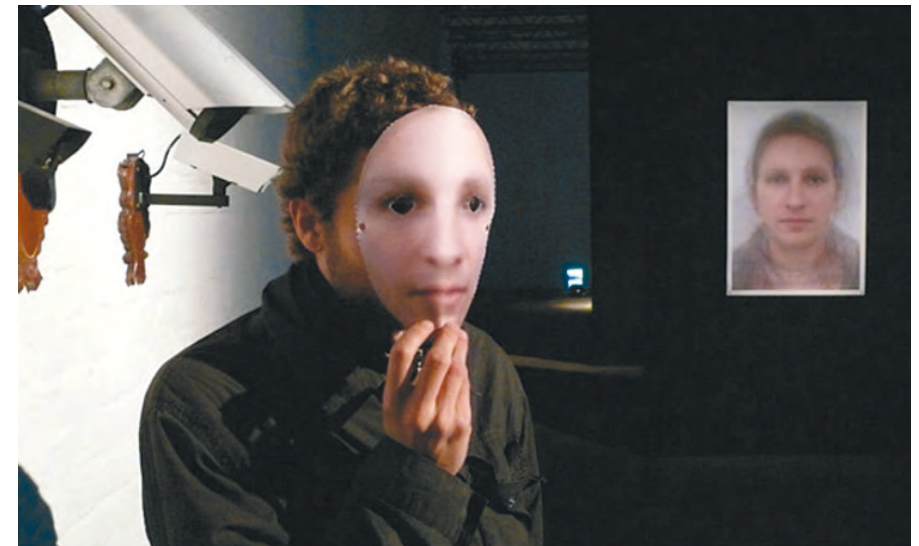
A number of German artists, also, have produced more locally oriented composite portraits. Christian Mahler has compiled a digital composite portrait of the typical inhabitant, at different ages, of his hometown, Berlin,¹⁵³ and Gerhard Lang has produced a composite portrait of all of the inhabitants of his home village, Schloss Nauses. However, these local digital and photographic compositions question the explanatory value of the faces as markers of national, ethnic or “racial” affiliation. In the case of Mahler, the perfectly symmetrical, smooth features of the multi-cultural face of the German capital assume a super-natural clarity, a form of artificial hyper-perfection that turns the images into shiny surfaces repelling all forms of racialising ascription. Lang, on the other hand, questions the evidential claims of the scientific visualisation technique by means of diffusion. He seems to adhere to strict scientific protocols but eventually turns them against the technique's claims and assertions. His composite face includes almost 200 individual portraits and results in a ghost-like humanoid facial form that seems to dissolve, before the viewer's eyes, into an indefinite background. This augmentation of the aesthetics of diffusion inherent in the technique reduces all impulses to perform a “semiotic reading” of the faces.

Florian Tuecke, also, has compiled a series of “city composites.” In *The Others Are We*,¹⁵⁴ the artist uses the medium of video to produce fluctuating, moving composite portraits recorded on the streets of various German and European cities. And while his video composite faces seem to maintain the assumption

¹⁵¹ The authors use composite portraits as mere illustrations and do not mention the problematic history of the technique that took part in establishing the racist presuppositions in the nineteenth century.

¹⁵² The authors found that after their publication the racial and gender bias decreased in the updated versions of the commercial face recognition systems. See Raji, I: Buolamwini, J.: “Actionable Auditing: Investigating the Impact of Publicly Naming Biased Performance Results of Commercial AI Products.” (2019) https://dam-prod.media.mit.edu/x/2019/01/24/AIES-19_paper_223.pdf [15/01/2022].

¹⁵³ See Mahler, Christian: *Face of Berlin*, 2006.



Gschrey, Raul: *'The Typical Inhabitant' or 'Automated Recognition Relies on Individual Characteristics – Try to Look Average.'* Do-it-yourself composite mask, exhibition view, 2008.

of a specific local appearance of the urban crowd, in contrast to Benetton's racialised and “national” beauty ideals, Tuecke's animated composites appear to celebrate a multicultural unity, a difference in similarity. The subtle changes in the facial features due to the video composition emphasise this effect. What the artist presents are not so much static typologies, but rather fleeting and evolving, multi-faceted countenances. This approach is expanded on in Tuecke's *facebook* composite *my_friend*,¹⁵⁵ for which he asked his contacts on that social media platform to send frontal portraits from which he compiled a common composite face. The artist uploaded the image back to *facebook*. The facial recognition software of the platform recognised the artificial construction as a face. But no reference could be detected, and many of the participants in the artistic project chose to use the composite as their profile image, thus subverting the algorithm of the platform that poses a threat to the privacy of its users.

¹⁵⁴ Tuecke, Florian: *the others are we*, video composite portraits, 2015–16. <http://www.floriantuecke.net/theothersarewe.html> [15/01/2022].

¹⁵⁵ Tuecke, Florian: *my_friend*, video composite, 2015. http://floriantuecke.net/my_friend.html 15/01/2022.

This opens the discussion to current techniques of biometric recognition and links in with an artistic project of mine.¹⁵⁶ For an exhibition on visual surveillance that was shown in a number of cities throughout Germany, I developed composite masks produced from component portraits of male and female inhabitants of the respective cities. The mask could be cut out and assembled by the visitors, who could wear it to subvert recognition by CCTV and biometric recognition systems. The masks became part of a performative enactment of privacy and resistance in relation to an ever-increasing surveillance society.

In summary, the artistic positions introduced above draw on the special aesthetics of composite portraiture and digital morphing that produce smooth outlines and immaculate textures. In this way, the individual works question the historical assumptions of racial difference and evolutionary and degenerationist positions that have focussed predominantly on the supposed deformities in the composed faces. A similar strategy in relation to racialising and nationalising ascriptions is sustained through media transitions into the sphere of the moving image, the internet, and social media, as well as by formulating a critique through the performative intervention of showing a common and "unreadable" face in public. These conceptual composite faces, in particular, contribute to the current discussion surrounding racial and gender-biased artificial intelligence systems in automated biometric recognition.¹⁵⁷

¹⁵⁶ See Gschrey, Raul: "The Typical Inhabitant" or "Automated Recognition Relies on Individual Characteristics - Try to Look Average." Do-it-yourself composite mask, 2008-2010.

¹⁵⁷ For the current discussion on civil right infringements through artificial intelligence and biometric recognition and racist inequality, see the Algorithmic Justice League: <https://www.ajl.org> [15/01/2022].

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It may be to explain how the Anthropometric Laboratory & Finger Prints grew out of previous works. After writing 'Hereditary Genius and other kindred subjects', I tried to measure heredity; whence my lecture on peas (Typical Law of Heredity) at Royal Institution in 1877. This gave a law but I did not see my way to verify it on man, so I took up previous faculties, trying to find suitable ones to measure. ^{Heavily the book Human Faculties} This led me to Psycho-physics and to the idea of getting up a laboratory for experiments, ~~etc~~, whence frequent relations between myself & Croon Robertson. Then the International Health Exhibition of 1884 coming on, I proposed to start a laboratory there which was a success. I had also offered prizes for family records, the governing idea in both ^{cases} was to lay the foundation of ways of recording measurable data that hereafter might serve to strict hereditary conclusions. It turned out that the family records, lax as they were in many respects, did afford data of the kind I wanted, whence I worked out the law of Regression which entirely confirmed what the peas had shown. This was the subject of my address ^{and the book 'Natural Inheritance'} at Aberdeen to Section H in 1886.

Then, with Mr Merrifield's help, I tried moth breeding (*Solenia illustraria*) 2 generations a year for 4 years, - A, B & C hereditary sets, but the broods were not large enough for statistics & the thing, which had given much trouble, failed.

In 1888 Bertillon's system was being carried on in France & I gave a lecture at the R. Inst. on Personal Identification, in which I spoke of finger marks, having stumbled in 'Nature' on a short account of Sir W. Herschel's work, ^{in Bengal} which I inquired about. At this time too, I had started my laboratory in S. Kensington. I had wanted among other things to introduce marks ~~into~~ to physical efficiency in competitive army & examinations & the laboratory helped in getting data for this. Finger marks fascinated me on account of their unique persistence, & ^{the} belief that they might be (which they are) of ethnological & value. Being anxious to get to the bottom of them & to use them to the uttermost I have given perhaps an undue amount of attention to them. However it seems, after all, likely to lead to useful practical results.



5 | Cranial Composites: Racialising Gazes Penetrating to the Bone

As one specific arena of the racialising gaze of composite photography, the production of cranial composites applied the technique to human remains. The discussion of these special superimpositions opens a diverse field of discourses that shaped the images' production and perception in the late nineteenth-century. Cranial composites were discussed in anthropological terms and employed in "racial science." Superimpositions of the photographs of skulls were evaluated in terms of size and shape and compared with skulls of different regional and ethnic origins, as well as with archaeological specimens. The composite images were treated as visual proof for the evolutionary development of humankind and as evidence for the "racial diversity" within the human species. Furthermore, just like anthropological images of the time, the photographic compositions were connected to contemporary physiognomic studies in craniology¹ and phrenology, whose cranial character studies became a mass cultural phenomenon in the nineteenth century. This popularity of physiognomy, along with visual and physical anthropological perspectives, were central for the understanding of skull composites and of the technique's racialising gaze both in scientific circles and the wider public.

Initially it seems strange that composite portraiture, as a technique that so much relied on the skin and the eyes, the soft parts of the human head, should be used on bare bones. Its adoption into the fields of anthropology and "racial science," however, led to a number of composite studies of human skulls, initiated by the technique's inventor Francis Galton in 1881. This reveals a central battle ground in the seemingly antagonistic, but, in fact, closely allied approaches of physiognomy and anthropometry: which structure of the human form was considered meaningful, the face or the skull? This controversy of whether to study the soft parts, the flesh and skin, or the bone structure, dates back to the early protagonists of modern physiognomy. Johann Caspar Lavater had examined the face and head in its living form, often using images in his argumentation,² while Franz Joseph Gall and his disciple Johann Gaspar Spurzheim, in their craniology and phrenology, had scrutinised the hard parts of the skull.³

Despite claiming a more reliable and concrete scientific basis, the exponents of physical anthropology and craniology showed close affiliations to character studies of earlier times. Further, the boundary between physiognomic studies and anthropology in the late nineteenth century is all but clear. The work of the influential phrenologist George Combe and the anthropologist Samuel George Morton linked craniometry and physical anthropology with phrenological readings of the human skull, at the time a thriving and immensely popular science in determining moral and intellectual character.⁴ And, as contemporary publications such as the *American Phrenological Journal* attest, the racialising gaze and phrenological observations coincide in physiognomic analyses and their visualisations.⁵

The eighteenth- and nineteenth-century fascination with skulls and human remains and their understanding as a “key” to underlying truths is a phenomenon that I have encountered continuously in my visits to ethnographic, medical, and historical collections throughout Europe. In Turin, a whole museum dedicated to Cesare Lombroso largely defends the nationalistic, racist, classist, and sexist positions of the protagonist of Italian positivist criminology. The central part of the collection consists of human remains, including the skeleton of its creator. In the *Rollett Museum* in Baden, Austria, skulls from the collection of Gall are displayed with next to no contextualising information. My first visit to the *Narrenturm* in Vienna in 2012, the asylum in which many of Gall’s specimens were “collected,” was a veritable adventure. Decaying and sometimes very problematic exhibits were presented in badly lit corridors and former cells

¹ The term “craniology” was coined by Franz Josef Gall. The same type of study was later referred to as “phrenology” and is not to be confused with “craniometry” used in the field of physical anthropology.

² See Lavater, Johann Caspar: *Physiognomische Fragmente zur Beförderung der Menschenkenntnis und Menschenliebe* (1775–1778).

³ The collection of skulls gathered by Franz Joseph Gall has become part of the *Rollett Museum* in Baden, close to Vienna. These skulls were mainly “collected” in prisons, and psychiatric clinics.

⁴ For a discussion of phrenology and its influences on nineteenth-century American society and education, see Tomlinson, Stephen: *Head Masters: Phrenology, Secular Education, and Nineteenth-Century Social Thought*. Tuscaloosa: University of Alabama Press, 2005.

⁵ The cover of the 1869 edition of the *American Phrenological Journal* mixes character study with the presentation of racial hierarchy: Above a depiction of the iconic phrenological bust in its centre, the portrait of a western-clad white man dominates the half circle that presents non-European “specimens” in traditional garb, ranging from “human” to “brute.” The central image is flanked by depictions of countenances that are classified as representatives for the specific human mental and character traits. The base of the cover is formed by a seemingly random depiction of animals and animal heads. See the frontispiece in: Wells, Samuel R. (ed.): *American Phrenological Journal and Life Illustrated*, 49:1, no. 861, January 1869.

– an astonishing contravention of contemporary curatorial standards.⁶ The lack of sensitivity to the exposition of human remains, gathered under questionable circumstances and displayed like trophies in glass cabinets, shows the continuity of power-knowledge regimes in exhibition practices created during the eighteenth and nineteenth centuries. This gaze still permeates and determines museum practice, particularly the exhibition of the remains of marginalised persons – and it highlights the need for critical curatorial recontextualisation of many collections.

The focus of cranial composite portraiture and craniology and on specimens of aboriginal origin reveals a Eurocentric and colonial perspective. With reference to imagined lines criss-crossing the cranium, with measurements of the cubic capacity, as well as the protrusion of certain regions of the skull, racialising and racist arguments on the inferiority of so-called primitive peoples were constructed. Links between alleged earlier evolutionary phases of development and the presumed deviant morphologies of indigenous populations were manufactured, backed up by dubious theories of a reversion and degeneration in so-called atavism.⁷ The European skull was construed as the central reference for the hierarchy of evolutionary development, a perspective that also determined the discussion on cranial composites. The anthropological-evolutionary perspective and the racialising gaze of composite portraiture become united in what could be described in terms of visual archaeological racism.⁸

The discussion of cranial composites begins with a glance into nineteenth-century craniometry and physical anthropology, including their forms of aesthetic and reasoning and connections to physiognomic thought. Here hierarchical polygenist conceptions of human diversity that informed the technique’s visual reasoning, as well as underlying Eurocentric and racial biases in relation to the groups under inquiry, come into focus. The examination continues with the technique’s use on aboriginal populations of the Andaman Islands

⁶ Since then the museum fortunately has received a radical modernisation. https://www.nhm-wien.ac.at/forschung/anthropologie/pathologisch-anatomische_sammlung_im_narrenturm [15/01/2022]

⁷ See the discussion of the concept of “atavism” coined by Lombroso (chapters 4, 5, and 6) that played a central role in criminal anthropology and in creating the criminalising gaze of composite portraiture.

⁸ I use the term “archaeological racism” as a specification of the concept of scientific racism: the empirical justification of racism and racial discrimination in the field of archaeology. This archaeological racism is also relevant in the discussion of the reconstructing gaze of composite portraiture that will be discussed in chapter 9.

and Australia and their role in the quest for the visualisation of racial difference and human evolution. The technique is positioned, in those cases, as an archaeological technique in the quest for evolutionary origins. The following part focusses on the cranial composites of Native Americans and the technical apparatuses developed for their production by the American scientists Matthews and Billings. This racist position also appears in a later archaeological composite study by Earnest Hooton, who employed the visual constructions as part of his evolutionary eugenic argument. The final part summarises the findings in the special field of racialising composite portraiture and its repercussions in current artistic projects.

Osseous Hierarchies and Normative Aesthetics: Craniometrics, Phrenology, and Composite Portraiture

With the technique's focus on the solid bone structure, and not the soft parts of the face, composite portraiture's racialising gaze entered into yet another field of nineteenth-century science, namely physical anthropology and craniology. Measurement of human crania in so called "craniometry" sought to typify and hierarchise human groups, their intelligence and evolutionary development. The following part of this chapter will examine the normative aesthetic bases of racialising hierarchies, which resurface in composite portraiture and which, together with its assumed photo-mechanical objectivity, made it a well-received tool in that subject area. Connections to phrenology, the character study on the human skull, contributed to its success and the technique's perception in the field.

The nineteenth-century protagonists of craniology and physical anthropology George Combe,⁹ Samuel George Morton,¹⁰ and Paul Brocka¹¹ drew on the eighteenth-century writings of the German physician and anthropologist Johann Friedrich Blumenbach, who had devised a racial classification of human types,¹²

⁹ See Combe, George: *Elements of Phrenology*. Edinburgh: John Anderson, 1824.

¹⁰ See Morton, Samuel George: *Crania Americana: Or a Comparative View of the Skulls of Various Aboriginal Nations of North and South America: To which is Prefixed an Essay on the Varieties of the Human Species*. Philadelphia: J. Dobson, 1839.

¹¹ See Brocka, Paul: *On the Phenomena of Hybridity in the Genus Homo*. London: Longman, Green, Longman, & Roberts, 1864.

as well as on the work of the Dutch anatomist Petrus Camper, who had developed a peculiar measurement, the so-called "facial angle," to determine the intelligence and evolutionary development of different "species" of humankind. According to Camper, apes and people of colour were among the lowest forms of humanoid life, while Europeans ranked decidedly higher;¹³ Ancient Greece represented the pinnacle of intellectual development. These normative aesthetic ideals of skull formation, as well as the hierarchical conception of "races" were shared by Francis Galton and other contemporary scientists.¹⁴ Camper's work on craniometry and his specific procedures of scientific reasoning were influential for future generations of anthropologists and "racial scientists." In his methodological approach, exact measurement and mathematical precision, became paired with a focus on aesthetics and a descriptive language that assumed a form of scientific objectivity, a procedural method prominent in later nineteenth-century positivist science.¹⁵ These modes of aestheticised scientific reasoning formed the basis for the success of Galton's photographic technique in the physical anthropological field. With its special aesthetic and beautifying quality composite portraiture can be seen as a photo-mechanical re-establishing of the synergy of arts and science in the depiction of "race" as proclaimed by

¹² In his "Treatise on the Natural Variety of Mankind" (1795) that focused on the analysis of human crania, the monogenist Blumenbach proposed a division of the human species into five distinct "races." He put the Caucasian, or "white race" in a central position, as the original variety of humankind from which the other varieties had degenerated for environmental reasons. This was laying the ground for later scientific racism. The term "Caucasian" has survived twentieth-century criticism of racist ideologies and is still used in the nomenclature of identification. See Blumenbach, Johann Friedrich: "Treatise on the Natural Variety of Mankind" (1795). In: Thomas Bendyshe (ed.): *The Anthropological Treatises of Johann Friedrich Blumenbach*. London: Longman, Green, Longman, & Roberts, 1865.

¹³ See Camper, Petrus: "On the Origin and Color of Blacks," *De Rhapsodist* 2 (1772), 373–394; "Petrus Camper on the Origin and Color of Blacks," *History of Anthropology Newsletter* 24 (December 1997), 3–9. Translated from the Dutch into English by Miriam Claude Meijer.

<https://petruscamper.com/han.htm> [15/01/2022]. For a discussion of Camper's work and influence, see Ewen; Ewen: *Typecasting*; Meijer, Miriam Claude: *Race and Aesthetics in the Anthropology of Petrus Camper (1722–1789)*. Amsterdam: Rodopi, 1999.

¹⁴ Intelligence and evolutionary development here became closely linked with ideals of beauty, harmony, and aesthetics, attesting to the intimate relationship of arts and science in the eighteenth and nineteenth centuries. Camper drew on the theories of the pioneer of archaeology and art history, Johann Joachim Winckelmann, who fostered the adoption and imitation of classical (Greek) art and aesthetics in the eighteenth and nineteenth centuries: ideals that were taken up in scientific writings of the day. Also, Blumenbach's scientific criteria, as Elizabeth and Stuart Ewen have argued, were essentially aesthetic, based on the relative (perceived) beauty of his specimens, and rooted in tradition of the synergy of arts and science. See Winckelmann, Johann Joachim: *Geschichte der Kunst des Alterthums*. Dresden: Walther, 1764, translated into English as *History of Ancient Art Among the Greeks*. London: John Chapman, 1850; Ewen; Ewen: *Typecasting* 108.

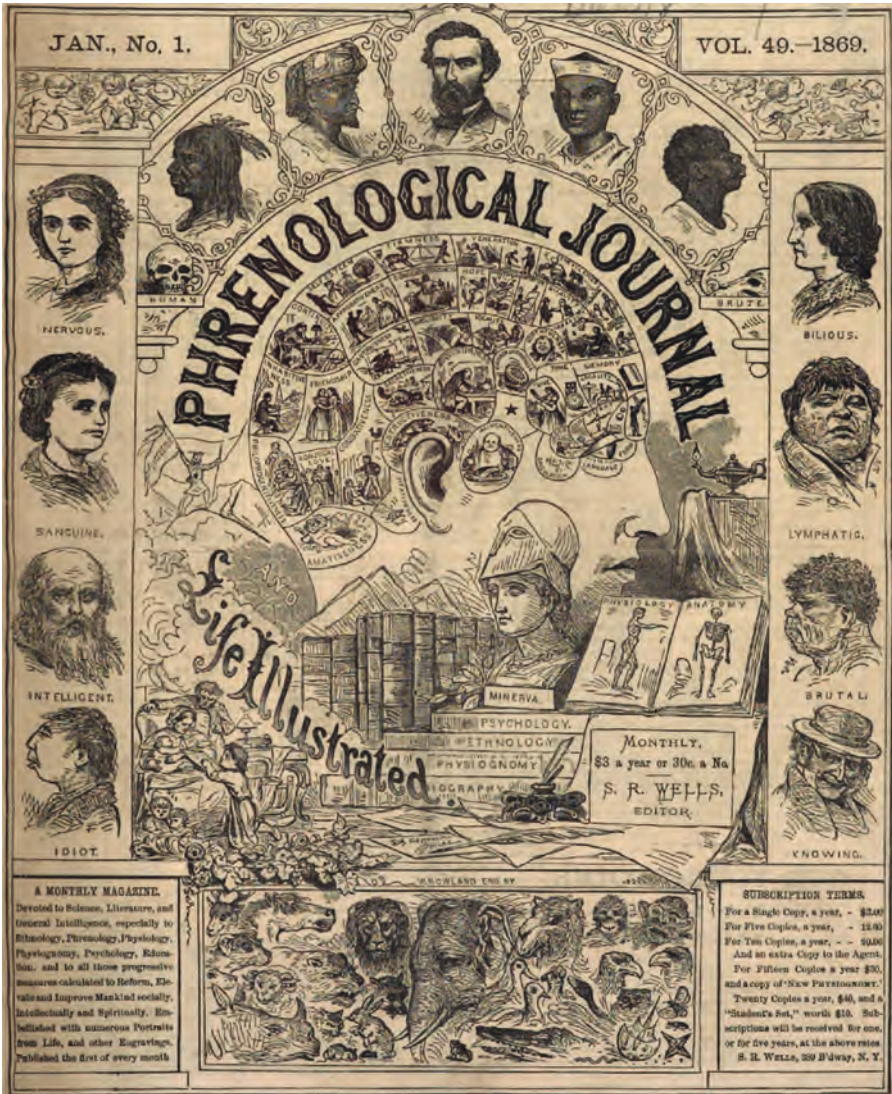
¹⁵ See Ewen; Ewen: *Typecasting*, 120.

Blumenbach and Camper a century earlier. And the images offered a photo-mechanical justification of arguments of “racial” and evolutionary hierarchies that were sustained in the field. Needless to say that the aesthetic ideals were oriented at European role models and became used for the justification of European superiority and colonialism.

The racialising gaze of composite portraiture likewise had connections to the inherently aestheticising and hierarchising doctrines of phrenology and physiognomic thought. The character analysis of the outer structure of the human skull had its roots in Ancient Greek physiognomic thought that became translated to modern times by Johann Casper Lavater and Franz Joseph Gall. In the early nineteenth-century, the Vienna-based anatomist Gall and his disciple Johann Gaspar Spurzheim coined the terms “craniology” and later “phrenology” and embarked on a series of lectures and public performances. Their “character science” was further developed and popularised by Spurzheim, who lectured extensively in Britain and brought phrenology to the United States, where it took off on its triumphal course.¹⁶ By the end of the century, phrenological and physiognomic handbooks, as well as maps and busts navigating the moral topography of the human head were produced on an industrial scale. The brothers Orson Squire and Lorenzo Niles Fowler were, alongside Samuel R. Wells, the most avid and business-minded promoters of phrenology, which, in a climate of moral anxiety and social change, developed into a mass cultural phenomenon. Books, charts and maps were sold in the thousands, phrenological museums opened in various American cities, and phrenologists toured the country performing in front of large audiences.¹⁷ These performances and the practice of phrenological readings involved direct physical contact, the laying on of hands by self-proclaimed experts, feeling for bumps and dents on the cranial surface. In the fusion of beauty, physical, as well as moral goodness, and a striving for “physiognomic perfection” in the normative aesthetics of composite portraiture, the proximity of the technique to phrenology becomes obvious. In the case of composite portraiture, however, it was a more distanced, mediated reading of a collective rather than of individual nature, and without the phrenological promise of potential self-improvement.¹⁸

¹⁶ See Ewen; Ewen: *Typecasting*, 141–148.

¹⁷ See Ewen; Ewen: *Typecasting*, 141–148.



Wells, Samuel R.: Frontispiece in: Wells, Samuel R. (ed.): *American Phrenological Journal and Life Illustrated*, 49/1 (861), New York, January 1869.

¹⁸ Phrenology developed into a technique of self-observation and promised the potential of moral self-improvement as the numerous editions of “Illustrated Self-Instructors”, in which personal phrenological data could be entered, indicate. See Fowler, O.S.; Wells, S.R.: *The Illustrated Self-Instructor in Phrenology and Physiology*. New York, Fowler & Wells, 1859. See also the New Year’s address in the *American Phrenological Journal* of 1869 in which the editor Samuel Wells states: “Phrenology is the camera through which we may look at ourselves, and thus learn what are our deficiencies and excesses, and how we must cultivate the former and restrain the latter. It shows us the relations existing between a comely countenance and a virtuous character, or a gross, beastly face and a low brutal character.” Wells, Samuel: “New Year’s Address.” In: *American Phrenological Journal and Life Illustrated*, 49:1, no. 861, January 1869, 30.

Likewise, the connections of the physiognomic doctrine to racialising anthropometric thought are strong. The cover of the 1869 issue of the *American Phrenological Journal*, for instance, mixes character study with the presentation of racial hierarchy. Above a depiction of the iconic phrenological bust in its centre, the portrait of a white man in Western dress dominates the half circle that, below and beside, presents non-European “specimens” in traditional garb, described as ranging from “human” to “brute.” The central image is flanked left and right by depictions of countenances classified as representative of human character traits. The base of the cover is formed by a seemingly random depiction of “animal heads,” representations of the lowest tiers on the physiognomic-racial evolutionary hierarchy. As the examination of cranial composites reveals, the subjects of inquiry of the racialising gaze of composite portraiture mirror precisely these strata of – supposed – evolutionary development as visualised in the upper half-circle of the phrenological illustration.

Aboriginal Composites and the Quest for Evolutionary Origins

With its focus on skulls, the racialising gaze of composite portraiture focused on specimens of archeological and aboriginal origin. This perspective was initiated by Francis Galton himself, who was convinced that the technique could achieve no less than “producing true anthropological averages [and allowed for the] pictorial definition of races.”¹⁹ It is no coincidence that the first cranial composites were produced of the native inhabitants of the Andaman Islands, who were then perceived as significant with respect to human evolutionary development. But also Australian aboriginals, a colonial population likewise under the reign of the British Empire, were scrutinised and put in comparison with the normative aesthetics oriented at European physical ideals. Here the racialising gaze and its discriminatory, othering, and self-affirmative potential become particularly valid.

At the 1881 meeting of the British Association for the Advancement of Science, Francis Galton presented a paper on the application of composite portraiture in the field of anthropology. On this occasion, he exhibited a cranial composite, a profile of eight skulls originating from the Andaman Islands,²⁰ a remote archipelago located in the Bay of Bengal that had become the most important penal colony for the British-Indian colonial government in Victorian times.²¹ The aboriginal inhabitants of these islands were of particular interest to

anthropologists of the time. Owing to their seclusion and limited contact with the outside world until the mid-nineteenth century, Andaman islanders were thought to represent a distinct stratum of human development.²² Among the *Galton Papers* and in the *Galton Collection*, only one copy of the profile composite has survived.²³ No component images are preserved, but in an article the photographs are described to have been taken under the instruction of a Mr. Flower, following a strict *modus operandi*.²⁴ Most probably this refers to William Henry Flower, an anatomist and surgeon, at the time curator of the Hunterian Museum of The Royal College of Surgeons and later director of the natural history department of the British Museum.²⁵

Flower, who was part of the pro-Darwinian scientific circle around Francis Galton, Thomas Henry Huxley, and Flinders Petri,²⁶ was one of the key figures in the interpretation of skeletal remains originating from the Andaman Islands. With these, Fowler seems to have developed an almost personal relationship:

After having had twenty-four skulls in my room for a few days, repeatedly examining, handling and measuring them, the special characters of each became so distinctly revealed, that I could in a moment recognize one from the other, as no doubt would be the case with the living individuals of the race.²⁷

¹⁹ Galton, Francis: “On the Application of Composite Portraiture to Anthropological purposes.” In: *Report of the British Association for the Advancement of Science*, no. 51, 1881, 690–691.

²⁰ See Pearson: *Life, Letters and Labours*, 288.

²¹ See Vaidik, Aparna: *Imperial Andamans. Colonial Encounter and Island History*. London, New York: Palgrave Macmillan, 2010.

²² For a detailed account of the colonial history of the Andaman Islands see Vaidik, Aparna: *Imperial Andamans*. Newer research by means of genetic screening of historical bones partly verifies the nineteenth-century hypothesis of the evolutionary particularity of Andaman indigenous peoples. See Endicott, Phillip; Gilbert, Thomas P. et al.: “The Genetic Origins of Andaman Islanders.” In: *American Journal of Human Genetics*, 72:1, 2003, 178–184.

²³ See Galton, Francis: “Composite of Skulls of Andamanese Islanders.” *Galton Papers*, UCL, GALTON 2/8/1/3/16. The image was later published in Karl Pearson’s biography of Galton. See Pearson: *Life, Letters and Labours*, Plate XXXIII.

²⁴ See Galton: “On the Application of Composite Portraiture to Anthropological purposes.”

²⁵ See Lydekker, Richard: *Sir William Flower*. New York: E.P. Dutton & London: J.M. Dent, 1906.

²⁶ For a closer discussion of the relationship between Francis Galton, Flinders Petri, and William Henry Flower, see Challis: *Archaeology of Race*. See also chapter 9, “True Likenesses and Composite Idols.”

²⁷ Flower, William: “On the Oseology and Affinities of the Natives of the Andaman Islands.” In: *Journal of the Anthropological Institute*, 8, 1879, 108–135, at 112.

The intimate relationship was, however, not entirely amicable. In an article illustrated with frontal and lateral drawings of the skulls, he described the Andamanese population as “infantile, un-developed, or primitive.”²⁸ And it was neither the individual characteristics, nor the fate of the people threatened by extinction that Flower was interested in, but the average typical features as representatives of what he described as “little modified descendants of an extremely ancient race, the ancestors of all the Negro tribes.”²⁹ This ur-species, he argued, had continued evolutionary development on the African, Asian, and Australian continents.³⁰ He highlighted the importance of a close craniometric examination of the group as a key to understanding the origins of humankind and argued that his findings supported polygenist scientific theories that reasoned that “Negritos [had] to be removed into a distinct primary group of Man.”³¹

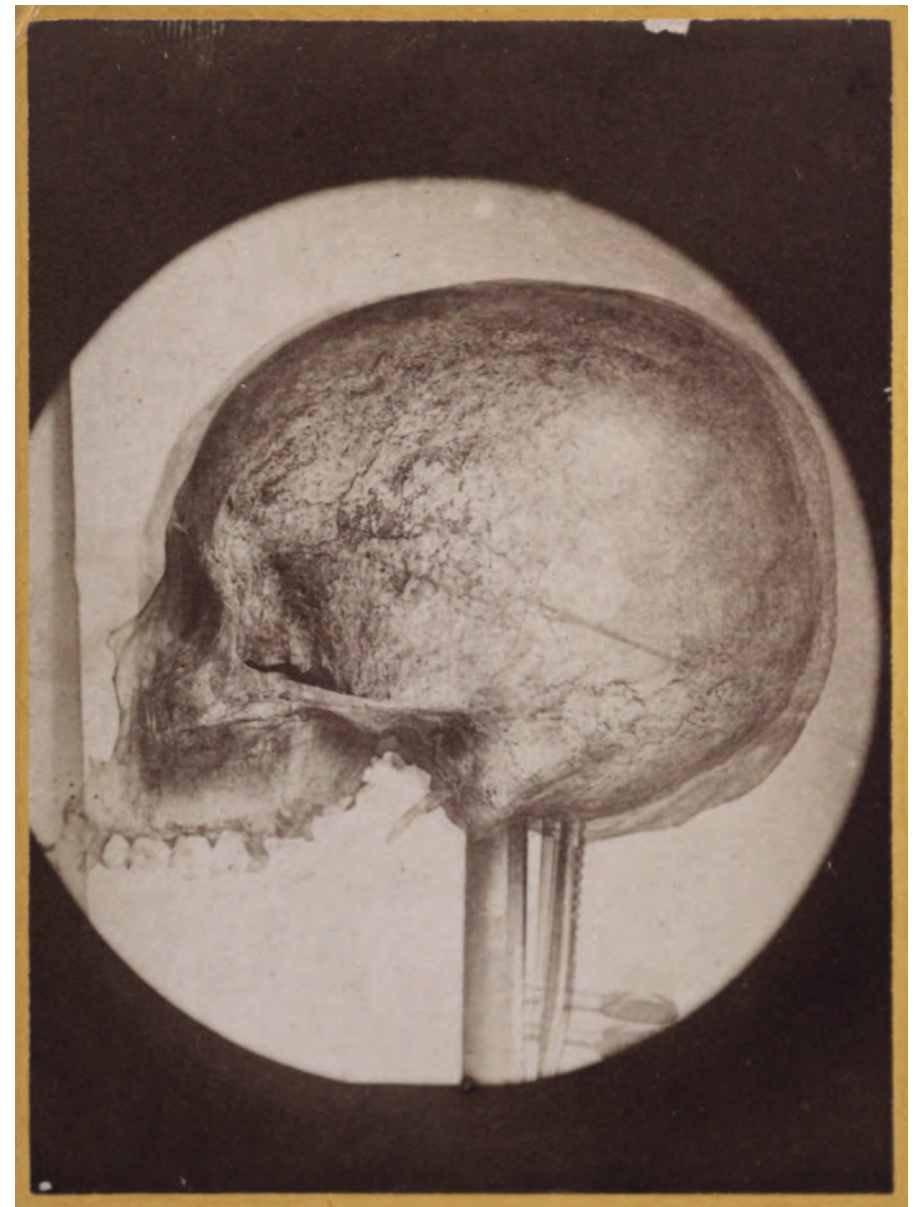
The Andamanese skulls, which had been accumulated from various museums and collections in Britain,³² were treated as historical specimens and as the “bony representatives” of a notional zero point of the evolutionary development of what was construed as “the negro race.” In the hands of physical anthropologists, the Andaman skeletal remains were an important means for constructing a comparative history of human evolution at a time when Darwinian evolutionary theory revolutionised the prevalent views on the origin and territorial fixity of “races.”³³ The examination and interpretation of these crania determined the contemporary scientific view on the Andaman Islanders, as well as on racial types and the history of evolutionary development in general. With its application to Andamanese crania, composite portraiture was positioned as a means of visual comparison and archaeological research in one of the central arenas of the scientific debate on the evolutionary origins of humanity and contributed to the thriving racism in late-nineteenth-century anthropology. The racialising gaze of composite portraiture and its visual definition of “races,” as the discussion of the cranial composites will show, lay in the hands of male western scientists, who argued for an, often polygenist, racial difference and an inherent inferiority of indigenous populations in comparison to European physical ideals.³⁴

²⁸ Flower: “On the Osteology and Affinities of the Natives of the Andaman Islands,” 132.

²⁹ Flower: “On the Osteology and Affinities of the Natives of the Andaman Islands,” 132.

³⁰ See Lydekker: *Sir William Flower*.

³¹ Flower: „On the Osteology and Affinities of the Natives of the Andaman Islands,” 132.



Galton, Francis: *Composite of Skulls of Andamanese Islanders* (1881). Galton Papers, Special Collections, University College London, GALTON 2/8/1/3/16.

³² Flower describes nineteen more or less complete skeletons and about thirty crania, most of which were kept in the Museum of the Royal College of Surgeons, the British Museum, the Middlesex Hospital Museum, the Oxford Museum, and the Museum of the University College London. See Flower: “On the Osteology and Affinities of the Natives of the Andaman Islands,” 110.

In 1884, Galton's approach to visual craniology was advanced further by the British anatomist and anthropologist Arthur Thomson, who worked with skulls of Australian aboriginal as well as of French origin. Thomson was an ardent student of the human body and human skeletal remains,³⁵ but he became best known for his theories on a very peculiar and disputable anatomical correlation, "Thomson's Nose Rule."³⁶ In his comparative contribution to cranial composite photography, he argued that "in the study of craniology one of the greatest difficulties has been to obtain a skull of the race under examination, embodying all the peculiarities characteristic of the crania of that race."³⁷ In this context of the production of more reliable and objective types, composite portraiture is presented as a suitable "graphic method of comparison [...] which appeals most forcibly to the uninitiated."³⁸ The racialising gaze of composite portraiture not only comes into effect as a means of visual comparison and a form of "racial synthesis." It also appears as a means for popularising scientific knowledge, by offering a new form of immediate visual access to scientific theories, a visual gateway to the understanding and appreciation of nineteenth-century racial theories and racist worldviews.

Thomson's article contains two frontal and two lateral cranial composites of eight male aboriginal Australian and four male French skulls. The specimens were provided by the anatomist, and future principal of the University of Edinburgh, William Turner. The respected craniologist was praised for his comparative studies of bones from all around the world and the analysis of their racial peculiarities. His enthusiastic biographer noted that in Turner's work "[t]he dry

³³ See Thomas, David: "Tools of the Trade: The Production of Ethnographic Observations on the Andaman Islands." In: George W. Stocking (ed.): *Colonial Situations. Essays on the Contextualization of Ethnographic Knowledge*. Madison: University of Wisconsin Press, 1991, 83.

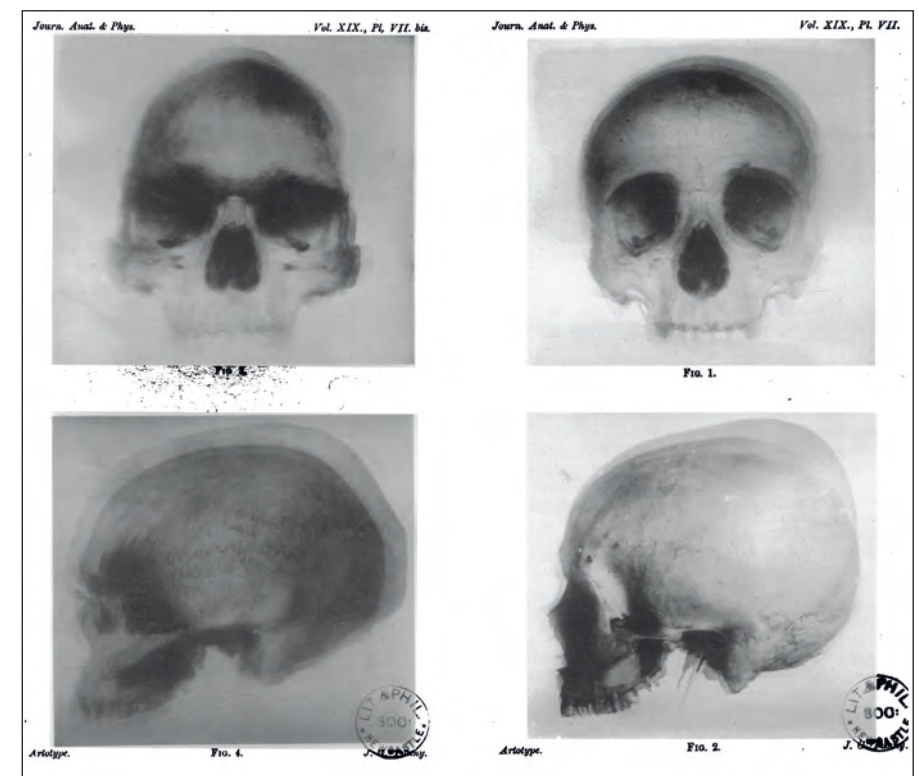
³⁴ Galton's disciple Karl Pearson applauded the Andaman composite and argued that it was "distinctly better than much later work – which has tended to discredit composite portraiture in craniology." See Pearson: *Life, Letters and Labours*, 288.

³⁵ See Thomson, Arthur; Randall-Maciver D.: *The Ancient Races of the Thebaid: Being an Anthropometrical Study of the Inhabitants of Upper Egypt from the Earliest Prehistoric Times to the Mohammedan Conquest, Based upon the Examination of over 1,500 Crania*. London: Clarendon Press, 1905.

³⁶ The theory presumed that ethnic groups living under colder, arid climates tended to have longer, thinner noses than those from warmer, humid climates. See Thomson, Arthur; Buxton, L. H. Dudley: "Man's Nasal Index in Relation to Certain Climatic Conditions." In: *Journal of the Royal Anthropological Institute*, 53, 1923, 92–122.

³⁷ Thomson, Arthur: "On the Delineation of Skulls by Composite Photography." In: *Journal of Anatomy and Physiology*, 19, 1884, 108–114, at 109.

³⁸ Thomson: "On the Delineation of Skulls by Composite Photography," 109.



Thomson, Arthur: Plate VII in: Thomson, Arthur: "On the Delineation of Skulls by Composite Photography." In: *Journal of Anatomy and Physiology*, October 1884, 109–114.

bones were [...] made to live, and to form an important link in the chain of evidence forged for the purpose of establishing their place in the history of mankind."³⁹ Turner was entrusted with the collection of skulls and skeletons gathered during the Challenger Expedition (1872–1876), which contained crania of three Australian aborigines.⁴⁰ These skulls, along with an even larger number from Turner's collection, were described in the expedition and most probably formed the corpus from which the specimens for the cranial composition were selected. Turner compared his anthropometric results with William Flower's measurements and descriptions of aboriginal crania and remarked on the small size and capacity of the Australian skulls, concluding that this "establish[ed]

³⁹ Turner, Logan A.: *Sir William Turner. A Chapter in Medical History*. Edinburgh; London: William Blackwood & Sons, 1919, 208.

⁴⁰ See Turner, William: "Report on Human Skeletons. First Part: The Crania." In: *Report of the Scientific Results of the Voyage of H.M.S. Challenger during the Years 1873–1876, Zoology* 29, Vol. 10. Her Majesty's Government, 1884.

the microcephalic character of these people.”⁴¹ This pathologisation of a head shape that the European observer considered sub-standard reveals the racial-hierarchical ideas and convictions of European superiority behind the otherwise seemingly neutral measurements, comparisons, and descriptions of bone structures.

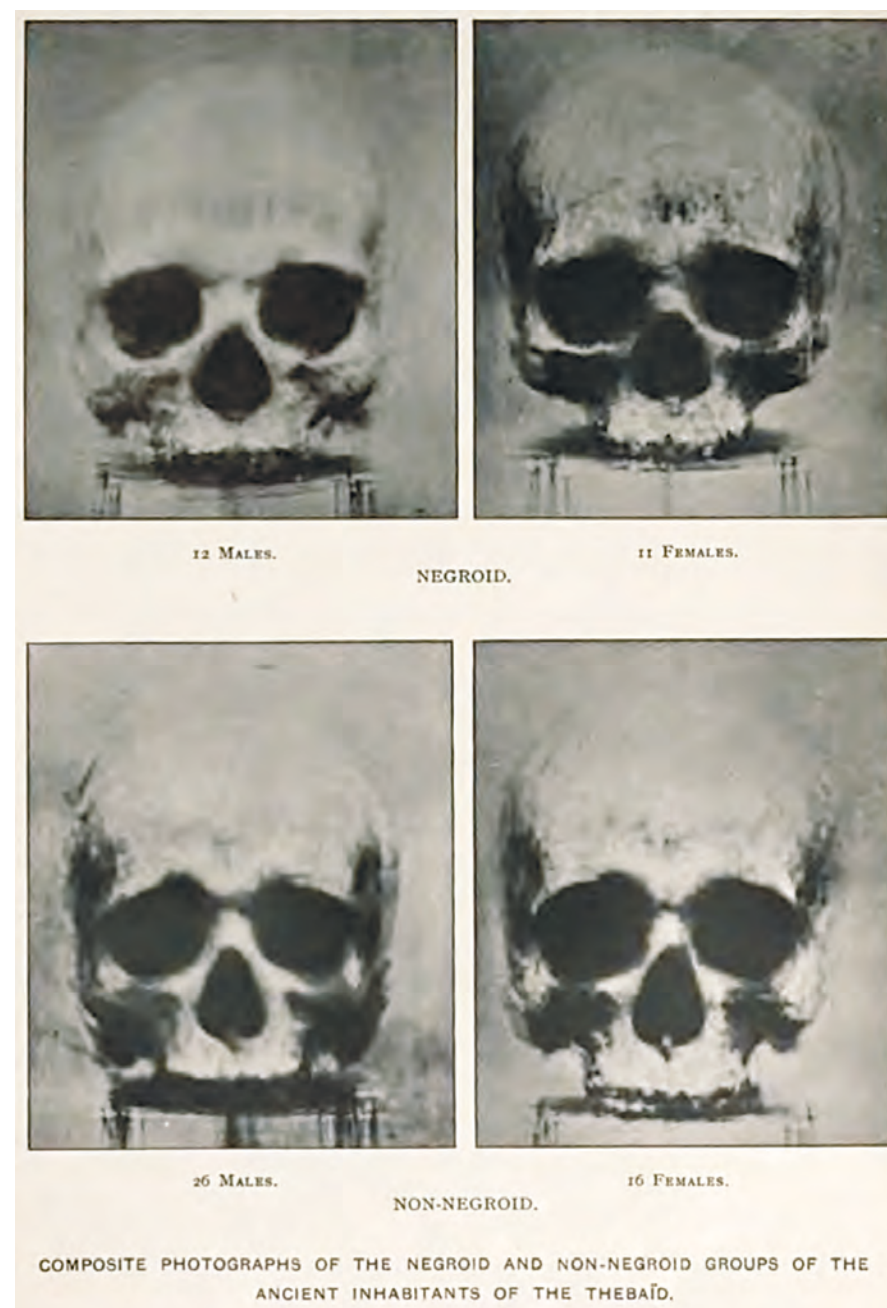
Arthur Thomson did not resort to such dismissive language in his discussion of his cranial composites, while retaining the discriminatory racialising gaze outlined above. In his concluding words on the composite crania of aboriginal and European origin, he returns to his initial remark on the popularisation of anthropological science that could be achieved through the photographic technique and its immediate accessibility, remarking that it was “hardly necessary to contrast the two series, as the plates speak for themselves.”⁴² He thus highlights the anatomical differences and invites an evaluation of his visual constructions of the “racial types” of Europeans as compared to Australian aborigines – an evaluation that, for a late-nineteenth century Western public, could only lead to an unfavourable result on the part of the aborigines.

Twenty years later, Thomson returned to the technique and produced composite portraits of ancient skulls of the Egyptian Thebaid region, employing the racialising gaze of composite portraiture in order to argue for an affiliation of the historical group to the co-called “negroid racial type.”⁴³ He here seems to be extending his racialising argument to specimens from one of the core areas of archaeological research that enjoyed immense popularity in the early twentieth century: Egyptology. This archaeological racialising gaze is linked to the work done by Flinders Petrie and is taken up by Earnest Hooton in his composite photographs of the archaeological remains of Native Americans that will be discussed below.

⁴¹ Turner, William: “Report on Human Skeletons,” 43.

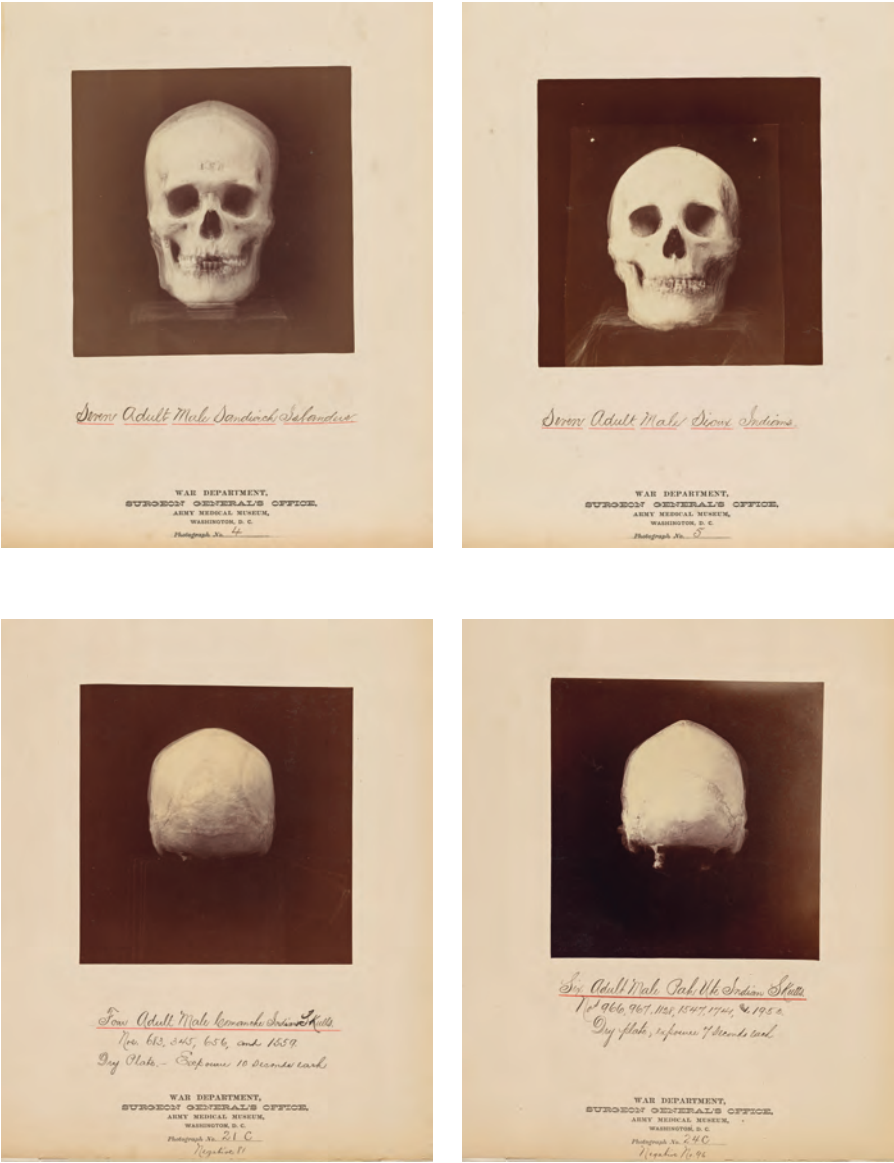
⁴² Thomson: “On the Delineation of Skulls by Composite Photography,” 113.

⁴³ S.O.Y Keita has uncovered the racist quest for the Negro/Negroid in Egyptian archaeology of the time. See Keita, S.O.Y.: “Studies and Comments on Ancient Egyptian Biological Relationships.” In: *History in Africa*, 20, 1993, 129–154.



Thomson, Arthur: *Composite Photographs of the Negroid and Non-Negroid Groups of the Ancient Inhabitants of the Thebaid*. In: “Composite Photographs of Early Egyptian Skulls.” In: *MAN Monthly Record of Anthropological Science*, London: The Anthropological Institute, 1905, Plate E, facing 65.

Cranial Composite Apparatuses and the Photographic Subjugation of Native Americans



Billings, J.S.; Matthews, Washington: *Seven Adult Male Sandwich Islanders; Seven Adult Male Sioux Indians, our Adult Male Comanche Indian Skulls; Six Adult Male Pah Ute Indian Skulls*. The Miriam and Ira D. Wallach Division of Art, Prints and Photographs: Photography Collection, The New York Public Library.

Cranial Composites: Racialising Gazes Penetrating to the Bone

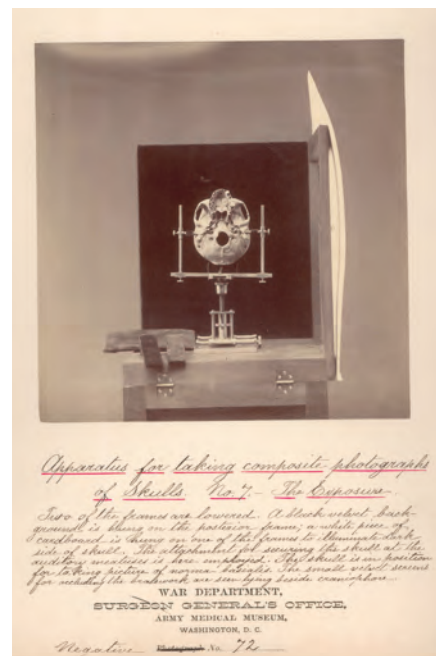
Cranial Composites: Racialising Gazes Penetrating to the Bone

In 1885, only one year after the first photographic experiments on human crania, composite portraiture was taken up on the other side of the Atlantic. The American surgeons and ethnographers John Shaw Billings and Washington Matthews, colleagues at the Army Medical Library and the Army Medical Museum, drew on the large collection of those institutions for the compilation of a series of racialising composite portraits of indigenous groups. In an article, they present their apparatus for taking composite portraits of skulls with examples of cranial composites of Sandwich Islanders, inhabitants of the archipelago now referred to as Hawaii, and members of the Arapahoe, a Native American tribe that originally inhabited the plains of what is now known as Colorado and Wyoming, as well as so-called Ancient Californians.⁴⁴ The work could be seen as a photo-technical update of *Crania Americana*, Samuel George Morton's influential collection of American skulls.⁴⁵ But as will become clear, even more than the composite portraits themselves, the photographs of specifically constructed technical apparatuses and their handling demonstrate the racialising gaze expressed in the technique.

Billings and Matthews were convinced that the method of composite portraiture was a “convenient means of obtaining a graphic representation of a series of irregular objects,”⁴⁶ but cautioned that the “composite photographs must be studied in connection with the measurements of the crania represented in them.”⁴⁷ Theirs were by far the most extensive experiments conducted with the technique on crania, and the two researchers developed a special instrument, the so-called “craniophore,”⁴⁸ to hold the specimens and present them to the photographic lens. They also supplemented the established frontal and lateral views with additional perspectives: views from the top, from below, as well as from the back. This approach almost suggests a three-dimensional model, only not of an individual specimen, but of the somewhat ghostly idea of the ideal of a “race.” Following the argument of Galton, who described the photographic technique as form of visual statistics, its racialising gaze becomes further validated by elaborate tables of measurements. This construes a reproducible prototype of a race – a prototype that was to provide the basis for comparative research on the indigenous populations of the world as well as visual proof for their low status in the evolutionary hierarchy.⁴⁹

⁴⁴ Billings, J.S.; Matthews, Washington: “On Composite Photography as Applied to Craniology, and on Measuring the Cubic Capacity of Skulls.” In: *Memoirs of the National Academy of Sciences*, 3:2, 1886, 105–121.

⁴⁵ See Morton: *Crania Americana*.



Billings, J.S.; Matthews, Washington: *Apparatus for taking Composite Photographs of Skulls. No. 6 - The Adjustment; Apparatus for taking Composite Photographs of Skulls. No. 7 - The Exposure.* The Miriam and Ira D. Wallach Division of Art, Prints and Photographs: Photography Collection, The New York Public Library.

Even more than the actual composites produced by Billings and Matthews, the photographic depictions of the utilisation of the apparatuses for the production of cranial composite portraits and for measuring the skulls' cubic capacity offer interesting insights. The "cranial composite machine" is presented from various perspectives that underline the presence of its racialising gaze. In the photograph of a staged scene that was published alongside the composites, two middle-aged white men, presumably the scientists themselves, handle no fewer than seven skulls. At their feet, a basket is arranged with their "bountiful harvest" from tribal areas and indigenous lands,⁵⁰ the skulls looking up at their "masters." In the scene, the partly visible apparatus for composite portraiture leaves no doubt about the focus of the endeavor and the fate of the indigenous population: the intersecting lines in front of a skull, held in position in the background, resemble a target mark.

⁴⁶ Billings; Matthews: "On Composite Photography as Applied to Craniology," 106.

⁴⁷ Billings; Matthews: "On Composite Photography as Applied to Craniology," 106.



Billings, J.S.; Matthews, Washington: *Ascertaining capacity of cranial cavity by means of water.* Illustration in: Billings, J.S.; Matthews, Washington: "On Composite Photography as Applied to Craniology, and on Measuring the Cubic Capacity of Skulls." In: *Memoirs of the National Academy of Sciences*, Vol.3, part 2. Washington: Government Printing Office, 1886, 105-121.

⁴⁸ See Billings, John S.: "On a New Craniophore for Use in Taking Composite Photographs of Skulls." In: *The Journal of the Anthropological Institute of Great Britain and Ireland*, 16, 1887, 97-98.

⁴⁹ The work of Billings was also received in the old country and by the founder of the composite technique. Billings and Galton exchanged letters between 1888 and 1895. John Shaw Billings: Letters addressed to Francis Galton. Galton Papers, UCL, GALTON 3/3/2/15.

⁵⁰ Ann Fabian has observed that the basket recalls the practices of collecting the raw material by bone-collectors, of harvesting the dead and cleaning, packing, and shipping the skulls, oblivious of the fact that they were once the head of living individuals. See Fabian, Ann: "The Curious Cabinet of Dr. Morton." In: Leah Dillworth (ed.): *Acts of Possession. Collecting in America*. New Brunswick: Rutgers University Press, 2003, 112-137, at 131.

In a letter Galton congratulated the scientists on their success and highlighted the specific importance of exact superimposition that he saw realised in the cranial composites of Mathew and Billings:

I was most agreeably surprised by receiving your beautiful skull composites yesterday morning, and laid them that very evening before the Anthropological Institute. The negro seems extremely good and testifies to the great similarity of its constituents, just as the European skull does to their diversity. You must have found it difficult, as I did, to arrange so that they should be superimposed with the utmost probable justice. The difficulty with skulls is two-fold greater than with faces [...] because the part of interest is the outside rim and not the inner parts so that any misfit is the more conspicuous.¹

Galton announces his intention of forwarding the images to local anthropological institutions and was most likely involved in facilitating a reprint of the American anthropologists' work concerning the apparatus for the production of skull composites in the British Journal of the Anthropological Institute.⁵¹ The same issue contains an article on the Andaman Islands by the photographer and penal administrator Edward Horace Man⁵² and an article by Galton himself on his Anthropometric Laboratory.⁵³ This shows the connection of the visual analyses by means of composite portraiture to the anthropological debates on evolution and to Galton's anthropometric measurements, which has been described as a form of craniology of the living.⁵⁴

⁵¹ Galton, Francis: Letter addressed to John Shaw Billings, 13 November 1884. Reprinted in Garrison: *John Shaw Billings: A Memoir*. New York: G.P. Putnam's Sons, 1915, 250–251.

⁵² See Billings, John S.: "On Composite Photographs of Skulls." In: *The Journal of the Anthropological Institute of Great Britain and Ireland*, 14, 1885, 287–288. See also: Billings: "On a New Craniophore."

⁵³ See Man, Edward Horace: "On the Andaman Islands, and Their Inhabitants." In: *The Journal of the Anthropological Institute of Great Britain and Ireland*, 14, 1885, 253–272.

⁵⁴ Galton, Francis: "On the Anthropometric Laboratory at the Late International Health Exhibition." In: *The Journal of the Anthropological Institute of Great Britain and Ireland*, 14, 1885, 205–221.

⁵⁵ See Challis, Debbie: "Skull Triangles: Flinders Petrie, Race Theory and Biometrics." In: *Bulletin of the History of Archaeology*, 26:1, 2016. <https://www.archaeologybulletin.org/articles/10.5334/bha-556> [15/01/2022].

⁵⁶ Hooton's arguments on the supposed racial inferiority of people of colour, criminals, and other groups can doubtless be described as racist from a present-day perspective, although he revised some of his positions in later publications. See for instance a 1930 publication in which he (re-)contextualised many of his earlier statements: Hooton, Earnest Albert: "Plain Statements about Race." In: *Science*, 83, No. 2161, 29 May 1936, 511–513. Eugene Gilles argues against the understanding of Hooton as a racist, reading his work against its historical background, and stresses his relationships to African American students and researchers. From my point of view, however, this does not make his statements less racist. See Gilles, Eugene: "Two Faces of Earnest A. Hooton." In: *American Journal of Physical Anthropology*, 149, supplement 55, 2012, 105–113.

De-Composing Native American Origins: The Pecos Pueblo Composites

The American physical anthropologist and university professor Earnest Hooton, who was an influential figure in physical anthropology and "racial science" in the early twentieth century, took a similar approach, combining visual and statistical studies of archaeological human remains. Hooton proposed a hierarchical "racial classification" of humanity along physical characteristics into "primary races" and "subtypes," a typology that expressed a firm belief in white racial superiority.⁵⁵ In his hands, the technique of composite portraiture developed into an instrument of (archeological) evolutionary de-composition. But it also became linked to Hooton's eugenicist ideas and those of other proponents of archaeological racism like Finders Petrie.

After joining an expedition to the archaeological site of Pecos Pueblo in New Mexico in 1920, Hooton began studying the skeletal remains that had been brought to the Peabody Museum at Harvard University, where Hooton was curator of physical anthropology. His corpus eventually included remains of more than 1,254 individuals. For the comparative analysis of his findings, Hooton takes a "hypothetical average male European as a standard"⁵⁶ and describes cranial morphology in terms of the absence or grade of presence of these hypothesised ideal markers. In a chronological analysis of the former inhabitants of the settlement, he argued that their "[m]orphological features taken from period to period clearly show[ed] a deterioration of the Pecos population toward a brutal but rather degenerate type."⁵⁷

Not entirely satisfied with this degenerationist genealogical perspective, Hooton adopted a morphological approach based on visual likeness.⁵⁸ Based on their mutual resemblance, he sorted 129 male crania into eight groups and named them according to similarities with "racial types" already established in contemporary writings.⁵⁹ His sorting process thus resembles that of the handling of specimens adopted by Galton in order to produce composite portraits. From

⁵⁷ Hooton, Earnest Albert: *The Indians of Pecos Pueblo. A Study of Their Skeletal Remains*. New Haven: Yale University Press, 1930, 80.

⁵⁸ Hooton: *Indians of Pecos Pueblo*, 346.

⁵⁹ See Weisensee, Katherine Elizabeth: *Pecos Revisited: A Modern Analysis of Earnest Hooton's, "The Indians of Pecos Pueblo."* Master's Thesis, University of Tennessee, 2001, 13. http://trace.tennessee.edu/utk_gradthes/1995 [15/01/2022].

selected examples of the remains of the historical population, arbitrary types were constructed according to their appearance and their resemblance to racially tinted generalisations of physiognomic types, while “a number of crania with no discernible affinities with any of the groups were ‘dumped’ into a ‘Residual’ class.”⁶⁰ Arguing that certain features could be observed and graded, but not measured,⁶¹ he set out to support the statistical anthropometric results by the visual means of composite portraiture and its already established racialising gaze:

In order to convince myself and my readers of the actual validity and integrity of these morphological types, I made composite photographs of ten crania of each type. These composite photographs [...] conclusively justify the type selections.¹

Building on what he saw proved by means of the photographic technique, Hooton proclaimed a hierarchical difference of the types, arguing that the “archaic types” blended more satisfactorily than the more “advanced types.” In the co-composite of all seventy crania, he contended, the primitive types were disappearing altogether, revealing a more balanced image of the more advanced cranial types.⁶² Composite portraiture’s racialising gaze here appears as a predictive evolutionary technique that could visualise the eventual disappearance of what the author saw as more primitive racial types and their dissolving into the more advanced physiognomies. This reminds of evolutionist theories of the survival of the fittest and links Hooton’s archaeological work with his eugenic convictions.

Only a short section of the text directly refers to the visual representations, but the author apparently attributed high significance to the photographic technique as part of his argument. The book is abundantly illustrated and contains frontal and lateral photographic reproductions of individual skulls, as well as two plates of four frontal composite photographs each. A folder at the back holds fifteen bigger cranial composites, some of which are larger versions of

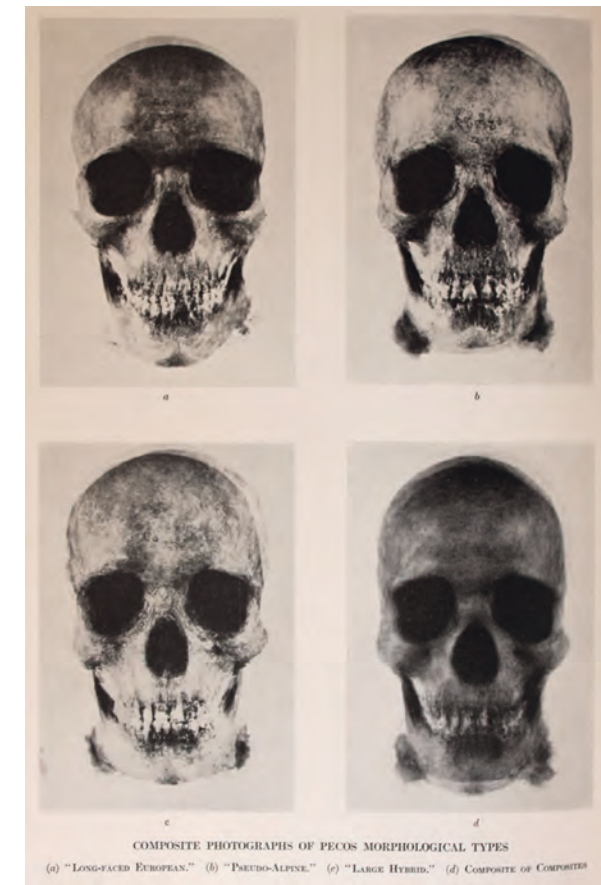
⁶⁰ The tell-tale denominations included “Basket-Maker,” “Pseudo-Negroid,” “Pseudo-Australoid,” “Pseudo-Alpine,” “Long-Faced European,” “Plains Indian,” and “Large Hybrid.” See Hooton: *Indians of Pecos Pueblo*, 185–186.

⁶¹ See Hooton: *Indians of Pecos Pueblo*, 186.

⁶² See Hooton: *Indians of Pecos Pueblo*, 215.

⁶³ See Hooton: *Indians of Pecos Pueblo*, 347.

⁶⁴ See Hooton: *Indians of Pecos Pueblo*, 230.



Hooton, Earnest Albert: *Composite Photographs of Pecos Morphological Types: (a) Long-Faced European; (b) Pseudo-Alpine; (c) Large Hybrid; (d) Composite of Composites*. In: *The Indians of Pecos Pueblo. A Study of Their Skeletal Remains*. New Haven: Yale UP, 1930, Plate VII 2, facing 231.

the ones included in the text; the others are various frontal co-composites and lateral composite views of Hooton’s individual “racial types.” Their epistemological role is not discussed, but the composite images constitute an integral part of the publication and function as a sort of visual guide through the overwhelming presence of numbers and statistical tables⁶³ – and the photographic technique serves as a visual justification for the racial typology of the archaeological specimens and for Hooton’s evolutionary theories.⁶⁴

⁶⁵ Hooton here employs the same strategy as in other publications, such as in his work on criminality. See the illustrations in Hooton: *Crime and the Man*.

⁶⁶ See Hooton: *Indians of Pecos Pueblo*, 228.

On these visual selections, authenticated by photographic composition, Hooton built his argument on the origins of Native American peoples. The physiognomic types are credited as proof for theories of a late peopling of the American continent from Asia in successive waves. These origins and the intermixed morphologies, he argued, could be traced in the Pecos Pueblo sample and in the composite portraits of the various types.⁶⁵ When the Europeans arrived, he reasoned, returning to his degenerationist and eugenic argument, “the most notable civilisations of the New World were already dead or decadent,”⁶⁶ implicitly pardoning colonial invasion of the Americas.

In the work of the Egyptologist and Galton’s fellow at University College London Flinders Petrie, this form of archaeological racism and its connection to eugenics is even more prominent. In Petrie’s books fundamental visual-archaeological research becomes fused with eugenic views, noting: “We see on all sides that races of a low character necessarily pass, by the force of events, under the domination of other races who have a higher or stronger character.”⁶⁷ Petrie reiterates social-Darwinist theories of the “survival of the fittest” in the archaeological arena and does so with reference to the physical appearance of his specimens and continues to argue for eugenic intervention:

[I]f the view becomes gradually grasped that the source of every civilisation has lain in race mixture, it may be that eugenics will, in some future civilisation, carefully segregate fine races, and prohibit continual mixture, until they have a distinct type, which will start a new civilisation when transplanted.¹

The eugenic understanding of evolutionary development resonates strongly in Hooton’s work on Pecos Pueblo and the rise and decline of civilisations that he sought to visualise by means of the composite technique. Here the racialising gaze shows a proximity to the eugenicising gaze of composite photography. Both approaches to the construction of human difference required a re-definition of (evolutionary) history and a normative positioning of European “racial superiority,” not only as opposed to colonial populations, but also in the centre of the Empire. Difference had to be construed on an international, but also on a national level. This is probably why skull composites seemed so appealing to

⁶⁷ Hooton: *Indians of Pecos Pueblo*, 357–358.

⁶⁸ Hooton: *Indians of Pecos Pueblo*, 352.

⁶⁹ Petrie, Flinders: *Janus in Modern Life*. New York: Putnam, 1907, 1.

⁷⁰ Petrie, Flinders: *The Revolutions of Civilisation*. London/New York: Harper & Brothers, 1911, 131.

Galton and were used as a means to foster his plans of a visual ethnography of the population of the British Isles. On the “home front,” racialised constructions of difference became directed at the social deviant group of criminals, such as in Cesare Lombroso’s approach of stereotyping of groups within society as atavistic and born criminals and by means of his degenerationist theory of atavism.⁶⁸

De-Composing Cranial Composites

In summary, the treatment of crania by means of composite portraiture can be described in terms of a special form of the technique’s racialising gaze that became directed in a mostly derogative way at human remains of people considered inferior and primitive when compared to the “ideal standard” of European physiognomies. As the examination of cranial composite portraits has shown, the visual arguments made by means of the technique sought to deduce racial origin and construe racial difference. They were taking part in the racialising process of categorising, stereotyping, and hierarchising people and peoples and were discriminating against these biologised groups. In contrast to these nineteenth-century cranial composites, twenty-first century artistic cranial compositions adopt a critical perspective towards physical anthropological visualisations or hint at the more general phenomenon of mortality and transience.

In the nineteenth century, the fusion of craniometric and phrenological interpretations in the racialising gaze of composite portraiture assumed a decidedly political function. Degrading indigenous peoples provided a justification for European colonialism and the expansionist settler politics in the United States. This went along the lines of the work of contemporary anthropologists, such as Samuel George Morton, a medical doctor from Philadelphia, who assembled a huge collection of Native American skulls and used it as a material basis for arguing for hierarchies of intelligence and moral worth in different racially defined human sub-groups. This degrading polygenist world view is expressed in his derogative characterisations of the indigenous populations of the Americas.⁶⁹

⁷¹ Lombroso worked predominantly on crania, and his wide methodological and technical-apparative repertoire also included composite portraiture. The cranial composites of Cesare Lombroso are discussed in chapter 3, “Suspect Identities.”

For Morton's amply illustrated work *Crania Americana*, George Combe contributed instructions for a phrenological reading, in which he expressed the conviction: "I am free to acknowledge that there is a singular harmony between the mental character of the Indian, and his cranial developments as explained by Phrenology."⁷⁰ Billings and Matthews' racialising composites of Native American skulls in turn can be seen as a photo-technical advancement and empirical validation of Morton's collection of American crania and its biologising and physiognomic reading. This not only shows the technique's proximity to phrenology, but also highlights contemporary understandings of phrenology as a racial science.⁷¹

The production of skull composites was often conducted as experiments on the photographic technique itself, on its reliability, reproducibility, and evidential value. Galton attempted a visual test for the veracity of evolutionary theories and Billings and Matthews developed new intricate apparatuses for cranial composite production. In Hooton's study, the visualisations assumed a more independent function, acting as visual proof and justification for his racialised and eugenic evolutionary theories. This special form of scientific, archaeological racism descended into the graves of historical indigenous populations, and the racialising gaze of composite portraiture intensified in this perspective, penetrating literally down to the bones. The comparative morphological analyses by means of composite portraiture of archeological specimens are reminiscent of recent studies on palaeodemography, in palaeoanthropology or bioarchaeology. Through advances in genetic analysis, mechanistic scientific perspectives on human evolution experience a revival in current archaeology.⁷²

⁷² See Ewen; Ewen: *Typecasting*, 153.

⁷³ Combe, George: "Dedication." In: Morton: *Crania Americana*, I–II., at I.

⁷⁴ Elizabeth and Stuart Ewen have discussed the connections between J.G. Spurzheim and George Combe, who after his "conversion" to physiognomic science linked phrenology with craniological observations of racial and national characteristics, ascribing superior mental constitutions to the British, the Swiss, as well as to Anglo-Americans. See Ewen; Ewen: *Typecasting*, 149–150.

⁷⁵ See for instance the following archaeology handbooks: Séguy, Isabelle; Buchet, Luc: *Handbook of Palaeodemography*. Basel: Springer International Publishing, 2013; Henke, Winfried; Tattersall, Ian: *Handbook of Paleoanthropology*. Offenburg: Springer Reference, 2007; Martin, Debra L.; Harrod, Ryan P.; Pérez, Ventura R.: *Bioarchaeology: An Integrated Approach to Working with Human Remains*. New York: Springer Science+Buisness Media, 2013.



Salavon, Jason: *Generic Mammal Skull* (13% baboon, 36% bear, 46% human, 5% wild boar), digital composite, print, 2010. Courtesy of the artist.

Current artistic works comment on these composite forms of the construction of evidence. The American artist Jason Salavon, who repeatedly employs the composite technique in his works and deals with the condensation of visual data and the exploration of underlying structures in visual representations, such as paintings, print media, and television productions.⁷³ In his work *Generic Mammal Skull*, he presents digital skull morphings, intermediate versions of skull formation, incorporating characteristics from different mammals, including humans. His fictional creations evoke theories of evolutionary development and manifestations of missing links, but they are clearly marked as artificial constructions. In a video version resembling a painted vanitas still life, the skull structures dissolve into one another in a continuous loop.⁷⁴

Salavon's artistic renderings of synthetic skulls seem to comment on theories of evolutionary development, on the atavistic readings of skulls of humans and animals as proposed by Cesar Lombroso, and on morphological classifications and idealistic morphology in the eighteenth and nineteenth centuries more

⁷⁶ For Salavon's other works created by means of the composite technique see <http://salavon.com> [01/02/2023]

⁷⁷ See Salavon, Jason: *Still Life (Vanitas)*, 2009, digital animation, 257', continuous loop.

generally.⁷⁵ But, what is presented as a serious anatomical morphological study receives a twist in the combination of incongruous elements that provide a human-looking skull with characteristics of a predator. In the fusion of these elements in front of a historicising background, the seamless images seem to reveal similarities and continuities, rather than differences in the skull formation of mammals, thus appearing to contradict racialising readings of the images.

An artistic experiment of a different nature has been conducted by the British artist Susan Elaine Jones. As part of a series of works on death and transience, she has produced a photographic composite of 32 skulls from the Rothwell Ossuary in Northamptonshire. The artist treats this collection of historical, mainly medieval skulls not as a corpus for the visualisation of human variation or evolutionary development, but as a mine for the demonstration of human similarity in difference. Her composite portrait of the selected skulls has a painterly quality; it reveals a manifestly common human nature and stands as a reminder of an inevitable common fate.

Nineteenth-century composite portraiture of skulls reveals a specific racialising gaze that was predominantly directed at historical specimens. It assumed the role of photographically authenticating human difference and visualising evolutionary hierarchies. This typology constructed by means of composite portraiture was based on eighteenth- and nineteenth-century understandings of racial difference that had a strong normative aesthetic basis, which became reinforced by the new method of photographic visualisation. Composite portraiture as a technique discontinued to be used in mid- and late twentieth century archaeological and anthropological research. The comparative anatomical approach to human remains, however, still plays a role in current archeological approaches to human remains, updated by new possibilities of DNA analysis.

Current artistic works adopt a different perspective: the “composite skulls” presented by them seem to be attempting a more general visualisation of transience, while evoking the vanitas tradition of still life painting. In particular the digital composite morphings of Jason Salavon, however, extend this perspective towards the more general question of the place of the human in evolutionary deep time. They question the visual comparative approaches in

⁷⁵ Johann Wolfgang Goethe was among the protagonists of this idea of an ur-species and the examination of pure phenomena. See Steigerwald, Joan: “Goethe’s Morphology: *Urphänomene* and Aesthetic Appraisal.” In: *Journal of the History of Biology*, 35:2, 2002, 291–328; Bloch, Robert: “Goethe, Idealistic Morphology and Science.” In: *American Scientist*, 40:2, 1952, 313–322.



Jones, Susan Elaine: *Composite of 32 skulls*. A composite image of 32 skulls from Rothwell Ossuary, highlighting many of the common features and hinting at individual differences, 2018. Courtesy of the artist.

anthropology and the quest for evolutionary “missing links,” as well as anthropocentric claims of superiority in the animal world. The same artistic positions can likewise be read in relation to exhibition practices in museums that often display skulls and fragments of human remains as part of a narrative of continuous evolution. They comment on the eighteenth- and nineteenth-century gaze targeting the marginalised and excluded, a gaze that still permeates museum practice today; but they also draw our attention to the sensationalist quality of these collections, which apparently have lost little of their appeal since the nineteenth century and continue to attract large audiences.

LONDON COUNTY ASYLUM
HANWELL.

CASE BOOK
MALES
No 5.

FROM 27TH MAY, 1878.
TO 16TH JUNE, 1879.

6 | Visual Pathologies: The Pathologising Gaze of Composite Portraiture

The technique of composite portraiture also assumed authority in the medical field – in the visualisation of the characteristics of physiological and psychological illnesses. As a version of the medical gaze delineated by Michel Foucault in relation to clinical diagnosis, the technique's role in typifying unhealthy groups of society and establishing clinical pictures will be addressed in terms of its pathologising gaze. This medico-photographic gaze of composite portraiture was cast on patients diagnosed with tuberculosis and mental illnesses in the late nineteenth century. In the early and mid-twentieth century, it was directed at children with sight impairments and mental disabilities. In the twenty-first century, digital composite portraits suggest an eerie revival of the pathologising gaze, such as in social psychology and computerised facial analysis, aiming to reveal sexual orientation, as well as in the presentation of “composite faces of drug addiction” by the United States health industry.

In the pathologising gaze, the photographic lens and composite portraiture were to zoom in on medical phenomena and impaired conditions of the human body and their deviation from a “healthy norm.” This medical perspective was based on the assumption of a genetic predisposition to certain diseases and of its visibility on the human body, so-called diathesis, for which the technique was supposed to provide evidence for. It focused on deviant physiognomies and supposed pathological traces as indicative of genetic degeneration. The visualisations sought to reveal ideal characteristics and composite forms of diseases in the fusion of outer facial shapes; this was to provide medical practice with an objective diagnostic tool and classificatory device. In this sense, composite portraiture can be described as a re-visualisation and manifestation of the visual-medical diagnostic paradigm: The formation of a clinical picture – a composite union – through the delineation of an ideal type of a disease by means of the combination of observations on many patients.¹ The presumed signs for these symptoms are constructed as evidence for the hereditary grounding of the pathological nature of the “cases” in question, further marginalizing the groups often already secluded in sanatoria and asylums.²

Contrary to its proclamation as a neutral instance of visualisation, the pathologising gaze of composite portraiture developed a prescriptive force and construed images of diseases oriented both at their prevalent social perception and at earlier diagnostic examples. The genetic postulate of the technique's pathologising gaze contributed to the negligence of other factors, such as social and environmental causes and theories of infectious transmission, and led to a further exclusion of the already marginalised groups in the “duplicate worlds”³ of specialised disciplinary institutions. These institutions, the psychiatric clinics, hospitals and sanatoria, augmented the power relations already inscribed in the unequal power dynamics of the patient-doctor relationship. It can be assumed that the participation of the patients in photographic experiments in the asylums was not voluntary and that the consent of the tuberculosis patients to be photographed at least partly was an effect of their dependency on the medical staff and institutions.

Francis Galton highlighted the importance of studies on “deviant” groups in the medical field and linked these to his work on the hereditary nature of genius. By studying extremes of mental and physical disease, he argued, it would be possible to draw conclusions on the human condition as a whole.⁴ This reveals the scientist's understanding of the human species as subject to the normal distribution, however with clearly defined binary limits on either side. His studies on mental illness brought Galton to two London mental asylums in 1881 and 1882, where he commissioned a photographer to take portraits of inmates. These institutions were the relatively new county asylum at Hanwell, which had opened in the early nineteenth-century, and the privately run Bethlem Royal Hospital, which dates back to the thirteenth-century and

¹ This is based on Foucault's observations on the epistemological reasoning of the clinical gaze. See Foucault: *Birth of the Clinic*.

² In recent academic literature the term pathologising gaze is used for the description of discriminatory regimes, in particular in relation to disability, mental health, gender and sexual orientation, but also with reference to historical medical and psychiatric practice and eugenics. See for instance: Goodley, Dan: “Theorising Disability and Humanity.” In: Linda Ware (ed.): *Critical Readings in Interdisciplinary Disability Studies: (Dis)Assemblages*. Cham: Springer, 2020, 41-52; Baril, Alexandre: “Transness as Debility: Rethinking Intersections between Trans and Disabled Embodiments.” In: *Feminist Review*, Vol. 111/1 2015, 59-74.

³ Susan Sontag coined this term in relation to nineteenth-century mental asylums, sanatoria and prisons. See Sontag, Susan: *Illness as Metaphor*. London, New York: Penguin, 1991 [1978], 36.

⁴ Galton argued: “No professor of metaphysics, psychology, or religion can claim to know the elements that he teaches, unless he is acquainted with the ordinary phenomena of idiocy, madness and epilepsy. He must study the manifestations of disease and congenital folly, as well as those of sanity and high intellect.” See Galton: *Inquiries into Human Faculty*, 47.

whose colloquial nickname “Bedlam” entered the dictionaries as a synonym for uproar, frenzy and confusion. Bethlem already had a history of photographic depiction of its patients, which affords an opportunity to discuss and compare the practices of medical photography as practiced on psychiatric patients with the later photographs taken for the production of composite portraits. Galton eventually abandoned his composite experiments on patients institutionalised in psychiatric clinics without publishing any results, and no actual photographic superimpositions are preserved. Still, his treatment of the portraits offers insights into contemporary scientific understandings of health and illness, as well as the relationship between body and mind and their presumed hereditary nature. A contemporary of Galton, the physician William Noyes eventually employed the technique on psychiatric patients at Bloomingdale Insane Asylum in New York City.

As part of my research I visited the clinics and their (former) sites in London. Hanwell now operates under the name of St. Bernhard’s Hospital behind its high and almost unbroken nineteenth-century walls. The former grounds of Bethlem now house the Imperial War Museum. The completely gutted central part of the building and the towering dome are preserved, but no sign indicates its former use, and the staff do not seem to be aware of its history. The new Bethlem Royal Hospital, which is also the site of the Bethlem Museum and Archives, is more advanced in relation to the documentation and discussion of its controversial history. Its well-curated exhibition discusses the historical practices in the institution and shows artworks by former patients. The clinic furthermore offers a programme of artistic education to current patients, whose works are shown in an adjoining gallery. George J. Harding, for instance, an artist and former patient, has produced a series of paintings that appear to comment on the history of the depiction of patients in the institution. His self-portraits, while largely maintaining a conventional head-and-shoulders structure, disguise and liquefy the face in ripples, as if seen as a reflection in water, or as if seen through a frosted mirror.⁵ The artistic expression of patients here challenges positivist perceptions of mental health and serves to form counter-images against the involuntary portraits produced in the earlier parts of Bethlem’s history.

⁵ See Harding, George J.: *My Body is a Boundary*, 2016 and *I’ Real But I also feel I’m Not*, 2016. Skull, 2016 and Happiness Projected, 2016. <https://museumofthemind.org.uk/collections/gallery/artists/george-j.-harding> [15/01/2022].

Parallel to his visual study of mental illnesses, Galton and the physicist Frederick Akbar Mahomed⁶ targeted another pathological condition. They worked on the visualisation of the physiognomy of tuberculosis, the most lethal disease in the nineteenth century,⁷ and conducted the, at that time, largest and most complex study attempted by means of composite portraiture. In 1881, they secured over 440 portraits of male and female patients diagnosed with tuberculosis in London hospitals. They published a large number of composite portraits, shortly before the verification of the infectious nature of tuberculosis by Robert Koch in 1882.

The examination of the pathologising gaze of the composite technique will start with a general discussion of the visual nature of medical diagnosis and reasoning, highlighting the importance of the medium of photography and the role of photographic compositions as biopolitical portraits. This perspective will be followed by an exploration of the photographic practices in psychiatric hospitals of the day, leading to a discussion of the portraits produced by Galton and his photographer in Hanwell and Bethlem asylums. This analysis of the technique’s use in mental institutions will be concluded with a discussion of the composite portraits produced by the psychiatrist William Noyes in New York. The second part of the chapter will deal with the pathologising gaze of composite portraiture as cast on tuberculosis, and its relation to the long-lived theory of the disease’s genetic diathesis that remained important even after the discovery of the tuberculosis bacillus. Moreover, composite photography enjoyed a long life in the medical field and was used and further developed until the mid-twentieth century. The chapter will conclude with an evaluation of the pathologising gaze of composite portraiture, showing its continuation in popular culture as well as socio-psychological examinations of today, which employ digital composite portraiture and artificial intelligence to detect sexual orientation.

⁶ Frederick Akbar Mahomed was the son of another famous Indian living in England, Sake Dean Mahomed, who is known as the first Asian author to have published a book in English. See Mahomed, Sake Dean: *The Travels of Dean Mahomet, a Native of Patna in Bengal, Through Several Parts of India, While in the Service of the Honourable the East India Company*. Written by himself, in a series of letters to a friend. Cork: J. Connor, 1794. See also: Fisher, Michael Herbert: *The First Indian Author in English: Dean Mahomed (1759–1851) in India, Ireland, and England*. Oxford: Oxford University Press, 1996.

⁷ See O’Connor, Erin: *Raw Material. Producing Pathology in Victorian Culture*. Durham, N.C./London: Duke University Press, 2000, 2.

Biopolitical Portraits: Establishing a Medico-Photographic Pathologising Gaze

The formation of the pathologising gaze of composite portraiture in the medical field was based on the already established use of photography in medical diagnosis and on a special form of seeing, a medical gaze that was aimed at detecting signs and markers for pathological conditions on the body of the patients. This strategy, which was employed in the disciplinary institutions of hospitals and psychiatric clinics, can be addressed, using Michel Foucault's concept of biopolitics, as a practice of what he described as normalising society.⁸ Composite portraits in this context can be described as biopolitical portraits that were aimed at the categorisation and management of the population on a societal level.

The use of photography in medical diagnosis was fostered by the increasing importance of the visible sign in the description of pathologies in the nineteenth century. In order to be analysed, classified and integrated into the repertoire of medical knowledge, illnesses and their specific signs and symptoms had to be recorded. This mode of observation made the camera the ideal tool for medical research, such as in Jean-Martin Charcot's well-known work on hysteria.⁹ Convinced of the physical basis of psychological disorders, the French neurologist had argued that in order to form valid diagnoses, "stigmata," visible signs of the illness, had to be described in the most accurate way, relying on the surface and interior of the body of the patient.¹⁰ This emphasis on the visual signs of a pathological status of the human body required the development of a specialised way of seeing, a medical gaze that focused on the physiognomy of the patient.¹¹ Photographs thus served as means of representing the individual case, as well as a general typology of a specific illness. In relation to the formation of medical types, composite portraiture was presented as a non-interventionist technique of visualisation that could combine representative cases in order to create more reliable general portraits of pathological states and would thus be able to update or verify the clinical picture of a given disease.

⁸ See Foucault: *Society Must Be Defended*.

⁹ See Charcot, Jean Martin: *Iconographie photographique de la Salpêtrière*. Paris: Adrien Delahaye & Co., 1878.

¹⁰ See Gilman, Sander: *The Jew's Body*, 61–62.

In Foucault's conceptualisation, the clinical gaze – and medical and empirical reasoning in general – is based on a bipolar normative ordering of human existence into normal and pathological.¹² This medical gaze was directed at the discovery of structures and the mapping of differences and similarities and therefore showed a proximity to certain modes of empirical reasoning in the natural sciences that were founded on the principle of seeing, isolating features, and the taxonomic classification into species and families.¹³ Foucault furthermore observed an entanglement of theory and practice, methods and results in the practice of "read(ing) the deep structures of visibility in which field and gaze are bound together by 'codes of knowledge.'" ¹⁴ Under this gaze that encompassed calculation and linguistic contextualisation, the symptom was developing into a signifying element.¹⁵ The body that initially held secrets, invisible structures hidden from the clinical gaze, develops into a readable surface, revealing its internal processes in meticulous studies of symptoms and signs, their frequency of occurrence and their progression, or eventually in post-mortem examination. In an analytic process of composition and decomposition, the "sign is [constructed as] the symptom itself, but in its original truth," ¹⁶ a truth in which the visible and the sayable communicate.¹⁷ This analytical structure of the composition of ideas and their comparison that is based on a visual metaphor became the dominant mode of scientific reasoning and knowledge production in the nineteenth century.

The photographic technique of composite portraiture could be read as a re-translation and reduction of this scientific paradigm, originally borrowed from the aesthetic field, back into the realm of the immediately perceptible and the new medium of visual recording – photography. The composite technique

¹¹ John Tagg, with reference to Michel Foucault, has described this as "an ever more intimate observation and an ever more subtle moral control; an ever more refined institutional order and an ever more encompassing discourse; and ever more passive subjection and an ever more dominant benevolent gaze." Tagg: *Burden of Representation*, 81.

¹² See Foucault: *Birth of the Clinic*, 34–35.

¹³ See Foucault: *Birth of the Clinic*, 89.

¹⁴ Foucault: *Birth of the Clinic*, 90.

¹⁵ See Foucault: *Birth of the Clinic*, 93–94: "Beneath a gaze that is sensitive to difference, simultaneity or succession, and frequency, the symptom therefore becomes a sign – a spontaneously differential operation, devoted to totality and to memory, and calculating as well; an act therefore, that joins, in a single movement, the element and the connexion of the elements among themselves."

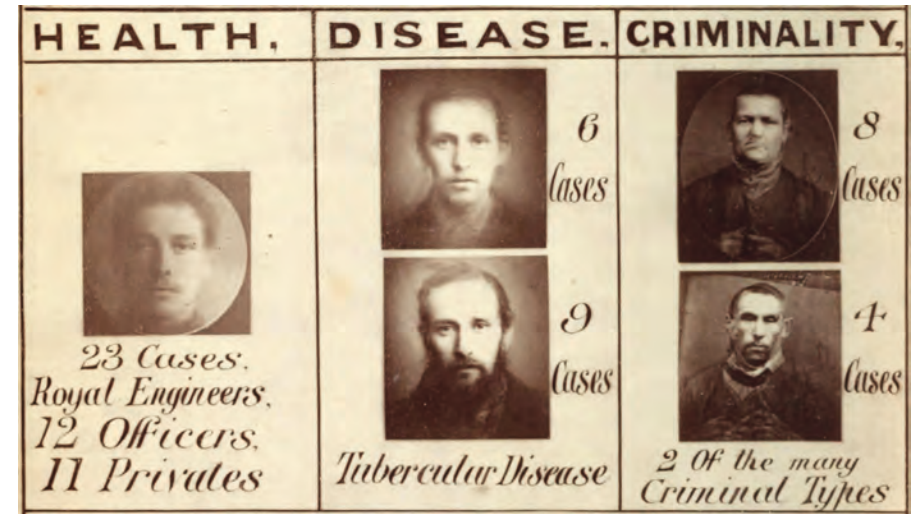
¹⁶ Foucault: *Birth of the Clinic*, 94.

¹⁷ See Foucault: *Birth of the Clinic*, 95.

incorporates the unresolved tensions between a spatial and chronological understanding of diseases in clinical medicine observed by Foucault.¹⁸ Composite portraiture, through its presumed photo-analytical potential, condenses the spatial and temporal dimensions of the classificatory and calculating clinical gaze in the flat surface of a meta-photographic print. According to its proponents, no inner truth and no hidden pathological state would remain invisible in composite portraiture, depending on the skillful choice of specimens and their productive composition. The pathologising gaze of composite portraiture, however, in a manner more violent than that of the processes hitherto established for the formation of clinical pictures, adopted an exclusionary and normative function, stigmatising groups already marginalised in society and contributing to the increasing biologising of human difference along the lines of genetic constitution.

The photographic visualisations of somatic and mental diseases and disorders undertaken by Galton and his contemporaries can best be understood in relation to Victorian conceptions of health, in which body and mind were seen as interdependent.¹⁹ Health was understood as a state of structural wholeness, dependent on the soundness of body and mind, as well as of the patient's spiritual environment and moral behaviour. This state of harmony and perfection was associated with responsible, ethical behavior, and with capitalist ideals of a productive contribution to society.²⁰ In this respect, a composite portrait, which Galton published under the heading of "Health," can be seen as a visual prototype.²¹ The individuals he was dealing with in relation to tuberculosis and mental illness were certainly not the role-models Galton had in mind. But with respect to his eugenic project, the groups that did not conform to the norm seemed a rewarding object of investigation – if only as visual antitheses – and here the pathologising gaze of composite portraiture promised practical results. The understanding of disease and health, as well as of criminality, as related phenomena of human hereditary development, finds its visual expression in the contrasting juxtaposition of composite portraits in the probably most widely diffused illustration of this kind: "Specimens of Composite Portraiture" that compiled examples from the central arenas in which the technique was employed. This normative holistic interpretation of human soundness and physical and moral deviance from that ideal links the pathologising with the criminalising gaze, as well as the eugenicising gaze of the technique.²²

The development of a specific medical gaze and, in particular, of the pathologising gaze of composite portraiture, in an increasingly state-sponsored



Galton, Francis: *Excerpt from: Specimens of Composite Portraiture*. In: Galton, Francis: *Inquiries into Human Faculty and its Development*. London: Dent, 1883, 8a.

apparatus of diagnosis, treatment, and containment of disease in the nineteenth century can be described with Michel Foucault's notion of "biopower." Biopower is conceptualised as: "a set of mechanisms through which the basic biological features of the human species became the object of a political strategy."²³ As a result of this management oriented perspective and the de-individualised understanding of humanity as species, biopolitics led to increasing governmental attempts of regulating the development of populations. These measures were aimed at securing an equilibrium that would protect society as a whole from internal and external dangers. Here the collective

¹⁸ As Foucault observed: "The 'history' of diseases [...] now assumes its chronological dimension. The 'course' of time occupies in the structure of this new knowledge the role in classificatory medicine of the flat space of the nosological picture." (*Birth of the Clinic*, 96).

¹⁹ See Haley, Bruce: *The Healthy Body and Victorian Culture*. Harvard, London: Harvard University Press, 1978, 3.

²⁰ See Haley: *The Healthy Body and Victorian Culture*, 20–21.

²¹ See chapter 7 for a more thorough discussion of this composite portrait.

²² The photographic practice of composite portraiture was mainly directed an increasingly institutionalised population in the prisons, mental asylums, and sanatoria of the day, aiding in their categorisation and management. In the early twentieth century, the inclusion of eugenic thought went as far as establishing eugenic principles for the penal system and executing forced sterilisation and euthanasia on mentally and physically impaired persons.

²³ Foucault: *Security, Territory, Population*, 1.

human body as a compound figure and statistical variable comes into focus, a variable influenced by all facets specific to life such as demographic development, productivity, or medical status.²⁴

The medical field in particular, as Foucault observed, constitutes a power-knowledge regime that could likewise take hold both of the individual body and the whole population, thus developing disciplinary as well as regulatory effects.²⁵ Discipline, being the technology to form individuals into efficient and productive members of society, goes hand in hand with biopolitical regulation deployed to manage the population as a whole.²⁶

What we are dealing with in this new technology of power is not exactly society [...], nor is it the individual-as-body. It is a new body, a multiple body, a body with so many heads that, while they might not be indefinite in number, cannot necessarily be counted. Biopolitics deals with the population, with the population as political problem, as a problem that is at once scientific and political, as a biological problem and as power's problem.²⁷

The image of the multiple body, sporting a diversity of faces, shows similarities to composite portraiture's conceptualisation as a form of visual statistics – as an averaging and synthesising machine that could bring order to this chaos, categorise the population and provide the inscrutable multitude with a face. This links up with Foucault's observations regarding the development of the subject-centred disciplinary society into what he calls normalising society.²⁸ This shift entailed the translation, or rather expansion of old disciplinary surveillance, which had been centred on the individual, into a technology addressed to a multitude, the statistically visualised crowd or population. This becomes particularly clear in the pathologising gaze of composite portraiture, which constituted a specific form of knowledge production in the medical field. Composite portraiture can indeed be understood as a visual-statistic technique of biopolitics, and the individual photographic compositions, as biopolitical portraits.

²⁴ See Foucault: *Society Must Be Defended*, 242–243.

²⁵ See Foucault: *Society Must Be Defended*, 252.

²⁶ See Foucault: *Society Must Be Defended*, 242–243.

²⁷ Foucault: *Society Must Be Defended*, 245.

Mental Images: Photographic Practices in Nineteenth-Century Psychiatric Clinics

Before entering into the discussion of the portraits that Galton secured for his experiments with composite portraiture in the psychiatric field, a glance at the earlier photographic practices in nineteenth-century psychiatric clinics, such as Bethlem Royal Hospital will prove useful. This perspective will cast light on the special uses of photography in diagnosis and classification, and on the discursive framework within which Galton embarked on his (eventually unsuccessful) endeavour to visualise the “typical face of madness.” Furthermore, the portraits tell stories about the iconography and practices of photographic recording performed on the subjects in psychiatric institutions of the time, practices that can be seen as alternative forms of a medical pathologising gaze.

Galton shared the fascination with what Susan Sontag has described as “duplicate worlds”²⁹ with many of his contemporaries. But that was surely not the only impulse that compelled him to commission portraits of inmates of London's asylums in the early 1880's.³⁰ Rather it seems the next logical step to embark on experiments with composite portraiture on mental pathologies after he had worked on the phenomenon of criminality. In his writings Galton moves easily from the description of criminal characteristics to psychological deficiencies. Epilepsy and emotional instability, he argues, were common in the criminal classes and “[m]adness is often associated with epilepsy; in all cases it is a frightful and hereditary disfigurement of humanity.”³¹ A conviction of the interrelation of mental illness and criminality was prevalent in nineteenth-century science, especially in the branches that favoured hereditary reasoning

²⁸ Foucault conceptualises the normalising society as follows: “The normalising society is a society in which the norm of discipline and the norm of regulation intersect along an orthogonal articulation [...] that [...] thanks to the play of technologies of discipline on the one hand and technologies of regulation on the other, succeeded in covering the whole surface that lies between the organic and the biological, between body and population.” See Foucault: *Society Must Be Defended*, 253.

²⁹ See Sontag: *Illness as Metaphor*, 35.

³⁰ Galton was intrigued with the behaviour of inmates of Hanwell Asylum, which he described by reference to *Vathek*, an Orientalist gothic novel. His contemporaries, also, were fascinated with the asylums and their patients, and it was a common pastime to visit the institutions, for instance to attend dances that were organized at Bethlem, among other places. See Galton: *Inquiries into Human Faculty*, 46–47; Beckford, William: *Vathek* (1782) English translation by Samuel Henley published as *An Arabian Tale From an Unpublished Manuscript*. London: J. Johnson, 1786. Newspaper articles also attest to the interest in the duplicate worlds; see for instance: *The Albion*, New York, Saturday, 2 April 1842.

over environmental and social explanations.³² Through composite portraiture, Galton sought to illuminate this genetic source of insanity and disease by photographic means.

The utilisation of photography was, at the time, established in medical practice and literature, and in particular in the field of psychiatry and the study of mental disorders, such as in the work of the French neurologists Duchenne de Boulogne³³ and Jean-Martin Charcot.³⁴ But Britain, also, had a history of photography in psychiatric clinics: John Conolly, a physician at Hanwell Asylum, who became known as one of the most influential protagonists of nineteenth-century psychiatric reform, published illustrations based on photographs in his series of articles on the “Physiognomy of Insanity”³⁵ and the psychiatrist Hugh Welsh Diamond worked on the application of photography for the depiction of mental illnesses.³⁶



Hering, Henry: *H. J. Acute Mania; H. J. Convalescent after Acute Mania; Portrait of J.B. and H.B., male patients (father and son) diagnosed with acute melancholia*, photographs, c. 1858. Bethlem Royal Hospital Archive, HPA-03; HPA-04; HPA-32.

³¹ Galton: *Inquiries into Human Faculty*, 45.

³² See among others: Mauldsley, Henry: *Responsibility in Mental Disease*. New York: Appleton, 1876.

³³ See De Boulogne, Duchenne: *Mécanisme de la physionomie humaine, ou Analyse électro-physiologique de l'expression des passions applicable à la pratique des arts plastiques*. Paris: J.-B. Baillière, 1876 [1862].

³⁴ Carcot, Jean Martin: *Iconographie Photographique de la Salpêtrière*.

³⁵ See Conolly, John: “The Physiognomy of Insanity.” Series of thirteen articles. In: *Medical Times and Gazette*, 1858–59.

Already in the 1850s photographic portraits of the patients were regularly taken at Bethlem Asylum. These photographs were produced not only as a tool for diagnosis and classification but also as a means for fostering the reformist work and public image of such institutions and their medical staff. Henry Hering, a professional photographer, who ran a studio in London’s Regent Street, produced portraits of Bethlem patients. Several individuals were photographed shortly after their admittance and before their release. These highly staged before-and-after images³⁷ convey telling stories: about the public image and perception of madness (ruffled hair, disfigured faces, and twisted bodies), as well as about the “moral treatment” of inmates and their prospects for regaining social respectability. But the images also show the increasing shift towards somatic and hereditary understandings of mental illness, such as in a double portrait of a father and son, both inmates of the clinic.³⁸ The photographic portraits were not produced by an expert in psychiatric medicine. Still, they show striking similarities to the work of the medical scientist and photographic pioneer Hugh Welsh Diamond and the resident physicians must have played a role in “directing” these scenes.

Photographic portraits in psychiatric hospitals of the time were increasingly understood as diagnostic aids and as visual material in the professional training of future experts in the newly emerging field of psychiatric medicine. In the late nineteenth century, illustrated handbooks and atlases that provided visual typologies of mental disorders became common.³⁹ Among the earliest photographers in the field was the psychiatric doctor Hugh W. Diamond, who had

³⁶ Diamond, Hugh W.: “On the Application of Photography to the Physiognomic and Mental Phenomena of Insanity. Read before the Royal Society, May 22, 1856.” In: Gilman, Sander (ed.): *The Face of Madness. Hugh W. Diamond and the Origin of Psychiatric Photography*. Brattleboro: Echo Point Books, 2014, 17–24.

³⁷ These before-and-after images clearly stand in the tradition of Alexander Morrison’s work that presented patients at different stages of their illness in a series of lithographs, based on almost impressionistic pencil drawings. See Morrison, Alexander: *The Physiognomy of Mental Diseases*. London: Longman, 1840.

³⁸ See the photographic portraits in the Bethlem Royal Hospital Archive. Hering, Henry: *H. J. Acute Mania; H. J. Convalescent after Acute Mania; Portrait of J.B. and H.B., male patients (father and son) diagnosed with acute melancholia*, photographs, 1858. Bethlem Royal Hospital Archive, HPA-03; HPA-04; HPA-32.

³⁹ Sander Gilman has identified examples for (lithographically) illustrated handbooks for psychiatric medicine in mid-nineteenth century: Dietrich Georg Kieser: *Elements of Psychiatry* (1855); and Max Leidensohn: *Textbook on Psychiatric Illness* (1865). As the first publication in the field that used actual photographic reproductions, he refers to Henri Dragonet’s *New Elemental and Practical Treatise on Mental Illness* (1876) See Gilman, Sander L.: *Seeing the Insane*. Lincoln, Nebr./London: University of Nebraska Press, 1996, 173–174.

received a part of his education at Bethlem Royal Hospital and who produced portraits of female inmates of the Surrey County Lunatic Asylum in the early 1850s. He published articles on the advantages of the medium of photography for the inquiry into mental illness; in these he linked the practice to physiognomic studies:

The Metaphysician and Moralist, the Physician and Physiologist will proach such an inquiry with their peculiar views, definitions and classifications. The Photographer, on the other hand, needs in many cases no aid from any language of his own, but prefers rather to listen, with the picture before him, to the silent but telling language of nature. [...] [T]he picture speaks for itself with the most marked pression [...] [T]he Photographer secures with unerring accuracy the external phenomena of each passion, as the really certain indication of internal derangement, and exhibits to the eye the well known sympathy which exists between the diseased brain and the organs and features of the body.⁴⁰

Diamond emphasised the allegedly direct relationship of physiognomic appearance and inner disposition that marked the discourse on mental illness in the late nineteenth century and that was also presumed by Galton in his experiments with composite portraits. Diamond described his photographic practice in terms of an immediate signification, directly “speaking” to the viewer in a language intelligible to all. The visual immanence of photographic representations was believed to surpass words and the unreliability of verbal clinical description. Diamond stressed the accuracy of the medium and its value in the production of evidence, its capacity for depicting individual characteristics as well as types, presenting “a perfect and faithful record, free altogether from the painful caricaturing which so disfigures almost all the published portraits of the Insane as to render them nearly valueless either for purposes of art or of science.”⁴¹

The study of the visual signs on the body and face, with recourse to physiognomic thought, as well as heredity explanation for the diagnosis of mental illnesses can be traced in many publications by nineteenth-century psychiatrists. Among others, John Conolly⁴² and John Charles Bucknill⁴³ emphasised the links between physiognomic thought; measurements of the physical structure of the body, head and brain; and hereditary explanations. From these observations, they drew conclusions for the diagnosis and treatment of psychological and psychiatric disorders – and in a proto-eugenicist manner, they advocated

⁴⁰ Diamond, Hugh W.: “On the Application of Photography,” 19–20.

⁴¹ Diamond, Hugh W.: “On the Application of Photography,” 24.

against the procreation of individuals diagnosed with so-called “hereditary insanity.” These positivist somatic explanations became coupled with the promise of a formerly unknown objectivity of visual representation through the new medium of photography, contributing to the photo-analytical pathologising gaze of composite portraiture.

Some of the staged asylum photographs taken by Henry Hering were later used in scientific publications on the relationship of physiognomy and mental illness. One even found its way into the collection of photographs that Charles Darwin assembled for his publication on *The Expression of the Emotions in Man and Animals*⁴⁴ that can be counted as an inspiration for Francis Galton’s exploration of the medium of photography and, in particular, composite portraiture. But even though realised in the medical context, Hering’s portraits were highly indebted to the iconography of commercial portraiture. These staged photos must have seemed inappropriate, even untruthful as visual representations of mental illness to Galton, who was not interested in extravagant emotional expression, but in the expressionless face as a neutral surface to be studied and compounded to reveal a deeper genetic truth. Unlike the judiciary portraits produced in the prison system, the photographs taken in the asylums of the day did not follow the requirements necessary for the production of composite portraits, thus Galton commissioned a new series of portraits.

Galton's Bethlem and Hanwell Portraits and Noyes's “Composite Types of Insanity”

It is worthwhile to consider the history and state of the London asylums Bethlem and Hanwell and the circumstances under which patients were living in these disciplinary institutions where Galton’s portraits were produced. This glance into the asylums helps to understand the production process of the source

⁴² Conolly expresses his belief in phrenology: “It is not only the variety of character, of which it may occur to some of my readers that the phrenological system affords the best apparent explanation. The facts alluded to in the text, many of the phenomena of disease, and THE OBSERVATION OF ALL MANKIND, seem to me to prove that the first principles of Phrenology are founded in Nature.” See Conolly, John: *An Inquiry Concerning Indications of Insanity, with Suggestions for the Better Protection and Care of the Insane*. London: John Taylor, 1830, 135.

⁴³ See Bucknill, John Charles; Tuke, Daniel Hack: *A Manual of Psychological Medicine Containing the Lunacy Laws, the Nosology, Statistics, Description, Diagnosis, Pathology, and Treatment of Insanity*. Fourth Edition. London: J.A. Churchill, 1879 [1858].

images for potential composite portraits in terms of a photographic act⁴⁵ and an affectual encounter with the images, including the circumstances of their production, even before the initial exposure, as well as their later contextualisation. Galton's photographic portraits of patients of psychiatric clinics were not aimed at diagnosis in an individual sense; they could rather be aligned to the scientific work of leading nineteenth-century "alienists" on the visualisation of disease patterns and clinical pictures of the heredity of insanity. The eventually failed attempt of securing composite portraits of pathological mental conditions was taken up in the United States by William Noyes, who produced series of composite portraits of his patients, who must have lived under conditions comparable to those in the British asylums.

In the two major institutions catering to the mentally affected in London at that time, Hanwell County Asylum and Bethlem Royal Hospital, an expert, presumably the prison photographer Mackie, took portraits according to Galton's guidelines.⁴⁶ In 1828, the privately run Bethlem, then as now Britain's oldest mental asylum, moved to a new building, crowned by an impressive dome, in the London Borough of Lambeth.⁴⁷ Hanwell, on the other hand, was built in 1831 in a period of a psychiatric reform as the first purpose-built asylum in England.⁴⁸ Its six wings, connected by three panopticon-style towers, resemble prison architecture and are located behind a high wall in the western outskirts of London. The complex was extended over the course of time and in the late nineteenth century became the largest mental hospital in all of Europe.⁴⁹ Parts of the original Hanwell complex are still in use as a psychiatric clinic and hospital.

⁴⁴ See Dale, Collin; Howard, Robert: *Presumed Curable. An Illustrated Casebook of Victorian Psychiatric Patients in Bethlem Hospital*. Petersfield, Philadelphia: Wrightson Biometric Publishing, 2003, 12.

⁴⁵ See Dubois: *Der fotografische Akt*; Geimer: *Theorien der Fotografie zur Einführung*, 38–39.

⁴⁶ The identity of the photographer remains unclear: even though the folder in the Galton Collection contains some cards by the professional photographer Benjamin J. Horn from Hoxton (1851–1932), it is likely that Galton commissioned the former prison photographer Mackie, whom he later hired for his work on tuberculosis patients.

⁴⁷ This building today houses the Imperial War Museum.

⁴⁸ The County Asylum at Hanwell was established under governmental jurisdiction in 1831 for the paupers and lower classes. As the first purpose built public asylum of London it could, like Pentonville Prison, be described as a model institution and as an example for the "lunacy reform" in the second half of the nineteenth century. This was part of a broader movement of philanthropic public intervention of constructing charitable institutions of confinement and "treatment" of persons that did not conform to the norm. See Scull, Andrew: *Social Order/Mental Disorder: Anglo-American Psychiatry in Historical Perspective*. Berkeley: University of California Press, 1989, 221–222.

Both clinics were run according to the principles of psychiatric reform, which denounced restraint and combined so-called "moral therapy" and recreation with opportunities for work. However, this doctrine of the treatment of mental disorders, advocated by William Ellis and John Conolly, who both were superintendents at Hanwell,⁵⁰ was all but non-violent. It called for the removal of patients from their families and communities, their separation from society and isolation among strangers. In the specially designed institutions strict daily routines were enforced, and a severe disciplinary regime was in practice, in which solitary confinement and the administering of sedatives were common.⁵¹ But in the late nineteenth-century, the relatively humane treatment that was pioneered in the state-run model clinic Hanwell became challenged by economic pressures and an increasing number of patients,⁵² as well as by new somatic and hereditary understandings of mental illness.

It was during this period of a backlash against the reformatory impulse of early nineteenth-century psychiatry that Galton and his photographer entered Bethlem and Hanwell. The most outrageous times of the "treatment" of the mentally ill had been left behind, yet the high ideals of "moral therapy" and "lunacy reform" had also begun to fade, and the conditions for patients in London's asylums deteriorated again.⁵³ Changing medical understandings of the sources and treatment of mental illness also played a part. An atmosphere of therapeutic pessimism entered the institutions, and hereditary, physiognomic, and class-biased understandings gained ground in diagnosis and treatment.⁵⁴ This change

⁴⁹ See Andrews, Jonathan et al.: *The History of Bethlem*. London/New York: Routledge, 1997, 492–502.

⁵⁰ See Scull: *Social Order/Mental Disorder*, 222.

⁵¹ See Rothman, David J.: *The Discovery of the Asylum: Social Order and Disorder in the New Republic*. Boston/Toronto: Little, Brown & Co., 1971, 137–138.

⁵² Initially constructed for 500 patients, Hanwell was enlarged in several phases between 1837 and 1879 to hold a little over 1800 patients in 1881. This was mainly due to increasing class segregation in the British asylum system: private patients were removed from county asylums; poor patients, from private institutions. While Hanwell Lunatic Asylum, as it was known, became the largest and through its metropolitan location the most visible British asylum, the private Bethlem Hospital, even though started to accept paying patients in the early 1880s, remained comparably small with its around 400 patients. On the class segregation of the asylum system see Scull: *Social Order/Mental Disorder*. On the development of Bethlem and the patient numbers there, see Andrews et al.: *History of Bethlem*, 492–502.

⁵³ With respect to nineteenth-century asylums in the United States, this development has been described as a decline from rehabilitation to custodianship by David J. Rothman in his *The Discovery of the Asylum*, 235–236.

⁵⁴ See Arnold, Catherine: *Bedlam: London and its Mad*. London: Symon & Schuster, 2008, 237.

in atmosphere at London's asylums extended to their medical superintendents at the time, in which Galton must have found like-minded thinkers. Henry Rayner at Hanwell has been characterised as a "convinced devolutionist,"⁵⁵ and George Henry Savage at Bethlem explicitly stressed the hereditary source of insanity, placing greater emphasis on physical and somatic causes than on treatment and moral development.⁵⁶ They were convinced of a genetic predisposition to mental illness. They shared physiognomic interpretations and must have been sympathetic to the advances of visualising mental (pre-)dispositions by means of composite portraiture.

A majority of the portraits of 76 male and 65 female patients from Bethlem, as well as all of the 191 male patients photographed at Hanwell display signs indicating their origin and consecutive numbers. The names or initials of the patients were scratched into the emulsion on the glass negatives preserved in the Galton Collection.⁵⁷ These negatives were copied to prints preserved as duplicates in the Galton Papers.⁵⁸ By means of this information, it is possible to trace the records of individual patients and their medical histories in the Bethlem Hospital Archives and in the London Metropolitan Archives. By comparing the periods of treatment of different patients,⁵⁹ who were often photographed a second time as part of the asylum's procedure, the photographs taken in Bethlem can be dated to the years 1881–1882. The portraits produced at Hanwell appear to have been taken at a slightly later date, as both the medical files in the Metropolitan Archives⁶⁰ and the internal evidence from the – rapidly professionalising – photographic procedures indicate.⁶¹

⁵⁵ Scull, Andrew; MacKenzie, Charlotte; Hervey, Nicholas (eds.): *Masters of Bedlam: The Transformation of the Mad-Doctoring Trade*. Princeton: Princeton University Press, 1996, 250.

⁵⁶ In 1878–1888, George Henry Savage was Resident Physician-Superintendent at Bethlem Hospital. He conducted a study on hereditary predisposition at Bethlem and argues that analogous to and interrelated with physical peculiarities, mental deficiencies were hereditarily transmitted. These stigmata, such as a peculiar shape of the head, could be observed in the asylum population. In his study, Savage deducted a genetic predisposition in 375 out of 1072 admissions, equalling 34.9 % of the patients admitted during that time. See Savage, George Henry: "Some Relations of Mental Disease to Inheritance." In: *Guy's Hospital Reports*, 22, 1877, 56–95.

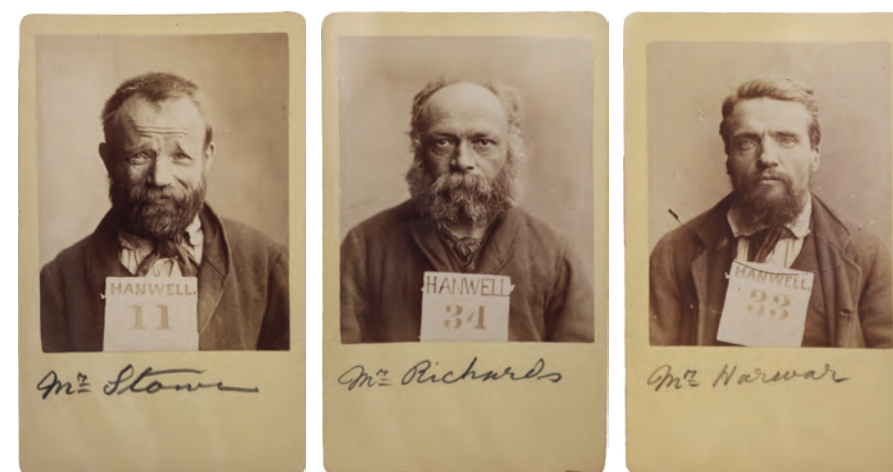
⁵⁷ Galton Collection, University College London, GALT 385.

⁵⁸ Galton Papers, UCL, GALTON 2/8/1/5/1-6.

⁵⁹ Due to restrictions in the admission of "incurable cases" and long-term stays, patients in Bethlem seldom stayed longer than two years. See Andrews et al.: *History of Bethlem*, 457–458.

⁶⁰ The admission dates seem to indicate a later arrival of some of the patients portrayed. See H11/HLL/B20, London Metropolitan Archives.

The photographs taken by Galton's photographer at the institutions are seated, head-and-shoulder, frontal portraits, zooming in closer on the face than the staged portraits taken by Hering. Patients were photographed in front of a neutral background, and without any studio props. Some women institutionalised at Bethlem, a private hospital, wear dresses, bonnets or hats, scarfs and jewelry; some men, suits and hats. At Hanwell, a state-run hospital catering to a less prosperous clientele, the sitters' attire is more basic: uniform-style clothes and identical scarves provided by the institution.



Galton, Francis: Portraits of patients of Hanwell Asylum commissioned by Galton, No. 11; No. 34; No. 33, mounted prints, c. 1880–1882. Galton Papers, University College London, GALTON 2/8/1/6/1.

In his autobiography, Galton relates an incident during his work at Hanwell Asylum that offers insights into the manner in which the portraits were taken:

I took a photographer with me to Hanwell, where it was arranged that the patients should sit two at a time on a bench. One of them was to be led forward and posted in front of the camera [...]. It happened that the second of the pair who were the first to occupy the bench considered himself to be a very mighty man, I forget whom, but let us say Alexander the Great. He boiled with internal fury at not being given precedence, and when the photographer had his head well under the velvet cloth, with his body bent, in the familiar attitude of photographers while focusing, Alexander the Great slid swiftly to his rear and administered a really good bite to the unprotected hinder end of the poor photographer, whose scared face emerging from under the velvet cloth rises vividly in my memory.⁶²

What is presented as a funny anecdote cannot hide the circumstances under which the patients were brought under the pathologising photographic gaze. Patients were taken to an unfamiliar place, were exposed to an inscrutable situation and had to line up before they were furnished with a sign spelling out the name of their respective institution, thereby highlighting the unfortunate situation they found themselves in. The signs and numbers, as well as the poses they had to take, must have been familiar to them as being adopted from the judiciary routine performed in the prisons of the time. Furthermore their institutional background informed the images: the patients dragged before the inquiring photographic lens, had been living, sometimes for years, under constant supervision in the highly regimented disciplinary institutions.

In order to eliminate instabilities and tensions deemed detrimental to mental sanity, the mental asylums of the time practiced a repressive regime of strict isolation from family and friends, at the same time secluding patients from a public kept at bay by the high walls and fences surrounding the clinics. The terminology used to describe the institutional organisation was often that of the household,⁶³ and internal arrangements were oriented at a disciplined and “well-regulated family”⁶⁴ – needless to say that the patients were expected to play the role of obedient children. The mental hospitals of the time showed many similarities with Victorian penitentiaries: both relied on strict discipline, exact and punctual routines, and a repertoire of punishments. Secluded from the public, inmates lead their lives at the mercy of their guardians and doctors. In this respect, the allocation of the patients for Galton’s physiognomic experiments, the recording of the images, was further adding to their loss of individuality and agency.

It is difficult to say what this procedure of being photographed in such a way, in the style of the “mugshot,” meant for the psychologically instable patients. It is likely that the photographs were taken without their consent, or at least without their appreciation, as the critical glances of many patients and some individuals’ refusal to adhere to the strict guidelines show. These photographs are different from the staged portraits of Hering and Conolly, which sought to capture the essence of a given disease in the expression and physique of

⁶¹ For the first cases in Bethlem, handwritten numbers were used that are later replaced by printed signs; at Hanwell, nearly all patients were photographed with these.

⁶² Galton: *Memories of My Life*, 262–263.

⁶³ See Rothman: *Discovery of the Asylum*, 151.

afflicted individuals, but at least partly allowed for their self-fashioning and deliberate interaction with the camera and as a part of their “moral treatment.” In the portraits commissioned by Galton, to which the patients most likely never had access, the individuals are reduced to numbers, their facial features, to a pathological surface, destined to dissolve in the photographic compositions.

These peculiar portraits can be discussed with reference to the photo-theoretical writings of Philipp Dubois, who aims to reunite the indexical status of photography with the social-constructivist understanding of the medium, highlighting the stages of recording, as well as pre- and post-coding that take part in the construction and reception of the image.⁶⁵ Traces of the circumstances of production become inscribed in the images via iconographic specifications and culturally coded gestures⁶⁶ – and the agency of the sitters becomes revealed, such as in provocative postures and glances in some of the portraits. This opening up of the “photographic product,” now understood as an ongoing process, including the reception, individual recognition and potential misconception of the image, allows for an observation of its affective dimension. The affective responses of the sitters in the moment of photographic exposure find their continuity in the images’ reception and in the fascination these portraits still hold for an audience almost one hundred fifty years after their making. Many of the disciplinary portraits taken of the psychiatric patients did not succeed in producing docile bodies and faces, but show gestures that oppose the power dynamics prevalent in the disciplinary institutions and in the inquiring gaze of the photographic lens.

This unruly emotionality of the faces that could not be forced into repose might have been the reason why Galton did not produce a “composite portrait of insanity” as he had planned. He abandoned his experiments after realising that he “could not make good composites of lunatics; their features are apt to be so irregular in different ways that it was impossible to blend them.”⁶⁷ But even though his experiments did not produce the results he had hoped for, the portraits nevertheless document an important stage in the development of the composite technique and are likely to have influenced Galton’s visual study on tuberculosis that he had embarked on around the same time.

⁶⁴ Earle, Pliny: “N.Y. Lunacy Asylum Annual Report, 1851.” Quoted in: Rothman: *Discovery of the Asylum*, 152.

⁶⁵ See Dubois: *Der fotografische Akt*, 68.

⁶⁶ See Dubois: *Der fotografische Akt*, 44.



Galton, Francis: Portraits of patients of Bethlem Asylum commissioned by Galton, No. 1; No. 21; No. 6, mounted prints, c. 1880–1881, Galton Papers, University College London, GALTON 2/8/1/5/1.

The idea of producing “typical” faces of mental disorders, however, prevailed, and less than a decade later, a New York-based psychiatrist did indeed produce composite portraits of his patients. William Noyes was apparently not aware of Galton’s experiments when he noted that: “[m]ost studies in composites have been confined, up to this time, to normal individuals, and, so far as the present writer is aware, no attempts have been made to secure composite types of insanity.”⁶⁸ These composite portraits were compiled from negatives taken by Noyes, according to Galton’s instructions, at Bloomingdale Asylum in New York City and composed by the Notman Photographic Company of Boston.⁶⁹ The composite of “melancholia” consists of eight components, all male; that of “paresis,” a term used to describe disease patterns of muscular weakness, progressive dementia and feeble-mindedness, was produced from the portraits of eight patients, three female and five male. The composites were published together with a text, in which the author expresses his conviction of the explanatory value of composite portraiture:

The composites seem fairly to represent the physiognomy of the two diseases; and that of paresis has been spoken of by several alienists as being a typically characteristic face. The well-known look of easy-going complacency of paresis is strongly shown in the portrait.⁷⁰

⁶⁷ Galton: *Memories of My Life*, 262.

⁶⁸ Noyes, William: “Composite Portraiture of the Insane.” In: *Science*, 9, 1888, no. 277, 252–253, at 252.



Noyes, William: *Melancholia; Paresis*, composed from negatives by William Noyes by Notman Co., Boston, 1887; *Advanced Paresis*, composed by Taylor, Philadelphia, 1888. Galton Papers, UCL, GALTON 2/8/1/1/12.

Noyes goes on to argue that mental diseases would offer an excellent field for the study of types and that these would give a more appropriate conception of the typical expressions than portraits deduced from typical individual cases.⁷¹ Noyes tried to make the composite technique useful for descriptive and diagnostic purposes in the field of psychiatric medicine, thus following a course already commenced by the early proponents of the use of photography in the medical and psychiatric fields. The images cast a pathologising gaze on the patients, proclaiming a common visible typology of the rather diffuse clinical diagnoses. Visually, however, the composite faces share the indistinct ambiguity of the medical diagnoses, an observation that is sustained with respect to the diversity of appearance and emotional expression in the component portraits of the patients.

Still, Noyes’s psychiatric composite faces received an enthusiastic response from the German archaeologist and art historian Georg Treu, who praised the compositions for revealing a clear visual representation of mental diseases and their specific qualities and argued that they allowed for a glance into the inner life and psyche of the typical patients. He observed hereditary forms of skull deformation in the composites and commented on the differences in general expression, but attributed a particular significance to the eyes and the pathological nature of the sitters’ gaze:⁷²

[The eyes] of the feeble-minded have a stupid expression; those of the melancholic have a misty, deeply sad glance. It seems as if the combined agony of many pairs of eyes was looking at us; as if the abysses of an inner life full of suffering were opening before us.⁷³

A recurring motive in contemporary descriptions of composite portraits is the eyes and their glances, directed back at the lens and viewer.⁷⁴ These glances are not on an equal plane and the peculiar kind of eye-to-eye contact, sustained, on the active viewer's part, from the safe analytical position of the observer, allows for speculation on the inner worlds, the psyche of the patients in their suffering read in their eyes and glances. This affectual contact is not reciprocal; it is dominated by power structures that fix the pathological status of the de-individualised "specimens" under observation. It left the interpretative power and judgement to the viewers, providing them with the authority to verify their assumptions on the pathological state and its embodiment. Here the force of the pathologising gaze of composite portraiture comes to the fore: as a multiple lens capturing a common deviant physiognomy, amplifying the traces of an inherent, impending disease in the combined surfaces of the faces under observation. The superimposed de-individualised facial characteristics are construed as a typical representation: as the common face of a peculiar disease or pathological state that invites diagnostic comparisons with other potentially unsound individuals.

In a letter addressed to Galton, Noyes refers to a composite portrait of fifteen nurses in training at the McLean Asylum in Somerville, Massachusetts.⁷⁵ This shows that on the other side of the Atlantic, the technique was not only employed on patients. It was also used on the medical staff, albeit for very different purposes. In contrast to the pathologising gaze directed at the patients, composites prepared in educational contexts can be seen as counter-images, as sane and healthy eugenic prototypes for the future of American society.⁷⁶

⁶⁹ Bloomingdale Asylum housed about 150 patients in two separate buildings for male and female inmate, divided into six categories for men, four for women. See Rothman: *Discovery of the Asylum*, 148.

⁷⁰ Noyes: "Composite Portraiture of the Insane," 253.

⁷¹ See Noyes: "Composite Portraiture of the Insane," 253.

⁷² See Treu: "Durchschnittsbild und Schönheit," 437.

⁷³ Treu: "Durchschnittsbild und Schönheit," 437 (my translation).

⁷⁴ See also the discussion of the eyes and gaze of the composite portrait of the Jewish boys in chapter 4.

⁷⁵ Noyes, William: Letter addressed to Francis Galton, 6 April 1888. Galton Collection, UCL GALTON/2/8/1/1/12 f8. The composite was published as "Fifteen Nurses. Class of '86 at the McLean Asylum

This links in with Galton's initial perspective on composite portraiture in the medical field and the study of extremes of human existence and deviation from the norm – extremes that, if deciphered by the photographic technique of visual analysis, could function as counter-images to the morally impeccable, mentally sound, physically healthy, and genetically fit prototypes for Galton's eugenic project. And it was with respect to eugenics that the pathologising gaze of composite portraiture developed its darkest legacy. The technique can be seen as an instrument in establishing deviance and as a potential means in the biopolitical management of the population within a normalising society in the Foucauldian sense, which became established in the nineteenth century and in which the medical pathologising gaze played a central role.

The Composite Face of Tuberculosis

Parallel to the experiments on the visualisation of mental illnesses, the pathologising gaze of composite portraiture was cast on the phenomenon of tuberculosis. In the late nineteenth century, when Francis Galton and Frederick Akbar Mahomed were conducting their visual studies, the disease had devastating effects, especially in densely populated urban areas, and thus constituted a pressing objective for medical research. The symptoms of the disease were ambiguous, its diagnosis and classification proved difficult, and contemporary medical knowledge did not allow for the effective treatment of patients. The discussion of the pathologising effects of the technique in this arena will start with the consideration of the public perception and social and medical importance of the disease. It continues with an analysis of contemporary scientific explanations that in northern European expert opinion, just as in the case of mental illness, considered hereditary predispositions and genetic degeneration the main causes of tuberculosis. This general perspective will be followed by the examination of the pathologising gaze of composite portraits and an analysis of the images – and their affective potential – in Galton's and Mahomed's articles on tuberculosis. Their afterlife in Karl Pearson's work reveals the persistence of genetic explanatory models of tuberculosis in medical circles well into the twentieth century, despite the verification of the contagious nature of the disease by Robert Koch in 1882, only months after the publication of the photographic experiments.

In the nineteenth century, tuberculosis and related consumptive pulmonary diseases were perhaps the most common cause of death worldwide⁷⁷ and were described to “carry off prematurely one fourth part of the inhabitants of Europe.”⁷⁸ Prevalent especially in the cities and among the poor, but also in upper-class households, the infectious disease affected primarily children and young adults. In particular in the disciplinary institutions of the day, tuberculosis took its toll: in workhouses, penitentiaries, asylums, as well as among the military population, the rates of tuberculosis were considerable.⁷⁹ So strong was the influence of tuberculosis on nineteenth-century Britain that consumption became a metaphor⁸⁰ for what in the “degenerationist” climate of the Victorian era was conceived of as the pathological constitution of the wasting social body of Britain – the downside of increasing urbanisation and industrialisation.⁸¹

Rene and Jean Dubos argue that diseases can manifest multiple personalities and that, in the course of history, their descriptions and classifications underlie a continuous process of change.⁸² This proves particularly true for tuberculous infections. Their symptoms have historically been labeled under a variety of names, the most common being consumption and phthisis.⁸³ Two central and conflicting preconceptions characterised the medical understanding of tuberculosis in the nineteenth century: the majority of southern European scientific and medical practitioners regarded tuberculosis as a contagious disease,

Training School” in: Stoddard, John Tappan: “College Composites.” In: *The Century*, 35:1, November 1887, 121–125, at 125.

⁷⁶ Composite portraiture’s affirmative visualisations will be elaborated on in chapter 7.

⁷⁷ See Dubos, Rene; Dubos, Jean: *The White Plague. Tuberculosis, Man and Society*. Boston: Little, Brown & Co., 1952, 10. According to Erin O’Connor, tuberculosis caused a third of all deaths between 1800 and 1850, before its mortality was halved between 1850 and 1910. See O’Connor: *Raw Material*, 2.

⁷⁸ Quoted in Dubos; Dubos: *White Plague*, 9.

⁷⁹ See Dubos; Dubos: *White Plague*, 9–10.

⁸⁰ Susan Sontag describes how disease itself can become a metaphor. See Sontag: *Illness as Metaphor*, 60.

⁸¹ In *Past and Present* (1843) Thomas Carlyle described the condition of England as one of terminal illness, and the country’s ailment as consumption. See O’Connor: *Raw Material*, 2.

⁸² See Dubos; Dubos: *White Plague*, 3.

⁸³ This was due to the many facets of the infection, but also the perspectives and preconceptions under which the disease and its symptoms were classified. The tubercle bacilli can affect the lungs and pulmonary organs and can cause a generalised infection of most organs of the human body, but the disease can also be limited to certain parts. The different symptoms of the infection were often diagnosed as separate diseases, while other wasting diseases of the chest, such as cancer, silicosis, and pulmonary infections were confused with tuberculosis.

transmitted through direct contact, since the disease was particularly common in certain families and communities. Northern European medical scientists, meanwhile, predominantly believed that its causes lay in hereditary defects.⁸⁴ This is attested by a standard medical handbook of the time that draws parallels to mental illness:

Facts show the tuberculous diathesis in a certain proportion of cases to be congenital and inherited. Why a peculiarity of constitution rendering a person specially liable, at a certain age, to the development of this disease should be transmitted from parent to child, cannot be explained more than the fact that peculiar traits of physiognomy or mental character are inherited.⁸⁵

At the time of Galton’s and Mahomed’s experiments, the germ theory of disease and the infectious nature of tuberculosis had not yet been established in Northern European medical circles. Tuberculosis was partly blamed on poverty and insanitary surroundings, but at the same time, an inner, genetic disposition was believed to be a prerequisite for contracting the disease. This understanding went along with an ambivalent metaphoric perception of tuberculosis, on the one hand as a pathological process in which the body was consumed, interrupted by phases of euphoria, increased appetite, and sexual desire, before it led to inevitable death. On the other hand, the disease evoked romantic notions and was associated with a superior sensitivity, creativity, sadness, and vulnerability. In certain circles, the illness-ridden, delicate body was treated as a macabre sign of individuality,⁸⁶ but also as a melancholic symbol of beauty and as an indication for genius.⁸⁷ The pale, emaciated tubercular face became an emblem, carrying the auspicious marks of inner value and destructive genetic pathology at once. These ambiguous understandings of the disease formed the basis for the visual-hereditary approach and the pathologising gaze of composite portraiture proposed by Galton and Mahomed that aimed to depict the “physiognomy of consumption” in the faces of tuberculosis patients.

⁸⁴ The understanding of tuberculosis as a contagious disease dates back to Italian writings of the sixteenth century. And while in large parts of southern Europe, such as in Italy and Spain, first prophylactic rules and legislations were passed in the late seventeenth and early eighteenth centuries to contain the transmission of the disease, in northern Europe and Britain no such precautions were taken. The perception of tuberculosis as a hereditary defect was expressed by French writings of the seventeenth century and remained accepted until the late nineteenth century in northern European medical science. See Dubos; Dubos: *White Plague*, 28–29.

⁸⁵ Flint, August; Welch, William H.: *The Principles and Practice of Medicine*, Fifth Edition, 1881, 295.

⁸⁶ See Sontag: *Illness as Metaphor*, 31.

⁸⁷ For an extended discussion of the impact of tuberculosis on nineteenth-century aesthetics see Dubos; Dubos: *White Plague*, 56–57.

Here again it is what Galton described as the study of extremes, the extremes of genius and degeneration as manifested on the face and in its deeper genetic structure of sufferers from tuberculosis, that fascinated the nineteenth-century scientists.

For their study, Galton and Mahomed commissioned portraits of 442 patients, between the age of fifteen and forty, diagnosed with tuberculosis at Brompton Hospital, Victoria Park Hospital, and Guy's Hospital, all in London. For purposes of comparison with these 261 male and 181 female "specimens," random portraits of 100 male and 100 female non-tubercular patients were taken at Guy's Hospital. The portraits were produced by Galton and Mahomed, as well as by a professional photographer employed at Pentonville Prison, who was able to quickly photograph the out-patients of all four hospitals.⁸⁸ To accompany the photographs, the physicians of the respective hospitals were asked to fill out a form, providing information on the patients and their diagnoses, stating among others the extent, duration, and the "hereditary taint" of the disease in the respective cases. The composite technique was supposed to provide evidence for the theory of diathesis, the belief in a hereditary physical formation that indicates predispositions to certain diseases. The case study on the physiognomy of consumption, the scientists argued, was to prove a most fruitful endeavour to evaluate these theories:

Probably no diathetic types are more commonly recognized, either rightly or wrongly, than the so-called tubercular and strumous; [...] It has appeared to us that this belief might be put to the test by the means of 'composite portraiture;' in short, that we might be able to ascertain whether there are any facial characteristics common to any large proportion of cases of phthisis.⁸⁹

This was the largest and most complex study conducted with composite portraiture in the medical field in the nineteenth century, providing the scientists with 642 portraits and the accompanying information. The handling of such a large number of cases apparently proved difficult and no obvious physical commonalities could be detected in the portraits, which forced the scientists to abandon their initial plans of composing portraits strictly according to the diagnoses.

⁸⁸ The prison photographer Mackie is credited by Galton and Mahomed. See Galton; Mahomed: "An inquiry into the physiognomy of phthisis," 478. See also the description of the recording process in the *Fortnightly Review*. See Galton, Francis: "Photographic chronicles from childhood to age." In: *Fortnightly Review*, 31, 1882, 26–31.

⁸⁹ Galton; Mahomed: "An inquiry into the physiognomy of phthisis," 476.



Galton, Francis: Excerpt from *Specimens of Composite Portraiture*. In: Galton, Francis: *Inquiries into Human Faculty and its Development*. London: Dent, 1883, 8a.

In order to deal with the apparent absence of characteristic features in the portraits, Galton picked out 56 cases of women described by the physicians as exhibiting a strong hereditary disposition and proceeded by making random classifications along visual characteristics: "[...] sorting them tentatively in various ways, I began to perceive what seemed to be natural groups."⁹⁰ From these, eleven "natural groups" with about five components each, composite portraits were produced and arranged yet again into two groups. From these, in turn, compound composites⁹¹ were compiled, and so, eventually, a co-compound composite of both groups was created. These resulting composite portraits were ultimately declared as the ideal faces of tuberculosis, revealing the prescriptive nature of the pathologising gaze of the photographic technique: "I have no doubt that any future inquirer who deals as I have done with no less than fifty cases, will arrive at an ideal face almost identical with that which I have produced."⁹² As the authors also observe, the two physiognomic types, produced by Galton by way of his self-fulfilling visual approach, coincide with the then prevailing medical typology of phthisis, which classed patients as either "strumous" or "tubercular."

⁹⁰ Galton; Mahomed: "An inquiry into the physiognomy of phthisis," 482.

⁹¹ The term compound composite or co-composite was used to describe the photographic superimposition of two or more composite portraits.

⁹² Galton; Mahomed: "An inquiry into the physiognomy of phthisis," 483.

Figure I in the chart Consumption and other Maladies contains the combination of broad features, Figure II that of thin faces. Next to these a co-composite of these two groups is placed. On the right side, composites of non-consumptive male and female patients are placed for comparison. Galton, omitting his careful selection process, argues that when dealing with a sufficient number of cases, the combination was always resulting in an “ideal expression.”⁹³ Here the term “ideal expression” becomes a messy and contradictory category. This ambivalence and the incongruous prospects of the technique as, on the one hand, a means of typifying and, on the other, as an averaging device, are commented on by Galton and Mahomed:

It appears that the method of composite portraiture may be employed to obtain two different and equally advantageous results. Firstly, by throwing into one large number, say fifty different faces, taken without selection whatever, we can obtain an average of them all; but this presents no features or expressions characteristic of what may be called secondary types [...] Secondly it is possible by taking carefully select faces to form a composite face having certain characteristic features [...]⁹⁴

The scientists thus present different types, a general type and specific morphological expressions of different facets of the same medical phenomenon, that were compiled according to visual characteristics. In order to justify the visual results of their carefully selected combination of portraits, they adopted a rather ludicrous testing method, arguing that if these arbitrarily selected composites were not following the predefined characteristics, the selection must have been ill assorted. This self-fulfilling evidence does, however, not establish anything, but merely reproduces visual preconceptions of the disease in question, intensifying the pathologising gaze and normative nature of the composite visualisations.

Following this logic and the division of portraits along lines of overall likeness, further composites were produced from the source material, grouping broad and delicate features respectively. The final publication in *Guy's Hospital Reports* contains an overwhelming number of 47 composites and 113 individual portraits. The illustrations are arranged in figures: a larger, vignetted print of the composite, followed by downscaled individual component portraits, sometimes yet again superimposed co-composite portraits. The article shows the different foci and interpretations, but also the different strategies of Galton, the polymath,

⁹³ Galton: *Inquiries into Human Faculty*, 11.

⁹⁴ Galton; Mahomed: “An inquiry into the physiognomy of phthisis,” 483–484.



Galton, Francis; A.F. Mahomed: Plate IV. In: Galton, Francis; A.F. Mahomed: “An Inquiry into the Physiognomy of Phthisis by the Method of ‘Composite Portraiture.’” In: *Guy's Hospital Reports* XXV, Feb. 1882, Plate IV. Galton, Francis; A.F. Mahomed: Selected similar type of face. Galton Papers, UCL, GALTON 2/8/1/3/14.

and Mahomed, the physician. The majority of the text was apparently written by Mahomed; a part by Galton is inserted almost like a quotation from an external source, which is then further discussed and evaluated. While Galton quickly presents a solution and a prototype of the hereditary consumptive physiognomy, Mahomed admits that the evidence for the hypothesis that a special type of face predominated among the patients remained inconclusive. Nevertheless the authors conclude, apparently unimpressed: “though much error has been accumulated around the doctrine of ‘diatheses,’ it nevertheless contains a nucleus of valuable truth,”⁹⁵ while the findings they present do certainly not provide sufficient evidence for their initial hypothesis of a visible physiognomic difference and the presence of pathological signs in the faces of tuberculosis patients. Rather than consolidating a common visual type, the sheer mass of illustrations in the article has a curiously distracting effect and the different facial features in the component portraits seem a visual contradiction to any hypothesis of a common likeness or physiognomy of the patients portrayed.



Galton, Francis; A.F. Mahomed: Composite portraits from the series on tuberculosis, glass negatives and positives, c. 1881, Galton Collection, University College London, GALT 389, courtesy of UCL science collections.

This visual encounter with the over 150 human faces, in all their difference, all looking directly at the viewer, is thoroughly exhausting. With each and every face an affective relationship is built, sympathies or antipathies come to the fore and emotions are read into the countenances, composites and components alike. This strange feeling was also noted by Galton. In what may appear like a contradiction to the emphasis placed on the scientific objectivity attributed

⁹⁵ Galton; Mahomed: "An inquiry into the physiognomy of phthisis," 493.

to the composite technique, he remarks on the emotional reactions he experienced during the process of sorting the photographic portraits for his experiments on the deviant bodies of tuberculosis and criminality:

In the large experience I have had of sorting photographs, literally by the thousand, while making experiments with composites, I have been struck by certain general impressions. The consumptive patients consisted of many hundred cases, including a considerable proportion of very ignoble specimens of humanity. Some were scrofulous and misshapen, or suffered from various loathsome forms of inherited disease; most were ill nourished. Nevertheless, in studying their portraits the pathetic interest prevailed, and I returned day after day to my tedious work of classification, with a liking for my materials. It was quite otherwise with the criminals. I did not adequately appreciate the degradation of their expressions for some time; at last the sense of it took firm hold of me, and I cannot now handle the portraits without overcoming by an effort the aversion they suggest.⁹⁶

Here Galton reveals his sympathies and aversions towards the groups of people he perceived as genetically and morally degraded, but he also shares his unrefined, affective responses to their faces, each and every face demanding full attention. This emotional, ad-hoc way of pathologising the photographic specimens is characteristic of Galton's work, but it also might have been a protective mechanism in relation to this mass of individual representations. It also shows the continuity of physiognomic readings of the face, which were grounded in a more immediate, folk-knowledge-based perception of an uncanny physique and in sub-conscious affective responses. Galton's aim of establishing a visual typology of mental and physical diseases by photographic means shows the persistence of physiognomic thought in late nineteenth-century medicine and science. The corresponding ideas were provided with fresh vigour through the contemporary phenotypical understanding of heredity – and through the dissemination of affective images.

While Galton and Mahomed were organising photo sessions in London hospitals, Robert Koch was conducting his famous experiments on the transmission of tuberculosis in guinea pigs. The discovery of the tuberculosis bacillus (*Mycobacterium tuberculosis*) in 1882 fundamentally discredited the general assumptions of their photographic study. So just over a month after its publication, the scientific value of the article on the physiognomy of tuberculosis was reduced to zero. Was the impending revelation of the infectious nature of tuberculosis a probable reason for Galton and Mahomed to rush their putative findings to the printing press,⁹⁷ or did they simply not believe in the straightforward germ

⁹⁶ Galton: *Inquiries into Human Faculty*, 12–13.

theory of disease, maintaining the value of composite portraiture and its pathologising gaze? Galton, who must have been aware of the verification of the contagious nature of tuberculosis, continued to use the photographic images to illustrate his work on composite portraiture in his *Inquiries into Human Faculty and its Development* of 1883 and in later editions of the same book. He also refers to his work on tuberculosis in his autobiography published in 1909 and mentions the untimely death of his co-author Mahomed. These obvious hints pointing towards a contagious nature of the disease, however, did not lead Galton to re-evaluate the pathologising gaze of composite portraiture, neither did he change his views on the disease's hereditary nature and the existence of a diathesis for tuberculosis.

As late as 1924, Karl Pearson, a disciple of Galton and fellow eugenicist, in a reevaluation of Galton's and Mahomed's work played down the infectious transmission of tuberculosis, going so far as to question the doubts on the theory of tubercular diathesis raised in the article in *Guy's Hospital Reports*.⁹⁸ Pearson's argument shows the interconnection of medicine and eugenics in the reasoning on tubercular diathesis in the writings around the turn of the twentieth century. In his own study on tuberculosis, published in 1907, Pearson argues: "The discovery of the possibility of phthisical infection has led, I think, to [an] underestimation of the hereditary factor."⁹⁹ And then he gives the observation a eugenic twist, arguing that the theory of infection did not account for genetic facts, and blames the medical profession for their disregard of eugenics, encouraging the reproduction of undesirable parts of the population.¹⁰⁰ Drawing on the pathologising gaze of composite portraiture, Pearson turns the medical and statistical discussion on the tuberculosis diathesis into a eugenic argument: "One certain rule of racial fitness is the preservation of the dominant reproductivity of the mentally and physically fitter stocks [...] a united effort [is called for] in favour of legislation to restrain those anti-social by inheritance or nurture."¹⁰¹

⁹⁷ In the article, the authors refer to "some unforeseen pressure of time" that had complicated the detailed work with the huge number of composite portraits. See Galton; Mahomed: "An inquiry into the physiognomy of phthisis," 491–492.

⁹⁸ See Pearson: *Life, Letters and Labours*, 292–293.

⁹⁹ Pearson: *First Study of the Statistics of Pulmonary Tuberculosis*, 2.

¹⁰⁰ See Pearson: *First Study of the Statistics of Pulmonary Tuberculosis*, 15.

¹⁰¹ Pearson: *First Study of the Statistics of Pulmonary Tuberculosis*, 26.

The tendency to marginalise the relevance of social factors for contracting tuberculosis infections in favour of hereditary influences was, however, not a singular act of stubbornness, but can be observed in numerous contemporary publications.¹⁰² It took decades until the contagious theory of the disease finally became an accepted fact and even longer for conditions to change in the poor urban neighbourhoods and overpopulated disciplinary institutions that formed the breeding ground for the infection.¹⁰³ In the early twentieth century, the heyday of eugenics, tuberculosis was even viewed by many scientists and influential decision makers as a productive, social-Darwinian force, fulfilling a eugenic purpose in diminishing the poor, weakest and least adaptable members of society. And the eugenicist biopolitics continued well into the century, for instance in the sterilisation of "consumptive" women and the abortion of foetus of infected mothers until the 1930s.¹⁰⁴

Disciplinary Pathologies and the Institutionalised Power of the Gaze

In the pathologising and devolutionist medical climate of the late nineteenth century, mental illnesses and physical maladies, as well as the disposition to criminality, were seen as forms of hereditary degeneration, an assumption that was reproduced and advanced by the pathologising gaze of composite portraiture. An awareness of the interdependence between good physical mental health infused the contemporary medical debate, as did a growing understanding of genetic explanations. This was affecting the treatment of patients and "morally diseased" criminals alike. In a larger frame, this can be described as the pathologising and biologisation of social deviance, the normalising of moral behaviour, physical and mental fitness, and the disciplining of individuals and their bodies in institutions that showed striking similarities.

Among others, Henry Maudsley, the influential reformer of the treatment of mental illness in Britain, highlighted the connection between mental illness and criminality:

¹⁰² Marc Arnold argues that hereditary reasons were still accepted as the cause of tuberculosis by many doctors during the early twentieth century. See Arnold, Marc: *Disease, Class and Social Change: Tuberculosis in Folkestone and Sandgate, 1880–1930*. Newcastle: Cambridge Scholars, 2012, 32, 39.

¹⁰³ Among the population of poor urban quarters, work houses, mental asylums, and prisons, the rates of tuberculosis were above the average. See Arnold: *Disease, Class and Social Change*, 27.

There is a borderland between crime and insanity, near one boundary of which we meet with something of madness but more of sin, and near the other boundary of which something of sin but more of madness.¹⁰⁵

Mauldsley describes “the criminal” as a debased variety of humankind marked by sub-normal physical and mental characteristics, whose moral and bodily degeneration was primarily due to hereditary reasons. In his descriptions of the criminal physique and character, Mauldsley freely mixed medical vocabulary with more colloquial, degrading language: “They are scrofulous, not seldom deformed, with badly formed angular heads; are stupid, sullen, sluggish, deficient in vital energy, and sometimes afflicted with epilepsy. [...] not a few of them are weak-minded and imbecile.”¹⁰⁶ Here the disease patterns and symptoms of mental illness and tuberculosis become merged as markers for a deviant physiological appearance of criminals and as a sign for their moral degradation.

In the arguments of contemporary scholars, we can see a union of the pathologising gaze, the criminalising gaze, and the eugenicising gaze, all zooming in on the morbid and deviant human body and face, as a readable surface open to the mapping of its deeper genetic substrate. This reasoning resulted in an increasing pathologisation of social and medical factors of influence, reproducing the dynamics of power at work in the nineteenth-century class system of Britain. Pathologisation along the lines of visual appearance and social affiliation strengthened the disciplinary effects – and the disciplinary framework was essential for the application of the medical gaze. A pathologising, criminalising, and eugenicising perspective became established in the late nineteenth century that informed both the wider scientific discourse and the formation of particular scientific disciplines. And it manifested in a network of disciplinary institutions put in charge of those diagnosed as physically ill, mentally impaired, and/or morally defective.

In the later twentieth century, Susan Sontag observed this amalgamation of social deviance and pathology on the theoretical level but also in concrete actions and structures. She argues that “[e]very form of social deviation can be considered an illness”¹⁰⁷ and that metaphoric descriptions of illnesses reveal

¹⁰⁴ See Arnold: *Disease, Class and Social Change*, 39.

¹⁰⁵ Mauldsley: *Responsibility in Mental Disease*, 34.

¹⁰⁶ Mauldsley: *Responsibility in Mental Disease*, 30.

¹⁰⁷ See Sontag: *Illness as Metaphor*, 57.

associations between tuberculosis and mental disorders, in particular in the disease pattern of so-called melancholia.¹⁰⁸ Furthermore, Sontag observes that not only the scientific and popular discourse but also the practical treatment of the deviant groups of society and the institutions that were catering to them exhibited similarities:

The fancies associated with tuberculosis and insanity have many parallels. With both illnesses there is confinement. Sufferers are sent to a sanatorium [...]. Once put away, the patient enters a duplicate world with special rules. Like TB, insanity is a kind of exile. [...] To be cured, the patient had to be taken out of his or her daily routine.¹⁰⁹

The architectural composition of these duplicate worlds, the disciplinary institutions of confinement, seemed fundamental for the disciplinary and biopolitical management of deviance. The disciplinary architectures kept inmates under a tight regime of surveillance and control, imposing rules and regulations on every aspect of the life within the walls of the institution: from diet to exercise, from “moral education” to employment. While nineteenth-century penitentiaries, as we have seen earlier,¹¹⁰ were offering decidedly less cheerful surroundings than sanatoria or mental asylums, their general functions as disciplinary institutions are strikingly similar. Foucault describes this network of disciplinary institutions as a carceral continuum:

Incarceration with its mechanisms of surveillance and punishment functioned [...] on a principle of relative continuity. The continuity of the institutions themselves, which were linked to one another [...]. A continuity of the punitive criteria and mechanisms, which on the basis of a mere deviation gradually strengthened the rules and increased the punishment. [...] [A] certain significant generality moved between the least irregularity and the greatest crime; it was no longer the offence, the attack on the common interest, it was the departure from the norm, the anomaly; it was this that haunted the school, the court, the asylum or the prison.¹¹¹

This carceral continuity is evidenced in my research by the pervasive photographic practice and iconography of the disciplinary portraits taken in the army, at prisons, schools (including universities), and hospitals alike, in each case providing the source material for composite portraiture. But it may also be found in the registers of different institutions that document the practice of a continuous disciplinary attention. In the carceral network of the late nineteenth

¹⁰⁸ See Sontag: *Illness as Metaphor*, 32–33.

¹⁰⁹ See Sontag: *Illness as Metaphor*, 36.

¹¹⁰ See chapter 3.

¹¹¹ Foucault: *Discipline and Punish*, 299.

century, inmates were transferred to various penal institutions: from Bedford Prison to Pentonville and Millbank penitentiaries, for instance, but also from prisons such as Pentonville to psychiatric clinics such as the Bethlem Royal Hospital.¹¹²

The photographic practices performed in these duplicate worlds of the carceral network can be read as an additional way of objectifying and disciplining the inmates while, at the same time, visualising their place in – or rather apart from – society. Beyond the immediate disciplinary identifying function of the photographic recording, composite photography constituted a diagnostic method, a further strategy of making the human body readable by allowing a glance into its interior. Relying on individual disciplinary portraits, the technique de-individualised whole groups of society and sought to visualise their invisible deviant identity by constructing exemplary pathological physiognomies. The techniques' pathologising gaze thus contributed to advance social discrimination in the class-oriented society of Victorian Britain, which felt threatened by increasing (social) mobility, by urbanisation and the results of industrialisation. In the United States, too, where eugenic thought fell on particularly fertile ground, the role of composite visualisations as biopolitical portraits and incentives for population management intensified.¹¹³

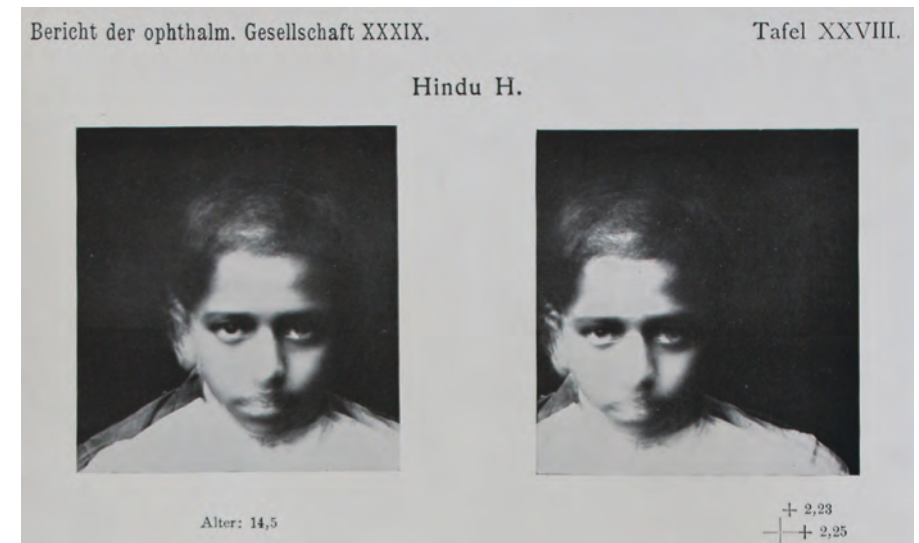
Affective Encounters: Twentieth-Century Pathologising Composites

Composite portraiture was taken up in medicine and psychology in the early decades of the twentieth century, in particular by German authors, who not only employed, but sought to develop the technique even further. The German ophthalmologist Franz F. Krusius and the German-Swedish psychologist Katz produced composite portraits of physically and mentally impaired children.

¹¹² The Registers preserved in Bedfordshire and Luton Archives, the National Archives, as well as in the London Metropolitan Archives and Bethlem Hospital Archives show these connections. Often transfers from and to the institutions are noted and the names and even disciplinary portraits of persons can be traced in the archives.

¹¹³ In the United States, prisons and asylums were managed incorporating negative eugenic principles, sometimes even including the photographic practice of composite portraiture; forced sterilisation was practiced among so-called morally, mentally, and hereditarily defective individuals and in a positive eugenic perspective composite portraits became used as biopolitical role models for the new North-Eastern intellectual elite. See chapters 3 and 7.

Their approach and shared the pathologising gaze of the work by Galton, Mahomet, and Noyes and their composite figures, through technical innovations and the choice of very young and vulnerable target groups, develop a particular haunting presence, highlighting the role of affect for the artificial visualisations.



Krusius: Franz F.: Hindu H. In: A. Wagenmann (ed.): *Bericht über die 39. Versammlung der Ophthalmologischen Gesellschaft, Heidelberg 1913*. Wiesbaden: Bergmann, 1919, plate XXVIII.

Trained in medicine and having specialised in ophthalmology at the universities of Würzburg and Marburg, Germany, Krusius performed experiments on weak-sightedness in children and young adults.¹¹⁴ On a medical excursion to Bombay, via Istanbul and Odessa, he produced stereo composite portraits of pupils at local schools, where he had conducted medical examinations. These stereoscopic views added a third dimension to composite portraiture, a technique that partly owes its existence to stereoscopy.¹¹⁵ This three-dimensionality brought viewers into an even closer, more intimate contact with the artificial faces. This immediate three-dimensional presence,¹¹⁶ by means of another optical instrument, brings

¹¹⁴ Krusius, Franz F.: "Ergebnisse vergleichender Refraktionsuntersuchungen an höheren Schulen der Levante und Ostindiens." In: A. Wagenmann (ed.): *Bericht über die 39. Versammlung der Ophthalmologischen Gesellschaft, Heidelberg 1913*. Wiesbaden: Bergmann, 1919, 296–310.

¹¹⁵ The development of composite portraiture is linked to stereoscopy. See chapter 2.

¹¹⁶ This effect is augmented by the perspective of the heads that are inclined downwards, appearing to look at the viewers from above.

the slightly hazy humanoid faces closer and on an equal plane with the viewers, generating likewise immediate affective encounters.¹¹⁷ Viewed through stereoscopic glasses, the directness of the gaze of the boys into the camera is striking and results in affective responses on the side of the viewers that remain below the level of awareness.¹¹⁸

Brian Massumi has commented on the “primacy of the affective in image reception”¹¹⁹ as a factor establishing a pre-cognitive response that not necessarily corresponds to the intention and anticipated meaning of the images. In his theoretical conception of affectual impact, he focused on the event of reception, which he breaks down into two parts: the intensity of the pre-cognitive effect, its strength and duration; and its qualification, in which the meaning of the image is rationally qualified by the viewer.¹²⁰ With respect to composite portraits in general and the stereoscopic composites in particular, the affective intensity and emotional resonance to a form that is perceived as a human face is particularly strong, and its rational qualification seems a secondary component and particularly difficult to frame. This effect was already noted by Galton and other early protagonists of composite photography, who counted on the immediacy of the visual presence and the affective encounter with the composite faces in presentations and reproductions but also struggled to provide analytical perspectives in order not to lose interpretative power over the images.

In the presentation of his composite study at the congress of the German Ophthalmologist Society, Krusius appears elated that “7,420 German eyes are now contrasted with 3,604 eyes of alien races.”¹²¹ Dividing his specimens into long-sighted, normal-sighted, and short-sighted groups, he produced frontal and lateral composite stereographs. Concentrating on the examinations conducted in India, he observed decisive differences in the groups of Catholic, Muslim, Brahmin, and Parsi youth, and summarily turned the exploration of deficient

¹¹⁷ Viewing stereoscopic images, the distance is reduced and the focus lies solely on the images, while their surroundings blur. Furthermore, these images are often viewed holding the prints horizontally, at eye level.

¹¹⁸ Paraphrasing Brian Massumi, Elizabeth Wissinger characterises affective responses in this way. See Wissinger, Elizabeth: “Always on Display: Affective Production in the Modelling Industry.” In: Patricia T. Clough (ed.): *The Affective Turn: Theorising the Social*. Durham, N.C., Duke University Press, 2007, 221–260, at 237.

¹¹⁹ Massumi: *Parables for the Virtual*, 24.

¹²⁰ See Massumi, 24–25.

¹²¹ Krusius: “Ergebnisse vergleichender Refraktionsuntersuchungen,” 296 (my translation).

optical refraction of the eyes into a racial and religious question. In relation to the photographic compositions, to which he refers as “master images,” he argues for a “racial disposition” to defective sight and names inherited degeneration and inbreeding alongside acquired degradations of the eyes as the most decisive factors.¹²² However, in contrast to the history of composite portraiture, Krusius’s argument is not one of European superiority: it is the lower-caste Catholic pupils of Bombay that fare best, as far as their eyesight is concerned.¹²³

The focus on the eyes, their expression and ability to see, is also central in the composite portraits of blind and “feeble-minded” children published by David Katz more than thirty years later. The innovation to the technique developed by Katz was to superimpose the upper, middle, and lower parts separately, oriented at the eyes, nose and mouth respectively, and then unite them in one image. These multi-focal, sectional compositions resulted in clearer images. In relation to the visually impaired boys, he had to concede that the compound figure, except for a slightly more earnest look, did not make the impression of being blind.¹²⁴ Here an apparatus of augmented seeing by means of photo-mechanical equipment is used as a device for examining the loss of sight, a sense central for medical diagnosis. And the eyes as focal point continue to haunt Katz’s medical studies by means of the composite technique. While he observed no visible indicators of intelligence in composite portraits of students, he was convinced that he had detected the “imbecility” of children in the expression of their eyes in which he observed a weak, mellow expression and a drowsy glance.¹²⁵

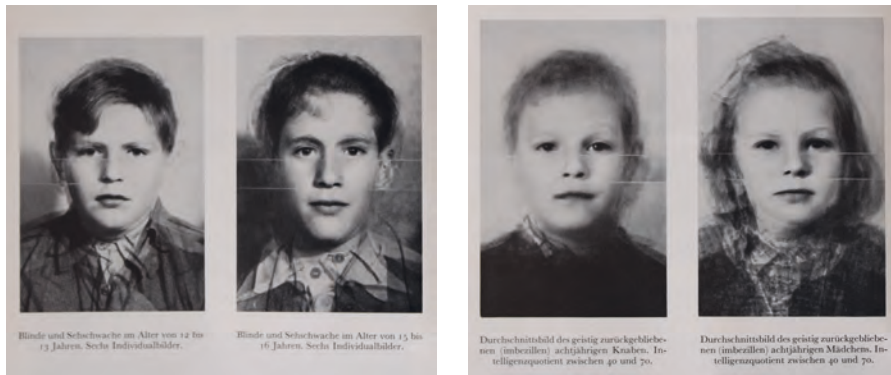
These series of facial compositions of children and young adults produced in disciplinary institutions, in schools and specialised educational institutions, and the visualisation of the pathological signs in the young bodies are particularly strange, intensifying the pathologising nature of composite portraiture. Likewise the immediacy of the photographic technique is amplified through the innovations added to it. The stereoscopic composite faces seem to get closer to the viewer; in leaving their two-dimensional pane, their complexity increases,

¹²² Krusius speaks of “*Stammbilder*.” See Krusius: “Ergebnisse vergleichender Refraktionsuntersuchungen,” 307–308.

¹²³ Krusius: “Ergebnisse vergleichender Refraktionsuntersuchungen,” 301.

¹²⁴ Katz: “Durchschnittsbild und Typologie,” 28.

¹²⁵ Katz: “Durchschnittsbild und Typologie,” 26–27.



Katz, David: *Blind and visually impaired 12-13 year-olds and 15-16 year-olds; Mentally retarded 8-year old boy and mentally retarded 8-year girl. Composite portraits.* In: *Studien zur Experimentellen Psychologie*. Basel: Benno Schwabe & Co., 1953, plate 30; plate 24.

resulting in a more direct, but also alienating presence. The sectional composites, however, through their synthetic clarity and the visibility of the fractures in the images, appear to heighten the artificiality of the images. What was meant as a way of increasing the explanatory power of the technique becomes an expression of the image's constructed quality which leaves the viewer with intangible and inextricable affective stimuli and an uncanny feeling of suspicion. Following the observation that affect does not reflect nor think but act,¹²⁶ the affective encounter with the composite faces exerts an immediate active and productive force on the viewer's body in a pre-cognitive, sub-conscious way. The affective responses are, however, not neutral or impartial, but are shaped by previous experiences that could be described as a biologically and culturally mediated sub-conscious.¹²⁷

A Continuum of Pathologising Gazes

The pathologising gaze of late-nineteenth and early twentieth-century composite portraiture was directed at mental and physiological illnesses: at the visualisation of psychiatric syndromes and the mental deficiencies of children as well as at patients diagnosed with tuberculosis, blindness, or short-sightedness. The medical gaze applied in the psychiatric clinics of the time, and the photographic practice of composite portraiture, which brought police-style "mugshots" to the hospital and asylum under the pretension of exploring the root of

illnesses in genetic deviance, attest to the tightening of the disciplinary regime and of biopolitical intervention in the late nineteenth century. The examination of composite portraiture in the medical field reveals the construction of a special way of seeing, which turns the patients into objects of a pathologising medical gaze. Their bodies, in turn, become elements in the representation of the disease in its ideal form and a part of the creation of a clinical picture. Composite portraiture here can be seen as a re-visualisation of the visual epistemological practice on which clinical reasoning is built: of the conceptualisation of diseases as compounds and combinations of observable representative qualities.¹²⁸ The strength of this form of visual reasoning and the pervasiveness of hereditary and eugenic explanations is illustrated by the longevity of the assumption of a genetic disposition to tuberculosis and the corresponding composite visualisations, which were retained by wide circles of the scientific community even after the infectious nature of the disease had been demonstrated.¹²⁹

The examination of (composite) photographic practices in mental asylums of the day exposes the power structures and disciplinary framework and the sometimes inhumane conditions under which patients were kept in the institutions, revealing a carceral continuum that spanned asylums, hospitals, and prisons. The pathologisation of any deviance from physical and mental "normal health" became aligned with deviations from social norms and behaviour, whose roots were sought in the hereditary constitution of patients, inmates and prisoners alike. This pathologisation of social phenomena went along with the proclamation of eugenic solutions, bringing together composite portraiture's criminalising, pathologising and eugenicising gazes. The harsh treatment in disciplinary institutions became justified with these biologising arguments, and negative eugenic measures were advocated as humane solutions. The utilisation

¹²⁶ Melissa Gregg and Gregory Seigworth draw on Sigmund Freud's *Project for a Scientific Psychology* (1895). See Gregg, Melissa; Seigworth, Gregory: "An Inventory of Shimers." In: Gregory Seigworth; Melissa Gregg (ed.): *The Affect Theory Reader*. Durham, N.C.: Duke University Press, 2010, 2.

¹²⁷ See the conceptualisation of affect by Massumi that draws on Spinoza and Deleuze. See Massumi: *Parables of the Virtual*; Massumi, Brian: *Politics of Affect*. Cambridge: Polity, 2015, 48–49.

¹²⁸ See the analysis of the clinical gaze in the writings of Michel Foucault. See Foucault: *Birth of the Clinic*.

¹²⁹ See among others the publications by Karl Pearson and Charles Goring: Pearson, Karl: *A First Study of the Statistics of Pulmonary Tuberculosis*. London: Dulau & Co., 1907; Goring, Charles: *On the Inheritance of the Diatheses of Phthisis and Insanity: A Statistical Study Based upon the Family History of 1500 Criminals*. London: Dunlan & Co., 1909.

of composite portraiture by the German physicians and psychologists Krusius and Katz in the first half of the twentieth century demonstrates the then ongoing fascination with composite photography in the medical field. Their technical innovations, by defining sectional foci, sharpened the images and, by adding a third dimension, brought the composite faces closer to the viewers. Paradoxically, however, this resulted in amplifying the artificiality of the faces and thus their affectual power, diminishing their credibility as scientific visualisations.

The pathologising gaze of composite portraiture remains powerful even today. While artists seem none too willing to become engaged in this messy, fraught segment of “composite culture,” a recent piece of research from the fields of social psychology and computer science returns to composite representations of bodily – and hence, the researchers argued, psychological – deviance. For their study conducted at Stanford University in 2017, Michal Kosinski and Yilun Wang developed an algorithm that aims to detect the sexual orientation of individuals in their facial appearance. Drawing on pictures from dating websites, the scientists claim, their big-data experiment could detect a homosexual orientation in portraits of men with a 81 per cent certainty, that of women with 74 per cent by means of their special facial recognition and matching software. The results of the artificial intelligence, they argue, were more reliable than the human brain and thus revealed the limits of human perception. The authors conclude that sexual orientation might be pre-natal and probably inherited and that this inner disposition was visible in the outer facial appearance.¹³⁰ Here we seem to be back in Francis Galton’s world: in a revived version of prejudice-entrenched, nineteenth-century scientific positivism.

Kosinski and Wang chose to publish digital composite portraits of male and female “gay and straight faces” showing “the average landmark locations and aggregate appearance of the faces classified as most and least likely to be gay.”¹³¹ In what reminds of the pathologising gaze of nineteenth-century composite portraiture, following their heteronormative logic, the visual data is used to classify the divergent outer appearance of homosexual persons from the heterosexual, in other words, “normal” population.¹³² Even though the scientists make sure to add that they do not condemn homosexuality, they describe it in terms of a deviation from the mainstream population and point at suspect markers. The remarks of Kosinski and Wang sound just like an

¹³⁰ Wang; Kosinski: “Deep Neural Networks.”

¹³¹ Wang; Kosinski: “Deep Neural Networks.”

excerpt from Lombroso’s or Galton’s work, the father figures of the racist and “pseudo-scientific” fields of criminal anthropology and eugenics:

Average landmark locations revealed that gay men had narrower jaws and longer noses, while lesbians had larger jaws. Composite faces suggest that gay men had larger foreheads than heterosexual men, while lesbians had smaller foreheads than heterosexual women.¹³³

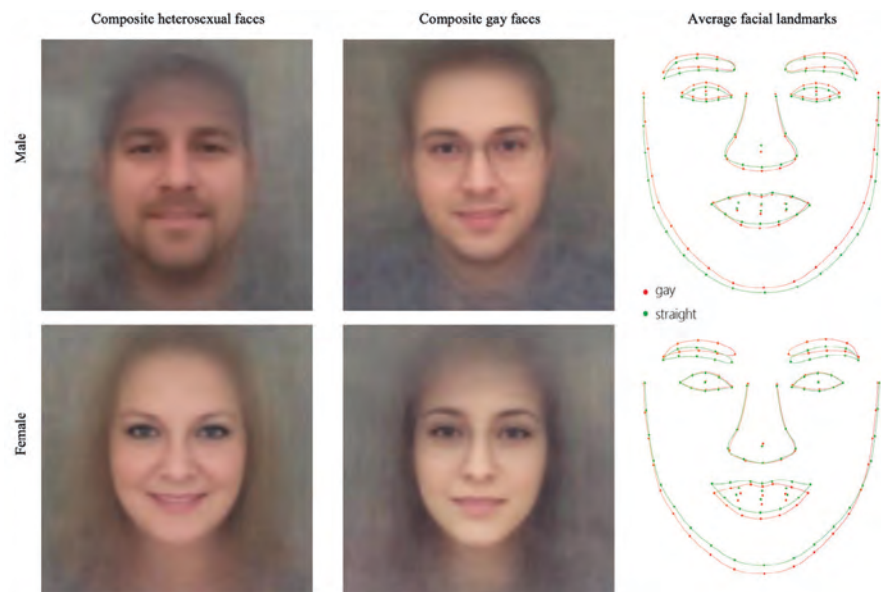
In their article Kosinski and Wang mention the long problematic history of the study of physiognomy, but argue that, despite all taboos, scientific evidence suggested the veracity of such connections. The pathologising gaze is directed at signs for specific sexual orientations and the authors point to hormonal theories and genetic dispositions, but also social factors; or “nature and nurture” as it is referred to in the report, an expression popularised by Sir Francis Galton himself. This inconsiderate approach to the scientific theories, techniques, and terminology of the past seems a recurring characteristic of their study, such as in the application of the term “race” in relation to ethnic diversity.

In a short disclaimer, ethical issues and privacy concerns are discussed and the authors warn of governmental and private efforts of identifying face-based classifiers aimed at detecting intimate traits and they argue that their findings could alert the public, rather than providing evidence against a minority group. Still, the thoughtless and (historically) uncritical publication of a visually strong and potentially derogative composite portrait is highly questionable and might indeed prove to be dangerous. This is attested by a number of newspaper articles that present short and oversimplified summaries of the study and often use the “gay composite” as a visual anchor.¹³⁴ Some are discussing the repercussions of the findings and warn of algorithms that could detect psychological

¹³² The visual difference of the contrasting images could, however, be explained by socio-cultural reasons, for instance in posing, hairstyling, and make-up habits that can be explained by the conscious self-representation of the groups. Also the source of the component images seems problematic, since on dating websites, visual representation and markers for social group identities become (again, consciously) exaggerated.

¹³³ Wang; Kosinski: “Deep Neural Networks.”

¹³⁴ See Titcombe, James: “AI can tell if people are gay or straight with one photo of their face.” In: *The Telegraph online*, 8 September 2017. <http://www.telegraph.co.uk/technology/2017/09/08/ai-can-tell-people-gay-straight-one-photo-face> [15/01/2022]; Economist.com: “Advances in AI are used to spot signs of sexuality.” In: *The Economist*, 9 September 2017. <https://www.economist.com/news/science-and-technology/21728614-machines-read-faces-are-coming-advances-ai-are-used-spot-signs?fsrc=scn/tw/te/bl/ed/advancesinaiareused-tospot-signsofsexuality> [15/01/2022].



Wang, Yilun; Kosinski, Michal: *Composite faces and the average facial landmarks built by averaging faces classified as most and least likely to be gay*. In: Wang, Yilun; Kosinski, Michal: "Deep Neural Networks Can Detect Sexual Orientation From Faces." In: *Journal of Personality and Social Psychology*, 114 (2), 2018, 246–257. <https://osf.io/zn79k> [15/01/2022].

dispositions and political leanings in the face,¹³⁵ while only a few focus on the criticism the study has drawn from LGBTQ* groups.¹³⁶

But what if the deep networks of artificial intelligence, which Kosinski, a psychologist, computer scientist, and programmer, admits himself he does not understand,¹³⁷ are indeed able to compute sexual orientation from the visual material posted online?¹³⁸ Whether the decisive markers are specific fashion styles, the postures and smiles in the portraits, or even as yet undefined physical markers actually indicating a potential homosexuality. In any case, the unre-

¹³⁵ See RT Deutsch online: *RT Deutsch*, 9 September 2017. <https://de.rt.com/180n> [22/11/2020].

¹³⁶ See Levin, Sam: "LGBT groups denounce 'dangerous' AI that uses your face to guess sexuality", In: *The Guardian online*, 8 September 2017. <https://www.theguardian.com/world/2017/sep/08/ai-gay-gaydar-algorithm-facial-recognition-criticism-stanford> [15/01/2022].

¹³⁷ See Kosinski's presentation at the *CeBIT Global Conference*, 23 March 2017. <https://www.youtube.com/watch?v=NesTWikfpD0> [15/01/2022].

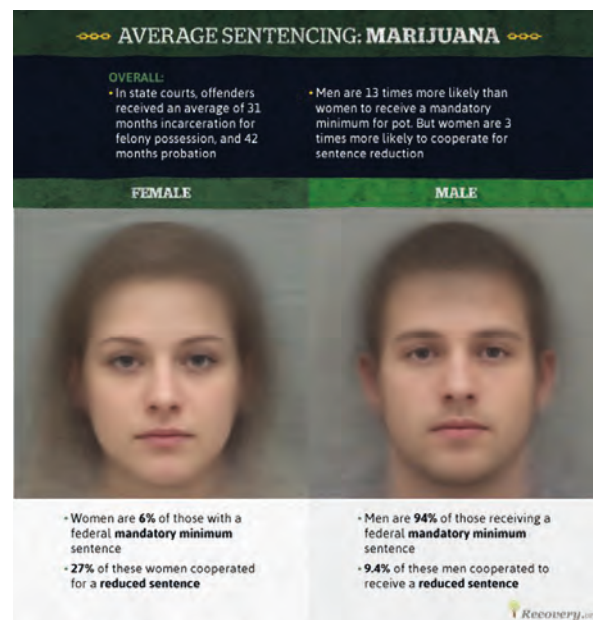
¹³⁸ A replication study conducted by computer scientists appears to confirm the results. See Leuner, John: "A Replication Study: Machine Learning Models Are Capable of Predicting Sexual Orientation from Facial Images." (2019) <https://arxiv.org/pdf/1902.10739.pdf> [15/01/2022].

strained publication of such results is highly problematic, and the visualisation of the algorithmic figure as a composite image, as the "collective face" of a community often subject to discrimination, is even more so. What if the inclusion of the homosexual "eigenface," the comparative vector computed from the material, into facial recognition systems, became a real threat? Then the study, in its unquestioning appropriation of techniques and modes of reasoning and visualisation would certainly not aid in alleviating problematic ascriptions and infractions of privacy, but would contribute to the discrimination of a social group. The study shows the pervasiveness of the pathologising gaze of composite portraiture and continues the appropriation of the technique in recent science and its often uncritical reception in popular culture.

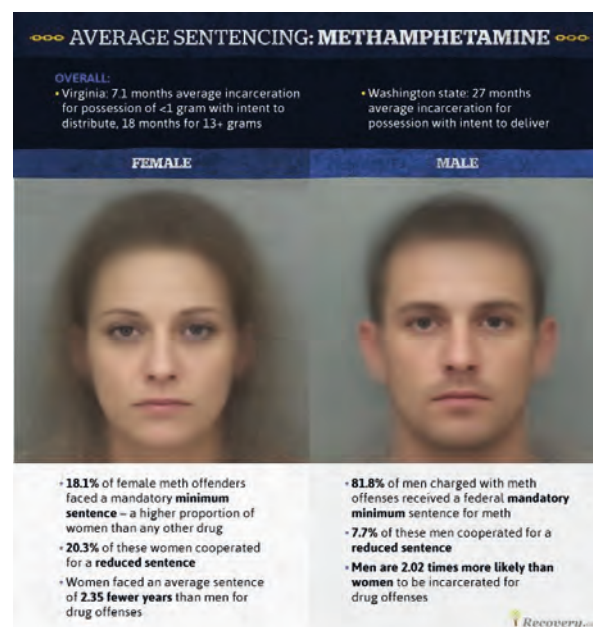
This is also true for a series of composite portraits of "mugshots" of drug users entitled *Average Face of Drug Addiction*. The images were published on the website of a private and stock-listed American health service association specialised in addiction treatment.¹³⁹ The illustrations are designed like a "Wanted" poster: stylised chains frame the title; below the images, specific markers are noted in the form of statistics on the average times of conviction and the rates of cooperation. The visualisations can be seen as the typecasting of the different facets of the disease patterns of addiction. What is presented as the combined "mugshot" and "composite portrait of the drug" is supposed to raise awareness of the detrimental effects of the respective drug and its abuse and is meant to convince the audience to enter cost-intensive anti-addiction treatment.

The layout of the illustration, however, seems to follow a different agenda that is both moralising and pathologising. Its merging of the individual portraitees' deviation from health with their alleged criminal behavior and moral categories is a strategy familiar from nineteenth-century composite studies. The presentation of the faces seems to hint at the irresponsibility of the users and their inability to preserve the integrity of their body. This is merging moral and medical criteria, as well as biopolitical expectations of self-management – all under the threat of failing to become a valuable and productive member of society. For the production of the composite portraits, the designers drew on judicial photographs from the American prison industry that in some states

¹³⁹ See Recovery.org: An American Addiction Centers Resource: *Drug Mugs: The Average Faces of Drug Abuse*. <https://www.recovery.org/learn/average-faces-of-drug-abuse> [15/01/2022]. The website is run by an association of commercial companies of the American health industry specialising in addiction treatment.



American Addiction Centers (Recovery.org): *Average Sentencing: Marijuana*.



American Addiction Centers (Recovery.org): *Average Sentencing: Methamphetamine*.

publishes the portraits of offenders on-line, including personal information, on what could be described as virtual walls of shame. This judiciary archive, just like in Galton's times, provided the material for the production of the criminalising and pathologising typecasts. By framing the images in relation to health and by redirecting guilt to the group of offenders suffering from addictions, the pathologising gaze of the technique intensifies, and the roles of victim and criminal become reversed.

This can be described in terms of what Sarah Ahmed has termed affective economies, in which the "accumulation of affective value shapes the surfaces of bodies and worlds."¹⁴⁰ Here, emotions are understood as active; they align individuals with communities; bodies, with social spaces, constructing relations of resemblance and collective bodies in a climate of general suspicion and fear.¹⁴¹ Furthermore, the private medical company responsible for these images appears to distribute them with an intention of provoking affective responses, an aversion from and identification with the faces. In the affective attention economy, where "affect is the power to affect and be affected"¹⁴² and the goal is the modulation and amplification of these effects,¹⁴³ this re-narration and aggravation of the pathologising gaze of the technique expands the marginalising power over the persons construed as unhealthy and abnormal in a seemingly benevolent offer for help. By updating the pathologising gaze and the biopolitical nature of the composite portraits, they continue a visual medical epistemology established in the racist, classist, degenerationist, and eugenicist climate of the late nineteenth century.

¹⁴⁰ Ahmed: "Affective Economies," 121.

¹⁴¹ See Ahmed: "Affective Economies."

¹⁴² Brian Massumi here paraphrases Spinoza. Massumi: *Politics of Affect*, IX.

¹⁴³ Elizabeth Wissinger argues along these lines in her study on affective production in the modelling industry. See Wissinger: "Always on Display," 247.



7 | Eugenic Role Models: The Eugenicising Gaze of Composite Portraiture

It was Francis Galton's project of eugenics that was to become his darkest legacy. His plan for the improvement of the quality of the human race through controlled reproduction brought together his work in the fields of statistics, heredity, anthropology, anthropometry, and photography. Composite portraiture, in particular, played a decisive role in Galton's eugenic campaign that began long before he coined the term "eugenics" in 1883. In a two-part article in *Macmillan's Magazine* during summer 1865, he proposed the development of a "highly-bred human race"¹ and argued that

[i]f a twentieth part of the cost and pains were spent in measures for the improvement of the human race that is spent on the improvement of the breed of horses and cattle, what a galaxy of genius might we not create. We might introduce prophets and high priests of civilization into the world, as surely as we can propagate idiots by mating crétins.²

The reference to visible signs, stigmata and telltale physiognomies comes up already in Galton's earliest book on genetic transmission. In that publication, he reverts to the discussion of facial features in his argument on the heredity of diseases, mental illness, criminality, poverty, and addiction, as well as "race."³ Most of these items reappear on the list of subjects Galton later focused on with his photographic experiments by means of composite portraiture. And the technique played a vital role in his eugenic endeavor: firstly in terms of fundamental research on heredity, providing a visual metaphor for Galton's understanding of genetic transmission; secondly as a potential diagnostic tool in the detection of good and bad genetic dispositions of individuals; and thirdly as a form of popular visualisation of exemplary role models in order to popularise the eugenic "enhancement" of humankind.

¹ Galton: "Hereditary Character and Talent," 319.

² Galton: "Hereditary Character and Talent," 165-166.

³ See Galton: "Hereditary Character and Talent," 320.

In composite portraiture's eugenicising gaze, the normalising visual practice is primarily directed at the nineteenth-century intellectual elite, fashioning a positive self-image and a target for eugenic intervention. The technique here worked as a classist diagnostic device that sought to categorise individuals in relation to their supposed genetic quality and social status. It furthermore develops an ableist, heteronormative, but also a racist perspective. And while the eugenicising gaze was predominantly connoted positively and had a popularising function, it essentially worked in opposition to representations of other individuals and groups categorised as inferior. Thus also the composite portraits discussed in relation to the criminalising, pathologising, and racialising gaze exhibit a eugenicising perspective.⁴

Following the positive eugenic agenda proposed by Galton, the eugenicising gaze of composite portraiture was mainly addressed at families from and members of respected groups of society. Portraits of soldiers, academics, and students were superimposed in order to produce an ideal image, a normative target towards which eugenic interventions and the disciplinary regime of reproduction⁴ could be oriented. These images constructed affirmative role models, enhancing the self-perception of the selected groups. This is particularly relevant in the photographic visualisations of the various group identities of academic professionals and university students in the United States. Here, composite portraits played the role of an ideological visual catalyst, providing the educational elite with a common class image, reaffirming their position in society, and including them in the eugenic project.

This popularising function of composite faces as eugenic identification figures was played out in articles in scientific and popular journals, as well as in eugenic exhibitions. At the same time, the eugenicising gaze shows an almost religious quality: composite faces were seen as timeless spiritual collective figures, linking

⁴ In current academic literature, the term "eugenicising gaze" has not yet been used, but the expression "eugenic gaze" is used to refer to forms of hierarchical observation, normalising judgement and a disciplinary regime of reproduction. See Steinberg, Deborah Lynn: "Technologies of Heterosexuality: Eugenic Reproductions Under Glass." In: Deborah Lynn Steinberg; Debbie Epstein; Richard Johnson (eds.): *Border Patrols. Policing the Boundaries of Heterosexuality*. London: Cassell, 1997, 66–97; Davis, Lennard J.: "Constructing Normalcy: The Bell Curve, the Novel, and the Invention of the Disabled Body in the Nineteenth Century." In: Lennard J. Davis (ed.): *The Disability Studies Reader*, New York, Routledge, 2006, 3–16.

ancestor worship with future-oriented eugenics. This gaze was, however, far from inclusive; it construed the normative ideal of a white Anglo-Saxon Protestant elite that was defined in opposition to other collective representations, such as the ones discussed under the rubric of racial typologies.⁵ These immaculate figures were prescribed as class and race-based archetypes and aesthetic ideals against which individuals could be measured and, necessarily, ranked as inferior. This shows the relevance of the visual constructions in the arena of negative eugenics. Galton had argued that eugenics' "first object [was] to check the birth-rate of the Unfit"⁶ and addressed precisely those groups within society as "residue,"⁷ which he had earlier put under the pathologising and criminalising gaze of composite portraiture.

The exploration of eugenicist composite portraits starts with an examination of Galton's understanding of genetics, his eugenic project, and the role of the photographic technique in the concepts' evolution between racial science, medicine, and social intervention. This examination of the backgrounds and specificities of the eugenicising gaze is followed by a discussion of composite portraits of soldiers produced by Galton in Britain and by his contemporary Bowditch in Germany that were supposed to represent national and ethnic prototypes for a healthy eugenic constitution. Eugenic thought was also important for American composite portraits of intellectual role-models coined after the white Anglo-Saxon Protestant elite; these affirmative identification figures are examined in the following parts of this chapter. The popularisation potential of the images as prototypical faces for a eugenicist future and the images' role in the contexts of eugenic research and exhibitions will be explored in the final, historical part. The concluding section synthesises the central aspects of the technique's eugenicising gaze and offers a glance into pop-cultural and artistic projects of the late twentieth and early twenty-first centuries, exploring the continuities and afterlife of the technique in this arena.

⁵ See Steinberg: *Technologies*, 66.

⁶ See chapter 4, "Racial Prototypes."

⁷ Galton: *Memories of my Life*, 323.

⁸ Galton, Francis: "Studies in National Eugenics." In: *Essays in Eugenics*. London: The Eugenics Education Society, 1909, 60–67, at 66.

Galton's Eugenic Project and the Role of Composite Portraiture

Composite portraiture played an important role in Francis Galton's work on genetic transmission and for the advancement of his central project, eugenics. In order to explore these relationships, an examination of the idea of the controlled breeding of humanity and its backgrounds and conceptualisation is relevant. This shows Galton's positive eugenic perspective, which characterises many of the composite studies in the field, as well as his treatment of the "creed of eugenics"⁸ as a social, scientific and religious obligation. This semblance of secular progressiveness, paired with a sense of moral duty, contributed to the success of eugenicist views on an international scale in the late nineteenth and early twentieth centuries, which led to ever more discriminatory positions, as well as to crimes against humanity.

Galton's work on hereditary transmission and eugenics rested on his conviction of a relative stability and visibility of genetic qualities, not only in different human "races," but also within specific groups of society. Hereditary traits, he believed, were determining factors of physical attributes as well as of intelligence, abilities, and moral qualities. These traits, leaving a direct imprint on the body and mind, could be observed, examined, and categorised.⁹ The basis of Galton's works on human heredity and eugenics was Charles Darwin's evolutionary theory, but he also drew on racial theories of categorising and ranking humanity according to their physical characteristics, such as in Georges Cuvier's¹⁰ and Joseph Arthur de Gobineau's work,¹¹ as well as on proto-eugenic thought in Ancient Greek philosophy¹² and in the writings of contemporary authors of evolutionary theory, such as Ernst Haeckel.¹³

⁹ Galton, Francis: "Eugenics as a Factor in Religion." In: *Essays in Eugenics*. London: The Eugenics Education Society, 1909, 68–70, at 68.

¹⁰ See Galton: "Hereditary Character and Talent;" Galton: *Hereditary Genius*.

¹¹ For a collection of Cuvier's writings see Pietsch, Theodore W. (ed.): *Cuvier's History of the Natural Sciences: twenty-four lessons from Antiquity to the Renaissance*. Paris: Publications scientifiques du Muséum national d'Histoire naturelle, 2012.

¹² See de Gobineau, Joseph Arthur: *Essai sur l'inégalité des races humaines*. Paris: Librairie de Firmin Didit Frères, 1853–1855. English translations appeared in 1856 and 1915. See de Gobineau, Joseph Arthur: *The Moral and Intellectual Diversity of Races*. Philadelphia: J.B. Lippincott, 1856.

¹³ See Galton, David J.: "Greek Theories on Eugenics." In: *Journal of Medical Ethics*, 24, 1998, 263–267.

¹⁴ See Haeckel, Ernst: *Natürliche Schöpfungsgeschichte*. Berlin: Georg Reimer, 1868. An English-language translation appeared in 1876. See Haeckel, Ernst: *The History of Creation*. New York: Appleton, 1876.

Galton was a staunch Darwinist. Along with many scientists of the time, he became furthermore convinced of the increasing degeneration of humankind.¹⁴ He considered it a social responsibility to counteract this decline by all means. Galton's position could be subsumed under what became known as Social Darwinism,¹⁵ a school of thought that is chiefly associated with the Victorian biologist and anthropologist Herbert Spencer, who was a close acquaintance of Galton and played a vital role in the creation of composite portraiture.¹⁶ Social Darwinism applied evolutionary theory and the principle of competition to society against a background of increasing urbanisation, industrialisation, poverty, and crime. In guise of the concept of a (misinterpreted) "survival of the fittest," Darwin's theories on the evolutionary struggle for survival became transformed into a racist and classist principle of social analysis. And they became manifest in social policies opposing welfare and advocating for the persecution of undesirable classes of society such as paupers, criminals, the mentally ill, vagrants, and prostitutes – groups that were marked as hereditarily degenerate.¹⁷

The term "eugenics" was coined by Galton in his 1883 book *Inquiries into Human Faculty and its Development*, the same volume that recapitulates his research on composite portraiture. He deduces the term from the Greek word *eugenēs*, "good in stock," and argues for the necessity of the neologism:

¹⁵ Galton speaks of atavism. See Galton: "Hereditary Character and Talent," 319. The concept of a degeneration of humankind originates in the work of the French psychiatrist Bénédict Augustin Morel and was taken up by the Italian criminal anthropologist Cesare Lombroso as well as by the physician and social critic Max Nordau. The idea was however prevalent in many writings of the time: in anthropology, evolution theory, and racial theory, in particular of the Social Darwinist school. See Morel, Bénédict Augustin: *Traité des dégénérescences physiques, intellectuelles et morales de l'espèce humaine et des causes qui produisent ces variétés malades*. Paris: J.B. Baillière, 1857; Lombroso: *L'uomo delinquente*; Nordau, Max: *Entartung*. Berlin: Duncker, 1892. For a thorough critical discussion see Pick, Daniel: *Faces of Degeneration. A European Disorder, c. 1848 – c. 1918*. Cambridge: Cambridge University Press, 1989.

¹⁶ See Bannister, Robert C.: *Social Darwinism: Science and Myth in Anglo-American Social Thought*. Philadelphia: Temple University Press, 1989. For a history of the term see Hodgson, Geoffrey M.: "Social Darwinism in Anglophone Academic Journals: A Contribution to the History of the Term." In: *Journal of Historical Sociology*, 17:4, 2004, 428–463.

¹⁷ In his first article on composite portraiture, Galton credits Spencer with having brought up the idea of superimposing images in order to compare them and to produce average results. See Galton, Francis: "Composite Portraits" [1878], 97–100.

¹⁸ See Claeys, Gregory: "The 'Survival of the Fittest' and the Origins of Social Darwinism." In: *Journal of the History of Ideas*, 61:2, 2000, 223–240.

We greatly want a brief word to express the science of improving stock, which is by no means confined to questions of judicious mating, but which, especially in the case of man, takes cognisance of all influences that tend in however remote a degree to give to the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable than they otherwise would have had. The word "eugenics" would sufficiently express the idea.¹⁸

In his eugenic project, Galton associated the procreation of humans with the breeding of livestock and plants; the word "eugenics," however, is used almost solely with reference to controlled human evolution. In a later publication, he offered a more straightforward definition: "Eugenics is the science which deals with all influences that improve the inborn qualities of a race"¹⁹ and highlighted his positive eugenic approach of encouraging the reproduction of persons exhibiting presumably good genetic qualities.²⁰

Galton refers to genetically noteworthy individuals as "Eugenes"²¹ and suggests a system that would encourage their reproduction. In order to archive this, he proposed rigorous examinations to be conducted by medical professionals in institutions such as schools, hospitals, and the armed forces, after which certificates would be issued to persons with notable eugenic qualities.²² And he suggested creating incentives, such as official recognition, models of private sponsorship, and financial support for families deemed suitable for reproduction.²³ This group of "Eugenes" is proposed as a model for the future development of humanity, visual eugenic role-models, whose physical characteristics became represented photographically in composite portraits of the elect groups.

¹⁹ Galton: *Inquiries into Human Faculty*, 17.

²⁰ Galton, Francis: "Eugenics: Its Definition, Scope and Aims." In: *Essays in Eugenics*. London: The Eugenics Education Society, 1909, 35.

²¹ Galton, Francis: "Possible Improvement of the Human Breed," 24: "The possibility of improving the race of a nation depends on the power of increasing the productivity of the best stock. This is far more important than that of repressing the productivity of the worst."

²² Galton, Francis: "Local Associations for Promoting Eugenics." In: *Essays in Eugenics*. London: The Eugenics Education Society, 1909, 100–109, at 106.

²³ See Galton "Studies in National Eugenics," 63–64.

²⁴ See Galton, Francis: "The possible improvement of the human breed under the existing conditions of law and sentiment." In: *Nature*, 64, 1901, 663–664, later reprinted in his *Essays in Eugenics* (see Galton: "Possible Improvement of the Human Breed" in the bibliography). In his autobiography Galton argues that British charity should be redirected from the "undesirable" to the "desirable" in society. Galton: *Memories of my Life*, 169.

While most of Galton's arguments follow the course of positive eugenics, some aspects forebode negative eugenic endeavors that sought to prevent the reproduction by means of sterilisation or even execution.²⁴ Galton lobbied for the negative eugenic "treatment" of the mentally ill,²⁵ as well as for the compilation of archives of families and individuals that were deemed below the average in health, mental, and physical qualities.²⁶ In accordance with contemporary assumptions of the inherent superiority of the "British race" and echoing sentiments of colonialist responsibility, Galton stresses the importance of eugenic management:²⁷ "To no nation is a high human breed more necessary than to our own, for we plant our stock all over the world and lay the foundations of the dispositions and capacities of future millions of the human race."²⁸ Here eugenics appears as a necessary tool and moral obligation in the struggle for existence that, thus the degenerationst view, would inevitably lead to the extinction of the unfit colonial populations.²⁹

This secular moral impetus becomes a defining characteristic of eugenics, and in Galton's later writings it assumed an almost religious quality. He saw the need to fill the position vacated by god in a secular scientific worldview, and to fill it with a firm belief in evolutionary theory and eugenic principles.³⁰ Drawing on religious registers he even "proclaim[ed] a 'Jehad,' or holy war against customs and prejudices that impair the physical and moral qualities of our race."³¹ Galton treats his eugenic project as a quasi-religion:³² a moral imperative based on scientific facts of evolutionary theory that would super-

²⁵ See Galton: *Memories of my Life*, 323.

²⁶ See Galton: "Local Associations for Promoting Eugenics," 100.

²⁷ Galton: "Studies in National Eugenics," 61.

²⁸ It has been observed that eugenics became linked to European imperialism and in particular to British colonialism. See Maxwell: *Picture Imperfect*, 4.

²⁹ Galton: "Possible Improvement of the Human Breed," 34.

³⁰ Galton was convinced that "[t]he feeble nations of the world are necessarily giving way before the nobler varieties of mankind." See Galton: "Hereditary Character and Talent," 166. Galton seems to be speaking here in particular about the settler colonies in southern Africa, Australia, and the former colonies in northern America. On the Indian subcontinent, the British colonial population remained a small minority, and Galton most probably did not have in mind the intermarriage of British citizens with the local population. Taking this argument a step further it would be interesting to see how Australia as a former penal colony would have fared in Galton's estimation, since he was convinced of the deficient moral and physical quality of criminals and the hereditary transmission of these characteristics and dispositions.

³¹ Galton, Francis: "Restrictions in Marriage." In: *Essays in Eugenics*. London: The Eugenics Education Society, 1909, 43–59.

sede religious superstition.³³ Composite portraiture, in its visualisation of the invisible beyond the individual, construction of a superhuman, ideal face, and the ascription of moral, intellectual, and genetic superiority, assumes a spiritual quality in a non-denominational, yet still sectarian way.³⁴ However, this image of secular progressiveness and orientation toward the future stands, as Amos Morris-Reich observes, in contrast to the reactionary logic of racial and eugenic theories, which was essentially preservationist and proclaimed a historical purity of racial characteristics in response to the increasing disintegration of traditional social forms.³⁵ This semblance of progressiveness and secular morality as well as its preservationist note, favoured the reception of eugenics and informed the eugenicising gaze of composite portraiture.

Initially, Galton's eugenic theories were not received enthusiastically. But around the turn of the twentieth century, eugenics became increasingly popular among the European and American educated classes. Contemporary scientific research on human genetics gradually adopted a eugenic perspective and eugenic societies were founded to promote eugenic principles in broader strands of society. But despite all semblance of scientific progress and even though it was embraced in progressive intellectual and scientific circles, eugenics, essentially constituted a conservative, racist, and classist ideology which expressed itself in open hostility to ethnic, social, and religious groups that did not belong to the respective mainstream societies. In Britain, eugenics was marked by hostility of class rather than of race, while in the United States and

³² Galton, Francis: "Probability, the Foundation of Eugenics." In: *Essays in Eugenics*. London: The Eugenics Education Society, 1909, 73–99, at 99.

³³ "Indeed, an enthusiasm to improve the race is so noble in its aim that it might well give rise to the sense of a religious obligation." See Galton: "Possible Improvement of the Human Breed," 25.

³⁴ Anne Maxwell has observed that this form of secular morality became an important factor for securing popular and political support for eugenic ideas. See Maxwell: *Picture Imperfect*, 5.

³⁵ Galton used the technique on a very distinct religious group. Prints of a composite portrait of six "Baptist Welsh Ministers" and a glass negative in a golden frame are preserved among the Galton Papers. The image was published only posthumously in Pearson's biography and I could find no direct references to the image in Galton's writings. A twenty-first century project seems to take up this perspective on the pious face in a composite portrait of all cardinals that were taking part in the conclave electing the new pope in 2013. See Galton, Francis: *Composite of Six Baptist Welsh Ministers*, produced by W. Gulliver, Swansea, composite portrait, 1880. In: Galton Papers, UCL, GALTON 2/8/1/3/3. See also Pearson: *Life, Letters and Labours*, plate XXXIII; Cox, Amanda: "The Consensus Candidate." In: *New York Times. Sunday Review*, 22 February 2013. <https://archive.nytimes.com/www.nytimes.com/interactive/2013/02/22/sunday-review/the-consensus-candidate.html> [15/01/2022].

³⁶ See Morris-Reich: *Race and Photography*, 8.

Germany it promoted the segregation and prosecution of people according to "racial characteristics."³⁶

In Germany, eugenic thought fell on fertile ground. Scientific racism bloomed in the works of physicians, biologists, and anthropologists such as Alfred Ploetz,³⁷ Wilhelm Schallmeyer,³⁸ Eugen Fischer,³⁹ Agnes Bluhm,⁴⁰ Hans Friedrich Karl Günther,⁴¹ and Herman Muckermann,⁴² whose works laid the conceptual basis for the racial justification of the inhumane actions of the Nazi regime and, ultimately, for the horrors of the Holocaust. Negative eugenics, under the heading of "racial hygiene," were not only directed against the Jewish population.

³⁷ See Kelves, Daniel J.: *In the Name of Eugenics. Genetics and the Use of Human Heredity*. New York: Alfred A. Knopf, 1985, 76.

³⁸ Alfred Ploetz, a student of Ernst Haeckel, who was treated as a founding figure of German race ideology, became the most influential racial eugenicist in Germany. He coined the term "racial hygiene" and founded the "German Society for Racial Hygiene" in Berlin. See Ploetz, Alfred: *Die Tüchtigkeit unserer Rasse und der Schutz der Schwachen. Ein Versuch über Rassenhygiene und ihr Verhältnis zu den humanen Idealen, besonders zum Socialismus. Grundlinien einer Rassen-Hygiene, 1. Theil*. Berlin: Fischer, 1895.

³⁹ Wilhelm Schallmayer was a protégé of Ernst Haeckel and an advocate of negative eugenics. His publication on heredity and selection in the history of peoples became a standard work of German eugenics. See Schallmayer, Wilhelm: *Vererbung und Auslese im Lebenslauf der Völker. Eine staatswissenschaftliche Studie auf Grund der neueren Biologie*. Jena: Fischer Verlag, 1903.

⁴⁰ Eugen Fischer published on the so-called Bastards in German South West Africa, present-day Namibia, descendants of Dutch colonists and the local population, and argued for preserving the purity of races. His works included racial studies of so-called "mixed races" and Jews and influenced German legislation on race during National Socialism and the era of the Nuremberg laws. See Fischer, Eugen: *Die Rehobother Bastards und das Bastardierungsproblem beim Menschen: anthropologische und ethnographische Studien am Rehobother Bastardvolk in Deutsch-Südwest-Afrika*. Jena: G. Fischer, 1913.

⁴¹ Agnes Bluhm was a gynecologist and racial hygienist who became known for her publications on matters of racial hygiene concerning women. She worked with Alfred Ploetz in the "German Society for Racial Hygiene" and the eugenic journal *Archiv für Rassen- und Gesellschafts-Biologie*.

⁴² Hans Friedrich Karl Günther was a central proponent of Nordicism and Aryan race theory and an influential theorist of Nazi ideology. Even after the Second World War he continued to publish on eugenic issues. See Günther, Hans Friedrich Karl: *Rassenkunde des deutschen Volkes*. München: J. F. Lehmann, 1922; Günther, Hans Friedrich Karl: *Rassenkunde Europas*. München: J. F. Lehmann, 1924; Günther: *Rassenkunde des jüdischen Volkes*.

⁴³ Herman Muckermann was a member of the "German Society for Racial Hygiene" and worked on the implementation of eugenic legislation under National Socialism. He published on eugenics and proposed a social solution to the genetic transmission of mental illnesses, criminality, tuberculosis, and alcoholism by encouraging the procreation of so-called "high-quality" individuals and the obstruction of the reproduction of "inferior," "contaminated" individuals by means of institutionalisation and sterilisation. See Muckermann, Hermann: *Eugenik und Volkswohlfahrt*. Berlin: Mittler & Sohn, 1933; Muckermann, Hermann: *Rassenforschung und Volk der Zukunft*, Berlin: Dümmler, 1928; Muckermann, Hermann: *Entwicklung, Vererbung, Erziehung. Vortrag auf der Großen Gesundheits-Ausstellung Köln 1951*. Berlin: Morus Verlag, 1951.

Sterilisation and euthanasia were also performed on members of the so-called “Nordic” or “Aryan race” marked as deviant: on physically handicapped and mentally ill persons.⁴³ The German protagonists of eugenic thought and Nazi racial doctrine maintained close ties to British and American proponents of eugenics and scientific racism, such as Havelock Ellis and Charles Davenport. American eugenicists in turn defended German racial policy and negative eugenic measures.⁴⁴ Davenport, for instance, sustained close relationships to eugenic institutions in Nazi Germany into the 1940s, until the politics of elimination of the Nazi regime became unbearable even to him. Some of the German racial scientists, such as Hermann Muckermann and Hans Günther, continued to publish and promote eugenic ideas in Germany even after the demise of National Socialism.⁴⁵

In the United States, eugenic thought started to become influential in the early decades of the twentieth century. Eugenicist legislation was passed in the fields of immigration, criminality, and social welfare, including laws condoning forced sterilisation of so-called “unfit” individuals, a practice that continued well into the 1970s. In the United States, where negative eugenics had severe effects, positive eugenic images, also, enjoyed a high popularity. For instance, this is attested to by the role of composite portraits as eugenic role models for the

⁴⁴ For an analysis of the history of racial theory in Germany see Schmuhl, Hans-Walter: *Rassenhygiene, Nationalsozialismus, Euthanasie: Von der Verhütung zur Vernichtung “lebensunwerten Lebens,” 1890–1945*. Göttingen: Vandenhoeck & Ruprecht, 1987. For a concise history of the Kaiser Wilhelm Institute for Anthropology, the most influential institute for racial science and eugenics in Germany, see Schmuhl, Hans-Walter: *The Kaiser Wilhelm Institute for Anthropology, Human Heredity and Eugenics, 1927–1945. Crossing Boundaries*. Berlin: Springer, 2008.

⁴⁵ See C. G. Campbell, President of the Eugenics Research Association, who in 1936 praised German eugenic policies and defended sterilization programmes: “It is unfortunate that the anti-Nazi propaganda with which all countries have been flooded has gone far to obscure the great importance of the German racial policy. [...] This national policy seeks to attain the greater purity of racial stocks by selective endogamous mating and breeding, with a clear conception and conviction as to its beneficial effects upon its racial quality and its culture; the increased proportionate reproduction of the more competent eugenic stocks; and the proportionate decrease of the incompetent and undesirable dysgenic stocks. [...] no earnest eugenicist can fail to give approbation to such a national policy.” Campbell, C.G: “The German Racial Policy.” In: *Eugenical News*, 21:2, March/April 1936, 25–29, at 25.

⁴⁶ The third edition of Günther’s eugenic guide for choosing a spouse was published in 1951 and continued to support choices based on eugenic theory and certificates of genetic qualities. Other writings that played down the atrocities of the Holocaust were published by right-wing publishing houses. See Günther, Hans Friedrich Karl: *Gattenwahl zu ehelichem Glück und erblicher Ertüchtigung*. München: J. F. Lehmann, 1951. After the demise of National Socialism in Germany, Muckermann promoted a mellower version of positive eugenic measures, but with reference to the Nazi period rejected negative eugenics such as sterilisation and euthanasia. See Muckermann: *Entwicklung, Vererbung, Erziehung*.

white Anglo-Saxon Protestant elite. As Anne Maxwell has shown, photography played a decisive role in the popularising and legitimisation of racial theories and eugenics and as a tool of propaganda and repression.⁴⁶ This is particularly true for composite portraiture and its eugenising gaze.

Furthermore, the photographic technique was interconnected on a theoretical level with Galton’s ideas on human heredity and the principles of his discriminatory eugenic project. Composite portraiture was not a mere by-product of Galton’s research; both his visual and written work shared a conceptual framework in statistics – and the technique’s visuality informed Galton’s thinking about hereditary transmission. Galton understood inheritance in terms of blending,⁴⁷ a process exemplified and visually reconstructed by the photographic technique. His composite portraits, in their presumed ability to visualise average physical and genetic characteristics, were positioned as an analytical tool and as a potential diagnostic instrument in hereditary theory and eugenic practice. The images also were proposed as visual role-models against which individuals could be measured and judged:

It is the essential notion of a race that there should be some ideal typical form from which the individuals may deviate in all directions, but about which they chiefly cluster, and towards which their descendants will continue to cluster. The easiest direction in which a race can be improved is towards that central type [...] Now there can hardly be a more appropriate method of discovering the central physiognomical type of any race or group than that of composite portraiture.⁴⁸

Here the central type is defined as an ideal for eugenic intervention. This is a modification to Galton’s earlier study *Hereditary Genius*,⁴⁹ which had investigated exemplary intellectual traits and individual abilities.⁵⁰ The turn to an

⁴⁷ See Maxwell: *Picture Imperfect*.

⁴⁸ Already in his first eugenic articles Galton argues for such an understanding. “The share that a man retains in the constitution of his remote descendants is inconceivably small. The father transmits, on an average, one-half of his nature, the grandfather one-fourth, the great-grandfather one-eighth; the share decreasing step by step, in a geometrical ratio with great rapidity.” Galton: “Hereditary Character and Talent,” 326. Anne Maxwell observes this understanding of human heredity as a kind of visual merging. She argues that his perspective became displaced by the later reception of Gregor Mendel’s theories of recessive patterns of inheritance after 1910 that highlighted the invisible, hidden traits and the complexity of hereditary transmission. See Maxwell: *Picture Imperfect*, 7.

⁴⁹ Galton: *Inquiries into Human Faculty*, 10.

⁵⁰ See Galton: *Hereditary Genius*.

⁵¹ See Galton: *Hereditary Genius*, 1.

average, central ideal seems to have been influenced by Galton's study of Adolphe Quetelet's work, by his own statistical work, and in particular by his "visual statistics" carried out through composite portraiture. This focus on a central mean becomes aligned with the metaphor of the target, a eugenic target towards which humanity was to be advanced.⁵¹ While Galton also cautioned against eliminating difference in society,⁵² the renunciation of the exemplary remained limited in his affirmative compositions of noteworthy racial and national characteristics. Galton proposed very select average role-models and his visual central type remained a class and race-biased, prescriptive category.

The Ideal Face of the "English Race"

The composite portrait titled *Health* can not only be read in relation to the racialising and pathologising gaze of the technique,⁵³ but must also be considered, in eugenicist terms, as the construction of an ideal face, a visual target for the "genetic enhancement" of humanity. And here the prescriptive force of the visualisation of the average and ideal military man as a role model for eugenic intervention becomes particularly strong. This subject is taken up by the Harvard professor Henry Pickering Bowditch, who produced composite portraits of German soldiers. The contemporary presentation and discussion of these composite portraits shows the fusion of intellectual, moral, and physical criteria in the construction of an ideal image. At the same time, it reveals a racialising and classist perspective as well as the extension of the positive eugenicising gaze and its construction of role models serving as counter-images for negative eugenic or biopolitical intervention.

For the series of composite portraits, Galton superimposed portraits of officers and privates from the Royal Engineers, a highly regarded corps of the British Army.⁵⁴ The individual component photographs of the military personnel, which are preserved among the Galton Papers and in the Galton Collection, were provided by Leonard Darwin.⁵⁵ The son of Charles Darwin – and Galton's distant relative – was himself a lieutenant in the unit and later became president of the *British Eugenics Society*. Galton highlighted the criteria for the composition of his ideal role-model:

⁵² See Klein, Judy L.: *Statistical Visions in Time. A History of Time Series Analysis, 1662–1938*. Cambridge: Cambridge University Press, 1997, 127.



Darwin, Leonard: Portraits of British soldiers, c.1880–81, Galton Collection UCL, GALT 376/377, courtesy of UCL science collections.

⁵³ See Galton: *Inquiries into Human Faculty*, 2.

⁵⁴ See chapter 4, "Racial Prototypes."

⁵⁵ For this co-composite, published as a section of the chart "Specimens of Composite Portraiture," Galton superimposed the two middle composite portraits of the chart later published as "Comparison of Criminal and Normal Population."

⁵⁶ See Galton Papers, UCL, GALT 2/8/1/9/2; GALT 2/8/1/9/3.

The points they had in common were the bodily and mental qualifications required for admission into their select corps, and their generally British descent. The result is a composite having an expression of considerable vigour, resolution, intelligence, and frankness. [...] This face and the qualities it connotes probably give a clue to the direction in which the stock of the English race might most easily be improved.⁵⁶

Galton here fuses intellectual and physical criteria and aligns them with respected character traits, defining this combination as the embodiment of “health.” Health here is not to be understood in terms of a medical diagnosis, but appears as a highly charged social concept that equates bodily with mental and moral fitness, as well as beauty, and links these phenomena to physical appearance as an indicator for genetic disposition. The racial and eugenic role model was presented as a positive counter-image to visualisations of criminality and illness⁵⁷ and, in effect, as a piece of affirmative self-praise lauding the qualities of the British people.

But the composite portrait is far from an average representation of the male population of the British nation; its components were hand-picked from a select, relatively well-educated, and physically trained group of military men. With this focus on military personnel as positive representatives of national characteristics, Galton takes up a subject that had earlier been examined statistically by Quetelet, who built his theory of the average man on a study of anthropometric measurements of soldiers from France, Belgium and Scotland.⁵⁸ Galton, whose composite portraiture explicitly draws on the statistician’s work, might have had in mind here a direct visualisation of Quetelet’s average military man for Britain, or more specifically England. In a presentation read in front of the Photographic Society in 1881 that was published without illustrations in the *Photographic Journal*, Galton further explicates his treatment of the portraits and their compositions from the two groups of Royal Engineers:

Here is a composite of 12 officers; here is one of 30 privates. I then thought it better to select from the latter the men that came from the southern counties, and then again to make a further selection of 11 from these [...] It is very interesting to note the stamp of culture and refinement on the composite officer, and the honest and vigorous but more homely features of the privates. The combination of these two, officers and privates, gives a very effective physiognomy.⁵⁹

⁵⁷ Galton: *Inquiries into Human Faculty*, 10.

⁵⁸ See chapters 3 and 6.



Galton, Francis: *Comparison of Criminal and Normal population*. In: Pearson, Karl: *The Life, Letters and Labours of Francis Galton: Researches of Middle Life*. London: Cambridge University Press, 1924, Plate XXIX.

The choice of components for the composite privileges English origin over the British descent alluded to earlier, thus excluding individuals of Scottish, Welsh, or Irish backgrounds from the composite face of the lower-ranking soldiers.⁶⁰ Galton ascribes physical and moral virtues to the English sub-selection, while maintaining a strict class-separation between military ranks.⁶¹ This class division is suspended in a further co-composition of officers with privates that seems to attempt a blending of inner, as well as outer, physical characteristics under the presupposition that the best from both groups would be synthesised in the composite face.⁶² The resultant composite face Galton describes as “effective,”

⁵⁹ See Stigler, Stephen M.: *The History of Statistics. The Measurement of Uncertainty Before 1900*. Cambridge, Mass./London: Harvard University Press, 1986, 171–172.

⁶⁰ Galton: “Composite Portraiture,” 144.

⁶¹ See the discussion of the national composites by David Katz and others in chapter 4.

⁶² Even though the images were taken at a disciplinary institution, it is likely that the officers, at least, were aware of what their portraits would be used for, and would have had access to the final product.

which in the light of his quest for a eugenic role-model translates as “valuable” or “suitable,” as a visual indication of the kind of genetic material prerequisite for eugenic practice and the improvement of the “British race.”

In the published charts, the agenda of the eugenicising gaze becomes clearer. A benevolent but inquiring gaze is directed at one section of society in order to construe an ideal type of physical and intellectual quality as a target for social and biopolitical intervention. Galton’s description of this ideal as representing the “normal population” highlights the normative and prescriptive potential, revealing a diagnostic agenda apart from its affirmative function as a eugenic role-model. The images assume a biopolitical function in the management of the population and its propagation that becomes interlinked with disciplinary mechanisms directed at individuals. Foucault has observed this combination of disciplinary techniques with regulative methods in the sphere of sexuality and eugenic management and highlights it as characteristic of a normalising society.⁶³ In what he calls a system of “perversion-heredity-degenerescence,”⁶⁴ sex and reproduction became considered as a biopolitical responsibility with regard to the species and its eugenic management. This management of sexuality, he argues, was addressed primarily at the privileged and politically dominant classes.⁶⁵ Galton’s version of positive eugenics and the eugenicising gaze of composite portraiture appear to support this analysis: they were initially directed at elite groups, such as in a composite of students of Westminster School.⁶⁶ Only by the late nineteenth and early twentieth centuries, eugenic ideas spread to wider circles of society.

These portraits of groups of British society furthermore highlight the classist biopolitics of the eugenicising gaze, in particular when this ideal face is compared

⁶³ See the illustration on p. 191: “Specimens of Composite Portraiture”, illustration in: Galton, Francis: *Inquiries into Human Faculty and its Development*. London: Dent, 1883, 8a.

⁶⁴ Foucault: *History of Sexuality I: The Will to Knowledge*, 146.

⁶⁵ Foucault: *History of Sexuality I: The Will to Knowledge*, 118.

⁶⁶ Foucault: *History of Sexuality I: The Will to Knowledge*, 118–120.

⁶⁷ The eugenicising gaze also manifests in a composite portrait of Westminster Schoolboys, produced by Galton and his photographer, likewise in the early 1880s. Nine students of the Anglican public school, Royal College of St. Peter, also known as Westminster School, were photographed front and profile. Of these an unknown number of frontal portraits were superimposed into a composite, probably adding portraits from other origins. The results were never published by Galton, but found their way into a plate in Karl Pearson’s biography of his mentor. See Galton Papers, UCL, GALTON 2/8/1/9/1; Pearson, Karl: *Life, Letters and Labours*, plate XXXIII.

directly with the dismal, unwanted, degenerated side of society, exemplified by composite faces of “disease” and “criminality,” published side by side in Galton’s writings and Pearson’s biography. These inverse counter-images of physically or morally defective types open the path for negative eugenic intervention directed at that part of the population disqualified as “normal” by what could be called the negative eugenicising gaze of composite portraiture. Here the categories of race, nationality, class, criminality, and health intersect in the construction of the ideal and improved face of the English nation and of its counter-images.

The self-affirmative aspect of positively connoted composite portraits appealed not only to the army captain William de Wiveleslie Abney, who expressed his enthusiasm about the composite portraits of the Royal Engineers.⁶⁷ This aspect became more prominent in later American adaptations of the technique, in particular by the Harvard professor Henry Pickering Bowditch and John Tappan Stoddard, a professor at Smith College. The American physician made a tour of Europe in 1890, giving talks on the technique and exhibiting composite portraits.⁶⁸ “I have succeeded in awakening considerable interest in composite photographs here in Germany and hope that some attempts will be made to secure the Teutonic type of face,”⁶⁹ Bowditch writes to Galton from Dresden.⁷⁰

⁶⁸ In the discussion of Galton’s presentation of the images at the Photographic Society, Captain William de Wiveleslie Abney, an influential photographer and chemist as well as a teacher at the Royal School for Military Engineering, expressed his enthusiasm about the technique and the composite portraits of the Royal Engineers: “I was not aware that the typical officer was so good looking as he appears to be, and I cannot help feeling a certain amount of satisfaction in being connected with the corps on their account alone.” Captain Abney quoted in: Galton: “Composite Portraiture,” 146.

⁶⁹ The Boston physician Bowditch and Galton exchanged several letters starting in 1888, but most probably did not meet in person. In a letter dated 10 January 1888 H.P. Bowditch asks Galton for lantern slides for a presentation on composite portraiture in Boston and offers to send images produced with the technique in the US in exchange. In April 1888, Galton received a number of composite portraits and components of horse car conductors and drivers that in Bowditch’s view revealed the intellectual type of these groups, as well as of twelve Boston doctors. Bowditch also sent two composites of college students (449 male students; 287 female students) produced by John Tappan Stoddard. He notes that these “seem to me to be singularly intellectually and beautiful faces” and that he would like to compare them with a composite of English French, and German students. See Bowditch, Henry Pickering: Letters addressed to Francis Galton. Galton Papers, UCL, GALTON 2/8/1/1/3.

⁷⁰ Bowditch, Henry Pickering: Letter addressed to Francis Galton, 8 June 1890. Galton Papers, UCL, GALTON 2/8/1/1/3 f7.

⁷¹ This advertising campaign for composite portraiture, however, proved not to be successful; one of the few German language publications is an article by Georg Treu, who focuses on the aesthetics of the technique and merely reproduces arguments and images from the US and England. See Treu: “Durchschnittsbild und Schönheit.”

During his travels Bowditch embarked on a study of the same group that Galton had chosen to represent in his English eugenicist role model. With the aid of the German general Bernhard von Funcke,⁷¹ Bowditch produced composite portraits of German soldiers of Saxon and Wendish⁷² origin and noted that the Wend composite face gave the “impression of greater vigor and strength of character.”⁷³ Bowditch also forwarded the results to Galton, who was impressed by this composite of German military men.⁷⁴

In the plates of German soldiers, already discussed in chapter 4,⁷⁵ the photographic composition is presented in the centre, about four times the size of the surrounding individual components. Judging from the accuracy of size and frontal orientation of the portraits, they appear to have been produced for the specific purpose of photographic superimposition. The composite portraits are bright and an oval vignette seems to have been used, which results in a luminous glare that blanks out the background. The faces stand out in an intangible, spectral manner. In their comments on the images, both Bowditch and Galton focused on the observation of racial characteristics.⁷⁶ From a eugenic perspective, in which the purity of race was accepted as a defining category for the future development of populations, the images are presented as visual role-models. This interpretation is sustained by Bowditch’s composites of American scientists and other professions, which fused the categories of “class” and “race” in the construction of eugenicising composite faces of a new American elite.

Composing Role Models for the American Intellectual Elite

Henry Pickering Bowditch, who was professor at Harvard Medical School, became the most avid proponent of composite portraiture in the United States. Bowditch was not only active as a producer of composite portraits of various

⁷² Bernhard von Funcke was married to May Emerson Brooks, originally from New York. The couple later lived in Dresden and was presumably visited by H.P. Bowditch in 1890.

⁷³ The Wend minority, better known as Sorbian, was a Slavic community that settled from the eighth-century onwards in the territories that later became Germany.

⁷⁴ Bowditch: “Are Composite Photographs Typical Pictures?” 342.

⁷⁵ See Galton: Letter to Bowditch, 2 August 1892.

⁷⁶ See the illustrations in chapter 4.

⁷⁷ See the discussion of the racialising gaze of composite portraiture in chapter 4.



Bowditch, Henry P.: *Twelve Boston Physicians and Their Composite Portrait – the Composite in the Centre*, 1887. *Composite of 12 Boston Doctors*. Galton Papers, Special Collections, University College London, GALTON/2/8/1/1/3.

professional groups in late-nineteenth century north-eastern American society. He also collected the productions of other American protagonists of the technique, among others images by the geologist Raphael Pumpelly and by the psychiatrist William Noyes,⁷⁷ as well as composites of college classes and of the members of university faculties produced by the chemist John Tappan Stoddard.⁷⁸ The discussion of these photographic constructions of intellectual role models reveals a strong class bias and impetus towards the formation of a common but exclusionary identity.

Bowditch’s own series of positively connoted composite portraits fittingly started with himself, his family,⁷⁹ and members of his profession and of the

⁷⁸ Noyes’s composites of patients of a psychiatric hospital in New York are discussed in chapter 6.

⁷⁹ Bowditch shared his and some of these composite portraits with Francis Galton. See Bowditch: Letter to Galton, 21 March 1885. Galton Papers, UCL, GALTON 2/8/1/1/3 f3.

⁸⁰ Following the impulse of Francis Galton, who addressed his American audience directly on composite portraiture, Bowditch produced a composite of the members of his family. Bowditch’s family composite became part of the exhibit on composite portraiture in the Second International Exhibition of Eugenics. See Laughlin, Harry H.: *The Second International Exhibition of Eugenics*. Baltimore: Williams and Wilkins Company, 1923, Fig. 35, 131.

elite dining club Kappa Pi Eta. He produced a composite of all twelve members of this physician's club in Boston in 1887 and returned to this group in 1892 to produce a second composition. Interestingly the circular arrangement of the component portraits not only starts with Bowditch, but the result of the self-affirmative, positive eugenising gaze of composite seems to oscillate around its producer's physiognomy. The rather narcissist composite face of Boston doctors appears as a softer, more attractive, and less bald version of Bowditch's own face, on which he notes:

The face is distinctly intellectual in its character, and the apparent age is not far from the average age of the components [...] The method of composite photography has, therefore, in this case, at any rate, produced a portrait which may be regarded as typical of the components, since its features fairly represent the group in respect to the only two qualities, namely, age and intelligence, in which the individual faces resemble each other.



Bowditch, Henry P.: *Composite of 12 Horse Car Conductors* and components, c. 1887. Galton Papers, Special Collections, University College London, GALTON 2/8/1/1/3.

Bowditch compiled composite portraits of professional groups of his contemporary scientific elite, but also of less prestigious manual professions, such as horse-car conductors and horse-car drivers. In an article in the September 1894 issue of the illustrated monthly *McClure's Magazine*,⁸⁰ which contained a series of these composites, he observes:

⁸¹ Bowditch: "Are Composite Photographs Typical Pictures?"

⁸² Bowditch: "Are Composite Photographs Typical Pictures?," 342.

We have thus three groups of portraits, the doctors, the conductors, and the drivers, each group characterized by a different grade of intellectual development, and that grade fairly constant within each group. Now, since the composites of these groups show a corresponding difference, it seems to be a reasonable conclusion that, as far as intelligence is concerned, the composite portrait fairly represents the typical physiognomy of the group to which it belongs.⁸¹



Bowditch, Henry P.: *Composite of 12 Horse Car Drivers* and components, c. 1887. Galton Papers, Special Collections, University College London, GALTON 2/8/1/1/3.

Arguing for the importance of composite portraiture in ascertaining typical professional physiognomies,⁸² Bowditch presents the composites as typical examples of the three professions and as representations of their respective intelligence. He thus returns to the starting point of Francis Galton's study on heredity and his first impulse for eugenic intervention in his publication *Hereditary Genius*. While Galton had only hinted at markers for intelligence in the discussion of his composite of English military men, Bowditch presents intricate hierarchies of class, not only between different academic professions, but between professions that, from a current perspective, seem hardly distinguishable.

Much in the same vein as Bowditch, Joseph Jastrow⁸³ and John Tappan Stoddard⁸⁴ produced composites of mathematicians and naturalists, and published the results.⁸⁵ Raphael Pumpelly presented a composite portrait of the members of the National Academy of Sciences. In the groups that were "selected as a type of the higher American intelligence in the field of abstract science,"⁸⁶ Pumpelly

⁸³ See Bowditch: "Are Composite Photographs Typical Pictures?," 342.

observed “an idea of perfect equilibrium, of marked intelligence, and [...] imaginativeness.”⁸⁷ The lower right composite, of the Northern Transcontinental Survey, was praised as “having the physique and energy, as well as intelligence, needed to execute such a task.”⁸⁸

Pumpelly’s, Bowditch’s, Stoddard’s, and Jastrow’s composite portraits of members of respected professions and scientific societies in north-eastern American urban centers constitute examples for the self-affirmative use of the photographic technique.⁸⁹ The eugenicising gaze of composite portraiture was moving beyond the study of the deviant and abnormal. Here the aspect of a common representation in the construction of a new American elite, superior in physical, moral and intellectual qualities, is infused in the photographically composed faces, constructing what could be described as an, albeit selective, “everybody figure.”⁹⁰ The authors made sure to only include white Anglo-Saxon males of a certain class, and under these circumstances the composite faces became a means of creating the unified race, gender, and class-based identity of an educational elite that became increasingly imbued with eugenic thought. At the zenith of the technique’s popularity, it became fashionable to produce composite portraits of graduating classes of American colleges; these also included women but followed a similar agenda.

⁸⁴ Joseph Jastrow commissioned a composite portrait of the members of the American association for the advancement of science (Messrs. Newton, Lesley, Newcomb, Asa Gray, Cope, Hilgard, Putnam, James Hall, J. W. Langley, Morse, Eaton, N. H. Winchell, Wormley, Thurston, Eddy, Springer, and John Trowbridge.) It was prepared by Mr. W. Curtis Taylor of Philadelphia and published in *Science*. See Jastrow, Joseph: “A Composite Portrait of the Officers of the Association.” *Science*, 6, no. 134, 28 August 1885, 167. See also the discussion of this composite by Curtis Taylor, who notes: “These notables, all laying their heads together, are supposed to present to our gaze the typical scientific man.” See Taylor, W. Curtis: “On Composite Photography.” In: *Proceedings of the American Philosophical Society*, 22, no. 120, part IV, October 1885, 360–362, at 361.

⁸⁵ A frontal and profile composite of the “Members of the National Academy of Sciences” appeared in John T. Stoddard’s 1887 article on the composite technique in the popular Journal, *The Century*. See Stoddard, John Tappan: “Composite Photography.” In: *The Century*, 33:5, March 1887, 750–757, at 754.

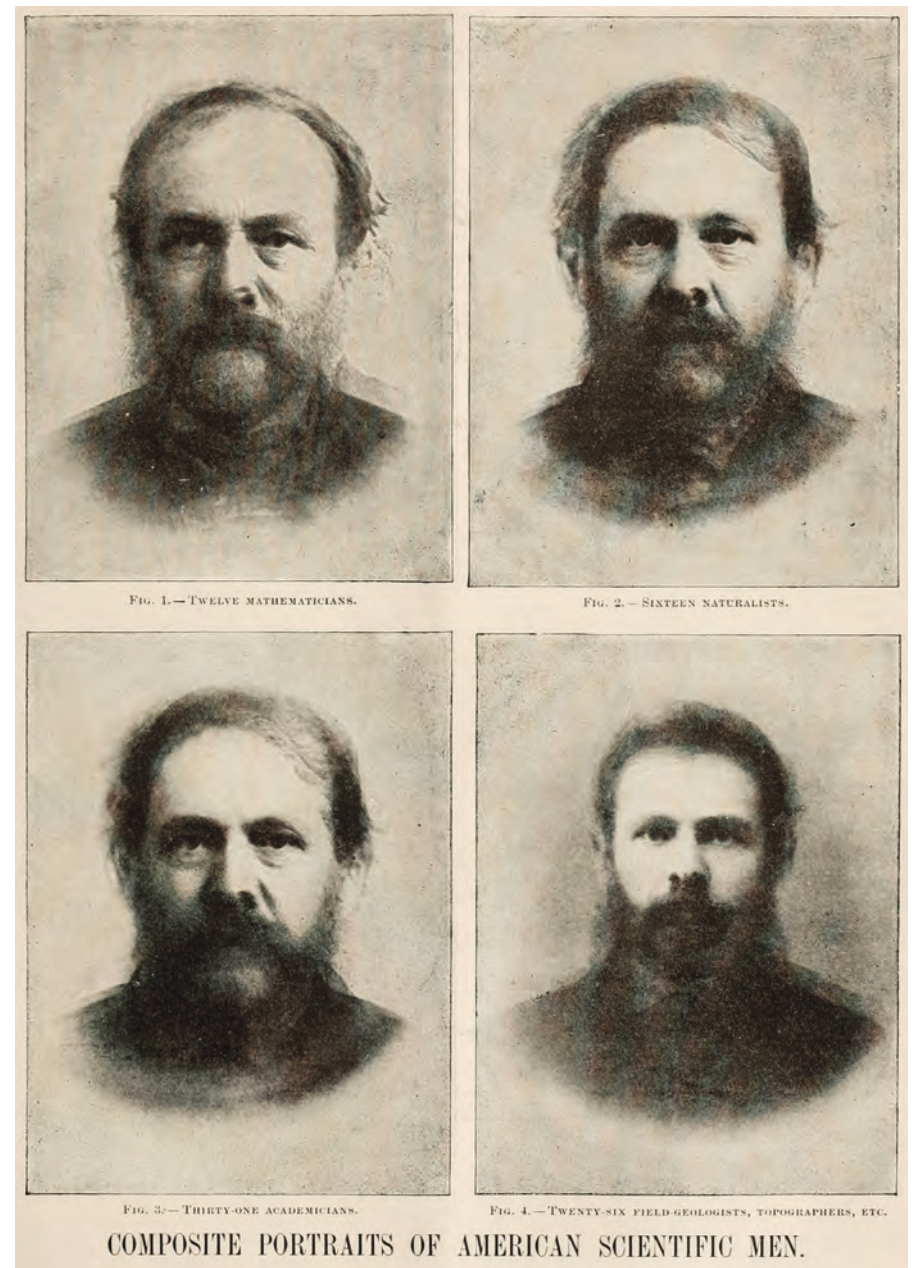
⁸⁶ In 1908, a composite portrait of the “Pianistic Face” was published in *Harper’s Weekly*, blending the portraits of twelve of the best-known pianists of the time. See *Harper’s Weekly*, 16 May 1908.

⁸⁷ Pumpelly, Raphael: “Composite Portraits of Members of the National Academy of Sciences.” In: *Science*, 5, no. 118, 8 May 1885, 378–379, at 378.

⁸⁸ Pumpelly: “Composite Portraits of Members of the National Academy of Sciences,” 378.

⁸⁹ Pumpelly, Raphael: “Composite Portraits of Members of the National Academy of Sciences,” 379.

⁹⁰ Galton must have been aware of Pumpelly’s composite portraits, since a short article of his can be found in the same slender issue of *Nature* which featured a reprint of Pumpelly’s article on composite portraits. See Galton, Francis: “The Measure of Fidget.” In: *Nature*, 25 June 1885, 174–175.



Pumpelly, Raphael: *Composite Portraits of American Scientific Men*, Fig. 1: 12 mathematicians, including astrophysicists and physicists; average age of 51.66; Fig 2: 16 naturalists, including 7 biologists, 3 chemists, 6 geologists; average age of 51.66; Fig. 3: 31 academicians; Fig. 4: 26 members of the corps of the Northern Transcontinental Survey; average age 30. In: *Nature*, June 25, 1885, facing 180.

⁹¹ See Gschrey: “Facing Everybody?”

American Class Composites and "Eugenic Everybodies"

In the 1880's and 1890's composite portraiture became fashionable as a special form of group-portrait in north-eastern American colleges and universities. With the college group portraits the composite technique reached its highest level of complexity. In some cases, more than 400 individual negatives were combined by photographic companies in a single photographic print, a number that surpassed even Galton's most extensive experiments. Also, in those class composites the technique reached its widest circulation and recognition, both in contemporary popular culture and in the American scientific community. The audience of the composites was twofold: they were sold as keepsakes to students and their families and they were published in scientific and popular journals.⁹¹ In those arenas, the images were functioning as self-affirmative portraits of group identities, as (rather paradoxical) exclusive "everybody" figures and as devices in the popularisation of eugenic ideas. Furthermore, the eugenic class composites contributed to the more general construction of images of the intellectual elite and the construal of the genetic superiority of the intellectual class and the advocacy of its elevated role in American society.

Most influential north-eastern American colleges of the time joined the composite craze. Composites were produced at the then all-male institutions Amherst College, Harvard University, Cornell University, Williams College, Bowdoin College, Williams College, Johns Hopkins University, and Sheffield Scientific School (part of Yale College). In institutions of female higher education, also, composite portraiture enjoyed considerable popularity: at Smith College, Wellesley College, Harvard Annex (now Radcliffe College, Harvard University), Mount Holyoke Seminary (now Mount Holyoke College), Wells College, and Vassar College. Among these were five of the prestigious "Seven Sisters" colleges that in the late nineteenth century provided university-level educational opportunities for women.⁹² The images were popular not only in university circles; the press likewise celebrated the arrival of this new type of class portrait:

⁹² School photography interestingly is a genre in which composite portraiture has survived until today.

⁹³ In the heyday of college composite portraiture in the mid-1880s, the remaining two "Seven Sisters" schools, Bryn Mawr College and Barnard College, were still in the construction process.

⁹⁴ Photographic News: "A Typical Girl-Portrait by Galton's Method." In: *The Photographic News*, 7 August 1885, 812.

The typical young woman of culture, the ideal of many poets, the study of modern novelists, has been finally discovered and made public, not by insight, nor philosophy, but by the useful, though apparently prosaic, art of photography. [...] The mystery of the camera is undeniably beautiful. With high brow softened by fluffy waves of hair, deep-eyed, with refined features and earnest expression, she is a young woman of dignity and sweetness. She is born for deep thought, and yet for sympathetic comfort and cheer. To be sure, she hits a tendency toward a double chin, but the lines of her countenance are noble, and her head is evenly developed. The senior class at Smith College has named its new sister Miss Senior P Smith, the P. indicating Physics, and will place her photograph in their albums, a shadow substance of a thing unseen, among the class photographs of bright and thoroughly alive graduates.⁹³

The popular reception of the eugenising gaze of composite portraiture was now focusing on women, a group that was largely ignored in the production of earlier photographic compositions. Female virtues are ascribed to the composite faces, merging physical beauty with moral qualities and intellectual capacity, without neglecting attributes of care and comfort. These qualities were seen as fundamental for the marriage market in a society that sought for markers of moral, physical and intellectual refinement and increasingly cared for eugenic ideas and the preservation and reproduction of its intellectual and economic elite.

John Tappan Stoddard, a professor at Smith College who together with his assistant produced the composite of young women that was so well received in the press, played an important role in the technique's diffusion and reception in university circles. At his own university, he arranged for the production of composite portraits of graduating classes between 1883 and 1892.⁹⁴ Many other college composites were also produced on his initiative, with the aid of the academic staff at the respective institutions and with the help of professional photographers and companies who produced the negatives specifically for this purpose.⁹⁵

⁹⁵ John Tappan Stoddard and John L. Lovell produced composite portraits of female Smith College students in the years 1886, 1887, 1889, 1890, 1891, and 1892 that are preserved in the college's archive. See "Composita of Smith." (2011) Smith College Archives Website, <https://smitharchives.wordpress.com/tag/john-tappan-stoddard> [15/01/2022].

⁹⁶ Stoddard mainly worked with John L. Lovell (Amherst), but the photographers A.O. Reed (Brunswick), Evan D. Evans (Ithaca), James S. Cummins (Baltimore), Pach Brothers (New York), Vail Brothers (Poughkeepsie), R.R. Abbott (Springport), James Notman (Cambridge/Boston) also produced composite portraits. See Stoddard: "College Composites", 121.



Stoddard, John Tappan: College Composites. In: *The Century*, 35.1, November 1887, 122; 124.

The thus compiled college composites were published by Stoddard in *Science*⁹⁶ and in different issues of the popular monthly magazine *The Century*,⁹⁷ a conservative journal influential in advancing American nationalism.⁹⁸ Here Stoddard argued that composite photographs of college classes could provide important evidence for the value of the method of typical representation and that in the images “heredity and environment [...] are here all summed up and averaged.”⁹⁹ For each of the composite portraits of university classes, information on the percentage of students from New England or the “Middle States” is noted. Even though Stoddard observes differences that he attributes to this geographical variation, as well as to specific university environments, he notes a “family resemblance” in the composite faces that exhibited common characteristics of this exclusive group.¹⁰⁰

Kris Belden-Adams argues that the college composites constitute a visual typology of New England’s educational and economic elite, the so-called

⁹⁷ See Stoddard, John Tappan: “Composite Portraiture.” In: *Science*, 8, no. 182, 30 July 1886, 89–91.
⁹⁸ See Stoddard: “Composite Photography;” Stoddard: “College Composites.”
⁹⁹ See Bond, J. Arthur: “‘Applying the Standards of Intrinsic Excellence’: Nationalism and Arnoldian Cultural Valuation in the Century Magazine.” In: *American Periodicals*, 9, 1999, 55–73.
¹⁰⁰ Stoddard: “College Composites,” 122.
¹⁰¹ See Stoddard: “College Composites.”

Boston Brahmins, in an academic and social environment that was infused with eugenic thought and class bias.¹⁰¹ The term was proposed by the writer, physician, and later dean at Harvard University Oliver Wendell Holmes, Sr., who argued for the physical and mental superiority and a distinct and hereditary physiognomic organisation of the Brahmin social class and its university students.¹⁰² The north-eastern American colleges, in particular Harvard, were influential in the dissemination of positive and negative eugenics. Presidents, deans, and academic personnel held offices in eugenics organisations, such as the Eugenics Record Office, and promoted eugenicist thinking and legislation.¹⁰³ In the eugenicist climate of the turn of the twentieth century, the eugenising gaze of composite portraiture performed a double function: fostering the identification with a peer-group and social class and providing orientation through the formulation of a utopian, positive eugenic ideal. Here, composite portraits function as “everybody figures” – in the sense of self-validating intermediary characters and discursively constructed representative figures – comes to the fore, exhibiting two major functions: addressing and involving the public.¹⁰⁴ As affirmative role models, however, are of a very selective and exclusionary kind that provided a representative identificatory device and biologised validation for the status of the new American educational elite.¹⁰⁵

¹⁰² See Belden-Adams, Kris: “Harvard’s Composite ‘Class’ Pictures.” In: *Photographies*, 8, 2015, 125–126. See also Belden-Adams, Kris: *Eugenics, ‘Aristogenics,’ Photography: Picturing Privilege*. New York: Routledge, 2021.
¹⁰³ Wendell Holmes’s novel is filled with physiognomic character descriptions and it was influential in the contemporary description of the New England educated class. The author observes a distinct physiognomy of the Brahmin elite and describes these physical and intellectual markers as hereditary. See Wendell Holmes, Oliver: “The Brahmin Caste of New England.” In: *The Atlantic Monthly*, 5, no. 27, 1860, 91–92.
¹⁰⁴ Several Presidents of Harvard were outspoken eugenicists such as Charles William Eliot, who later became vice-president of the First International Eugenics Congress, and A. Lawrence Lowell, who supported eugenics research and immigration legislation and introduced eugenic admission policies into the university. Among the academic staff of Harvard there are several other illustrious names who played a role in the history of composite portraiture: Oliver Wendell Holmes, dean of the Harvard Medical School and staunch eugenicist; Charles Davenport, who taught zoology at Harvard and later founded the Eugenics Record Office; Earnest Hooton, chairman of the anthropology department, who maintained his eugenic ideas even after they were discredited by the destructive eugenic politics of German National Socialism. See Cohen, Adam S.: “Harvard’s Eugenic Era.” In: *Harvard Magazine*, March–April 2016. <https://harvardmagazine.com/2016/03/harvards-eugenics-era> [15/01/2022].
¹⁰⁵ These are the centrals characteristics ascribed to everybody figures by Anna Schober. See Schober, Anna: “Everybody: Figuren ‘wie Sie und ich’ und ihr Verhältnis zum Publikum im historischen und medialen Umbruch.” In: J. Ahrens, L. Hieber, Y. Kautt (eds.): *Kampf um Images: Visuelle Kommunikation in gesellschaftlichen Konfliktlagen*. Wiesbaden: Springer, 2015, 241–270.

¹⁰⁶ See Gschrey: “Facing Everybody?”

A peculiar example of the popularity and identificatory effect of a eugenically intended composite everybody figure was the superimposition of the Smith College class of 1886. The class showed a particular identification with their composite portrait and even gave the artificial female face a name: “Composita.” They adopted the image as a kind of collective identity and mascot and even wrote and performed a play named after the composite heroine: *Composita Octogenta Sex: A Drama in Three Acts by One of Her Components*. Kati Curts describes the embodiment of this composite portrait as an expression of class-devotion, femininity, and whiteness.¹⁰⁶ This identity politics found a useful ally in a characteristic of the technique that softened the faces and thereby increased attractiveness in the process of photographic composition.¹⁰⁷ The archive of Smith College reveals that, long after the graduation of the class, “Composita” played a role in students’ lives.¹⁰⁸ Stoddard later published the image in *Science*, together with composite portraits of sub-groups according to their scholarly achievements.¹⁰⁹ This gave the image further authority as a means in the scientific authentication of social status and intellectual capacity. Furthermore, it became a female eugenic role model – an average but better everybody figure that is rather paradoxical in its exclusivity.

Stoddard also commissioned and published co-composites of the portraits taken at different colleges, two of which found their way into the *Galton Papers* through Henry Pickering Bowditch.¹¹⁰ These large-scale endeavours constructed what could be described as trans-institutional meta-composites of New England’s white protestant educational elite. They appear as intellectual and, implicitly, moral role models and physical prototypes for a eugenised breed of future Americans. The images, however, contrary to their discussion in scientific circles, reveal less about intelligence and physical aptitude than about contemporary clothing and hair styles: a demure high collar and wavy pinned-up hair for women; a suit, clean-shaven face, and side parting for men.¹¹¹

¹⁰⁷ See Curts, Kati: “Shadowy Relations and Shades of Devotion. Production and Possession of the 1889 Smith College Photograph.” In: Sally M. Promey (ed.): *Sensational Religion. Sensory Cultures in Material Practice*. New Haven: Yale University Press, 2014.

¹⁰⁸ Already Francis Galton observed the advance in attractiveness of composite portraits compared with the individual components. This will be discussed in chapter 10.

¹⁰⁹ See “Composita of Smith.”

¹¹⁰ See Stoddard: “Composite Portraiture.”

¹¹¹ See the images in the Galton Papers, UCL, GALTON 2/8/1/1/3.



Stoddard, J. T.; Lovell, J. L.: Co-composite portraits 287 female students (Harvard Annex, Mount Holyoke, Smith, Wellesley, Wells, Vassar); co-composite portraits of 449 male students (Amherst, Bowdoin, Cornell, Harvard, Johns Hopkins, Sheffield Scientific, Williams), c. 1887. Galton Papers, Special Collections, University College London, GALTON 2/8/1/1/3.

There were few critical remarks on the eugenising gaze of the composite technique by the contemporary audience. The Philadelphia-based physicist, amateur photographer, and essayist Ellerslie Wallace, for one, was not convinced by the composite portraits. He challenged the informative value of the technique and mocked the physiognomic quality of the blurry composite portraits of female college graduates:

I have recently seen a ‘type-composite’ of some seventy lady graduates of a well known college. While I am hardly in a position to judge of the intellectual average thus shown, I can say that a phrenologist would look in vain for the bump of photographic-common sensitiveness or chemico-physical-comprehensiveness.¹¹²

¹¹² The appearance of the college composites shows a marked contrast to a composite of thirty-eight all-male members of the Harvard faculty that was also produced by Lovell, and which appears to be sporting a full beard and a face mysteriously fusing into the dark background, an image that seems more of a fashion statement than a neutral visualisation of accumulated intelligence and academic refinement. See Stoddard: “College Composites,” 125.

¹¹³ Wallace: “Composite Photography 11.

Taylor Curtis, the photographer of many college composites, argues in the same vein: While defending the technique's use as a keepsake and in the character representation of historical individuals,¹¹³ he challenges the physiognomic potential of the compositions with respect to professions and groups in society.¹¹⁴ But apart from these isolated critiques of the ideal photographic compositions of the intellectual elite, the images seem to have been embraced by the nineteenth-century audience.

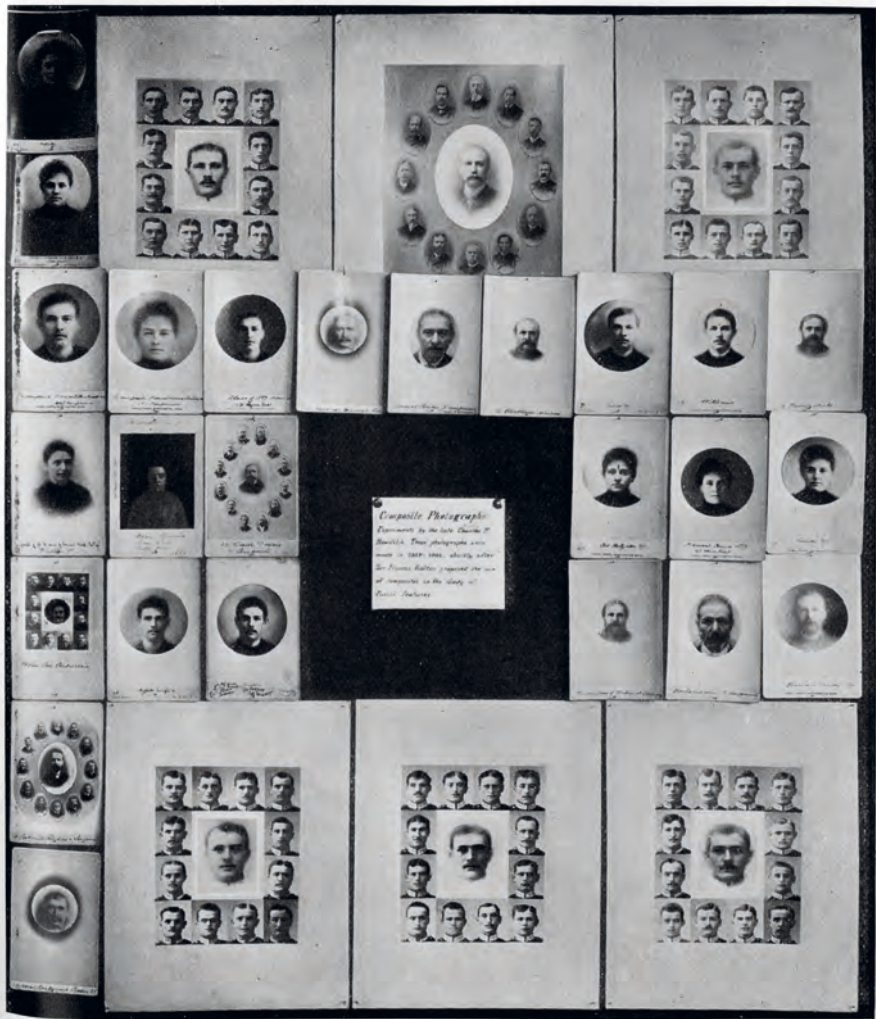
With their eugenicising gaze that contributed to the construction of normative, exemplary role models, the college composites contrast with the technique's initial focus on deviancy and the abnormal. In the American context, composite faces begin to express a common intellectual and class identity that, following a positive eugenic agenda, granted women an almost fair share in the human reproductive process – and in composite portraiture's attention to the human face. However, it defined a specific, exclusionary figure, a visual collective self that remained reserved for the white protestant academic elite. And the collective figure was defined in contrast to “other” faces at which negative eugenic ideas were directed, the deviant faces of crime, illness, and “other races,” at which the photographic technique was likewise directed in the United States.¹¹⁵

Exhibiting Eugenic Composites

Over thirty years after the heyday of American composite portraiture, their eugenicising gaze on society seems not to have lost its fascination for American audiences. The images were used as exhibits in eugenic exhibitions and the technique was used, in the first decades of the twentieth century, for the visualisation of exceptional group qualities and the popularisation of eugenic thinking. This fascination with an average ideal evolved into three-dimensional form in composite sculptures that, in addition to composite portraits, played a role in the nationalist and racialising visual self-definition of American society.

¹¹⁴ See chapter 9.

¹¹⁵ With reference to phrenology, Taylor argues, provokingly: “To borrow from the vagaries of phrenology, fill up between the bumps and there would be no bumps left.” See Taylor: “On Composite Photography,” 362.



Second International Exhibition of Eugenics: Reproduction of the exhibit on composite portraiture. See Laughlin, Harry H.: *The Second International Exhibition of Eugenics*. Baltimore: Williams & Wilkins Company, 1923, Fig. 35, 131.

¹¹⁶ Examples of this process can be found in the composite portraits of Native Americans by Alice C. Fletcher, the composite portraits of inmates of Elmira Reformatory (New York state) by Hamilton Wey and Bloomingdale Mental Asylum by William Noyes. See Alice C. Fletcher (Jenness Richardson): *Composites of Dakota Women*, 1886; Wey, Hamilton: “Composite photograph of twenty criminals – ‘dullards’ – in the Elmira Reformatory.” Frontispiece in: Ellis: *The Criminal*; Noyes: “Composite Portraiture of the Insane,” 252.

At the exhibition of the Second International Eugenics Congress of 1921, a chart with over 31 composite portraits from the collection of Henry Pickering Bowditch was shown at the American Museum of Natural History, New York. The eugenic congress was one of three held between 1912 and 1932, which were among others presided over by the renowned eugenicists Charles Davenport and Leonard Darwin, who had contributed to Galton's first eugenic composite portrait. Harry. H. Laughlin,¹¹⁶ Davenport's fellow at the Eugenics Record Office, Cold Springs Harbour, worked on the exhibits committee of the second congress.

The exhibition, even more than the congress, was a popular event that was visited by between 5,000 and 10,000 people during the one-month exhibition period. The show contained material by 131 exhibitors and addressed a non-expert audience. Its aim was to promote the central fields of eugenics in illustrated exhibits: evolution, racial science, migration, anthropometry, psychiatry and mental testing, statistics, breeding of animals, genealogical research, and family records. The exhibition was documented by means of photographic reproductions, among which was the collection of composite portraits of the late Henry Pickering Bowditch.¹¹⁷ The large majority of these were examples for the positive, self-affirmative function that composite portraiture played in late nineteenth- and early twentieth-century America. The chart was shown next to a section that dealt with the "Races of Man" and the hereditary difference and constitution of humanity. Here maps of physical characteristics and their distribution in the United States were presented, as well as sixty-one large-scale photographs of recent immigrants at Ellis Island entitled: "Carriers of the Germ-plasm of the Future American Population."¹¹⁸ The frontal and lateral portraits of the "new arrivals," even though produced in the style of judiciary portraits, were not announced as individuals, but as "racial types." In this surrounding, the composite portraits of the acknowledged American professional workers, academics, and college students must have been perceived as visual expressions of

¹¹⁷ Laughlin was the superintendent and later assistant director of the Eugenics Record Office in New York State under Charles Davenport, from its opening in 1910 until its closure in 1939. He was influential in promoting eugenic ideas in the US and establishing compulsory sterilisation legislation for so-called unfit individuals in many states, a practice that continued well into the 1970s. For a history of the Eugenics Record Office and Laughlin's role, see Garland, E. Allen: "The Eugenics Record Office at Cold Spring Harbor, 1910–1940: An Essay in Institutional History." In: *Osiris*, 2, 225–264. For a summary of American eugenic legislation see Lombardo, Paul: "Eugenic Sterilization Laws." Essay in *Eugenics Archive* <http://www.eugenicsarchive.org/html/eugenics/essay8text.html> [15/01/2022].

¹¹⁸ See Laughlin: *Second International Exhibition of Eugenics*.

¹¹⁹ Laughlin: *Second International Exhibition of Eugenics*, 36.

¹²⁰ See Laughlin: *Second International Exhibition of Eugenics*, 28.

an inborn Americanness that was completely antithetical to the individuals going onshore in a hostile climate of eugenically motivated immigration management.

Another set of composite portraits, contributed by Esther F. Byrnes, who taught at Vassar College and later became a teacher of biology and physiology at Girls' High School, Brooklyn, New York City, was also shown in the exhibition. The composite portraits and accompanying statistics of the different origins of the high school students were produced in 1921. The catalogue states:

The composite photographs show the types of the several different races and nationalities. Altogether the data show the foreign make-up of the school and the types contributing their blood and traditions to the future American.¹¹⁹



Byrnes, Esther F.: *German-Irish Mixture*. Composite portrait in the style of Francis Galton, lantern slide. The Harry H. Laughlin Papers, Truman State University, ID# 1030; *Composite. Group of Irish High School Students*, lantern slide. The Harry H. Laughlin Papers, Truman State University, ID# 1027.

It is likely that the composite photographs referred to are the ones preserved among the personal papers of the curator of the exhibition, Harry H. Laughlin.¹²⁰ In the three undated and unsigned lantern slides, component portraits of American high school students of Irish and German descent are arranged around a larger composite of the group.¹²¹ One chart, entitled "Group of Irish High School students," follows the same visual pattern, but provides additional information on the individual portraits: names, ages, and biometric information, such as skin tone and eye colour of the portrayed as well as the variation

of these traits in their family, up to two generations back. In this case, composite photography aims to establish racial continuity in an immigrant nation. Most of the girls were probably second or third generation immigrants, whose parents or great-parents had originated from a likewise mixed background in their respective countries of origin. The aim here seems to visually disentangle the chaos of what later became known as the “melting pot” and to render this visual anthropological information useful as a diagnostic tool for eugenic intervention. The eugenicising gaze here assumes a racialising perspective that became not explicitly addressed in the composite faces of college role models, but that was already present in the racial arguments regarding the composite faces of soldiers put forward by Galton and Bowditch.¹²²

Two exhibits that can be described as composite statues, were the central objects of the exhibition. One was produced by Jane Davenport Harris, daughter of the leading American eugenicist Charles Davenport and wife of the director of the Cold Spring Harbour Laboratory, Reginald Gordon Harris. At only 55 centimetres high, this statuette combined the average anthropometric measurements and proportions of 100,000 white soldiers from research conducted at demobilisation by the War Department in 1919. The three-dimensional anthropometric compo-

¹²¹ This assumption is supported by the age of the students and the school uniforms of the time, as well as by the background of most photographs: a wall that resembles the structure of the school building that remains standing today in New York.

¹²² In the mid- and late nineteenth century, Irish and German immigrants constituted a sizable part of the total influx into the United States. Eugenicists like Laughlin were successful in lobbying for eugenicist anti-immigration policies, which led to eugenic legislation in the 1920s. But the contemporary eugenic views on the usefulness and suitability of people of various ethnic origins favoured Northern European immigrants, and the German and Irish girls were not perceived as a threat. This explains the positive attitude, as opposed to that shown towards Ellis Island arrivals more generally. Laughlin's expertise influenced the *Immigration Restriction Act* of 1924 that limited total numbers, but also prescribed a quota that favoured northern European arrivals and severely disadvantaged south and eastern Europeans, restricted immigration from the African continent, and banned immigration from the Middle East and Asia. In a later statement before the House of Representatives, these eugenic immigration policies gain an even stronger exclusionary position that was also directed against individuals already living in the United States. See Laughlin, Harry H.: “Biological Aspects of Immigration.” Laughlin testimony before the House Committee on Immigration and Naturalization. In: *Hearings before the Committee on Immigration and Naturalization, House of Representatives, Sixty-sixth Congress, April 16–17, 1920*. Washington: Government Printing Office, 1921; Laughlin, Harry H.: “The Eugenic Aspects of Deportation.” Laughlin statement before the House. In: *Hearings before the Committee on Immigration and Naturalization, House of Representatives, Seventieth Congress, February 21, 1928*. Washington: Government Printing Office, 1928; “The Immigration Act of 1924 (The Johnson-Reed Act)”. U.S. Department of State Office of the Historian. <https://history.state.gov/milestones/1921-1936/immigration-act> [15/01/2022].

¹²³ The racialising gaze of composite photography is discussed in chapters 4 and 5.

site figure, entitled *Statue of the Average Young American Male*, represented a rather slender, un-athletic nude male figure. The head had a straight frontal orientation, with the arms hanging to the sides of the torso; its legs were slightly bent, as if the figure was searching for a comfortable way to stand. The statuette invoked the casts of Ancient Greek and Roman statues that were known to museum visitors of the time as classical ideals of beauty and civilisation, a fact that was not lost on the art critic Edward Allen Jewell, who scoffed at the “condensed doughboy” and “luckless eugenic figment.”¹²³ The sculpture found a counterpart at the entrance of the exhibition, where another, bigger composite statue, *The Composite Athlete, 30 strongest Men from Harvard*,¹²⁴ was placed. In relation to this well-trained university athlete, the average American soldier must have been perceived as ultimately inferior, as an image of the degeneracy of a national body in decline and in dire need of eugenic refurbishment. Here, interestingly, the soldier that for Galton and Bowditch in the 1880's had been a symbol of bodily and mental vigour, in the 1920's became the feeble counter-image to a eugenic role model that was coined after an educational and athletic elite.¹²⁵

Alongside this ambiguous perception of the average American, a public discussion evolved that celebrated American conventionality; individuals were presented as representatives of average Americanness and its consumer culture.¹²⁶ Another twenty years later, the male composite sculpture received a female counterpart that was created by the sculptor Abram Belskie, based on data collected on 15,000 women by the gynaecologist Robert Latou Dickinson. The composite

¹²⁴ Mary Coffey quotes Edward Allen Jewell, observing the implicit link to antiquity and the role ancient Greece played for eugenics, as well as for the contemporary critical response. See Coffey, Mary: “The Law of Averages 2: American Adonis. Eugenics, Statistics, and the Controversial Paunch.” In: *Cabinet*, no. 15, 2004. <http://www.cabinetmagazine.org/issues/15/coffey.php> [15/01/2022].

¹²⁵ See the description in the floor plan of the exhibition catalogue. Laughlin: *Second International Exhibition of Eugenics*, 12.

¹²⁶ This depiction reflected a general perception of the “average man” that was fostered by the work of Columbia psychologist Harry L. Hollingworth, who also drew on data from the War department and described the average soldier in unfavourable terms, exhibiting a mental age equivalent to a fourteen-year-old. For an in-depth discussion see Hollingworth, Harry L.: *The Psychology of Functional Neuroses*. New York/London: Appleton, 1920, 191; Miller, Nathan: *New World Coming: the 1920s and the Making of Modern America*. New York: Scribner/Simon and Schuster, 2003, 172.

¹²⁷ Peter Cryle and Elisabeth Stevens argue that in the early decades of the twentieth century the average man became a figure of scientific and popular interest that developed into the figure of a Middle American, who is described as a more integral figure, expressing shared cultural practices and values. See Cryle, Peter; Stevens, Elisabeth: *Normality: A Critical Genealogy*. Chicago/London: University of Chicago Press, 2017, 302–303.



Davenport Harris, Jane: *The Average American Male*. In: Laughlin, Harry H.: *The Second International Exhibition of Eugenics*. Baltimore: Williams & Wilkins Company, 1923, Fig. 5, 69. Belskie, Abram; Dickinson, Robert Latou: *Norma*, courtesy of Cleveland Health Museum, 1943.

figure was named *Norma*, its male version *Normman*,¹²⁷ and both are witness of the plasticity of the perception of the average constructions. The singularly beautiful, athletic role model served as an identificatory figure for the white American population in wartime.¹²⁸ This also becomes apparent in the different styles of their respective photographic reproductions. Whereas the earlier sculpture is diminished in size, due to a slightly elevated viewpoint, *Norma* looks down on the viewer and gleams in a spectacular light. The illumination of the background further elevates the statue and reminds of anthropometric grids that were regularly used in anthropological photography of the time.¹²⁹

¹²⁸ Beside its direct derivation as impersonations of the term "norm," the name is invoking a common racial makeup as decedents of white northern European origin.

¹²⁹ The Cleveland Health Museum, which purchased the statue, even sponsored a contest to find out whose body "matched" the ideal female bust. See Chambers, Dahlia S.: "The Law of Averages 1: Normman and Norma. Looking for Mr. and Mrs. America." In: *Cabinet*, no. 15, 2004. <http://www.cabinetmagazine.org/issues/15/cambers.php> [15/01/2022].

¹³⁰ For an in-depth discussion of composite statues of American men and women see Cryle; Stephens: *Normality*, 294–332.

¹³¹ See Gschrey: "Facing Everybody?"

Eugenic Prototypes and Future Faces

Recapitulating the discussion of the eugenising gaze of composite portraiture, it becomes clear that this perspective highlights a number of aspects crucial to the understanding of the technique and its popular reception in the late nineteenth and early twentieth centuries. The aesthetic appeal of the slightly softened, but regular faces with their intense eyes that seem to address the viewers directly made composite portraits a suitable technique for the visualisation of eugenic role models. The images' diffuse openness offered a surface onto which ideas and desires could be projected. The fashioning of attractive and positively connoted composite faces likewise appealed to popular culture and visual arts around the turn of the twenty-first century. While these images from arts and popular culture are certainly not to be confused with eugenic prototypes proper, their affirmative composite faces nevertheless represent questionable visual role models and expand the images' popularising function as everybody figures.¹³⁰ The inclusiveness of the visual constructions, however, remains limited, and the images, such as the "future American" composite face published in *Time* magazine in 1993, carry and maintain dubious connotations, often sustaining the evidential claims and continuing the explanatory models established by nineteenth-century science.

The eugenising gaze of composite portraiture mainly focused on positive representations. The composite eugenic role models worked as visual argument for eugenic intervention, as a device for popularising eugenic ideas, and as affirmative, but exclusionary portraits of elite groups of society. But the eugenising gaze did not stop at the creation of positive eugenic role models; the perspective became extended to those parts of the population identified as unwanted and unfit, whose composite representations functioned as counter-images and defined them as addressees for negative eugenic intervention. This focus on the disciplinary management and enhancement of the population characterises eugenic composite portraiture as a biopolitical technique, and as a kind of power-knowledge that is organised around the normative aesthetic ideal of the average. The diffuse aesthetics of composite portraiture that is augmenting attractiveness contributed to the images' popular appeal, such as in the composite portraits of soldiers produced by Galton and Bowditch. Its popularising function is elevated in the American photographic constructions of the intellectual and professional elite of north-eastern white Protestant society, which peaked in the composite portraits of college classes serving as identificatory figures and role-models in an increasingly nationalistic and

eugenically charged climate around the turn of the century. With their over-exaggeration of a supra-individual presence, the composite images assumed a spiritual quality, forming the forward-looking, ideal countenance of the super-human.

An examination of the presentation of composite portraits in eugenic exhibitions and among the materials of the American Eugenic Record Office attests to the long life of the photographic technique in eugenic research and shows the appeal of the aesthetics of the average that also appeared in a three-dimensional shape as model for the advancement of the eugenic project. The eugenising gaze of composite portraiture played a decisive role in the popularisation of eugenic thought and provided appealing visual targets for positive eugenic intervention. However, the gaze also reveals a number of exclusionary intersectional categories, inhibiting and shaping notions of class, race, gender, nationality, and health. The technique provided the images that informed the discussion, but it also established those categories and ensured their inclusion into the project of a genetic improvement of a white Anglo-Protestant elite. The composite portraits of racialised European-American students and their presentation as the future face of America in eugenic exhibitions shows the struggle for the maintenance of white dominance in the makeup of the nation that was fought by means of composite visualisations.

This visual battle for representation appears to continue even today. The digital composite portrait on the cover of the 1993 *Time* magazine special issue entitled *The New Face of America: How Immigrants Are Shaping the World's First Multicultural Society*, seems to continue nineteenth-century battles over cultural and racial dominance. The image, which was produced by the imaging specialist Kin Wah Lam and the photographer Ted Tai, was oriented at the photographic work of the media artist Nancy Burson, who had in the 1980's begun to create digital compositions of faces.¹³¹ The thinly smiling figure is presented in front of a backdrop of miniature portraits that dissolve into the light background. The graphic designer reproduced the visual framework that was developed in nineteenth-century composite portraiture, where often smaller reproductions of the individual portraits were presented alongside the composite. Lam used images of models, seven men and seven women as representatives of various ethnic backgrounds, national and regional groups

¹³² In *Mankind*, for instance, the artist used population statistics to create a supra-national composite face. See Burson, Nancy: *Mankind*, digital composite portrait, 1983–1985.



Time Magazine: Cover of the Special Issue "The New Face of America: How Immigrants Are Shaping the World's First Multicultural Society." 18 November 1993.

and the morphing software Morph 2.0.¹³² The result is presented as a "New Eve" that embodied the visual statistical combination of physical attributes of different racial backgrounds: 15% Anglo-Saxon, 17,5% Middle Eastern, 7,5% African, 35% Southern European and 7,5 % Hispanic. This process can be seen as a continuation of Galton's typological project and it has been convincingly argued that the *Time* cover is essentially a continuation of Galton's racial ideas, since it reaffirms a belief in the distinctness of racial and ethnic types and that the process used by Lam relies on the typology of visible racial affiliation.¹³³ Here, even more than Galton's visual statistics, the digital composition process resembles a black box, whose mechanisms and algorithms remain opaque.

¹³³ The software *morph* by the company Gryphon Software was the first commercially available morphing software; three versions were released in 1992 and 1993.

¹³⁴ See Smith, Shawn Michelle: *American Archives: Gender, Race, and Class in Visual Culture*. Princeton: Princeton University Press, 1999, 224.

The result that is presented on the cover is a strikingly attractive face, read as female, smiling at the viewer, bare-shouldered.¹³⁴ A text that almost reads like a warning is placed to the left side of face: "Take a good look at this woman. She was created by a computer from a mix of several races. What you see is a remarkable preview of ... The New Face of America."¹³⁵ And the slightly alarmed tone continues in the article connected to the front cover: "For all the talk of cultural separation, the races that make up the U.S. are now crossbreeding at unprecedented rates."¹³⁶ The article uses biologising terminology that ignites fears of the over-powering of mainstream society, a style that is reminiscent of the writings of nationalist eugenicists around the turn of the twentieth century.

Read in relation to the framing words on the cover, the female figure represents a vision into the future of an increasingly multicultural, or rather multi-ethnic society. It is presented as an updated everybody figure for the future society of the United States. And here the image retains aspects of the historical eugenicising gaze performed by the technique; the construction of an ideal face that is presented as a target towards which multicultural society could aim, or seen negatively, an image of degenerating society and the loss of national and "racial" purity. The image evoked fear in the still dominant white Anglo-Saxon community, who could not identify with this "brownish" figure and manipulations of the cover and tagline are still used by right-wing groups in the United States for racist propaganda on the internet.¹³⁷ But also, most people of colour could not identify with the peculiar computerised everybody figure presented by the magazine in the early nineties, whose beauty, youth, slim features, and light skin colour most people could not associate with their own faces and those that surrounded them in their communities.¹³⁸

¹³⁵ The depiction of the unclothed "model" seems to suggest its sexual availability.

¹³⁶ Special Issue of *Time* magazine: "The New Face of America: How Immigrants Are Shaping the World's First Multicultural Society," 18 November 1993, cover.

¹³⁷ Special Issue of *Time* magazine: "The New Face of America: How Immigrants Are Shaping the World's First Multicultural Society," 18 November 1993.

¹³⁸ A number of racist internet memes and images are based on the *Time* magazine issue's cover art. These are shared on social networks and alt-right, white supremacist websites such as www.occidentaldissent.com

¹³⁹ This ambiguous reception was shared by a campaign of the fashion label Benetton that proposed a hyper-attractive female composite figure as a model for a new fashion line. See the detailed discussion of the campaign in chapter 4, "Racial Prototypes."

The college composites, also, received an update in the early twenty-first century. The German photographer Michael Wesely produced composite portraits of pupils at an elite school in Bayreuth, arguing that "Every group – and everybody who has been together with the same people for a longer period of time, knows that – has an identity. And a face."¹³⁹ But rather than critically framing his photographic constructions, the artist reproduced central arguments on the visibility of a common class identity and evidential and analytical claims attributed to the technique in the nineteenth century. He expresses a mechanistic and deterministic view of (artistic) photography, ignoring the agency of the photographer and the photographed.¹⁴⁰ Wesely does clearly not follow a eugenic agenda, and yet, like the nineteenth-century eugenicising class composites, his school portraits seem to rely on the affirmative and identificatory potential of group visualisations based on the elevation of one group identity over other comparable entities. What is presented as an innocent endeavor of producing "meaningful" group portraits shows a lack of historical knowledge and sensibility.¹⁴¹ This ranges from the difficulties – the questionability, even – of constructing a class identity in the context on an elite school and the reversion to quasi-physiognomic ideas in the compilation of further select groups according to interests and skills.¹⁴²

A different update of college composite portraiture was undertaken by the American artist Jason Salavon. In his series *Amalgamation*, composite portraits of graduation classes of different years are compiled from photographic material published in college yearbooks. The artist makes use of available material, the standardised frontal depictions of the educational facilities. But in contrast to the established eugenicising gaze often noticeable in the field, in Salavon's work the loss of definition and diffusion is central. In the large-scale examination, the college countenances in the composite portraits become reduced to blurred

¹⁴⁰ Zinnecker, Florian: „Wer bin ich – und wenn ja, wie viele.“ Michael Wesely im Interview mit Florian Zinnecker. In: *SZ Magazin*, 21 April 2016. <https://sz-magazin.sueddeutsche.de/fotografie/wer-bin-ich-und-wenn-ja-wie-viele-82419> [08/08/2021], my translation.

¹⁴¹ See Zinnecker: „Wer bin ich – und wenn ja, wie viele.“

¹⁴² In the interview Wesely mentions nineteenth-century composite portraiture and describes the photographic practice as a kind of ethnography that sought to establish links between the outer appearance and "tribal affiliations" or professions, but does not draw connections to Galton's problematic photographic work on criminality, pathology, and eugenics. See Zinnecker, Florian: „Wer bin ich – und wenn ja, wie viele.“

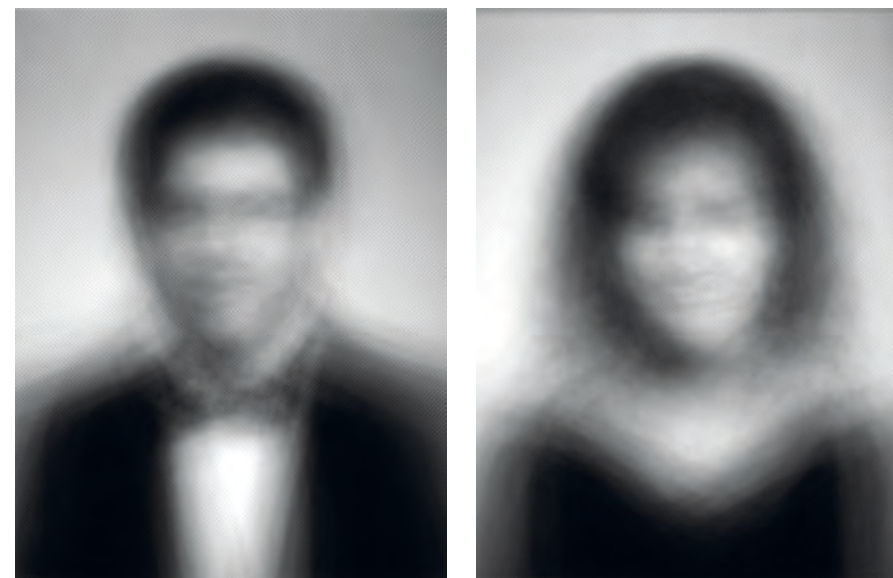
¹⁴³ Wesely also compiled portraits of the members of special, extra-curricular courses, such as music and sports offered at the school.



Wesely, Michael: *Klasse 5a*; Alle, Markgräfin-Wilhelmine-Gymnasium, Bayreuth. Composite portraits, 2016. Courtesy of the artist.

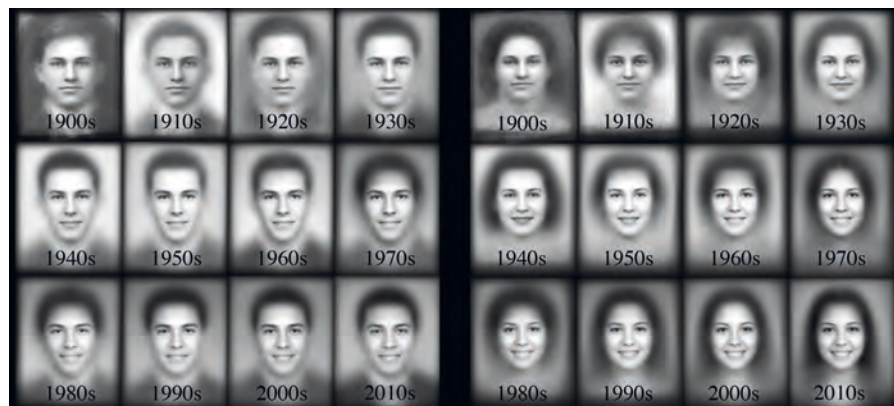
facial shapes, contradicting all evidential claims of the technique. Any identificatory potential as common images of a group dissolve in the blurry facial forms. The juxtaposition of the composite faces, male and female, compiled from sources of the 1960's and 1980's, respectively, adds a comparative perspective to the work. In the latter example, the increasing loss of definition seems to hint at an increasing diversity in the individual depiction and expression of the source portraits. This could be an expression of growing, but limited individuality: the strict dress-code, dark suit and evening dress, seems to prevail.

The value of composite portraiture as indicative of style was observed in 2015 by a team of researchers from Berkeley and Brown universities, who developed a digital update of the composite technique to compute the average appearance of American high school students from 37,921 frontal facing year-book portraits from 115 high schools in 26 states. The relative clarity of the composite portraits is due to their production by means of a computerised averaging system that works with relative proportions and not individual points in the photographs. Differences in size, aspect, and perspective are evened out in this digital advancement of the technique. The researchers argue that the facial compositions from different decades were useful to “consider issues such as a decade’s defining style elements, or trends in fashion and social norms over time.”¹⁴³ The visualisations reveal typical hairstyles and clothes, but also portrait-posing habits, in particular a smile appearing on the faces in the 1920's and 1930's



Salavon, Jason: *The Class of 1988*; *The Class of 1967*, composite portraits, 1998. Courtesy of the artist.

¹⁴⁴ Ginosar, Shiry; Rakelly, Kate; Sachs, Sarah; Yin, Brian; Efros, Alexei A.: “A Century of Portraits: A Visual Historical Record of American High School Yearbooks.” *Extreme Imaging Workshop*, International Conference on Computer Vision, ICCV, 2015. http://people.eecs.berkeley.edu/~shiry/publications/Ginosar15_Yearbooks.pdf [15/01/2022].



Ginosar, Shiry et al: *Average images of students by decade*. In: Ginosar, Shiry; Rakelly, Kate; Sachs, Sarah; Yin Brian, Efros, Alexei A.: "A Century of Portraits: A Visual Historical Record of American High School Yearbooks." *Extreme Imaging Workshop*, International Conference on Computer Vision, ICCV, 2015. http://people.eecs.berkeley.edu/~shiry/publications/Ginosar15_Yearbooks.pdf [15.01/2022].

(and its broadening in the following decades) – a smile that was absent in the composites produced during the early decades of school portraiture, such as the college composites produced at American elite colleges in the 1880–90'.¹⁴⁴

The authors refer to the photographic work of Francis Galton and describe his technique in neutral terms as "simplest visual-data summarization technique,"¹⁴⁵ without mentioning its problematic background. In contrast with the treatment of the college composites in the nineteenth century, however, the authors do not attempt to draw conclusions on specific physiognomies and facial features. They also refrain from adopting a normative perspective, celebrating the "common face" of a given era, but position their findings and computerised visual methods as an aid and resource in humanities research for dating portraits.¹⁴⁶

The ideological agenda of the eugenicising gaze became explicit in the nineteenth century, when the visual form of composite portraiture and its aesthetic specificities and beautifying effect contributed to the propagation of eugenic ideas and composite images were constructed as role-models and targets towards

¹⁴⁵ A peculiarity that is not commented on by the researchers is the observation that the smile is appearing later on male faces.

¹⁴⁶ Ginosar; Rakelly; Sachs; Yin; Efros: "A Century of Portraits."

¹⁴⁷ Ginosar; Rakelly; Sachs; Yin; Efros: "A Century of Portraits."

which controlled biopolitical interventions on the level of the "national body" could be directed. Recent computerised updates in this context, rather than dissociating themselves from the historical applications of composite portraiture, seem to reiterate and reaffirm ascriptions of an analytical potential and explanatory value of the artificial portraits as predictive visual-genetic constructions. In the case of the *New Face of America*, composite portraiture is attempting the visualisation of the future of a collective body on a national scale: a composite body whose impeccable and feminised face remains a surface for nationalist and racial ascriptions and radical political positions. These composite faces, which could be read as well-intentioned celebrations of a multicultural identity, eventually turn out as peculiar and exclusive everybody figures that receive ambiguous responses and must fall short as inclusive surfaces and examples inviting collective identification.

Recent productions of class composites, like their historical predecessors, seem to fall for the mass availability of standardised pictures. While they do not voice eugenicist ideas, some are reiterating proclamations of seemingly meaningful group physiognomies and rely on the images' function as positive icons of communities, implicitly affirming the construction of elite identities. Others contradict evidential claims expressed in the composite faces by emphasising diffusion and irregularities. Here only the shadow of a group identity is maintained: the culturally coded forms of public festive representation in the American educational context. These visual specificities are examined in what could be called iconographical composite studies that redirect the technique's gaze towards cultural-historical developments in photographic portraiture and public (self-) representation.

While many of the eugenicising composite representations seem rather innocent, this chapter highlights a dark aspect of composite portraiture as a vehicle for eugenic ideologies and a pathway to negative interventions on those considered genetically undesirable. Composite portraiture in popular science and its ethno-nationalist visual metaphors have geared public opinion in the past, construing an exclusive essence and identity of a people. The current cases of eugenicising composite faces are by no means resistant to the power-knowledge nexus that their predecessors represent, often presenting an average that becomes an ideal because it reifies the characteristics of dominant perception according to ethnic attribution, class, and gender.

8 | Ideal Family Likenesses: The Genealogising Gaze of Composite Portraiture

Composite portraiture was not only used to fuse the faces of groups of people potentially sharing similarities in character, as well as in physical and mental constitution. Before long, the technique was also employed for the visualisation and analysis of the likeness and implied genetic relationship of the members of a family – revealing a genealogising gaze. Already in his earliest articles published on the technique in 1878, Galton proposed the production of family composites and requested readers to send in family photographs.¹ While he seemed to have received few responses to this early query, through his later inquiries to the public, he gained access to a number of family portraits. This connects the production of family composites with a whole series of collective investigation initiatives,² which culminated in Galton's publications *Life History Album* and *Record of Family Faculties* and led to the establishment of his Anthropometric Laboratory³ and the Eugenics Record Office in London. Apart from their primary intention of mass data collection, these initiatives were also directed at popularising personal data collection and eugenic thought.

In its genealogising gaze composite portraiture functions as a form of visual genetic analysis, as a specific form of power-knowledge addressed at the family as an organism. In contrast to the other perspectives, the genealogising gaze was not aimed at visualising a specific group in society and its hereditary physiognomic nature, but the genetic structure and genealogy of the family. It sought to capture an ancestral biological essence and appeared as a device for a theoretical understanding of human heredity, but also acted as a practical means for assessing genetic merit as part of the eugenic project. Furthermore, the genealogising gaze of the technique was influential in advancing and popularising eugenic thought and in providing iconic family portraits in the classist society of nineteenth and early twentieth centuries.⁵

¹ "[T]he main motive for my publishing these early results is [...] to enable me to procure a considerable variety of materials to work on. I especially want sets of family photographs all as nearly as possible of the same size and taken in the same attitudes." See Galton: "Composite Portraits." In: *Journal of the Anthropological Institute*, 8, 1879, 142–143. At 142.

The photographs that Galton received in the 1880s were mainly portraits of the families of pioneers of photography, amateur photographers and professionals, chemists and natural scientists, most of them members of the new scientific elite of Victorian England. The neutral frontal and profile portraits were of an entirely different nature than the staged traditional family portraits of the time whose function was the expression of individuality and character, but also of social status. Galton aimed to liberate the portraits from their emotional and individual aspects and to reduce the photographs to mere maps of facial shapes betraying their underlying genetic configuration. While most of the donors must have perceived the endeavour as an amusing pastime and the resulting pictures as an intriguing and puzzling new form of family portrait, Galton attached more value to his quest for ideal family likenesses. He conceptualised the family composites as genealogical images of the past – and as predictive tools for the visualisation of the genetic future of a family.

Compared with other images produced by means of the technique, such as the criminalising composite faces, the family composites and their genealogising

² Collective investigation could be described as an early attempt at big data analysis, a technique of scientific data gathering, mainly in the field of medicine, that relied on the participation of individual members of society and local experts, such as general practitioners and hospital personnel. It has also been described as an international movement that gained popularity in the late nineteenth century, seeking to revolutionise modes and practices of medical data gathering in order to compile a fuller picture of diseases and their distribution. This is attested by the installation of the Collective Investigation Committee of the British Medical Association and similar initiatives in the US. See "The British Medical Association and Collective Investigation. Part I. Past Experience." In: *The British Medical Journal*, 2/3495, 31 December 1927, 245–247. See also: Marks, Harry M.: "Until the Sun of Science ... the true Apollo of Medicine has risen." Collective Investigation in Britain and America, 1880–1910." In: *Medical History*, 50:2, 2006, 147–166. This is not to be confused with the collective research practised in public (library) collections proposed by the artist Matthew Bakkom. See Purtill, Conny: *Mathew Bakkom Collective Investigation*. Matthew Bakkom with Purtill Family Business, 2011.

³ In a documentary photograph of the set-up of the Anthropometric Laboratory in late nineteenth century two composite portraits by William Noyes are visible as exhibits on the wall, indicating that Galton also considered the technique useful in relation to this more numeric approach to statistics on the human.

⁴ Susanne Scholz has argued that family composite portraits can be understood in terms of genealogical pictures. See Scholz: *Phantasmatic Knowledge*, 110.

⁵ In current writings, the term "genealogical gaze" is used in relation to Michel Foucault's genealogical work and in the post-colonial context, as well as with reference to (family) archives and collections. See Ketelaar, Eric: "The Genealogical Gaze: Family Identities and Family Archives in the Fourteenth to Seventeenth Centuries." In: *Libraries Et the Cultural Record* 44(1): 2009, 9–28. It was used by the post-colonial studies scholar Homi Bhabha with reference to Foucault in relation to his concept of mimicry to describe the disintegration of the unity of human existence and the partial representation and appropriation of colonial identities. See Bhabha, Homi: "Mimicry and Man: The Ambivalence of Colonial Discourse." In: *October*, Vol. 28, 1984, 125–133.

gaze reveal a decisively different approach. Their aim was not the quest for a particular "type," a biologised socio-cultural group within society made visible through the revelation of a telltale physiognomy, but the visualisation of the genetic transmission of phenotypic characteristics in a single family through time. Furthermore, the family portraits sought to provide a biological, hereditary grounding for the stability of physiognomic and implied genetic markers, and thereby constituted means of authenticating the results of Galton's other composite portraits and his research on genetic transmission.⁶ Furthermore, composite portraiture and its genealogical perspective also played a decisive role in Galton's scientific projects. In order to decipher the deeper structures of family likeness, Galton devised a system of weighting the individual component portraits in the composition according to their presumed influence on the genetic structure. He not only saw the family composites as a diagnostic and predictive tool; his reasoning in – and with – composite portraiture reveals a close proximity between his genealogical preoccupations, his theories on hereditary transmission, the so-called "Ancestral Law," and their shared epistemological basis in visual, photo-chemical reasoning for which the technique provided a blueprint.

The genealogising gaze of the photographic technique relied on the cooperation of the families and the public and led to institutionalised programmes of collective investigation to achieve biometric mass data collection. In these endeavours, which sought to provide the raw data for genetic classification and biopolitical intervention, it became linked to what I have subsumed under the notion of the eugenising gaze of the composite technique.⁷ Galton's work in the family-research context, carried out with protagonists of the scientific and photographic elite of Victorian Britain, also entailed a focus on peoples' emotional responses to the images, in which an almost spiritual note and deeper meaning was attached to the composite faces. These responses reveal the affective potential of the composite visualisations. The inventor's own emotional investment becomes apparent in the fictional writings of his final years, in which he constructs the scientific and religious practices of a utopian eugenic society around the photographic technique and genealogical composite portrait galleries.

⁶ Benedict Burbridge has observed this authenticating function of composite family portraits. See Burbridge, Benedict: "Idea Series: Agency and Objectification in Francis Galton's Family Composites." In: *Photoworks Annual*, 20, 2013. <https://photoworks.org.uk/agency-objectification-francis-galtons-family-composites> [15/01/2022].

⁷ On the eugenising gaze of composite portraiture see chapter 7.

The following examination of the genealogising gaze of composite portraiture begins with a discussion of Galton's early family compositions, the returns to his initial collective investigation initiatives, as well as the reactions of the families to this novel form of the condensed family portraits. This is followed by an evaluation of the influences of the photographic technique on Galton's scientific reasoning and the visual nature of his genetic theories and his understanding of genetic transmission in terms of a chemical process analogous to photographic composition. The next part focuses on Galton's large-scale collective investigation projects that sought to compile visual and biometric family albums in centralised and de-centralised archives, such as in the Eugenics Record Office, but also in the hands of the individual families. The families, thus Galton's plan, were to accept the books as a new form of genealogical Bible. The spiritual significance that Galton attributed to the genealogical family composites is revealed in his unfinished utopian narrative *Kantsaywhere*. This examination of Galton's multi-faceted work on family composites is followed by a discussion of the contributions of other protagonists to the field of genealogical composite portraiture: the French photographer Arthur Batut and the philosopher Ludwig Wittgenstein, who diverted and redirected the earlier perspective and redefined the modes of genealogical reasoning by means of the composite technique. The examination will conclude with a recapitulation of the genealogising gaze of composite portraiture in the nineteenth century and the discussion of its afterlife in late twentieth- and early twenty-first century adaptations of the technique in popular culture and the arts.

The Quest for Ideal Family Likenesses

Galton started his work on family composites as early as 1878, shortly after his initial experiments on the "composite face of criminality."⁸ In the late 1870s and early 1880s, Galton commissioned and produced composites of at least eight families. In order to gain access to visual material, he embarked on his first project of collective investigation, in which he asked the public to send in

⁸ A letter exchanged between Reynolds and Galton mentioning Maskelyne supports the assumption that Galton started to work on family composites much earlier than is usually acknowledged. See the letter addressed to Galton, 4 September 1878. Galton Papers, University College London, GALTON 2/8/1/1/14/f24. Further evidence is that Galton showed the portrait of the Maskelyne Family in a presentation on generic images in 1879 and that he added to his 1879 article on composite portraiture a query for family photographs. See Galton: "Composite Portraits" [1879], 142.

family photographs. His treatment of the material reveals Galton's eugenic perspective that connected the genealogising gaze of the technique with his work on the breeding of animals. Furthermore, it is telling with respect to the scientist's treatment of women and the role of the female sex, more generally, in Galton's biologising and eugenicist worldview.

In the early years of his work with the composite portraiture, Galton relied on the professional photographer H. Reynolds, whom he had hired earlier for reproductions and photographic superimpositions of classical antiques.⁹ This photographer most likely provided the portraits for the first composite of family likenesses from his archive. These were the portraits of the family of Nevil Story Maskelyne, a grandson of the astronomer Nevil Maskelyne and himself a professor of mineralogy and pioneer of photography, as well as an associate of the influential photographer Henry Fox Talbot. Since these source photographs were not produced specifically for the purpose of the production of composite portraits, the earliest family composition constitutes a rare example of a half-profile composite portrait.¹⁰ Galton later used the frontal as well as lateral perspective, following the argument of the physiognomist Lavater, who saw the silhouette as superior with respect to the analysis of family likeness.¹¹

When Galton speaks of family likeness, he does not mean a mere resemblance in appearance, but the amalgamation of visible traits of genetic similarities and, at the same time, the revelation of common character traits and dispositions. The term is not only used with reference to families, but in relation to other forms of kinship, racial taxonomies, and even in the description of the correlation of physiognomic markers of anthropometric measurements.¹² Thus, Galton's perspective on family likeness always implies an extrapolation of the similarity of characteristics to the deeper structures of genetic composition in basically the whole field of evolutionary development.

⁹ This use of composite portraiture is discussed in chapter 9.

¹⁰ See Galton, Francis: Leaflet of portraits entitled "Maskelyne" and composite. Galton Papers, UCL, GALTON 2/8/1/3/10. Individual portraits are also among the letters in the Galton Papers, UCL, GALTON 2/8/1/1.

¹¹ Galton, Francis: "Photography and Silhouettes." In: *The Photographic News*, 23 July 1887, 462.

¹² "A very little reflection made it clear that family likeness was nothing more than a particular case of the wide subject of correlation, and that the whole of the reasoning already bestowed on the special case of family likeness was equally applicable to correlation in its most general aspect." See Galton, Francis: "Human Variety. Presidential Address delivered at the anniversary meeting of the Anthropological Institute, Jan 22, 1889." In: Francis Galton (ed.): *Anthropometric Laboratory. Notes and Memoirs*. London: Clay, 1890, 12–21, at 14.



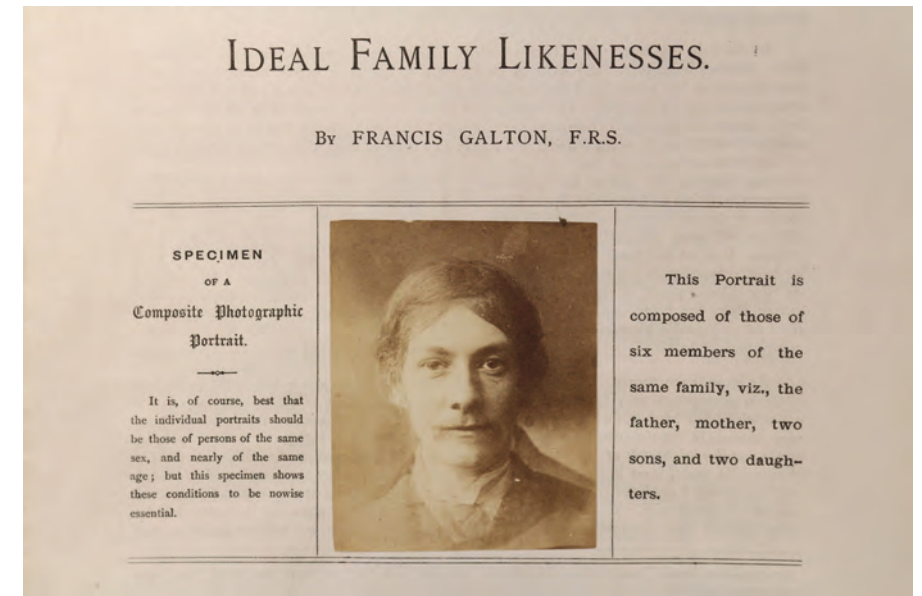
Galton, Francis: *Maskelyne*. Composites and components. Galton Papers, University College London, GALTON 2/8/1/3/10.

The genealogising gaze of composite portraiture also extended to the breeding of cattle, and in 1898 Galton composed composites of race horses and experimented with other livestock.¹³ Since the time of his earliest writings, he had linked the selective breeding of animals to the eugenically organised reproduction of humans.¹⁴ Galton proposed composite portraiture as a predictive apparatus selection: "it might be equally applied to portraits of other animals than horses, including men and women, whose features combine unexpectedly well in composites, though one sex be bearded and the other not."¹⁵ This reveals the eugenic perspective of family composites and hints at the technique's potential utilisation in eugenic intervention, merging the genealogising gaze with the eugenicising gaze of composite portraiture.

¹³ See Galton: "Photographic Records of Pedigree Stock;" Galton, Francis: "Letters." In: *Live Stock Journal*, 23 September 1898, 30 September 1898, 7 October 1898, and images among the Galton Papers: UCL, GALTON 2/8/7/6/1.

¹⁴ In an article on the heredity of character, Galton writes: "The breeders of our domestic animals have discovered many rules by experience, and act upon them to a nicety. But we have not advanced, even to this limited extent, in respect to the human race." See Galton: "Hereditary Character and Talent," 157.

¹⁵ Galton: "Photographic Records of Pedigree Stock," 600.



Galton, Francis: *Application of Composite Portraiture to the production of Ideal Family Likenesses*. Letter addressed to amateur photographers. Galton Papers, University College London, GALTON 2/8/1/2/5.

The acquisition of family portraits suitable for Galton's purposes proved more difficult than in the case of race horses.¹⁶ In order to gain access to a larger corpus of suitable material, Galton started his first large-scale collective investigation project in 1882. He issued a letter to amateur photographers asking for portraits of their families. The leaflet contained technical descriptions and a composite photographic print of an anonymous family that was most likely produced for the occasion and was exhibited in the 1882 Loan Photographic Exhibition at the Society of Arts.¹⁷ The image was reprinted in Galton's 1883 publication *Inquiries into The Human Faculty and its Development*, along with a composition produced from the returns to his circular.¹⁸ In response to his

¹⁶ Great Britain has a long tradition of depicting horses in paintings, usually in profile. The breeding associations of the time were swiftly adopted the new medium of photography to show their successes.

¹⁷ See Galton: *Inquiries into Human Faculty and its Development*, 9. This exhibition shows that from early on, Galton sought to position the technique and the family composites also in the artistic context.

¹⁸ The later discussion of this family composite of the daughters of the renowned Victorian photographer H. P. Robinson reveals different understandings of resemblance and truthful likeness in arts and science. See Robinson, Henry Peach: Letter addressed to Francis Galton, 3 May 1882. GALTON/2/8/1/1/15.

query, Galton had received a number of letters containing photographic prints along with descriptions and information on the familial relationship of the persons depicted.¹⁹ Galton usually produced composites of the female and male sides, as well as one of all members of the family combined. This was the only field in which he produced mixed-gender composite portraits, referring to the images as “epicene.”²⁰

This could be seen as a liberating impulse of breaking down gender barriers, and as expressing a recognition of the female influence in genetic transmission. Galton, however, seemed to have produced the mixed-gender composition out of pure necessity and did not comment on the socio-cultural consequences. Even though his theories of hereditary transmission included the influence of the female side, he generally ignored women, in continuation of a position already expressed in his early work, *Hereditary Genius*.²¹ This world-view was shared many of his Victorian fellow scientists and eugenicists, who seemed to care less for the intellectual achievements of women, but commented on their musical education, their moral and bodily virtues, while treating them as mere “vessels” for genetic transmission. In Galton’s 1889 book *Natural Inheritance*, in which he drew on the data collected by collective investigation projects, such as the circular calling for visual family data, he takes a different, but no less derogatory approach to women in comparison to men. For the analysis of his anthropometric measurements, Galton by a statistical trick turns them into men by computing their “deficiency” in relation to their male counterparts and adding the figure thus gained to the sampled data.²²

¹⁹ From the following persons Galton received family portraits: H.P. Robinson (photographer and art theorist), Nevil Story Maskelyne (professor of mineralogy at Oxford, keeper of minerals at the British Museum, member of parliament, pioneer of photography and associate of Henry Fox Talbot – photograph was published in Pearson’s biography, Plate XXXIII); John M.C. Grove (photograph was published in Pearson’s biography, Plate XXXIII); George Griffith (Science Master at Harrow School, member of the Association for the Advancement of Science. Galton and Nevil Story Maskelyne wrote testimonials for Griffith in his candidature for the professorship of experimental philosophy at Oxford in 1865); William Frederick Donkin (alpine photographer); F. Row (photograph was published in Pearson’s biography, Plate XXXIII).

²⁰ Galton: *Memories of My Life*, 262.

²¹ See Galton: *Hereditary Genius*.

²² “The artifice is never to deal with female measures as they are observed, but to always employ their male equivalents in the place of them.” See Galton, Francis: *Natural Inheritance*. London: Macmillan, 1889, 6.

²³ See Pearson: *Life, Letters and Labours*, Plates XXXII and XXXIII.

Galton had asked for permission to publish the photographic compositions that were produced from the material sent to him, but only three family composites were published during his lifetime. Compared with his other series of composite portraits, the images showed a very specific and recognisable resemblance with individuals and notable Victorian families. Probably due to the private nature of the photographs, he relegated the responsibility for the images to the individuals and families. Likewise, the process of taking the portraits according to Galton’s strict directions was “outsourced” to the families. His disciple and biographer Karl Pearson showed less restraint and published two plates in the second part of his biography, containing composites of the Maskelyne, Row, Robinson, and Grove families,²³ and in the case of the Robinson family even added individual portraits of the daughters, posthumously breaking Galton’s promise.²⁴

The Reception of Genealogical Composites

Galton was particularly interested in the reactions to the genealogising gaze of composite portraiture. On the one hand, he depended on the expert opinion on the reliability of his ideal family likenesses, on the other, it could be seen as a form of the promotion of collective investigation projects and eugenics. The examination of the letters exchanged between Galton and the families shows ambiguous reactions to this peculiar form of family portraiture that range from enthusiastic praise all the way to doubt and resistance. In the following, a discussion of the feedback of the photographers who took part in the visual data collection leads to a discussion on the truthfulness of photographic depiction, then to different understandings of the concept of family likeness in the arts and sciences.

As he had promised in his collective investigation letter, Galton returned the portraits and their photographic superimpositions to the donors, sometimes entering into a discussion with them on the results, intrigued whether the “pro-

²³ Fifty years after their production, in 1932, Pearson followed up on Galton’s work and wrote to the families, probably during his research for the biography of his mentor. He received letters from the Griffith and Row families answering questions regarding the persons depicted in the composites and their professional achievements, but no further research of Pearson, who was also a eugenicist and geneticist, seems to have resulted from these inquiries. See Griffith, C.L.T.: Letter addressed to Karl Pearson, 10 October 1932. Galton Papers, UCL, GALTON 2/8/1/1/8.

cess is capable of bringing out family likeness in the ‘opinion of the family.’”²⁵ The responses were ambivalent. Most perceived a general family likeness in the portraits, while some observed the predominance of one individual of the family.²⁶ Others even stated that they had “seen in the combination a likeness to collateral members of the family that no individual possesses.”²⁷ The sometimes emotional responses to the images show how dissimilar their reception was from, for instance, that of the criminal composites. Even though, these images were formally alike, they were perceived as the visual “other” to a law-abiding, moral and intellectual middle class. The family composites, in contrast, were accepted as collective identification figures, and as confirmations of genetic fitness. This identification extended beyond the family as a collective organism to a larger social collective, a well-educated and wealthy bourgeoisie, revealing again the popularising potential and class-based appeal of composite portraiture already observed in the discussion of eugenic role models.²⁸

The reception, however, seemed not to have been enthusiastic in all families; several amateur photographers mention difficulties in getting consent to take the photographs needed for the purpose.²⁹ Galton voiced his disappointment that “persons whose portraits are blended together seldom seem to care much for the result, except as a curiosity”³⁰ and links the “object[ion] to being mixed up indiscriminately with others”³¹ with an exaggerated assertion of individuality that was negating the fact of a common biological descent.³² But more likely the objection on the side of the depicted subjects might have been grounded in their rejection of the form of the frontal and lateral portraits with their disciplinary and judicial connotations, as well as in their insecurities in relation to the outcome of the opaque process. Furthermore, the loss of individuality as part of the family – a highly contested social space marked by all kinds of

²⁵ Galton, Francis: “Application of Composite Portraiture to the Production of Ideal Family Likenesses.” Letter addressed to amateur photographers. Galton Papers, UCL, GALTON 2/8/1/2/5.

²⁶ See Grove, John M.: Letter addressed to Francis Galton, 8 July 1882. Galton Papers, UCL, GALTON 2/8/1/1/9.

²⁷ See Row, F.: Letter addressed to Francis Galton, 19 May 1882. Galton Papers, UCL, GALTON 2/8/1/1/16.

²⁸ See chapter 7, “Eugenic Role Models.”

²⁹ See the letters addressed to Galton by H.P. Robinson (3 May 1882) and F. Row (19 May 1882).

³⁰ Galton: *Inquiries into Human Faculty*, 9.

³¹ Galton: *Inquiries into Human Faculty*, 9.

³² See Galton: *Inquiries into Human Faculty*, 9.

tensions and invisible power structures – might have played a role, as well as the affectual power of the ambiguous facial forms created through composite portraiture and their often incoherent fusion of faces that were perceived as not entirely natural and developed an uncanny presence.³³ The daughters of the Robinson family, who must have been accustomed to be photographed, “very much objected to having the aspects of their faces taken!”³⁴ Such insecurity in relation to the remorseless photographic lens and an aversion to the prescription of a neutral expression, as well as to the power structures inherent in the production process of composite photography, seem to manifest in the portraits. These powerful affectual responses here become apparent in all stages of the photographic act, the taking of individual portraits, the production of the composites, as well as in their later viewing. Arguing with Freudian terminology, family composites can be seen as an enactment of the oedipal conflict: The children submitting to symbolical castration and the loss of wholeness and their subjugation to (the symbolical law) of the father.

Unimpressed by objections raised in their families, the photographers, who provided the component portraits, were elated by the family compositions. A peculiarly passionate letter, from which Galton used an excerpt in *Inquiries into the Human Faculty and its Development*,³⁵ came from the well-known Victorian photographer and art theorist Henry Peach Robinson, whose work in artistic combination printing can be seen as a precursor to composite portraiture.³⁶ Robinson thanks Galton for the “curious and interesting composite portraits [that] caused me quite a surprise,”³⁷ and recounts the story of how he showed the composite of his daughters to his wife, who was confused about which of her daughters was depicted and astonished by their close resem-

³³ Sigmund Freud defines the uncanny as being familiar and unfamiliar at the same time. This fear of the unknown (or formerly known) has a strong affectual side and expresses itself in emotional reactions and their suppression. See Freud, Sigmund: “Das Unheimliche.” In: Alexander Mitscherlich, Angela Richards, James Strachey (eds.): *Studienausgabe, Bd. IV. Psychologische Schriften*. Frankfurt: Fischer, 1982.

³⁴ See Robinson: Letter to Galton, 3 May 1882.

³⁵ The composite of the daughters of H.P. Robinson was published in: Galton: *Inquiries into Human Faculty*, 9.

³⁶ For a detailed examination of the artistic roots of composite portraiture see Gschrey: “A surprising air of reality”.

³⁷ Robinson, H.P.: Letter addressed to Francis Galton, 19 May 1882. Galton Papers, UCL, GALTON 2/8/1/1/15.

³⁸ Robinson: Letter to Galton, 19 May 1882.



Galton, Francis: Composite Portrait and Components, Robinson Family. Galton Papers, Special Collections, University College London, GALTON 2/8/1/1/f5; f6.

blance.³⁸ This testimony shows Robinson's fascination with the technique of composite portraiture. He took the portraits of his daughters especially for the purpose, according to Galton's specifications spelled out in his circular letter. The women wear nice clothes with elaborate collars and jewelry, but the frontal and lateral portraits, although produced in a professional studio setting, dispense with all poses and iconography of contemporary studio photography and become reduced to the neutral depiction of facial aspects common in identification photography.

This stands in contrast to Robinson's then well-known writings on principles of artistic photography, which encouraged studio and amateur photographers to use the photographic "science as a means of giving pictorial embodiment to their ideas"³⁹ and to always stage the sitters in the photographic studio to their advantage: to bring out their attractive and characteristic sides, by means of posing, perspective, light, studio props, and backgrounds.⁴⁰ In his popular book *Pictorial Effect in Photography*, dedicated to Hugh Welch Diamond, a protagonist of scientific photography already mentioned,⁴¹ Robinson states:

³⁹ Robinson, Henry Peach: *Pictorial Effect in Photography: Being Hints on Composition and Chiaroscuro for Photographers, to which is Added a Chapter on Combination Printing*. London: Piper & Carter, 1869.

I am far from saying that a photograph must be an actual, literal, and absolute fact; that would be to deny all I have written; but it must represent truth. Truth and fact are not only two words, but, in art at least, they represent two things. A fact is anything done, or that exists – a reality. Truth is conformity to fact or reality – absence of falsehood. So that truth in art may exist without an absolute observance of facts.⁴²

Robinson's statement reveals an entirely different understanding of visual truth; it claims a form of aesthetic truth as opposed to scientific factuality that seems hard to reconcile with Galton's claims of photographic objectivity.

Why Robinson still chose to send the portraits of his family to Galton remains a secret, since he, as a well-versed photographer, could most probably have produced a superior and more aesthetic result. Did he believe in a higher level of objectivity in the strict procedure of superimposing the negatives? Did he expect a different kind of truth, a scientific factuality in the genealogising gaze of composite portraits, or was he just curious about the new form of combination printing, a technique of which he considered himself a master? In any case, Robinson seems to have been so pleased with the results that he offered Galton his advice and services as professional photographer. In the same letter he even asked Galton for the negatives of the composite portraits in order to further experiment with the technique and mentions his plan of retouching the negatives.⁴³ Robinson wrote in a later studio manual "[r]etouching [...] may now be included amongst the legitimate processes of photography [...] when it does not falsify nature,"⁴⁴ when, in other words, the "true nature" of a person and its likeness in the photograph were not challenged. This, however, was most certainly not what the Galton had in mind, who always cautioned against modifying what he perceived as objective scientific photographs.

⁴⁰ "[I]t is the province of the artist to secure the most characteristic, the most truthful, and the most pleasing aspect of every subject; and that, without regard to the matters to which I have been directing attention, character, truth, and beauty, will alike be wanting in photographic portraits, whether the originals be common-place or distinguished." See Robinson: *Pictorial Effect in Photography*, 88.

⁴¹ See chapter 6, "Visual Pathologies."

⁴² Robinson: *Pictorial Effect in Photography*, 78.

⁴³ Robinson, H.P.: Letter addressed to Francis Galton, 24 May 1882. Galton Papers, UCL, GALTON 2/8/1/1/15.

⁴⁴ Robinson, Henry Peach: *The Studio and What to Do in It*. London: Piper & Carter, 1891, 120.

Even though no results of Robinson's experiments with composite portraiture are preserved, this could be read as an early re-appropriation of the technique in the realm of the arts; an adoption of the photographic technique that links in with Galton's initial question of whether a truer likeness could be produced by means of family portraits, a topic to which Robinson, also, turned his theoretical attention. He cautioned against over-acting and posing sitters in an unnatural manner. On the other hand, he advised against producing portraits that were "mere maps of the face,"⁴⁵ but praised the benefits of a "natural portrait:"

Besides the advantages of a quiet and natural portrait in giving familiar likeness, it often possesses another advantage in having certain occult traits of likeness, only discoverable under special circumstances. This is the peculiarity of a really good and natural photographic portrait, which to the psychologist and the physiognomist is an interesting study. How often in a good photographic portrait, a family likeness to a relative is discovered which had not been apparent to anyone in the original! [...] It is generally in the simple, unconstrained, familiar likenesses that these unfamiliar or occult phases of resemblance are most present as well.⁴⁶

Robinson here locates what Galton described as ideal family likeness in a single, unrefined portrait that refers beyond the individual person in a temporal and supra-individual manner. Furthermore, he positions this strange presence of familiarity in the occult domain. A ghostlike presence of heritage, of shared traits of character, emerges in his reading of photographs produced by his colleague Oscar Gustave Rejlander alongside a story by Nathaniel Hawthorne. Truth here becomes inscribed into the photograph in a different way. The "honest untouched photographs [...] the simple rendering of a face with natural expression"⁴⁷ are different from Galton's de-individualised genealogising family-portraits: they reassert individuality, albeit with a deeper, uncanny genealogical substrate. After his initial interest, Robinson seemed not to have up followed up on the technique, but as these reflections attest, composite portraiture and Galton's quest for an ideal family likeness seem to have resonated strongly with the photographer.

Galton's conceptualisation of family likenesses – as objectively visualised and genetically manifested similarities – naturally had in mind a different approach

⁴⁵ Robinson: *The Studio*, 112.

⁴⁶ Robinson: *The Studio*, 112–113.

⁴⁷ Robinson: *The Studio*, 115.

to the portraits. He was not interested in "artistically truthful" photographic likenesses and would have applauded what Robinson deprecatingly called maps of the face – maps which, in their superimposition and visual aggregation, promised to reveal coordinates that would unravel the deeper underlying genealogical structures.

Optical Genetics: Portraits of the Genealogical Past and Eugenic Future

In relation to Galton's fundamental research on his project of eugenics and the heritability of human characteristics, the family composites were more than just an innocent amusement for amateur photographers. He understood genealogical composite portraiture as a form of visual genetics in which he incorporated his principles of hereditary transmission. But the technique also surfaces as a conceptual aid and visual metaphor for Galton's theories and his "Ancestral Law" that developed into an influential theoretical model for genetic transmission.

Such visual genetic reasoning by means of the photographic technique becomes obvious in the case of the composite portraits of an anonymous family attached to the circular letter. In addition to the combination of all family members, one each of the male side and the female side was produced. The exposure times of the components were weighted according to Galton's theories of hereditary transmission. In the male composite the emphasis lies on father and uncle, who were combined with two sons and one cousin, the latter only receiving half the exposure time. On the female side, also, components were weighted differently, granting the portraits of the daughters only half the exposure time compared to the mother's. The gendered composites show a historical perspective, they are directed towards an analysis of the family's genetic substrate and the visualisation of a common ancestor figure. The mixed-gender composite portrait is constructed differently: the two sons and two daughters are granted twice the exposure time of their parents, while cousin and uncle are left out completely. This shows a focus on the younger generation and emphasises the predictive orientation, considering future offspring of the family. These hereditary perspectives are emphasised by a genealogical tree delineating the family structure that is provided in the upper right side of the chart.



Galton, Francis: *Composite Portraiture: Illustrations of a family likeness*, 1882. Galton Papers, Special Collections, University College London, GALTON 2/8/1/1/f1.

What Galton proposes here is not a novel, special kind of family portrait, but the specialised genealogical portrait of a family. The technique here becomes an analytical tool for investigation into the genetic makeup of a family, an indicator of a genetic continuity that goes beyond the individual and extends into the familial genetic past. Susanne Scholz has convincingly argued that family composite portraits can be understood in terms of genealogical pictures, which treat families as organisms that move through time.⁴⁸ This genealogical view was expressed by Galton in his early articles on heredity:

Our natural constitution seems to bear as direct and stringent a relation to that of our forefathers as any other physical effect does to its cause. Our bodies, minds, and capabilities of development have been derived from them. Everything we possess at our birth is a heritage from our ancestors. [...] We should in this way look on the nature of mankind, and perhaps on that of the whole animated creation, as one continuous system, ever pushing out new branches in all directions, that variously interlace, and that bud into separate lives at every point of interlacement.⁴⁹

⁴⁸ See Scholz: *Phantasmatic Knowledge*, 110.

⁴⁹ Galton: "Hereditary Character and Talent," 321–322.

But this direct link via genetic transmission from generation to generation proved to be all but clear and linear and Galton struggled with his findings, which indicated that characteristics seemed not to be conveyed regularly. He sought to devise a theory for the transmission of characteristics that moved beyond the investigation into an individual and took into account a deeper examination of family history; an investigation that took shape in the 1880s, alongside his experiments with composite portraiture.

In his article "Types and their Inheritance," Galton drew on early experiments with seeds in the 1870s, as well as on data on body-height⁵⁰ accumulated in the 1880s in his *Anthropometric Laboratory*, and observed that any offspring showed a tendency of regressing to the mean:⁵¹

An analysis of the records [...] gives the numerical value of the regression towards mediocrity as from 1 to 2/3 with unexpected coherence and precision, and it supplied me with the class of facts I wanted to investigate – the degree of family likeness in different degrees of kinship, and the steps through which special family peculiarities become merged into the typical characteristics of the race at large.⁵²

Galton links these non-visual observations with the concept of family likeness he had initially employed for the characterisation of visual resemblance. The combination of these numerical family likenesses on a micro-level, Galton thought, resulted in a larger macro-type: the combined racial characteristics. With respect to the micro-category, he goes on to argue that any offspring inherits partly from his parents, whose averaged characteristics he terms "mid-parentages," and partly from its ancestry, the features of its grandparents, great-grandparents and earlier generations. Drawing on his argument on regression, Galton formulates his understanding of genetic transmission, the so-called "Ancestral Law," in which he attributes 1/2 of the hereditary influence to the parents, 1/4 to the grandparents, 1/16 to the great-grandparents and so on.⁵³

⁵⁰ Galton focuses on stature, or body-height, which he understands as: "not a simple element, but a sum of the accumulated lengths or thicknesses of more than a hundred bodily parts". Height here becomes itself a composite measurement, a number averaging out individual, intra-personal peculiarities. See Galton, Francis: "Types and their Inheritance." In: *Nature*, 24 September 1885, 507–510, at 507.

⁵¹ Galton: "Types and their Inheritance," 507.

⁵² Galton: "Types and their Inheritance," 507.

⁵³ Michael Blumer has traced the development of Galton's theory of ancestral heredity and shown its inconsistencies and mathematical flaws as well as its eventual supersession by Mendelian genetics. See Blumer, Michael: "Galton's law of ancestral heredity." In: *Heredity*, 81, 1998, 579–585.

Galton's theory allows for the distinction between phenotypic individual features and the genotype – and it leaves room for latent characteristics that, although invisible, could be passed on to future generations.⁵⁴ The regression towards the mean that Galton observed in the size of seeds and the variation of human stature is attributed to a general reversion to ancestral characteristics;⁵⁵ characteristics that Galton set out to discover in the genetic history of a family:

We have no word to express the form of that ideal and composite progenitor, whom the offspring of similar mid-parentages most easily resemble [...] He, she, or it, may be styled the 'generant' of the group.⁵⁶

Here the genealogising gaze of composite portraiture and its appeal as a device for the visualisation of the invisible genetic past and as an active agent in the creation of an ideal family type becomes obvious. When producing his family composite portraits, Galton would have had in mind the portrait of that "generant," the common figure that combines and reveals the phenotypic and genotypic features of a family.⁵⁷

The revelation of this ancestral figure was, however, not only of retrospective interest; it becomes supplemented with a predictive potential attributed to the family composites. Galton had argued as early as 1879 that composite portraiture could function as an aid in "forecasting the results of marriages between men and women."⁵⁸ The photographic compositions of male and female portraits, in the hands of a trained observer, promised to be a means for predicting the genetic makeup, the composition in physique and character, even the fate, of the descendants. In the deterministic world-view of the Victorian scientist, who believed that many decisions that were generally presumed to be subject to

⁵⁴ See Blumer: "Galton's law of ancestral heredity," 580.

⁵⁵ This tendency to regression is extrapolated to all kinds of physical features and moral traits. Galton is thus arguing against the presumption that exceptionally gifted families necessarily reproduce their positive characteristics, but also that not all weaknesses and diseases are automatically passed on. While this partly calls into question Galton's earlier study on the hereditary gifts of exceptional families in his first study, "Hereditary Genius," he remains convinced of the advantages of a union of eugenically fit individuals: "Let it not be supposed for a moment that these figures invalidate the general doctrine that the children of a gifted pair are much more likely to be gifted than the children of a mediocre pair." Galton: "Types and their Inheritance," 509.

⁵⁶ Galton: "Types and their Inheritance," 508.

⁵⁷ Josh Ellenbogen has observed this connection between Galton's photographic technique and his hereditary theory. See Ellenbogen: *Reasoned and Unreasoned Images*, 166.

⁵⁸ Galton, Francis: "Composite Portraits." In: *Journal of the Anthropological Institute*, 8, 1879, 142.

free will were actually pre-determined;⁵⁹ the course of life seemed largely prearranged in genetic terms.⁶⁰

The world is beginning to perceive that the life of each individual is in some real sense a prolongation of those of his ancestry. His character, his vigour, and his disease are principally theirs; sometimes his faculties are blends of ancestral qualities, more frequently they are aggregates, veins of resemblance to one or other of them showing now here and now there. The life-histories of our relatives are [...] prophetic of our own futures.⁶¹

Galton here seems to echo the psychiatrist Henry Maudsley, who in the third edition of his influential book *The Pathology of Mind* conceptualised the individual as the "unbroken continuation of the life of his forefathers,"⁶² and urged for the study of all branches of the family tree for the study of hereditarily transmitted dysfunctions.⁶³ Furthermore, the passage casts light on the visual nature of Galton's scientific reasoning in his conceptualisation of human genetics. The description of hereditary transmission in terms of merging, blends and aggregates shows a striking proximity to his photographic work on composite portraiture.⁶⁴ Indeed, the technique could be seen as a blueprint for how Galton envisaged the invisible and intangible processes of genetic transmission: as the merging and compounding of inner and outer characteristics in the individual offspring of a family organism. This visual, photo-chemical reasoning also surfaces in the writings of Maudsley, who was an adherent of Galton's reversion theory:⁶⁵

⁵⁹ In his endeavours of measuring character, Francis Galton adopts a mechanistic view of human existence, arguing that "man is little more than a conscious machine, the larger part of whose actions are predictable." Galton, Francis: "Measurement of Character." In: *Fortnightly Review*, 36, 1884, 179–185, at 181.

⁶⁰ "I came across frequent instances in which a son, happening to inherit somewhat exclusively the qualities of the father, had been found to fail with his failures, sin with his sins, surmount with his virtues, and generally to get through life in much the same way. The course of life had, therefore, been predetermined by his inborn faculties." Galton: "Measurement of Character," 180.

⁶¹ See Galton: "Photographic Chronicles from Childhood to Age," 31.

⁶² Maudsley, Henry: *The Pathology of Mind. Being the Third Edition of the Second Part of the 'Physiology and Pathology of Mind,' Recast, Enlarged, and Rewritten*. New York: Appleton, 1880, 90.

⁶³ "[E]very parent has latent in him the abstract potentialities of his ancestors. [...] To understand what these latent potentialities are, he would do well to study their developments in father, brothers, sisters, uncles, children – in all branches of the family tree. Explicit in them he shall read what is implicit in himself." Maudsley: *Pathology of Mind*, 90.

[H]ereditary action is not of the nature of a mere mechanical copy, it is rather of the nature of a complex chemical combination, whereby compounds not resembling their constituents are sometimes produced.⁶⁶

This is reminiscent of the invisible chemical processes and productive potential involved in the creation of photographs and, in particular, of composite portraits. Galton, who understood his technique as a productive analytical tool, with respect to genetic transmission, positioned composite portraiture as a photo-mechanical and chemo-analytical technique for genealogical investigation.

The Eugenicist's Family Bible: Collective Data Gathering for the Future of Eugenic Management

The orientation of composite portraiture towards the future and its conceptualisation as a form of visual genetics, along with Galton's deterministic outlook postulating a seemingly inescapable decline through continuous degeneration and retrogression to the mean, positioned the technique at the centre of his eugenic project. For this mission of the enhancement of humanity, data had to be accumulated centrally, in the hands of scientists and agencies of eugenic management, but also locally, in the families. The production of family composites was part of Galton's larger endeavour of collective data-gathering on individuals and the creation of archives on genetic merit. The collective investigation projects initiated by Galton included the collection of standardised photographic portraits, the "raw material" for visual analyses, in special albums alongside other vital information. Furthermore, the albums and their visual nature can be seen as a means of popularising personal data collection and eugenicist thought and were directed at what could be called bio-political self-management. The influence of composite portraiture in this field, however, remained limited and despite Galton's high hopes, genealogising composite portraits never became fashionable.

⁶⁴ In earlier articles Galton had argued that the composite technique provided more than a visual average or mean value, but that it created aggregates of common, typical characteristics. See Galton, Francis: "Composite Portraiture. A Communication from Francis Galton." In: *The Photographic News*, April 27, 1888, 237.

⁶⁵ See Maudsley: *Pathology of Mind*, 96. Theodore Porter has observed the mutual influences between Galton and Maudsley. See Porter, Theodore M.: *Genetics in the Madhouse. The Unknown History of Human Heredity*. Princeton/Oxford: Princeton University Press, 2018, 223–224.

In a number of publications, Galton advertised the collection of personal records of individuals and families and the production of "photographic chronicles."⁶⁷ He proposed that at different stages in life, frontal and profile portraits should be taken in a uniform manner and assembled in albums. Just like the notes on the front pages of family Bibles in the old days,⁶⁸ Galton's ambitious plan proposed, these special photographic albums, containing series of uniform portraits, were to provide registers of personal developments and family events and prove to be valuable resources:

[T]hose who care to initiate and carry on a family chronicle, illustrated by abundant photographic portraiture, will produce a work that they and their children, and their descendants in more remote generations, will assuredly be grateful for. The family tie has a real as well as a sentimental significance. [...] If there be such a thing as a natural birthright, I can conceive of none greater than the right of each child to be informed, at first by proxy through his guardians, and afterwards personally, of the life-history, medical and other, of his ancestry.⁶⁹

Galton elevates the collection of personal anthropometric, medical, and psychological data to the status of a human right, a perspective that can only be grasped in relation to his eugenic project. He was convinced that the documentation of the quality of human pedigrees would be essential in a future eugenic society and bemoaned that these advancements were "extremely hampered by the want of full family histories, both medical and general, extending over three or four generations."⁷⁰

Galton's initiative to fill this gap took shape in the form of the so-called *Life History Album*,⁷¹ published in 1884, and its second edition in 1902. This book was prepared in cooperation with Frederik Akbar Mahomed, with whom Galton had worked on the production of composite portraits of tuberculosis patients.⁷²

⁶⁶ Maudsley: *Pathology of Mind*, 92.

⁶⁷ See Galton: "Photographic Chronicles," 26–31.

⁶⁸ "Obtain photographs periodically of yourselves and of your children, making it a family custom to do so [...] Let those periodical photographs be full and side views of the face on an adequate scale [...] Keep the prints methodically in a family register, writing by their side all such chronicles as those that used to find a place on the fly-leaf of the Bibles of past generations, and much more besides." Galton: "Photographic Chronicles," 31.

⁶⁹ See Galton: "Photographic Chronicles," 31.

⁷⁰ Galton: *Inquiries into Human Faculty*, 30.

⁷¹ See Galton, Francis (ed.): *Life History Album*. London: Macmillan, 1884. A second, revised edition was published in 1902.

Together they headed the life-history sub-committee of the “Collective Investigation Committee” of the British Medical Association, which sought to gather vital information with the help of the public.⁷³ This “eugenicist Bible” had a blue hard-cover linen binding and contained standardised forms for entering anthropometric data and descriptions, as well as photographs, and it offered instructions on how to collect data on an individual’s development throughout life. The publication was addressed at parents, in particular of young children; the album, and with it the obligation to continue the recording, could be handed over to the offspring at a later stage.⁷⁴

On the first pages of each personalised album could be inscribed the name and other details of its “owner,” who is directly addressed in the preface: “This Album is designed to contain the Chart of your Life.”⁷⁵ The book was, however, not limited to the individual; information on ancestry, a so-called genealogical record, and information on marriage and offspring could be added, which turned the individualised album into a family chronicle. The bulk of the book was forms, tables, and charts into which anthropometric data at different periods of life could be entered. It also contained pages to paste in photographs, whose mode of production was specified according to Galton’s principles for anthropometric portraits: strict frontal and lateral views in a uniform reduction and size. The album does not directly propose the production of composite portraits, but it offered the raw material for their creation.

The data collected in the book was addressed at a lay, as well as at an expert audience and the editors requested users to send in copies of the completed sections to the “Collective Investigation Committee.” Some of the data thus collected would be of interest to doctors and anthropologists, primarily: data that in expert hands could be further processed and analysed, for instance through the production of composite portraits. But the album also provided a framework for appealing family chronicles and contained graphs of height and weight in which the individual subject could be inscribed at different stages in life and thus be compared to an average norm.⁷⁶ Parents could contribute to the production of anthropometric data on their children, and they were given

⁷² See the chapter on “Visual Pathologies.”

⁷³ See Hughes, Alun D.: “Commentary: ‘On the cards’: Collective investigation of disease and medical life histories in the nineteenth century.” In: *International Journal of Epidemiology*, 42, 2013, 683–688.

⁷⁴ Galton (ed.): *Life History Album*, 1.

⁷⁵ Galton (ed.): *Life History Album*, 1884, preface.



Completed page of “Record of Live History: From Birth to Five Years of Age” in: Galton, Francis (ed.): *Life History Album*. London: Macmillan, 1884, my collection.

the means to compare and evaluate certain markers of development. Even though the preface of the album focuses on personal use in the medical field, as a source of information for the treatment of chronic and hereditary illnesses, the wider implications become obvious in relation to Galton’s eugenic project: In the hands of medical professionals the data could be used as basis for the judgement on normal or anomalous development and genetic merit.

The *Life History Album* was published jointly with its “red-clad sibling,” the *Record of Family Faculties*, another endeavor of the “Collective Investigation Committee,” which was directed at adults. Specifically, it addressed those who “care to forecast the mental and bodily features of their children, and to further the science of heredity”⁷⁷ and offered monetary prizes for the best extracts of the records returned to the committee. And while photography and composite portraiture only played a minor role here, the photographic technique surfaces as explanatory model when Galton argues in the preface that experiments with composite photography had shown that information collected up to the great-

⁷⁶ These graphs show a striking similarity to those contained in the yellow examination booklets that are used in the obligatory health checks for children now in Germany.

⁷⁷ Galton, Francis (ed.): *Record of Family Faculties*. London: Macmillan, 1884, 1.

grandparent generation would suffice for a reliable “hereditary picture” of a given family.⁷⁸ The collection of this information was outsourced to the families, who willingly disclosed personal data, not only of themselves, but all members of their families. Confidentiality was promised, however, and the non-anonymised results were collected and archived under the auspices of Francis Galton, who received over 150 responses in the first four months.⁷⁹ In the following years, family records were extracted and findings were published in articles and in Galton’s book *Natural Inheritance*.⁸⁰ It is most likely that the data later became included in the Eugenics Record Office set up by Galton and his disciple Pearson in 1904.⁸¹

The two books can be seen as a means for popularising and collectivising anthropometrics and the collection of biometric data for scientific purposes and eugenic population management. Galton had understood that the public had to be won over in order to collaborate with this personal data collection,⁸² an aim he sought to achieve with his articles delineating medical advantages, as well as with prizes offered for data returned. The Anthropometric Laboratory, installed by Galton at the International Health Exhibition of 1884 functioned in a similar way. What was then, in the late nineteenth century, perceived as a prime example of egalitarian data collection,⁸³ when judged by the standard of Foucault’s concept of governmentality,⁸⁴ constitutes an early example of bio-political self-management.⁸⁵ The aim of these collective investigation projects was to involve the population in the collection of vital data for scientific and eventually governmental purposes, as well as to initiate moral and reformative

⁷⁸ Galton (ed.): *Record of Family Faculties*, 1884, 1.

⁷⁹ See Galton: *Natural Inheritance*, 74.

⁸⁰ Galton: *Natural Inheritance*.

⁸¹ The Eugenics Record Office was reconstituted as Galton Eugenics Laboratory in 1907 under the direction of Galton’s disciple Karl Pearson as part of University College London. The unit continued to exist in different forms within the institutional framework of UCL until its closure in 2000. The professorship sponsored by Galton, originally established as the Galton Chair in National Eugenics continues to exist to date.

⁸² Galton, Francis: “Why Do We Measure Mankind?” In: *Lippincott’s Monthly Magazine*, 45, 1890, 236–241, at 236.

⁸³ See Hughes: “Commentary: ‘On the cards’,” 683.

⁸⁴ For the delineation of the concept of “governmentality” see Foucault: *Security, Territory, Population*.

⁸⁵ For a delineation of the concepts of biopolitics and biopower, see Foucault: *History of Sexuality I: The Will to Knowledge*, Part Five, 135–159. See also Chloe Taylor’s article on biopower: Taylor, Chloe: “Biopower.” In: Diana Taylor (ed.): *Michel Foucault: Key Concepts*. Durham: Acumen, 2011, 41–54.

behaviour. In particular in relation to the moral and religious connotations of the *Life History Album* and genealogising composite portraiture in general, this is evocative of the act of confession, or the spiritual diaries of the Anglo-Protestant tradition, of laying bare all one’s (mis-)deeds and secrets.⁸⁶ Bio-politics, the technique for the management of the population, here aligns with the formation of technologies of the self, the transformative practices of self-management in relation to social norms,⁸⁷ revealing the proximity of the genealogising gaze to the eugenicising gaze of the technique.

The late nineteenth century with its advances in sanitary reform, epidemiology, and evolutionary theory as well as its moral-reformative impetus, provided a fruitful climate for projects of collective mass data gathering⁸⁸ and, one has to add, to the rise of eugenic thought. With reference to the Social Darwinist proclamation of the “survival of the fittest,”⁸⁹ the responsibility for individual and collective fitness was relegated to the population. It has been observed that in the twentieth century, collective investigation projects did not continue to enjoy their initial popularity; this is partly attributed to the sheer volume of mass data gathering and the difficulty of its analysis without computerised methods.⁹⁰ In the twenty-first century, however, collective investigation experiences a digital renaissance, such as in the online “Family Health Portrait” issued by the U.S. Department of Health,⁹¹ which is basically a digital version of Galton’s *Record of Family Faculties*.⁹² This revival is also attested to by electronic fitness devices that have become omnipresent in the past years as self-surveillance and self-management tools. These devices often share data with third parties, updating Foucauldian – and Galtonian – bio-political thought and the concept of confession and self-justification in the networked digital age.

⁸⁶ Foucault observed a “clinical codification of the inducement to speak. Combining confession with examination, the personal history with the development of a set of decipherable signs and symptoms; the interrogation, the exacting questionnaire, and hypnosis, with the recollection of memories and free association: all were ways of reinscribing the procedure of confession in a field of scientifically acceptable observations.” Foucault: *History of Sexuality I: The Will to Knowledge*, 65.

⁸⁷ See Foucault: *History of Sexuality I: The Will to Knowledge*, 139.

⁸⁸ See Hughes: “Commentary: ‘On the cards’,” 685.

⁸⁹ This expression was coined by Herbert Spencer, a philosopher and sociologist who adapted Darwinian evolutionary theory to the development of society and who is credited by Galton as a co-founding father of composite portraiture.

⁹⁰ See Hughes: “Commentary: ‘On the cards’,” 686.

⁹¹ U.S. Department of Health and Human Services, Office of the Surgeon General: *Family Health Portrait* (2007), <https://phgkb.cdc.gov/FHH/html/index.html> [15/01/2022].

Apart from the family portraits collected by means of the circular letter, the return of visual data in Galton's collective investigation projects was negligible; most people kept the *Life History Album* to themselves and often did not insert photographs according to the editor's strict guidelines.⁹³ Also, no examples of the utilisation of the visual material thus collected for the production of genealogical composites have come down to us, even though Galton repeatedly stressed the value and appeal of composite family portraits. And the "fashion [...] to have these pictures"⁹⁴ that, so Galton argued, were "sure to be artistic in expression and flatteringly handsome"⁹⁵ never set in.

Eugenic Fictions: Familiar Ghosts and Ghostlike Familiarity

Galton remained fascinated with family resemblance and composite portraiture throughout his life. He mentions the topic and technique among his scientific achievements in his 1909 autobiography,⁹⁶ and composite portraiture figures prominently in Galton's only fictional narrative, the unfinished novel *Kantsaywhere*⁹⁷ to which he devoted his final years.⁹⁸ Galton's utopian manuscript draws together many of the projects and the principles laid out by him in scientific

⁹² Alun Hughes has compared it to Galton's *Life History Album*, but considering the data collected, it rather resembles the less visual, anecdotal, and personalised *Record of Family Faculties*. See Hughes: "Commentary: 'On the cards'," 686.

⁹³ This can be seen in a copy in my possession. It was started for a baby born in 1893 and contains descriptions and anthropometric data as well as photographs from the first six years of the boy's life. The photographs, however, are classic studio portraits, often of several members of the family together.

⁹⁴ Galton: *Inquiries into Human Faculty*, 241.

⁹⁵ Galton: *Inquiries into Human Faculty*, 241.

⁹⁶ See Galton: *Memories of my Life*, 261–262.

⁹⁷ The title seems to refer to the popular utopian novel *Erewhon* by Samuel Butler whose title is an anagram of "nowhere". In Butler's fictional world, which satirically explores and confronts Victorian morals and values, criminality is treated as a disease and criminals are treated with sympathy, while illnesses like tuberculosis are seen as criminal and patients are punished. See Butler, Samuel: *Erewhon, Or, Over the Range*. New York: Dutton, 1917 [1872].

⁹⁸ In Pearson's biography of Galton, parts of *Kantsaywhere* were published. See Pearson: *Life, Letters and Labours*, Volume III, Correlation, Personal Identification and Eugenics, 411–425. In 2011 a transcription of the remaining fragments was released by UCL Special Collections and the Wellcome Collection. See <http://www.ucl.ac.uk/library/special-collections/kantsaywhere> [10/09/2018]. The original typescript manuscript with annotations is kept among the Galton Papers, UCL, GALTON 2/4/19/6/1.

terms. In *Kantsaywhere*, he delineates a future eugenic society, with a community life and customs that bring together the author's work on family registers and certificates, the anthropometric laboratory and identification, genetic transmission and eugenics, as well as photography and, in particular, composite portraiture. Composite portraiture and its genealogising gaze play a major role in the narrative. In Galton's utopian society, composite family portraits appear as a form of ancestral worship and become elevated to the status of religious icons. The novel can be understood as part of Galton's eugenic campaign, to which he dedicated his later life,⁹⁹ but also as a fictional space in which he could express his ideals and review the achievements of his life.

In the narrative about the "Eugenic College of Kantsaywhere," descriptive passages that almost read like technical manuals are interwoven with a romantic plotline.¹⁰⁰ In fictional eugenic society "everybody is classed by everybody else according to their estimate or knowledge of his person and faculties,"¹⁰¹ and a class system based on eugenic merit is in practice. Galton's ideal society is governed by exact measurement and recording; the "Examining, Inspecting and Registering Departments [...] together form the soul of the place."¹⁰² By means of genealogical analyses and strict physical and intellectual examinations, individuals are evaluated and granted eugenic certificates. Only persons who pass the initial examination are allowed to have children, the ones that fare exceedingly well are granted privileges and are motivated to have many offspring. Those who fail are encouraged to emigrate or are put under a tight regime of surveillance. In case of non-compliance with the strict rules, these "Unfit" face severe punishments, such as excommunication, deportation, and life-long segregation, since, as the narrator notes: "the propagation of the children by the Unfit is looked upon by the inhabitants of Kantsaywhere as a crime to the State."¹⁰³ While the narrative shows Galton's conviction of positive eugenics, elements of negative eugenics surface as well, such as the enforcement of celibacy and forced labour for certain groups of society, as well as expulsion and imprisonment.

⁹⁹ This is expressed in his work in the Eugenics Education Society founded in 1907 by the eugenicists H.G. Wells, Aldous Huxley, Marie Stopes, and others. Galton served as the Society's founding president.

¹⁰⁰ In an attempt to preserve his reputation, these passages were destroyed after Galton's death by his relatives, who judged the love scenes to be immoral. See Pearson: *Life, Letters and Labours*, 412.

¹⁰¹ Galton's *Kantsaywhere* quoted in Pearson: *Life, Letters and Labours*, 414.

¹⁰² Galton's *Kantsaywhere* quoted in Pearson: *Life, Letters and Labours*, 419.

¹⁰³ Galton's *Kantsaywhere* quoted in Pearson: *Life, Letters and Labours*, 416.

Composite portraiture is allocated a special place in Galton's utopian society, and in the genealogical composites popular, self-affirmative and eugenic functions become united:

There is a great demand in Kantsaywhere for composite portraits of families. The material for making these is abundant and excellent [...] I [...] was delighted at the punctilious and exact way by which composite photographs were made [...] I saw several beautiful composites in the Studio, of men and women respectively. Every family desires at least four family composites, one of the Grand-parental series, including Great Uncles and Aunts on both sides, another of the Parental series, including Father and Mother, Uncles and Aunts, and yet another of Self, Brothers and Sisters. Lastly, one made from the four grandparents and the two parents [...]¹⁰⁴

Here Galton includes his genealogical reasoning by means of the photographic technique and highlights the images' importance as family portraits, as tokens of communality in a society that is described as appreciating family and community more than individuality.¹⁰⁵ Furthermore, the narrator describes a deeper, religious meaning attributed to these family composite portraits. This spiritualist perspective transforms the visualisations into visions and turns them into objects of worship:

A peculiar interest lies in the close analogy between composite portraits and their [Kantsaywhereian] religious imagery [...] it is a kind of grandiose personification of what we call conscience in to a variety of composite portraits. I expect that many visionaries among them – for there are visionaries in all races – actually see with more or less distinctness the beseeching or the furious figures of these imaginary spirits, whether as individuals or as composites. There seems to be some confusion about the family, the racial, and the universal clouds of spirit watchers. They are supposed to co-exist separately and yet may merge into one or many different wholes.¹⁰⁶

Galton here imagines a special form of ancestor worship that circles around the composite face of the common ancestral figures, the progenitors, or “generants” of the family, the race, or humankind. The uncanny presence of the ghost-like features that merge and unite, disintegrate and de-compose before the mind's eyes of people who are capable of a higher level of vision, is reminiscent of

¹⁰⁴ Galton's *Kantsaywhere* quoted in Pearson: *Life, Letters and Labours*, 423.

¹⁰⁵ Galton's *Kantsaywhere* quoted in Pearson: *Life, Letters and Labours*, 414–415.

¹⁰⁶ Galton's *Kantsaywhere* quoted in Pearson: *Life, Letters and Labours*, 423.

traditions of Spiritism that flourished in the late nineteenth century, but which Galton, unlike some of his fellow Victorian scientists, never bought into. Galton, however, repeatedly proposed the inclusion of eugenic principles into religion, even positioned eugenics as a sort of ersatz religion in order to secure the adherence to its principles.¹⁰⁷ In the same vein, the narrator of *Kantsaywhere* concludes: “Their superstition certainly succeeds, even as it is, in giving a unity of endeavor and a seriousness of action to the whole population.”¹⁰⁸ The ghost-like shapes of composite portraiture seemed to have been haunting Galton to the end of his life, and it is their vagueness and ambiguity that allowed the images to develop into a godlike eugenic quasi-entity in his utopian society.

From Artistic Family Portraits to “Uncanny” Family Resemblances

Contrary to Galton's expectations, family composite portraiture neither became a popular new form of family portrait, nor did such artificial visualisations become spiritual icons of a future eugenic society. Only few photographers took up the genealogising gaze of the technique, all of them focusing on their own families.¹⁰⁹ Arthur Batut, the French protagonist of composite portraiture, whose photographic work with the technique has been discussed above,¹¹⁰ produced three composites of his own family. The superimposition of family portraits was taken up also by the philosopher Ludwig Wittgenstein in the 1920s; his treatment of the technique, however, shows an entirely different perspective.

Following Galton's lead, Arthur Batut used frontal portraits for his family composites that were produced specifically for the purpose in the late 1880's. In the three surviving composite portraits, he created individual compositions of the female and male sides, as well as one of the children. In a publication,

¹⁰⁷ See Pearson: *Life, Letters and Labours*, 424.

¹⁰⁸ Galton's *Kantsaywhere* quoted in Pearson: *Life, Letters and Labours*, 424.

¹⁰⁹ Even though Galton seemed convinced of the merits of family composites, he never attempted the production of a composite of his own family. Among the Galton Collection are reproductions of portraits of his family members, produced by Galton's photographer Reynolds, but the images are very dissimilar in perspective and low in quality. This might not have been the only reason for not following up on a family composite; Galton simply lacked the material, his marriage was childless, and, since he did not have siblings, with him the Galton-Darwin branch of the family came to an end.

¹¹⁰ See chapter 4, “Racial Prototypes.”



Batut, Arthur: Composites of the Batut family: male side; female side; children, c. 1886-87. Collection Espace Photographique Arthur Batut / Archives Départementales du Tarn.

Batut speaks of a family resemblance in all composite-type portraits but observes that family composite portraiture, in particular, yielded remarkable results that were of interest for strangers and family alike. He relates the reaction of a friend of the family, who seemed astonished: "I do not know [...] the person whose portrait you have shown to me, but I am sure that it is a member of your family."¹¹¹ Batut seconds this observation and states that the dominant likeness in the composite was one that did not surface in any individual portrait of a family member, but that it constituted something new, an ideal type of the family.¹¹²

Batut believed in the ethnographic significance of the technique, but he declined its physiognomic assumptions and he seems not to have attached the same genealogical value and predictive power to family composite portraiture as Galton had done. Batut seems to have cared more for the artistic quality of the unfamiliar family compositions. This is probably why he did not adhere to Galton's weighting of components according to hereditary theories and did not produce a mixed-gender, or as Galton would have called it, "epicene," family portrait. Rather, he extended his understanding of family resemblance to the other subjects of his studies with composite portraiture, the visual likeness of the markers of ethnicity in families and communities of the French Pyrenees.¹¹³

¹¹¹ Batut: *La photographie appliquée*, 17.

¹¹² See Batut: *La photographie appliquée*, 18.

¹¹³ See Batut: *La photographie appliquée*, 19.

In the early 1920s, the philosopher Ludwig Wittgenstein commissioned the photographer Moritz Nähr to produce a composite portrait of him and his three sisters, presumably from existing portraits.¹¹⁴ Wittgenstein seemed to have been intrigued by the ambiguity and visual complexity of Galtonian composites, and was most probably familiar with the reception and evolution of composite images in Sigmund Freud's theory of the interpretation of dreams.¹¹⁵ Freud used composite portraiture as a metaphor for the analysis of his own unconscious and of uncanny elements of morphing faces in his dreams. Here it becomes a reflective means for the explanation of psychological processes of sub-conscious cognition and it is implicitly questioned for its unconscious pathologising and criminalising function.¹¹⁶ Wittgenstein likewise reinterpreted the technique's epistemological nature: rather than perceiving the images as delineations of genetic similarities, he used the photographic technique as a sort of a visual metaphor for his language-philosophical concept of family resemblance.¹¹⁷

Contrary to Galton, who strove to reduce complexity by means of what he understood as visual statistics, Wittgenstein perceived the artificial constructions of composite photography as an enhancement of complexity. While Galton sought to get rid of shades and conspicuous artefacts, Wittgenstein focused on the blur – the ambiguities and fuzzy outlines – and understood the images as pictures of probabilities, allowing for multi-perceptual outcomes.¹¹⁸ As Ulrich Richtmeyer has argued, the philosopher's focus was no longer on the content of the individual components and their similarities but on the relationship of the images to one another, their universality and, at the same time, their particularity.¹¹⁹ Richtmeyer argues that "Wittgenstein turns the aporia of the composite image into an (image-)philosophically inspired critique

¹¹⁴ For various detailed images of the composite and component portraits and a technical discussion see: Gruber, Andreas: The Wittgenstein Composite Portrait Reconstructed. In: Uwe Schögl, Sandra Tretter, Peter Weinhäupl for the Klimt Foundation (eds.): *Moriz Nähr (1859-1945). Photographer for Habsburg, Klimt and Wittgenstein*. Vienna: Catalogue Raisonné, 2021, 2-12.

¹¹⁵ Sigmund Freud refers to Galton's composite portraits in terms of family resemblance. See Freud, Sigmund: *Traumdeutung*. Leipzig/Vienna: Franz Duedicke, 1900, 96; Freud, Sigmund: "Über den Traum." In: *Schriften über Träume und Traumdeutungen*. Frankfurt: Fischer, 1994, 53.

¹¹⁶ For a detailed analysis of Freud's use of composite portraiture see Mayer: "Von Galtons Mischphotographien zu Freuds Traumfiguren."

¹¹⁷ This was observed by Daston and Galison. See Daston; Galison: *Objectivity*, 169.

¹¹⁸ See: Lee-Morrison, Lila: *Portraits of Automated Facial Recognition: On Machinic Way of Seeing the Face*. Bielefeld: transcript, 2019.

¹¹⁹ See Richtmeyer: "Die unscharfe Allgemeinheit des Bildes," 122-123.

of the understanding of general concepts, of methods and technologies of generalisations.”¹²⁰ Once again, composite portraiture is used against the grain.¹²¹ In the present case, however, the basis of its epistemological rationale becomes reversed: it is precisely the mode of forming general concepts that becomes questioned by means of the composite technique.

The utilisation of the family composite portrait by the philosopher reveals a novel perspective in the interpretation of the diffuse aesthetics of the composite technique, and of the understanding of the concept of family resemblance. In Wittgenstein’s case, the composite image is not discussed in a genealogical sense, in terms of the visualisation of the family as an organism, nor is it discussed in terms of a common structure shared by its component parts, i. e., the individual family members. The sphere of indecisiveness between objects and their visual and linguistic representations are in the centre of this endeavor. Wittgenstein’s reasoning by means of composite portraiture is not a mere rewriting of the technique’s scope and focus, but a downright contradiction of its epistemological basis. This deconstructive perspective is directed against the visual unity performed in composite portraiture, it is highlighting the opacity and incongruity of the images and their significance in showing ruptures and ambiguities, rather than commonalities, a perspective that became shared by many twenty-first-century artists working with the technique.

Family Combinations: Nineteenth-Century Genealogising Composites and Current Revivals

Looking back at the historical production of composite portraits of family likenesses, it becomes clear that the technique’s genealogising gaze occupied Francis Galton from his first experiments with the technique of composite portraiture in 1878 until the final years of his life 1910–11. This emphasis connects several aspects of Galton’s scientific work and his social preoccupations. Even though his perspective was connected to widely distributed collective investigation projects, only a few of his contemporaries took up this specific use of com-

¹²⁰ Richtmeyer: “Die unscharfe Allgemeinheit des Bildes,” 125 (my translation).

¹²¹ This is reminiscent of its utilisation as an argument against positivist criminology by Charles Goring as well as of its adaption by Sigmund Freud in his *Interpretation of Dreams*.

posite portraiture. Still, in the work of the British photographer H. P. Robinson and of the French photographer Arthur Batut, as later in the philosophical work of Ludwig Wittgenstein, the idea of a composite family likeness resonates strongly, as does the corresponding genealogical perspective. This is also true for the field of popular culture and arts around the turn of the twenty-first century, when computerised genealogical composites experienced a revival or rather rediscovery in the early 1970s.

Family composite portraits were presented as genealogical pictures of the familial and “racial” past and were perceived as predictive tools for future eugenic development. Galton’s plans and convictions and their expression in family composite portraiture are nothing less than revolutionary: in the postulation of family albums as the new “Bible” and genealogical record of an enlightened eugenic society; in demands for the reformation of established studio portraiture and its iconography to meet the standards of scientific objectivity and eugenic practice; in the promotion of a new genre of family portraiture and its composite aesthetics; and in the elevation of composite portraiture as a new token of eugenic spirituality and as transcendental, ghost-like icons of an alternative religion in his utopian novel *Kantsaywhere*.

The genealogising gaze of composite portraiture, in contrast to other visual constructions of social and pathological groups, was aimed at visualising the genetic transmission of phenotypical appearance; it is directed at the family as an organism, at its ancestral past and genetic future. Furthermore, the photographic visualisations are fascinating epistemologically. They cast light on the visual nature of Galton’s scientific reasoning and form a visual explanatory model for the scientist’s influential theories on genetic transmission. At the same time, the genealogical family composites served as a test for the veracity and explanatory power of the technique in other scientific fields, such as ethnography, medicine, and criminology. The visual proof of the presumed stability in the transmission of phenotypic characteristics through generations of a single family, and the direct link to theories of heredity, provided the implicit justification for the application of the technique in the visual construction and biologisation of social and medical phenomena.

As the appealing visual side of collective investigation projects, photographic portraits contributed to the promotion of common big-data collection and the formation of personal, decentralised archives of vital data, as well as to the advancement of eugenics. Amateur photographers provided the data to be

analysed by experts and by means of the scientific technique of composite photography. These visual raw data were usually produced by the heads of the family, who introduced the technique and its underlying scientific and eugenic reasoning and used their power as “paterfamilias” to convince family members to sit for the special portraits. The production of the component portraits might not have been strictly voluntary on all sides, but in contrast to other groups, such as prisoners, patients, and army personnel, at least individuals were informed about what was going to happen to their portraits, and they were granted access to their depictions as well as the final product. These voluntary participatory projects, such as family albums and family composite portraiture, reveal a fusion of hereditary thought and class orientation. The visual constructions are positioned as self-affirmative images of an elevated social standing of the depicted families in contrast with images of lower, and allegedly genetically inferior, social classes. Here the genealogising gaze and the eugenicising gaze of composite portraiture overlap in the family as the central disciplinary and biopolitical arena for eugenic intervention.¹²²

Even though genealogical approaches to human heredity and eugenics continued to flourish after Galton’s death, family composite portraiture was not received enthusiastically by the public. Neither did it become the new fashionable family portrait, nor the spectral image of eugenic spirituality that Galton had envisaged. But its ghostlike familiarity continues to haunt us today, for instance in the software *MetamorFace*, developed by the Japanese company Matsushita (now Panasonic) in the late 1990s, which forecasts the appearance of offspring from images of prospective parents.¹²³ The software combined the technique of digital morphing with an algorithm that can transform the appearance of age, both of which were pioneered in the artistic field.¹²⁴

¹²² See also chapter 7, “Eugenic Role Models.”

¹²³ See Schmid, Katja: *Actual Photos*. <https://schreibkraft.adm.at/ausgaben/06-echt/actual-photos> [06/12/2018]; SeeBlen, Georg; Metz, Markus: *Schnittstelle Körper*. Berlin: Matthes & Seitz, 2018.

¹²⁴ The New York-based artist Nancy Burson, together with IT specialists, developed the first computerised composite portraits and the technique of morphing, as well as a software that could visualise aging and digitally “rejuvenate” images of faces.

¹²⁵ See the website: <https://www.luxand.com/babymaker/> [15/01/2022].

¹²⁶ See the website: <http://faceresearch.org/demos/baby> [15/01/2022].

¹²⁷ See the website: <http://www.babypicturemaker.com/> [15/01/2022].

¹²⁸ See the website: <http://www.makemebabies.com/> [15/01/2022].



Luxland: Screenshot of Luxland “BabyMaker.” <https://www.luxand.com/babymaker/> [15/01/2022].

A number of more or less “serious” apps and online services are currently on the market, among others *Baby Maker*,¹²⁵ *Face Research Baby Maker*,¹²⁶ *Baby Picture Maker*,¹²⁷ and *Make Me Babies*.¹²⁸ These services have taken up genealogical composite portraiture and have sustained and transformed the technique in the digital twenty-first century. The websites are advertising to be able to “accurately produce a picture of your baby,”¹²⁹ but leave the workings of the algorithms involved in the creation of the artificial visualisations unclear. They, however, stress that the programmes are working with facial markers, rather than with the whole face, as in conventional composite portraiture – facial markers that are used by the same companies in facial recognition software. These composite visualisation applications are a reminder of the continuing desire to explore the genetic future and the visual, phenotypic appearance of offspring. In times of the availability of genetic testing, this playful form of matching couples and of “testing” the appearance of the future offspring reveals social aspirations to a perfect baby and the perfect couple. And they show a pop-cultural revival of the genealogising gaze of the composite technique and the uncritical acceptance of over-simplified concepts of genetic transmission.¹³⁰

¹²⁹ Caption on the website: <https://www.luxand.com/babymaker/> [15/01/2022].

¹³⁰ In the commercial arena, also, the unfamiliar familiarity of family composites was taken up by Paul Vinet, a New York-based French artist (and the great-great-grandson of Arthur Batut). In 2012, Vinet opened a photographic studio in New York, named after his famous ancestor, in which he offered the production of family composite portraits. The studio has since closed, but Paul Vinet continues his artistic work. See <https://www.paulvinet.com> [15/01/2022].

The desire to explore family resemblances and their visual characteristics was an important factor that inspired artists to rediscover the technique in the late twentieth century. In 1972, the US based artist William Wegman was the first to re-establish the technique in the artistic realm.¹³¹ His work *Family Combinations* is a series of close-up portraits of members of his family and their combination into composite portraits. The interest of the experimental arrangement seems to be simple and innocent: what distinguishes the artist from his mother and father and where can visual continuities be detected? The black and white



Wegman, William: *Family Combinations*, 1972, silver gelatin prints, work in six parts measuring 12 1/2 x 10 inches each. Courtesy of the artist and Sperone Westwater Gallery, NY.

¹³¹ The other early contemporary protagonists of artistic composite portraiture were Nancy Burson, also from the United States, who started experimenting with digital composition techniques in the early 1980s, and Krystopher Pruszkowski from Poland, who around the same time worked with analogous composite portraiture.

¹³² Surprisingly the composition of the portraits of father and mother results in the most natural faces, which in Galton's reasoning would be indicating a closer proximity between the faces of the paternal generation than between them and their sons or daughters.



Rowland, Jake: *wife/self I-VI*, composite portraits, 2005. Courtesy of the artist.

photographic superimpositions, in correspondence with the individual portraits, result in uncannily familiar countenances. The parents seem to avert their direct gaze from the camera, which gives the composite faces a strangely lost, dreamy expression.¹³²

The photographic series reveals a strong desire to explore questions of origin and to establish a common ground in the familial constellation by locating the origins of the artist's own existence in the physical bodies of the family members. This embodiment of origin, the merging of individualities and their relocation in a familial organism, seems to be an artistic reenactment of the genealogising gaze proposed in the nineteenth century. In the sphere of the arts, however, the character and explanatory value of the visualisations evolves. In the exhibition context, the work was presented as two triptychs, of which the lower one seems to present alternative combinations of two members of the family each. Rather than presenting an ultimate common face or stable ground, the alternative combinations seem to be oscillating between certainties, as the variety of possibilities and potentialities comes into focus.

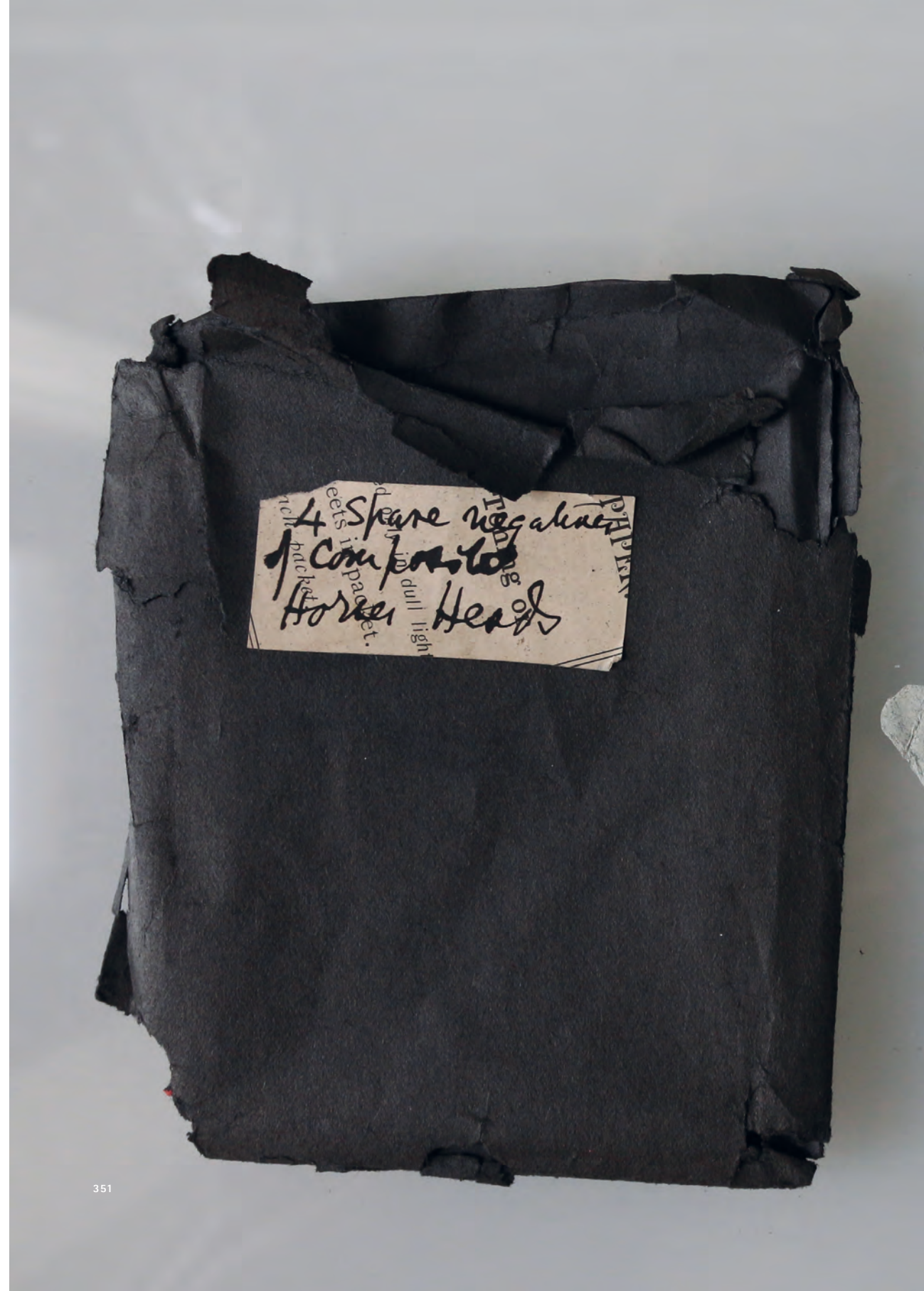
In contrast to this rather “traditional” composite investigation into familial origins, the New York-based artist Jake Rowland explores the mysterious depths of family resemblance; the incompatibility of facial features, which must always fall short of establishing a congruent and “natural” composite face. Here, the genealogising gaze of composite portraiture, much in the sense of its Wittgensteinian adaptation and Freudian reinterpretation, is directed against its materialist evidential claims. Also the notion of the uncanny becomes stressed in the images: The partial compositions of the artist and his family members result in haphazard combinations of facial elements highlighting the literally “defamiliarising” effect of the technique.¹³³ The deliberately uncanny images actively counteract the beautifying effect of composite aesthetics;¹³⁴ they challenge gender ascriptions and form composite countenances that could originate from a Freudian analysis of dreams.

A fascination with family composites continues in popular culture and arts around the turn of the twenty-first century. Current software applications maintain the assumption of the artificial construction’s credibility as a prescriptive visualisation of as yet unborn individuals. In the artificial visualisations of the baby apps the uncanny incoherence, familiar from composite portraits with only few components, is reduced by means of facial masks and morphing technology and accessories and backgrounds support the illusion an actual face.

Some current artworks likewise seem to follow the reasoning delineated in the early days of composite portraiture, but they no longer claim validity as diagnostic devices in analysing the familial past and its genetic substrate. Other artistic positions go further; they focus on disunities and deconstruct the idea of family likeness and the evidential claims of the genealogising gaze of composite portraiture with its simplistic conception of genetic transmission. These deconstructed family composites call into question the claims and validity of the composites of children produced by genealogical apps for inquisitive prospective parents.

¹³³ Like the images produced by Thomas Ruff, I read the partial or sectional digital compositions of faces as composite portraits.

¹³⁴ See the discussion in chapter 10.





9 | True Likenesses and Composite Idols: The Reconstructing Gaze of Composite Portraiture

A peculiar perspective of composite portraiture was opened by its use in the creation of – ostensibly – more reliable visual representations of persons who had lived before the invention of photography. The promise of this reconstructing gaze of the composite technique was the creation of more accurate and “truthful” portraits of persons long gone through the superimposition of their representation in different artistic media, such as on statues, medals, and gems.¹ When Galton presented his first results, he explained: “The aim has been to obtain the best likenesses attainable of historical personages, by combining various portraits of them taken at different periods of their lives and so to elicit the traits that are common to each series.”² These possibilities of the technique were also supposed to play out in the production of more truthful likenesses of living persons, by means of the combination of various photographic portraits of one individual, taken at different times.

The reconstructing gaze composite portraiture was promising a more truthful, authentic likeness of individuals – a photographically authenticated visual encounter with persons living before the advent of photography. It refers to the technique's role in forming an ideal representation and novel portrait of figures of the past from the available “visual evidence,” such as paintings, drawings, and coinage, ruling out the flaws and subjectivity inherent in the artistic representations. Beyond the obvious popular cultural function and the orientation towards physiognomy, this perspective is linked to archaeology, to the study and analysis of historical material culture and iconographical observations in the field. Furthermore, the reconstructing gaze of composite portraiture became linked to Galton's eugenic project and developed an almost spiritual quality in the representation of ancestral figures.³

In the quest for more authentic representations of historical personalities, special significance was attributed to composite portraiture and the new medium of photography with its promise of the concise mechanical production of visual evidence. This perspective on photography as the ultimate non-interventionist form of depicting outer reality, however, seems to disagree with the second

aim of the reconstructing gaze: representing personality. In the field of portraiture in particular artistic and handcrafted representations were applauded for their depiction of inner worlds and deeper, otherwise invisible truths. In these cases it was precisely not a one-to-one reproduction that was celebrated, but the artistic talent to depict a person's character, rather than their facial surface. At a time when public opinion, notwithstanding the rise of studio photography, still gave priority to painting as the supreme form of portraiture, it seems a bold move positioning composite portraiture as a superior means in representing individual likeness. This objectivising, photo-mechanical perspective reveals a suspicion towards artistic representations in general that were understood as inherently idiosyncratic and subject to human fallibility. The scientific-materialist approach to portraiture sought to even out this unreliability of the arts through the condensation of multiple depictions of a given subject into a single image. Or, phrased in a more positive way, the composite portraits sought to condense the collected artistic knowledge of the past into a more truthful and reliable representation of historical figures.

The reconstructing gaze posits the medium of photography as an analytical technique in the quest for hidden truths: not as a mere documentary tool but as a productive device in the aggregation of artistic subjectivity towards a more truthful essence. The composite technique here attempts a post-mortem re-mapping of the physiognomic terrain of the facial surface and its supposed substrata and it allowed for the creation of new images of idols of the past. In the physiognomic climate of the time, these portraits provided new material for character studies and phrenological analyses. Here the reconstructing gaze acquires a strong physiognomic connotation and becomes linked to the construction of archetypal personifications of historical eugenic role models. This perspective shows proximities to the genealogicalising, eugenicising and racialis-ing gaze of composite photography.⁴ Furthermore, it comprises an iconographic

¹ Galton: "Composite Portraits" [1878], 100.

² Galton: "Generic Images," 167.

³ In current literature there is no prevalent use of the term "reconstructing gaze" in the direction that I am proposing. In some publications the reconstruction of social ethnographic and racial identities through ethnographic fieldwork and photography is discussed in relation to gaze-structures and their reversal, focusing on a related, but different understanding. See: Freidenberg, Judith: "The Social Construction and Reconstruction of the Other: Fieldwork in El Barrio." In: *Anthropological Quarterly* 71/4, Oct. 1998, 169-185; Gillespie, Alex: "Tourist Photography and the Reverse Gaze." In: *Ethos*, 34/3, Jan. 2008, 343-366.

⁴ These perspectives were discussed earlier in chapters 4, 5, 7, and 8.

dimension that links in with the technique's aestheticising gaze, since, rather than revealing more truthful portraits, the images can be understood as a visual representation of evolving forms of historically and culturally shaped iconographic representations and beauty ideals.

The production of more truthful likenesses by means of composite portraiture emerged at a time in which Britain witnessed an increasing interest in the collection and public display of portraits of renowned figures from both the past and the present. This is attested to by the foundation of the National Portrait Gallery that Galton had visited during his research on facial appearance in portraits.⁵ This institution was opened in London in 1856 and started its collection with a portrait of William Shakespeare, a painting that would later become part of a composite portrait. This form of public self-representation in the mid- and late nineteenth century went along with increasing nationalism in Europe and the colonial expansion of the British Empire. It followed another display of British nationalism and self-ascribed superiority, the Great Exhibition of 1851 in London, on whose grounds the museum was housed during Galton's times. Other museums also expanded their collections of historical artefacts, such as the British Museum, which opened its new gates in 1850 at its current site and on whose collection of coins and medals Galton drew for his composite portraits of exceptional historical figures. This interest in outstanding persons and their national affiliation and implied racial superiority flourished in a time of expanding colonialism and the writing of cultural and evolutionary history. In a climate that embraced physiognomic and anthropometric readings of the human face, portraits were scrutinised for signs of heroism and exceptional character. The newly established museums and public collections provided the source material for these endeavours, which were also undertaken by means of composite portraiture.

His preoccupation with the reconstructing gaze of composite portraiture reflects Galton's ongoing fascination with the ingenuity and exceptionality of historical figures, statesmen, and leaders from Ancient Greek and Roman times, which he had already expressed in earlier publications. With the aid of a photographer and museum staff, he produced, among others, composites of Alexander the Great and Napoleon Bonaparte – characters Galton had counted, in *Hereditary Genius*, among the "most illustrious commanders [who] would have distinguished themselves under any circumstances."⁶ In the publication, he had

⁵ See Galton: *Inquiries into Human Faculty*, 4.

presented the Ancient Greeks as the pinnacle of human development and the “ablest race of whom history bears record [and the city of Athens as a place that had] built up a magnificent breed of human animals.”⁷

This idealised vision fitted the flourishing Victorian classicism of the time in (art) history and aesthetics, in which classical Greek sculpture became positioned as the ideal of physical fitness and beauty.⁸ This inclination to classical art was fostered by archeological explorations in Italy, Greece, northern Africa and the Middle East that had abducted a large number of antiques from their places of origin and had brought them to private collections and public museums in England and throughout Europe. Historians and archeologists such as Flinders Petrie, an associate of Galton’s and an advocate of composite portraiture, sought to unite the celebration of classicism with racial theories on the descent of peoples and nations, as well as eugenicist thinking on the genetic improvement of human populations.⁹ In the reconstructing gaze of the composite technique, these archeological racial theories on human evolution and the hierarchical status of human groups became combined with positivist visual modes of scientific reasoning by means of photography. In the nationalistic climate of the late nineteenth century, such “archaeological racism,”¹⁰ along with a desire for face-to-face encounters with historical role-models, formed the backdrop for the study of historical likenesses by means of composite portraiture.

The discussion of the reconstructing gaze of composite portraiture in this chapter will start with the examination of the contemporary understanding of representations on coins and other historical artefacts, and of Francis Galton’s general distrust of artistic representation. This leads to a discussion of composite photographic reconstructions from ancient coins and medals and their interpretation as individual character studies expressing exceptional merit and as pieces of a puzzle in a wider genealogical perspective on the genetic transmission of exceptional characteristics. In the following section of this chapter, the

⁶ Galton: *Hereditary Genius*, 86.

⁷ Galton: *Hereditary Genius*, 329

⁸ Challis: *Archaeology of Race*, 55. See also the discussion of the aestheticising gaze of composite portraiture in chapter 10.

⁹ See chapter 5. See also Challis: *Archaeology of Race*.

¹⁰ The term has not been used in academic literature on archaeology and racism yet. However, as I have argued earlier, it would provide a specification in terminology for the description of doctrines of scientific racism in the field of archaeology that contributed extensively to racist ideology in the nineteenth and twentieth centuries. See chapter 4.

adoption of the reconstructing gaze in the United States, where it was turned on idols of the old and the new world such as William Shakespeare and George Washington, will be discussed. The final part focuses on artistic positions around the turn of the twenty-first century that contribute to illuminating the pervasiveness of and fascination with the technique’s reconstructive approach.

Reconstructing Historical Likenesses: The Productive Accumulation of Artistic Misrepresentation

In April 1879, Galton gave a presentation in front of the Royal Society of London, in which he showed composite photographs of historical coins and medals. From the ancient Greek sphere he presented Alexander the Great, the Ptolemaic rulers Antiochus (IV Epiphanes), Demetrius Poliorcetes (I), and Cleopatra (VII Philopator); from the Roman period, the emperor Nero; and, as a more recent example, the French general and emperor Napoleon Bonaparte.¹¹ In order to understand the relevance of his findings that were presented in front of Britain’s most influential scientific association, it is worthwhile to explore the appeal and understanding of the historical artefacts used by Galton in the late nineteenth century. How did he try to make sense of the artistic representations by means of his photographic technique and what was the role of his desire to tame artistic subjectivity and unreliability through the process of photographic composition?

The components used for the production of the series of historical composite portraits were chosen by Reginald Stuart Poole and Percy Gardener,¹² experts of numismatics and historical medals working at the British Museum. Casts of these specimens were reproduced in uniform scale by the photographer H. Reynolds.¹³ Poole, who was influential in the founding of the Egypt Exploration Fund,¹⁴ later became professor of archaeology at University College London, the academic home of the archaeologist and eugenicist Flinders Petrie, as well

¹¹ See Galton: “Generic Images.”

¹² Galton exchanged letters with Gardener and Poole, starting in 1878. Galton Collection, UCL GALTON 2/8/1/1/7 and GALTON 2/8/1/1/13.

¹³ Between March 1876 and July 1879, Galton and his photographer H. Reynolds exchanged a number of letters to discuss the production of casts, lighting, production processes, and technical details, as well as laboratory set-ups. Galton Collection, UCL GALTON 2/8/1/1/14. Reynolds is also mentioned in Galton: *Inquiries into Human Faculty*, 8.

as of Francis Galton. Poole had published widely on coins and medals;¹⁵ in articles he defined these as bas-reliefs and thereby as an intermediary form situated between sculpture and painting, going on to argue:

Sculpture represents character; painting, expression. Character is the general and permanent expression of the face and body as denoting the dominant quality. We can trace in the features and form the effect of study, or of idleness, of pride, or of humility. Expression is the transient but intense effect of some sudden feeling, such as love or hatred, daring or terror. [...] Bas-relief partakes sometimes of the characteristics of sculpture, sometimes of those of painting.¹⁶

In his rather schematic genre theory, Poole describes coinage as an ideal form of portraiture, almost a version of composite representation in itself, in which artists combined the study of character and of fleeting expression. This argument, however, neglects the special aesthetics and politics of the coin, of the imprints of facial profiles as a form of deliberately fashioned public representation and manifestation of sovereign power.

Galton shared Poole's fascination with artistic forms of representations and their special capacities, but more in respect to the representation of general, supra-individual forms.¹⁷ In an article on the occasion of a talk at the Royal Society that includes three charts of reconstructing composite portraits, however, Galton highlighted the unreliability of memories and the processes of their blending in order to achieve general impressions: "general impressions are faint and perhaps faulty editions of blended memories. They are subject to errors of their own, and they inherit all those to which the memories are themselves liable."¹⁸ He presented photographic composites, so called "generic portraits," as a mechanical solution to and objectifying instance of these mental processes. It was these idiosyncrasies, the unreliability of mental images, as well as the artists' emotional and aesthetic rendering of the human face that Galton sought to contain by means of the impartial technique of composite portraiture:

¹⁴ The Egypt Exploration Fund was a British foundation, founded in 1882 by Amelia Edwards and Reginald Stuart Poole to promote and finance archaeological excavations in Egypt and the Sudan. Among other projects, the EFF funded the excavations of Flinders Petrie, a dedicated eugenicist, intimate of Galton's, and the first professor of Egyptian Archaeology in Britain at University College London.

¹⁵ See, among others, his publications on the coins of the British Museum: Poole, Reginald Stuart: *Catalogue of Greek Coins in the British Museum*. London: Trustees of the British Museum, 1873.

¹⁶ Poole, Reginald Stuart: "On Greek Coins as Illustrating Greek Art." In: *The Numismatic Chronicle and Journal of the Numismatic Society*, New Series, 4, 1864, 236–247, at 236.

¹⁷ Galton: "Generic Images," 162.

It seems to me that it is possible to obtain a truer likeness of a man than in any other way. Every artist makes mistakes; but by combining the conscientious work of many artists, their separate mistakes disappear, and what is common to all of their works remains.¹⁹

The passage reveals a deep distrust towards the visual arts – or rather, towards visual artists, whose work is denounced as intrinsically imperfect and subjective, as opposed to the objective mechanic depiction of reality by photographic means. This critique extends to what was perceived as the noblest mission of portraiture, its emotional investment and idiosyncratic depiction of character behind the surface. Paradoxically, the combined fallibility of subjective depictions by means of composite portraiture is attributed a truthfulness and evidential value denied to individual artistic renderings. Composites are presented as the better, more reliable form of portraiture and as objectifying alternative able to contain the fleeting expressions and inconsistencies inherent in both human perception and artistic production. Here composite portraiture, in its determination to visualise the invisible, finds its counterpart in the arts. It essentially becomes an artistic technique;²⁰ since artistic portraiture sought to achieve exactly that: the depiction of indiscernible inner characteristics through the depiction of outer form. In particular in relation to the depiction of historical figures, the quest went beyond what seems representable by means of photographic portraiture, since the actual "objects" no longer existed. Composite portraits of historical likenesses could be described as portraits of a second order, or reconstructive meta-portraits, combining and thereby authenticating artistic compositions, while at the same time questioning the reliability of these depictions.

Truthful Contemporary Likenesses

Already in the nineteenth century, composite portraiture was likewise proposed for the production of a more truthful, artful likeness of living persons by means of the combination of photographic portraits of one person, taken at different points in their lives and documenting different facial expressions:

¹⁸ Galton: "Generic Images," 162.

¹⁹ Galton: *Inquiries into Human Faculty*, 8.

The inferiority of photographs to the best works of artists, so far as resemblance is concerned, lies in their catching no more than a single expression. If many photographs of a person were taken at different times, perhaps even years apart, the composite would possess that in which a single photograph is deficient. [...] A composite portrait would have much of this varied suggestiveness.²¹

In this specific reading of the reconstructing gaze, the composite technique is seen as a means of enriching the depiction of a person – and, at the same time, the medium of photography itself. The varied suggestiveness, the images' obscurity and ambiguity are celebrated and composite portraiture is presented as an artistic technique, capturing personal resemblance rather than individual physical likeness. John Tappan Stoddard had advocated the technique's power in producing a more truthful likeness of one individual and argues that, "the passing and often constrained or conscious expression, which frequently renders ordinary photographic portraits unsatisfactory, would be eliminated, and a somewhat idealized likeness be obtained."²² The root of the argument behind this use of the technique of photographic superimposition lies in the revelation of hidden character traits, more truthful glances into the inner worlds of the persons portrayed.

The process was put to the test by Henry Pickering Bowditch, who sent to Galton a composite portrait taken in quick succession during one sitting in order to capture a multiplicity of aspects and views of one individual.²³ In this letter Bowditch describes the "result [as] very pretty and artistic looking."²⁴ The German archeologist and art historian Georg Treu, who published such a composite portrait by Bowditch²⁵ noticed slight differences in expression and composure in the component images and observed that "for the composite image, the facial features have with a calm relevance merged to a highly representative archetype [...] eliminating the fleeting expressions in favour of the permanent characteristic traits."²⁶ Following this argument, the photographic composition would fulfill the contemporary expectations for representing character in artistic works.²⁷

²⁰ Gunnar Schmidt has argued that even scientifically oriented composite portraiture also could be read as an artistic technique. See Schmidt: "Mischmenschen und Phantome."

²¹ Galton, Francis: "Composite Portraits" [1878], 99–100.

²² Stoddard: "Composite Photography," 757.

²³ Among the material sent to Galton by H.P. Bowditch is a card referring to the composite portrait. Unfortunately the image is not preserved in the Galton Papers. Galton Papers, UCL, GALTON 2/8/1/1/3.

²⁴ See Bowditch: Letter to Galton, 10 January 1888.

²⁵ See Treu: "Durchschnittsbild und Schönheit," plate I.



Bowditch, H. P.: *Sechs Einzelaufnahmen desselben Kinderkopfes in einem Durchschnittsbild vereinigt*. In: Treu, Georg: *Durchschnittsbild und Schönheit*. Stuttgart: Verlag von Ferdinand Enke, 1914, plate I.

With respect to its reconstructing gaze, composite portraiture was ascribed a particularly strong analytical and productive quality in establishing physiognomic truths through the accumulation of artistic subjectivities. The aggregation of common markers, which was believed to even out irregularities and artistic misinterpretations, seems to work in analogy to the technique's understanding as an analytical tool in other fields. Yet, rather than fashioning the production of supra-individual types, the technique of composition is credited with establishing precisely the reverse: a de-composition of a multitude of representations and their re-composition into a more reliable, photo-mechanically objectified portrait.

²⁶ Treu: "Durchschnittsbild und Schönheit," 3.

²⁷ See the discussion of Treu's aesthetic argument in chapter 10.

Exceptional Antique Countenances: From Alexander to Napoleon

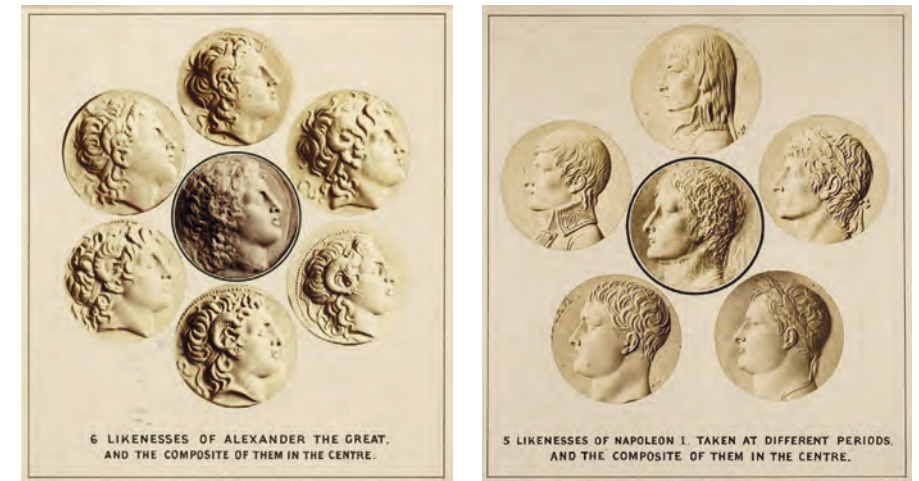
The examination of Galton's composites of historical figures, such as Alexander the Great and Napoleon Bonaparte, illustrates his implicit physiognomic reasoning by means of the technique. Furthermore, it shows that the photographer-scientist saw this form of historical meta-portraiture as a tool to further his genealogical work on the heredity of exceptional qualities and thus, eventually, as part of his eugenic research. This is seconded by the work of the archaeologist, and fellow eugenicist, Flinders Petrie, who proposed the production of composite portrait galleries of historical figures for character studies, but also for the study of human descent and "racial origins."

Already in his early writings on human genius, Galton had expressed his admiration for Alexander the Great and characterised him as "the commander of the greatest genius that the world has produced."²⁸ Galton goes on to argue that these dispositions were inherited: "the cool forethought and practical wisdom of his father, and the ardent enthusiasm and ungovernable passion of his mother."²⁹ Galton was convinced that these nicely gendered character traits must have left marks on the face, which he set out to examine by means of composite portraiture. In the *Proceedings of the Royal Institution*³⁰ the composite likeness of Alexander is represented in the centre, surrounded by its six components, facing to the right. Another figure in a similar layout, a composite of Napoleon Bonaparte and its five components, is placed to its right. The faces are presented vis-à-vis, and the chart is laid out as if to orchestrate a dialogue between the two military commanders, who had lived millennia apart. Indeed, the facial contours of the reconstructed portraits, jawline and nose, resemble one another. From a nineteenth-century physiognomic perspective, this could be read as indicating a common mindset and character, showing the proximity of the reconstructing gaze to physiognomic thought. But the author neither comments on these similarities, nor does he provide a physiognomic reading. He counts on the persuasive quality of the composite faces to speak for themselves and relegates the judgement of the images to the viewers, while visually implicating a kinship between the two military leaders.³¹

²⁸ Galton: *Hereditary Genius*, 143.

²⁹ Galton: *Hereditary Genius*, 143.

³⁰ See Galton, Francis: "Alexander and Napoleon." In: Galton: "Generic Images," facing 168.



Galton, Francis: Alexander and Napoleon. In: Galton, Francis: "Generic Images." In: *Proceedings of the Royal Institution*, vol. 9, 1879, facing 168. Photographic reproductions can be found among the Galton Papers, Special Collections, University College London, GALTON 2/8/1/14.

The Alexander coins and medals that Galton had received from the British Museum did not show a uniform appearance and aesthetics. At least two main "strains of depiction" became obvious, which impelled Galton to distinguish between the quite dissimilar Greek and Asian coinages. In most Greek coins, Alexander's head is depicted with a crescent-shaped ram's horn, his hair covering the ears in smaller curls. In contrast to these, the Asian coinages contain more fantastical elements, allegorical attributes in the representation of the ruler. Alexander's head is armoured with a helmet resembling elephant skin that carries ornaments reminiscent of fins and feathers; the pointed horns here are protruding at the forehead. In these representations the eyes are decidedly bigger, the nose slightly smaller.

For both "visual strains" of Alexander, composite portraits were produced, as well as a co-composite uniting the two compositions. Rather than ultimate likenesses, the composites here appear as studies of the iconographies of the depictions of the ruler in different spheres of his empire, and of their respective beauty ideals. Although Galton does not comment on this, he must have been aware of this inconsistency and published only the Greek version of the composite

³¹ This strategy employing an "analytical gap" is familiar from the writings of Galton on his other composite portraits.

³² Galton: "Generic Images."



Galton, Francis: Components for Alexander (Greek coinage); Components for Alexander (Indian coinage), ca. 1879. Galton Papers, Special Collections, University College London, GALTON 2/8/1/1/3.



Galton, Francis: *Alexander (India)*; *Alexander (Greek)*, 1879; *Alexander Co-Composite (Greek & Indian)*, 1879. Galton Papers, University College London, GALTON 2/8/1/3/1; GALTON 2/8/1/3/7.

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during his lifetime;³² the others emerged from Galton's personal archive only 45 years later in Karl Pearson's biography.³³ With his composite reconstructions, Galton played a part in fashioning a "European" Alexander iconography that continued in the twentieth century and beyond, for instance in the third modern Greek 100 Drachma coin that was in circulation until 2002.

Galton's work on ideal historical likenesses and the reconstructing gaze of composite portraiture did not remain limited to individuals. It became linked to the broader context of his work on exceptional characteristics and their genetic transmission. Already in his study on the heritability of genius, he had dealt with the Ptolemaic dynasty in order to delineate the genetic transmission of eminence in character and leadership in a family.³⁴ Seen from this perspective, Galton's series of composite reproductions of historical likenesses can be regarded an ancestral portrait gallery ranging from Alexander to the last of the Ptolemaic rulers, Cleopatra:³⁵ a visual assemblage of physical and personal attributes of a family of rulers.³⁶ Galton also compiled a composite of the female side of the Ptolemaic dynasty, combining the wives of Ptolemies II, III, IV and Cleopatra VII, with Philistis, Queen of Syracuse, as well as with Phthia, Queen of Epirus, who was a cousin of Alexander the Great. The resulting image approaches a depiction of the female side of power in the ancient world during the last four centuries BC, as well as presenting an "extended family" of rulers related to Galton's classical idol and embodiment of genial leadership, Alexander the Great. This shows the expansion of the reconstructing gaze that was focused on individuals, yet opened up towards genealogical and eugenic perspectives.³⁷

In the production of a co-composite of Alexander and Demetrius Poliorcetes, Galton deviates from this perspective. After all, Demetrius was not part of Alexander's family, but the founder of a new dynasty. Here, just as in the initial comparison of Alexander and Napoleon, as well as in a composite portrait of

³³ Pearson: *Life, Letters and Labours*, plates XXXIX, XXXVII, and XXXVI.

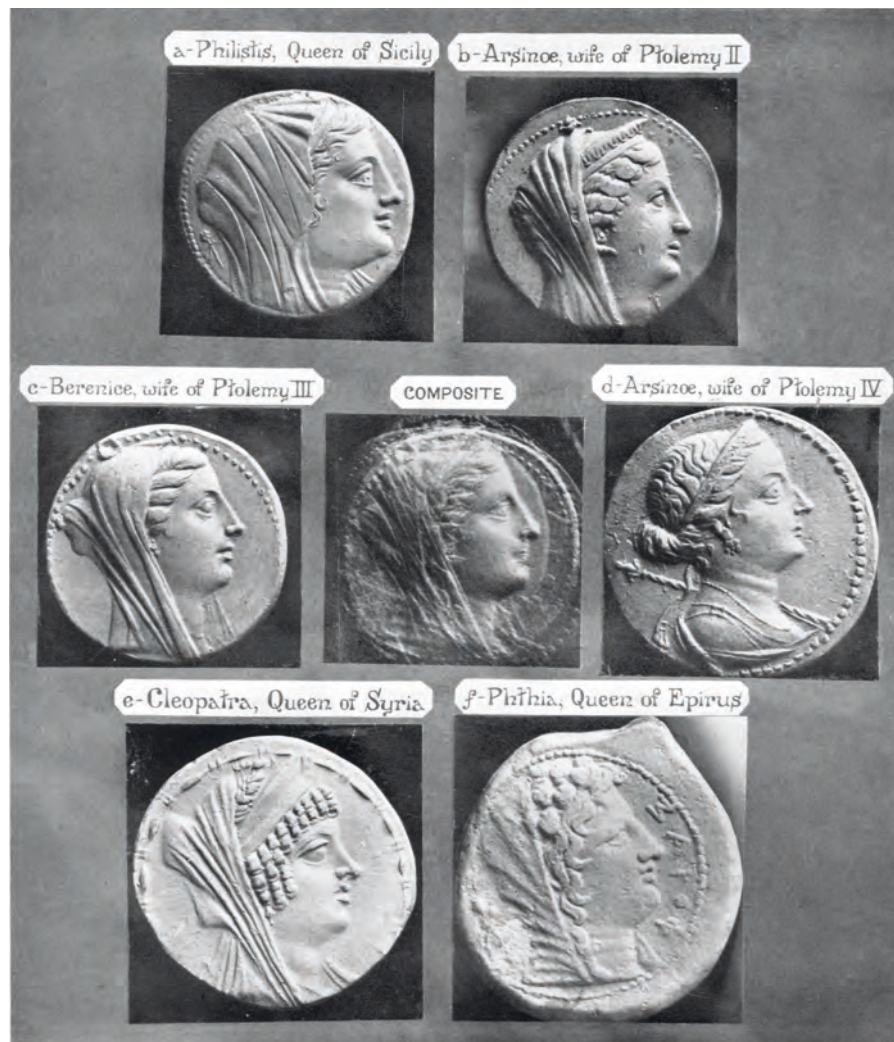
³⁴ Galton: *Hereditary Genius*, 144.

³⁵ Galton's composite reconstruction of Cleopatra is discussed in relation to the aestheticising gaze of composite portraiture in chapter 10.

³⁶ In a letter addressed to Stuart Reginald Poole, Galton, referring to the historical specimens, writes: "Likeness descends at times for a long period in families." Galton Papers, UCL GALTON/2/8/1/1/13.

³⁷ In his later writings, Galton returned to an evaluation of the incestuous nature of the marriages in the Ptolemaic dynasty from a eugenic perspective. See Galton: *Essays in Eugenics*, 55. See also chapters 7 and 8 on the genealogising and eugenicising gaze of composite portraiture.

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Galton, Francis: Composite Portrait of Queens in the last four centuries BC, c. 1879. In: Pearson, Karl: *Researches of Middle Life*. Cambridge: Cambridge University Press, 1924, Plate XLII.

Antiochus IV,³⁸ Galton's implicit aim seems to be neither a more truthful individual likeness, nor the analysis of genetic transmission, but the visualisation of sovereign power and leadership qualities. The interest, for him, lies in general

³⁸ See Galton, Francis: "Composite portrait of Antiochus IV." Galton Papers, UCL, GALTON/2/8/1/3/2.

³⁹ See chapter 3, "Suspect Identities."

⁴⁰ For the examination of Nero's posthumous reception, see Chaplin, E.: *Nero*, Cambridge, Mass. / London: Harvard University Press, 2003; Malik, Shushma: "Ultimate Corruption Manifest: Nero as the Antichrist in Late Antiquity." In: *Acta Classica Supplementum IV*, 2012, 169–186.



Galton, Francis: *Alexander & Demetrius [Poliorectes] Combined*, ca. 1879. Galton Papers, Special Collections, University College London, GALTON/2/8/1/3/7.

character traits and in the physical and implicitly mental abilities that account for the exceptional role the respective figures had played in history. Yet again, the reconstructing gaze of composite portraiture seems to return to physiognomic explanatory models and to its earlier use as a device for the evaluation of inner predispositions, precisely as in the case of the criminalising gaze of the technique.³⁹

This perspective also surfaces in a composite portrait of Nero composed from twelve coins depicting the notorious Roman emperor. In late antiquity, early modern times, and the nineteenth century, Nero was increasingly seen as the archetypal embodiment of the mad and cruel ruler, and as an antichrist figure, a characterisation that has been maintained in twentieth- and twenty-first century representations of Nero.⁴⁰ Judging from Francis Galton's verdict on Nero as the "Beast of the Apocalypse,"⁴¹ it is unlikely that Galton intended to portray leadership qualities like in his earlier portraits of Alexander and the Ptolemaic rulers. For a late nineteenth-century audience, both the historical figure of Nero and its composite portrait must have constituted the epitome of moral corruption, of decadence, and violence. In the physiognomic climate of Galton's time, Nero's strong jawline and receding forehead must have aroused suspicion.

⁴¹ Galton here follows the argument of the French historian and philosopher Ernest Renan. Galton, Francis: Letter addressed to his niece Milly Lethbridge, 20 May 1906. Quoted in Pearson, Karl: *Life, Letters and Labours of Francis Galton. Vol. 3, part 2, Characterisation, Especially by Letters*. Cambridge: Cambridge University Press, 1930, 572.



Galton, Francis: *12 Portraits of Nero, Emperor of Rome with Composite*, c. 1879. In: Pearson, Karl: *Researches of Middle Life*, Cambridge: Cambridge University Press, 1924, Plate XLI.

Taking into account Galton's earlier composite portraits of physiognomically grounded "signs of criminality," a reading of his composite study of Nero in this light readily suggests itself. But Galton apparently did not feel the need to discuss the image beyond its sole mention in a presentation in front of the Royal Society,⁴² for which glass positives were produced.⁴³

In the late nineteenth and early twentieth centuries, the production of more truthful likenesses of historical figures by means of composite portraits did not receive the attention of the scientific community and the broader public that Galton had envisioned. The technique did not take sustained hold in archeology and (art) history, nor in the thriving field of physiognomic and phrenological

⁴² Galton: "Generic Images," 165.

⁴³ A series of glass negatives are preserved among the Galton Papers, UCL GALTON/2/8/1/13/24. A reproduction of the composite was published only after Galton's death, again in Pearson's biography.

character studies. Apart from a few exceptions in the United States – which will be discussed later – and among Galton's closer acquaintances at University College London, the scientific community did not pick up the reconstructing gaze of the composite technique.

One notable exception was the archeologist Flinders Petrie, who during his excavations in Egypt in the 1880's had collected head depictions and busts and examined them as physical representatives of historical characters, and of the racial characteristics of ancient populations. These specimens are now, along with his other findings, kept at the Petrie Museum of Egyptian Archeology, which remains part of University College London.⁴⁴ The archaeologist was an influential protagonist of scientific racism, or more precisely, archaeological racism. Petrie worked on a theory delineating racial descent by means of cranial measurements on archeological findings and the visual analysis of the depictions of ancient physiognomies,⁴⁵ thus following a path of merging the analysis of depictions in historical monuments and material culture with the "racial theories" laid out earlier by the anatomist Robert Knox.⁴⁶

No composite portraits produced or commissioned by Petrie have survived, but the Egyptologist had apparently experimented with the technique as well as with forms of alternative stereoscopic vision.⁴⁷ In a letter to Galton, he referred to his own photographic work in Egypt in relation to composite portraiture.⁴⁸ He also discussed Galton's and Jacob's composites of Jewish youth, comparing them to antique representations and arguing for their status as a purer "race."⁴⁹

⁴⁴ Debbie Challis, curator at the Petrie Museum of Egyptian Archaeology at UCL, has discussed Petrie's historical and eugenic writing and his visual racial arguments in detail. See Challis: *Archaeology of Race*.

⁴⁵ See Petrie, Flinders: *Racial Photographs from the Monuments*. British Association, Bromley: Harman, 1887.

⁴⁶ Knox had argued for a continuity of racial affiliations from ancient times that could be studied in the representations on Egyptian tombs and temples. See Knox, Robert: *The Races of Men: A Fragment*. Philadelphia: Lea & Blanchard: 1850, 122.

⁴⁷ In response to a paper published by Galton, Petrie observed that the eyes can be tricked in merging images placed before them at different distances: the "overlapping image will alternately solidify and disappear," allowing for the composition of two elements. See Petrie, Flinders: "Alternate and Stereoscopic Vision." In: *Nature*, 18, 30 May 1878, 115–116.

⁴⁸ "I propose first to take off a series of casts and classify them racially; and then take the opinions of any members of the Committee who may be able to attend to the matter, as to which are to be reckoned the most valuable and suitable for reproducing as typical photographs for composite photographs." Petrie, Flinders: Letter addressed to Francis Galton, 2 April 1887. Galton Collection, UCL GALTON/3/3/16/20.

In 1909, Petrie returned to the topic and bemoaned the “absence of a collection of ancient portraiture of races”⁵⁰ – ready to be harnessed by means of composite portraiture – that could help with the identification of typical characteristics of archeological specimens: “There is not even a series of composite portrait heads from coins, which are greatly needed for the character study of celebrated kings.”⁵¹ Petrie here conflates the main intentions of the reconstructing gaze of composite portraiture: the physiognomic study of more reliable depictions of the facial features of historical figures, which was intended to delineate their individual character and psychological dispositions, as well as the construal of differences in physique along racial lines and the visualisation of genetic descent. These had also been the aims attributed to the technique by Galton in his experiments with Greek, Roman, and modern depictions of influential military leaders and rulers and their familial dynasties.⁵²

Resurrecting Iconic Writers and Statesmen: Shakespeare and Washington

In the late nineteenth century, the reconstruction of truthful historical likenesses by means of composite portraiture was taken up in the United States. The compositions produced there catered to a desire for the encounter with and the truthful physiognomic representation of idols of the past. Along with the combined authority of artists, as accumulated in the photographic compositions, the combined authority of experts is invoked in the construal of the composite faces as the new and authoritative representations of the historical figures. Furthermore, as the examination of this material shows, such images were part of a wider discourse on the value of truthful representations, but eventually resulted in meta-portraits of historical iconographic representations and artistic styles.

⁴⁹ See Challis: *Archaeology of Race*, 180.

⁵⁰ Petrie, Flinders: *The Palace of Apries (Memphis II)*. London: School of Archaeology in Egypt, University College, 1909, 16.

⁵¹ Petrie: *Palace of Apries (Memphis II)*, 16–a17.

⁵² Petrie's role in relation to composite portraiture and what I describe as archaeological racism is further discussed in chapter 5.

In 1885 Walter Rogers Furness, the son of one of the most renowned Shakespeare scholars of the nineteenth century, Horace Howard Furness, attempted the production of an ideal (composite) portrait of an icon of the old world, William Shakespeare. He procured the individual portraits needed with the aid of another prominent Shakespearean, Parker Norris, at a time when interest in the “actual appearance” and identity of Shakespeare was at a peak. In a publication on the existing portraits of the poet Norris writes: “Think of a photograph of Shakespeare, ‘in his habit as he lived!’ Would not such a relic be of inestimable value to the world, and what would not be given for such a treasure?”⁵³ The scholar did not halt at the analysis and comparison of paintings, engravings, busts, and the Bard's presumed death mask. He proposed to open Shakespeare's grave in order to obtain photographs of the “authentic” remains and to recover the poet's skull for further examination.⁵⁴ The nine portraits used for the Shakespeare composite by Walter Rogers Furness are discussed in detail in Norris's book that was issued in the same year by the same publisher.

This study by means of photographic composition could be seen as a new media alternative, as an addition to the more scholarly attempt of ascertaining the true likeness of the historical figure. The photo-mechanical reconstructive approach was to eliminate the central concern in the discussion on the authenticity and truthfulness of the portraits: namely, a widespread distrust towards the surviving artistic representations of Shakespeare. This concern was voiced by, among others, Henry Peach Robinson, an influential photographer of the time, who also played his part in the history of composite portraiture:⁵⁵

Even if the portrait was painted by a master, it required considerable faith to enable a person who did not know the original to believe in the fidelity of the resemblance. [...] [F]rom his painted portraits we have nothing but the faith in the personal appearance of Shakespeare we should possess had we a resemblance of him produced by photography.⁵⁶

The construction of a more truthful composite representation could be seen as a re-appropriation of long lost objectivity by means of a hyper-mediality expressed in the cross-referencing and aggregation of visual knowledge. But this means of re-gaining trust in the representation of the poet also required a leap of faith: a belief in the photographic composite technique and its productive quality that had to be sustained by meticulous mechanical procedures.

⁵³ Norris, J. Parker: *The Portraits of Shakespeare*. Philadelphia: Robert M. Lindsay, 1885, 4.

⁵⁴ See Norris: *Portraits of Shakespeare*, 3.

⁵⁵ See chapter 8, “Ideal Family Likenesses.”



Furness, Walter Rogers: *Composite Portrait of Shakespeare turned to the left* (Chandos, Droeshout, Jansen, Stratford, Felton, Stratford Bust); *Composite Portrait of Shakespeare turned to the right* (Marshall's copy of Droeshout, Ashbourne, Death Mask). In: Furness, Walter Rogers: *Composite Photography Applied to the Portraits of Shakespeare*. Philadelphia: Robert M. Lindsay, 1885.

With the aid of the Philadelphia photographer W. Curtis Taylor, Furness produced five composite portraits: three historical portraits depicting Shakespeare from the left side are compiled into one image; six from the right side, into another. Among these is the co-called “Chandos portrait,” which initiated the collection of the National Portrait Gallery.⁵⁷ Additionally the publication contained three composites with two components each that, as Furness thought, showed the closest resemblance, as well as photographic reproductions of the source material in various media (engravings, paintings, a bust, and a death mask) that were used to produce the photographic compositions. Furness was convinced that by means of composite portraiture, he had come closer to solving the riddle:

⁵⁶ Robinson: *Pictorial Effect in Photography*, 79.

⁵⁷ The portrait, which was painted between 1600 and 1610, gained its name from its former owners, the Dukes of Chandos, and is attributed to the painter John Taylor. Collection of the National Portrait Gallery, London: NPG1.

⁵⁸ Furness, Walter Rogers: *Composite Photography Applied to the Portraits of Shakespeare*. Philadelphia: Robert M. Lindsay, 1885, 5–6.

⁵⁹ Norris, J. Parker: “Composite Portraits of Shakespeare.” In: *Shakespeareiana*, 21:2, 1885, 449–450, quoted in: Galey, Allen: *The Shakespearean Archive. Experiments in New Media from the Renaissance to Postmodernity*. Cambridge: Cambridge University Press, 2014, 133.

“the photographs on the following pages reveal a similarity of likeness running through portraits which at first sight present a quite dissimilar character.”⁵⁸ And Parker Norris, also, seemed impressed by the results and the new-found composite likeness of Shakespeare: “the nose, mouth, eyes, eyebrows, and moustache are perfect. The expression, however, is different from that of any of the portraits of which it is composed.”⁵⁹

The photographic composition and its publication attest to the fascination with the true and authentic physical likeness of a writer long dead, who was known for the creation of inner worlds, of stories, rather than outer appearances. Alan Galey has remarked that the Shakespeare composites might tell us more about their producers, their worldview, and their epistemological reasoning by means of the new medium of photography, than about the historical Shakespeare.⁶⁰ This is probably true for most cases of the technique’s utilisation, but the composite experiment on Shakespeare was undoubtedly also influenced by the author himself and his writings. In nineteenth-century publications, Shakespeare is presented as an early physiognomist, such as in Wells’s immensely popular *New Physiognomy*, which not only contains a small reproduction of a portrait of the poet, but also carries a Shakespearean quotation on its front leaf, in which outer facial appearance is associated with personality and character.⁶¹

In the reproductions of the composite photographs, just like in Galton’s early prints, needles, or in this case veritable nails, can be seen onto which the historical specimens are “spiked.” But what was left out of by Galton in his vignette reproductions chosen fit for publication, seems to be deliberately presented by Furness. In his composite portrait, the nails form a frame to the image, adding a third dimension⁶² and the margins of the individual photographs are clearly visible. The beholder’s view is directed towards the point of highest visual density, the poet’s face in the upper left part of the image. The superimposition of the intricate cloth patterns depicted within individual portraits

⁶⁰ Galey, Allen: *The Shakespearean Archive. Experiments in New Media from the Renaissance to Postmodernity*. Cambridge: Cambridge University Press, 2014, 133.

⁶¹ The quotation from Shakespeare’s *The Winter’s Tale* (“I do believe thee! I saw his heart in his face”) is printed on the front leaf of *New Physiognomy*. See Wells: *New Physiognomy*. For an extensive examination of physiognomic thought in Shakespeare, see Baumbach, Sibylle: *Let me behold thy face: Physiognomik und Gesichtslektüren in Shakespeares Tragödien*. Heidelberg: Winter, 2007.

⁶² This additional dimension in the composite photographs was observed by Alan Galey. See Galey, Allen: “New media’s ghosts: an experiment in composite photography.” (2014) In: *The Floating Academy Website*, <https://floatingacademy.wordpress.com/2014/10/31/new-medias-ghosts-an-experiment-in-composite-photography> [15/01/2022].

reinforce this sensation of zooming in on the face – and create an impression of Shakespeare’s face as a flower sprouting from a lavish, multi-leafed collar. The eyes of the composites are directed straight at the viewer and while in the first, the head is inclined to the left, stressing the historical nature of the image, the inclination of the other – which contains the death mask – appears strangely forward-looking, in more than one sense.

In this attempt to revive a long-dead writer, his facial features and implied character, composite photography was used as a medium to provide access to a pre-photographic – and thus ostensibly pre-objective – past. It is, however, artistic imaginations of Shakespeare in various media – the increasingly codified iconography of Shakespeare’s posthumous depiction – that became united in the composite, reduced to an uncannily multi-dimensional yet flat surface. Diffuse, ghostlike artifacts intrude and take over large parts of the photographic reproduction. In the lower part of the composition, inscriptions are visible, the name Shakespeare shines through most prominently, but also artifacts of illegible, hand-written words can be seen, providing the image with yet another semantic level. The reconstructing gaze of composite portraiture here assumes the function of evoking a ghost, the real and ideal Shakespeare, in order to bring the obscure, but manifest countenance of the author into a face-to-face encounter with a nineteenth-century audience. It could almost be seen as a form of a photo-visual séance or spirit photography⁶³ – a popular genre that gripped the public imagination in the late nineteenth and early twentieth centuries. Spirit photography, which was also discussed in scientific circles, likewise employed multiple photographic exposures and presented diffuse visual countenances and hand-written artifacts.⁶⁴

Ghost hunting, however, was certainly not what Furness had in mind; he adhered to Galton’s systematic methodology of producing composite portraits and laid open his sources and production process. Notwithstanding the prominent epistemological reasoning, the emphasis on reproducibility and optical empiricism and references to Shakespeare experts, his “findings” remain astonishingly undefined. Also, an unintentional gothic sub-tone prevails in the obsession with the dead author’s true countenance and the quest for a “genuine photograph of Shakespeare.” This is highlighted by the inclusion of the only “authentic”

⁶³ Alan Galey has observed this proximity to spirit photography, see Galey: *Shakespearean Archive*, 134.

⁶⁴ See Coates, James: *Photographing the Invisible. Practical Studies in Spirit Photography, Spirit Portraiture, and other Rare but Allied Phenomena*. London: L.N. Fowler, 1911.

representation of the Bard – at least from a nineteenth-century materialist perspective: Shakespeare’s death mask. And judging from the solid spikes that were used to nail down the portraits, Furness apparently felt the need to securely fasten the historical likenesses and their uncanny presence. However, a different set of nails, the ones in Shakespeare’s coffin, which Parker Norris had set out to loosen, would remain in place.

The photographer Curtis Taylor, who had aided with the production of the Shakespeare composite, then directed the reconstructing gaze at the creation of an ideal portrait of the first US president George Washington, who also figured prominently in Wells’s *New Physiognomy*.⁶⁵ Taylor’s composite photographs were presented at the American Philosophical Society⁶⁶ and some years later published on the front page of the 26 April 1889 issue of *Science*. From seventeen contemporary portraits, obtained with the aid of the expert William S. Baker, the photographer produced three composites, a profile with seven components and two views of the head turned towards the right with five components each.⁶⁷ In his presentation he discussed the averaging and beautifying effect of the technique and argues that in the process too many individual peculiarities would be lost which impaired the explanatory power of the technique in the depiction of characteristics such as criminality and intelligence.⁶⁸ But with respect to the specific character of one individual, he was convinced, the technique was perfectly suitable:

In the case of the Washington heads we are met by no such difficulty. These are the efforts of a number of contemporaneous artists to present each his own conception of one particular subject, and the historical value of this method of averaging results is beyond computation. It is to portraiture what the sifting of the testimonies of a multitude of eye-witnesses is to the discovery of one set of facts.⁶⁹

⁶⁵ Wells writes in his *New Physiognomy*: “George Washington affords an admirable illustration of all the temperaments in harmonious combination. The brain was decidedly large, but not excessive; the quality was good, somewhat finer than the average, and the whole more evenly and harmoniously developed than is usually to be met with. [...] His phrenological organization was such as to render his character eminent for calmness, devotion, deliberation, frugality, industry, and justice.” See Wells: *New Physiognomy*, 714.

⁶⁶ See Taylor: “On Composite Photography,” 362.

⁶⁷ See Taylor: “On Composite Photography,” 362.

⁶⁸ Taylor: “On Composite Photography,” 362.

⁶⁹ Taylor: “On Composite Photography,” 362.

Taylor compares the technique of composite portraiture to detective work and the judicial mode of establishing facts. Interestingly, his argument entails a transition of media, from visual experience, via narration, to the written word and proven evidence. The objectifying force attributed to the quasi-forensic composite technique presents the resulting image not as a mere visual representation, but, in the vein of Galton's argument, as a form of visual statistics that would make the visual evidence accessible to accurate numerical and textual description. But while testimonies are usually tried in front of a court, in the present case it is the scientific community who assumes the authority of establishing the facts.

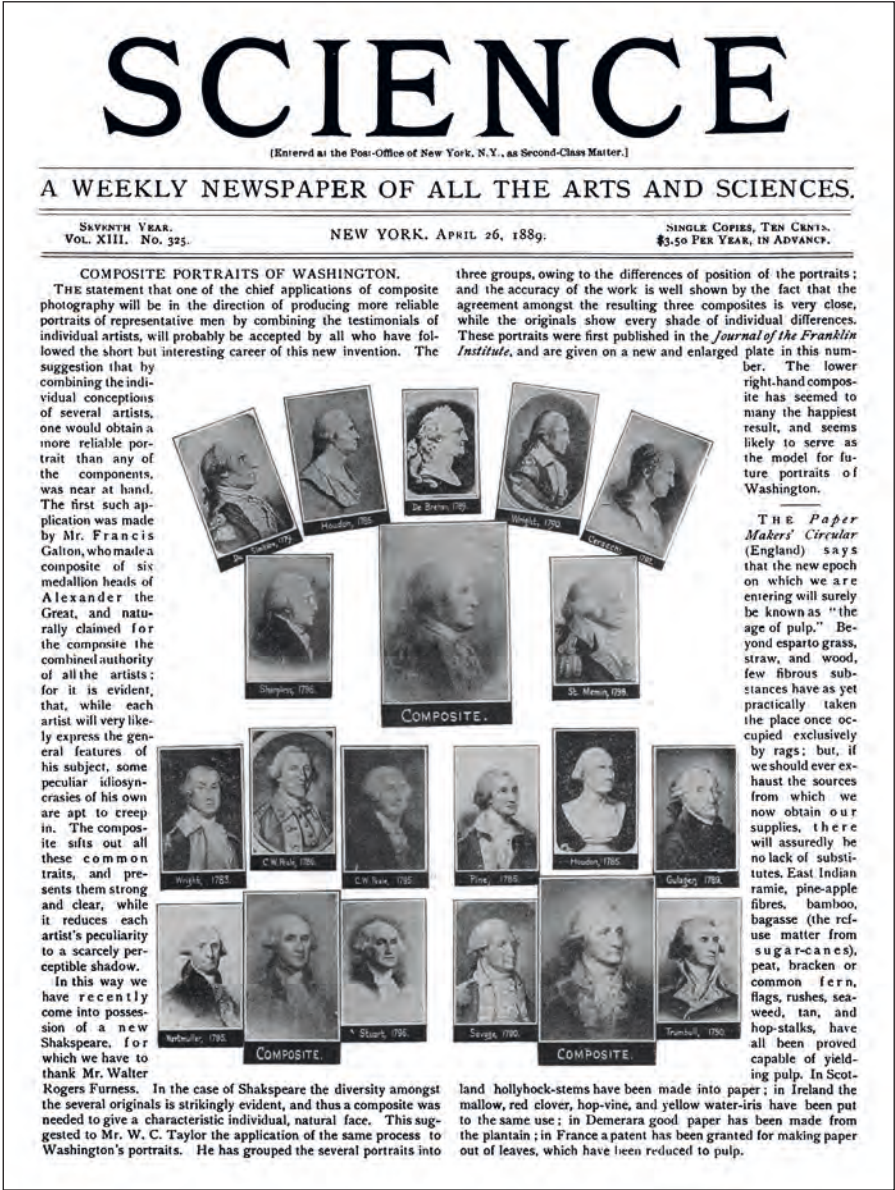
The largest Washington composite, a profile turned to the right, is surrounded by its seven components which, in the upper row, form a semi-circle. It was produced from a great variety of techniques of artistic representation: reproductions of busts and reliefs, but also engravings and pastel paintings. The lower two composites focus on two-dimensional representations of the president, mainly paintings, except for the inclusion of one bust. The composites are slightly enlarged in reproduction, and trimmed at the edges to as to cut into some of the smaller individual portraits, thereby dominating the chart in a gesture of inclusion. In these portraits, the head is turned to the right; on the left side, the portraits look directly at the viewer; on the right side, they show Washington stare into the distance.

Some of the individual portraits appear strangely deformed, and an examination of the original paintings reveals that at least three, the portraits by Gilbert Stuart (1796), Charles Wilson Peale (1795), and Robert Edge Pine (1785), were mirrored photographically to meet the orientation. Apparently, for Taylor, such manipulation of his source material was not as objectionable as it had been to Furness, who had produced two composites of the different sides of Shakespeare's face. Also, the multiplicity of (supposedly "ideal") composite faces raises questions which challenge the basic assumption of the reconstructing gaze of the technique: neither do the producers explain how *multiple* objective and truthful composite portraits of the same person could exist; nor do they comment on the obvious differences between the competing visualisations.

The publication on the composite of Washington in *New the Proceedings of the American Philosophical Society* did not contain images, but on the front page of *Science* the images become the central message. The accompanying text is arranged in a justified block around the figure that assembles seventeen

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Taylor, Curtis: Portraits and composites of George Washington on the front page of *Science*. In: *Science*, Vol. XII, No. 325, April 26, 1889.

components and three composites of George Washington. In *Science*, one of the most influential scientific publication organs of its kind, it is not an exquisite frame, but a framing of words that surrounds the images and provides the context for reading the arrangement of portraits. Echoing the earlier argument of Galton, the author expresses distrust towards the truthfulness

individual artistic representations,⁷⁰ but goes on to claim that the photographic portraits were infused with the “combined authority of all artists.”⁷¹ The reconstructing gaze absorbs artistic explanatory power, and authority, while claiming objective neutrality. With judicial scrutiny, by optical means and with forensic methodology, the materials were examined and laid before the audience. Judge and jury have spoken, and the verdict is clear: “The lower right-hand-composite has seemed to many the happiest result, and seems likely to serve as the model for future portraits of Washington.”⁷²

Reviewing Composite Idols

The production of historical likenesses and the reconstructing gaze of the composite technique assume a special role in nineteenth-century composite portraiture. Apart from the aestheticising gaze of composite photography aimed at the study of ideal beauty,⁷³ these are the only series of composites produced not from photographic portraits, but from reproductions of forms of artistic visualisation. Furthermore, they are special in their focus on individuals, as compared to the technique’s general utilisation in portraying a specified group of people that was then typified based on perceived visual similarities. The reconstructing gaze and its production of composite portraits of exceptional historical individuals from artistic sources followed a desire to gain access to optically authenticated representations and the truthful facial features of the characters. This aspiration was fanned by a soaring interest in physiognomic character studies, as well as by a growing nationalism and the celebration of national idols. The desire for a face-to-face encounter with the heroes and villains from the past was to be realised by the new medium of photography and the composite technique’s reproductive – and productive – potential. The construction of these allegedly more candid images relied both on artistic representations and on their absorption into an image that was construed as more authentic, while at the same time discrediting the component artworks as unreliable.

⁷⁰ “[W]hile each artist will very likely express the general features of his subject, some peculiar idiosyncrasies of his own are apt to creep in. The composite sifts out all these common traits, and presents then strong and clear, while it reduces each artists peculiarity to a scarcely visible shadow.” See Taylor, W. Curtis: “Composite Portraits of Washington.” In: *Science*, 13, no. 325, 26 April 1889, 311.

⁷¹ Taylor: “Composite Portraits of Washington,” 311.

⁷² Taylor: “Composite Portraits of Washington,” 311.

As we have seen in the American examples, the technique was also used in the quest for genuine likenesses of two idols of Anglo-American culture, Shakespeare and Washington, which invited physiognomic interpretations. The photo-chemical “resurrection” of persons long gone, the hunting of their ghostlike presence in the vague composite countenance, carry spiritualist overtones. Eventually, rather than providing more truthful and “authentic” portraits, the composites must be recognised as a composition of the iconography prevailing in the respective figure’s posthumous depiction and its evolving transmission and reproduction through and in the arts. The photographic approach ignored the status of the constituent images as artworks, including the style of the artists and the aesthetic ideals of *their* respective times, as well as the role and agency of the persons portrayed. A further inconsistency of the visual argument arises from the large variety of source materials that were admitted to these reconstructing composites, resulting in a mixture of completely different artistic media. Bas-reliefs, paintings, and sculptures were reduced to a monochrome photographic two-dimensionality, uniform in size and often lacking definition. For their publication, these hybrid photo-graphic superimpositions often experienced another change of medium and were reproduced as engravings of various techniques. While Galton remained relatively narrow in the selection of his source material, bas-relief in coins and medals, he still remained oblivious to the switch of media in the reproduction of the images.⁷⁴

The choice of Galton’s corpus of images and historical characters might have been due to the mass availability of coins in archeological collections and the archives of the British Museum. The construction of supposedly true likenesses, however, went beyond a fascination with historical idols. Galton’s composite studies of historical military leaders and rulers are a continuation of his work on the heritability of genius. With the production of composite ancestor galleries that extrapolated signs of exceptional character and physique to families and dynasties, the initial focus on individuals becomes expanded. In the context of Galton’s work, the visual-archeological forensics by means of composite portraiture was merging individual character studies with the quest for collective “racial” and genetic traits and a common disposition in personality and

⁷³ This perspective is discussed in chapter 10, “Attractive Averages.”

⁷⁴ The phenomenon was observed by H. Reynolds, Galton’s photographer, who in a letter addressed to Galton commented on the reproduction of a composite of the “criminal face” in *Nature*: “Thank you for the copy of ‘Nature’ containing your very interesting memoir. The composite do not you think has lost something in the engraving.” See Reynolds, H.: Letter addressed to Francis Galton, 27 May 1878. Galton Collection, UCL GALTON/2/8/1/1/2 f31.

physique. These historical composite likenesses, in a climate of scientific racism, were proposed as a visual aid in the field of archeology and anthropology. The agenda of the reconstructing gaze was thus not only to bring a more truthful representation of historical individuals before the eyes of its nineteenth-century audience: it was furthermore suggesting the proximity of outer physical similarities and inner dispositions, and their genetic manifestation as part of a racialising argument.

In the utilisation of composite portraiture on individuals, the technique takes part in the long-lasting argument on the representation of persons and personalities, of character traits and inner, deeper truths, which had long surrounded the portrait genre. The quest for the most vivid and meaningful portrait and the invisible truth in the face, however, followed different agendas in artistic and composite enhanced, photo-mechanical portraiture. While both claim an extraordinary access to hidden truths, the composite technique did so by assuming and presenting an immutable and readable surface, a singular truth that contrasts with the ambiguous variety of impressions and expressions in artistic portraiture. The composite technique here adopts an almost mystic note in proclaiming a uniquely productive quality which, while criticising the prevalent notion of the genius of the artist, nevertheless draws on these assumptions. Seen in this way, the production of the composite portraits entails the accumulation of artistic geniality, the technical production of a form of artistic meta-genius intended to grasp the otherwise invisible exceptionality of historical characters. Here the composite technique oscillates between ascriptions of mechanical objectivity and claims to an artistic quality.

As part of this reasoning, the positioning of the technique as the guarantor of a more truthful portrait had to entail a discrediting of artistic portrayal as inherently subjective and fallible; a claim that was substantiated by the argument of an analogy of composite portraiture to the formation of mental images and the fallibility of human mental processes and memories.⁷⁵ By aggregating and averaging the artistic renderings, the reconstructing gaze of composite portraiture set out to verify the true nature expressed in these portraits – a form of artistically enhanced subjectivity becomes transformed into a mechanically verified objectivity. The proclamation of this visual truth of a second order is an expression of the supremacy of optical empiricism in the nineteenth century and it can be seen in the wider frame of discrediting artistic

⁷⁵ See Galton: "Generic Images."

media in scientific practice and positioning photography as the prime medium of the objective depiction of reality.⁷⁶ Paradoxically, however, composite portraiture, while denying the arts had any capacity for truthful representation, was itself presented as the ultimate solution for the depiction of the true character of persons – a mission originally attributed precisely to the artistic realm. As an augmented representation of reality and the ultimate form of portrayal, the composite images here acquired a quasi-artistic status. Composite portraiture's new form of scientific aesthetics sought to claim terrain reserved to the arts – and the technique was, a hundred years later, in turn reclaimed by visual artists.

Current Composite Likenesses

The use of the technique of composite portraiture for the reconstruction of ideal likenesses of individual historical and contemporary persons, as proposed in the nineteenth century, was picked up both in the arts and in popular culture around the turn of the twenty-first century.⁷⁷ Current artworks follow a different logic and programme, but their appropriation of the technique – whether intentionally or inadvertently – stands in the tradition of its nineteenth-century application. They address already established concerns such as the truthfulness of representation and authenticity in the genre of portraiture. In contrast to the mechanical-analytical approach of nineteenth-century science, however, in current artworks the previously unquestioned faith in the evidential value of such composites becomes transformed, as the artworks set out to unsettle and to provoke viewers, allowing for ambivalent readings and shifting attention to formal aspects and to the presentation of the images. In their conceptual-artistic logic, the level of reception comes into focus, opening new ways of encountering and reading the idealised composite faces of the past. Still, the artistic positions can be read as a re-authentication of the myth of truthfulness in portraiture.

The production of ideal composite portraits of historically influential characters was picked up recently by the German artist Florian Tuercke, who compiled a sizeable collection of idealised digital composite portraits. In his ongoing project

⁷⁶ See among others the seminal and widely received work of Lorraine Daston and Peter Galison ("The Image of Objectivity," *Objectivity*).

he has so far composed over 90 composites of famous individuals who, according to his definition, have had a “significant impact on world affairs and society since World War II,”⁷⁸ ranging from Mahatma Gandhi through Stalin, Einstein, Mao, and Mother Theresa to Barack Obama and Edward Snowden. Tuercke drew his source images from the internet and digitally superimposed 10–30 individual pictures for each composition – seduced, arguably, as Galton had been, by a (new) form of mass availability. In an accompanying text, Tuercke argues:

Through photography portraits became naturalistic and thus – supposedly – more real. However, a photographic portrait depicts the person in question only at a certain moment. [...] The portraits of the series *Collective Memories* are an attempt to give famous people a clearer face.⁷⁹

The artist thus partly follows the nineteenth-century argument already put forward by Galton and his contemporaries, exhibiting distrust towards individual representations and subscribing to the idea of the production of a more truthful portrait of a given person by the aggregation of various views, merging different emotional aspects and temporal dimensions. In contrast to a historical composite portraiture that had to rely on artistic representations, Tuercke’s source materials are already photographic portraits. However, in times of digital manipulation, the artist seems to extend the suspicion initially directed at artistic subjectivity to photographic reproductions and mass-media images. In his pursuit of authenticity, or clarity, as he puts it, the composite technique is positioned as a device that allows looking *behind* the public mask worn by his subjects on the world stage. This quest for truth behind the media-constructed iconic faces is pursued by means of multi-perspectivity and fusion, but it ironically results in further diffusion and decidedly less clear images. The composite process, however, creates images that provide a projection screen in which the composite faces of the characters become themselves elevated to the status of icons – as meta-portraits of public faces.

⁷⁷ On his blog that deals with the update of historical scientific techniques of visualisation in the digital age, Patrick Feaster has published a large number of digital composite portraits. Here he addresses what he calls “face averaging” as a historical technique and presents composite faces of college students, baseball players, and female models from different times, but also of historical images of Queen Elizabeth I. In his argument he does not refer to Galton and his contemporaries, but maintains their assumption of an increase in authenticity through the composite technique. See Feaster, Patrick: *Face Averaging as a Historical Technique* (2014). <https://griffonagedotcom.wordpress.com/2014/07/01/face-averaging-as-a-historical-technique> [15/01/2022].

⁷⁸ Tuercke, Florian: *the good the bad and the ugly*, 2018. <http://www.floriantuercke.net/thegoodthebadtheugly.html> [15/01/2022].



Tuercke, Florian: *Collective Memories: the good the bad and the ugly*, digital composite portraits, 2018. Courtesy of the artist.

Tuercke presents a veritable portrait gallery of the iconic and influential figures of our age. The illustrious crowd is dominated by politicians and potentates, complemented by a number of scientists, activists, and religious leaders, as well as some businesspeople and media stars, the majority of whom are no longer

⁷⁹ Tuercke: *the good the bad and the ugly*, 2018.



Tuercke, Florian: *the good the bad and the ugly*, digital co-composite of all persons, 2018. Courtesy of the artist.

alive. The series contains only eight women: Mother Theresa, Rosa Parks, Indira Gandhi, Margaret Thatcher, Queen Elisabeth II, Aung San Suu Kyi, Angela Merkel and Oprah Winfrey; older European and North American white men dominate the scene.⁸⁰ From this very peculiar portrait gallery, over 90 pairs of eyes stare straight at the viewer. When looking at the numerous faces in square layout, viewers' attention jumps from one counter pole to another, establishing resemblance and identity in the diffuse faces. But the observation does not stop at the visual level, as immediately, the deeds (or misdeeds), political positions, and historical role of the respective figures come to mind and in turn influence

⁸⁰ The artist does not elaborate on his selection, but a comparison with the "Time 100" list of the most influential persons in the American context shows many overlaps. Still, the *Time* magazine list reserves more space for women and famous persons from the arts and popular culture.

perception. This performative activity on the receptive side evolves into a process of contemplation and reflection, clearly drawing on the affective power of the composite faces.

In his series of composite faces, the Tuercke aims for a new perspective on the depiction of influential persons. His corpus of material, however, downloaded from the internet, from journalistic sources and institutional profiles, implies an already "curated" collection of media images, reflecting the public role and agenda of the persons depicted. The frontal orientation of the portraits emphasises the constructed nature of these public images and highlights their mask-like, waxen appearance. By titling his series *Collective Memories: the good the bad and the ugly*, Tuercke introduces an ethical – as well as an aesthetic – perspective and the series of prominent faces now seems to challenge viewers to choose their own "good" or "ugly" character in relation to their personal knowledge and memories, their evaluation of the respective figure's "achievements." The images evoke the histories and stories behind the portraits and the period of their public reception: in the case of Julian Assange or Edward Snowden, a mere political incident and its aftermath; for others, the course of a whole public life. Furthermore, the series includes living persons whose story might not be finished – whose history and public image and iconography continues to be shaped. Tuercke's work succeeds in shifting emphasis from the meta-portraits of individuals towards the respective figures' public image, their "standing" within collective and personal memories. Their diffuse countenances provoke emotional reactions, and their ghost-like quality offers a projection screen for personal histories and stories that are mirrored in the blurry facial forms, reflecting the time and events that they became connected with.

In addition to his composite portrait gallery, the artist has produced a co-composite of all of his results, with so far 2040 individual components, which shows an exceedingly hazy portrait resembling a middle-aged white male figure, wearing suit and tie. This move reduces the initial idea of providing a clearer, more precise portrait to absurdity. It also challenges the quest for highly charged reconstructions of the ideal public faces, by combining the "good," "bad," and "ugly" all into a diffuse humanoid form, a form that reveals the dominance of male and western attributes of the composite *homo politicus*.⁸¹



Masuyama, Hiroyuki: *Family Portrait* (Son, mother, father, myself, wife), 1999. Courtesy of the artist.

Around the turn of the twenty-first century, other artists also have focused on the composite representation of individuals, superimposing portraits in order to generate a new form of subjective multiplicity. These more personal temporal and reconstructing composites often focus on the artists themselves and their family such as by the Düsseldorf-based Japanese-German artist Hiroyuki Masuyama. In his series of composite portraits and composite video animations, Masuyama assembles volatile, fluctuating composite animations of faces at different stages of the protagonists' lives. The emphasis seems the passing of time, or rather the changes that are effected by time and the promise of its

⁸¹ The co-composite of all of Tuercke's composite likenesses is reminiscent of the work of the German artist Christian Mahler, who produced a composite portrait of all 601 members – 404 men, 197 women – of the German parliament, the *Bundestag*, in 2005. The composite representative of the parliament that is itself a representative organ of the German population strikingly resembles Tuercke's meta-portrait of his political VIP gallery: a rather blurry face with receding hairline and uniform-style choice of clothes. The composition of the large number of overwhelmingly male, middle European faces seems to reveal only one thing: the diffuse form of a middle-aged male human countenance that has lost any individual peculiarities and expressiveness and, just like the suit, becomes a uniform mask of a humanoid form – and an official uniform.



Litvai, Peter: *Ich, Vater, Beate*, composite portraits, 2012. Courtesy of the artist.

erasure by means of composite photography. In his composite videos,⁸² the successive animations of the faces of the individual members of the family start with a baby or children's photo before the portraits of later stages in life are added, layer by layer. A new form of composition appears: a composite in motion, the continuous merging of a number of views that, while evolving, loses earlier aspects and assembles new material. The animation reconstructs and replays the facial changes accumulating over the subject's life-time in a continuous loop.⁸³ Under the eyes of the viewers, the faces transform and develop a strangely magnetic quality.

A more short-term approach is taken by the German photographer Peter Litvai, who in 2010 produced a series of photographic composite portraits of individuals, starting with himself and his family before extending his project to portray friends and acquaintances. For the series *Tagesform*,⁸⁴ component portraits

⁸² Masuyama, Hiroyuki: "Family portrait", 1999. https://www.youtube.com/watch?v=pJln72_7MIE [15/01/2022].

⁸³ This strategy was further developed in Masuyama's later works creating composite photographs of landmarks and of himself over time and his collage works on the visual representation of distance during travels. See the composite photographs of well-known buildings and landscapes, such as various architectural views in Rome, as well as mountains, among others Mount Fuji (1400–2013). See also the video composite self-portrait of the artist, standing in the same spot for a whole year, while the landscape around the central figure changes with the seasons. Masuyama, Hiroyuki: "Self portrait", video, 2004.

⁸⁴ The German term has no literal translation into English. By linking the words "day" and "form," it refers to the way a person feels or acts on a particular day. The meaning of the compound word is extended by the temporal dimension of the word "day" and the meaning of "form" as structural outer appearance.

were taken every 30 minutes over the period of one day and later composed into one image. In the background of the images, another layer of visual information can be traced. Here elements from the life-worlds of the protagonists enter the final composition. These artifacts further dis-clarify the images, but also give a clue to personal spaces and environments of the characters.⁸⁵ This emphasises the aesthetics of diffusion Litvai employs in the series, and it results in an almost painterly quality.

In what could be described as temporal reconstructing composite portraits, the most striking feature is the clarity and plasticity of the eyes that seem to stand out from the slightly blurry faces in a hyper-realistic manner. Even though the faces retain a neutral expression and would not have changed considerably over the course of a day, their outer regions, forehead, ears, and jawline, increasingly loose definition. These subtle changes of appearance and expression hint at the variability of the human face as organic structure, but also at its limited “readability” by photo-analytical and biometric means. In how far can photographs – taken in a split second – represent persons in all their complexity? Must it not rather lose its authority in the face of the temporal compositions Litvai presents us with?⁸⁶

These recent temporal reconstructive composite portraits are proposing new forms of enhanced artistic portraiture that hint at the temporal-emotional aspects of portrait photography, normally hidden from the inquiring eye of the camera. The artistic works by Masuyama and Litvai, however, sustain the assumption that through such compositions, a deeper insight and a more truthful portrait of the persons portrayed could be gained; their images count on the same suggestive quality of the composite aesthetics that was already observed by Francis Galton. This is also true of Florian Tuercke’s composite gallery of political protagonists, but in contrast to nineteenth-century reconstructing composites, his series neither supports racist assumptions, nor does it propose physiognomic character readings. Still, it maintains the notion that this composite multiplicity surpasses its individual component images. And although Tuercke’s is not a prescriptive perspective and his images and their evaluation are played back to the viewers, who become co-actors in the narration of collective

⁸⁵ In the composite portrait of “Beate,” for instance, in the lower part the words “Galerie Landshut Nahensteig” can be deciphered, which hint at the sitter’s professional life.

⁸⁶ Damian Zimmermann has argued that in the face of the nebulous aura that the images maintain, the right to exist of ordinary portraits comes into question. See Zimmermann, Damian: “‘Tagesform’ von Peter Litvai.” (26/11/2012) <http://www.damianzimmermann.de/blog/?p=10494> [15/01/2022].

memories expressed in the diffuse, but still recognisable countenances, his works are essentially a continuation of the historical assumption of a more truthful portraiture by means of the composite technique. Furthermore, Tuercke’s work bears witness to the ongoing fascination with idols from the past and the strong belief in portraiture’s potential for bringing to light a hidden truth, providing access to the deeper meaning behind the facial surface and reestablishing ideas of an augmented composite authenticity, based on visual multiplicity. All of these twenty-first-century composite artworks, just like their historical predecessors in the field, rely on viewers’ co-operation, turning *us* into accomplices in this (de-)constrictive endeavour.



10 | Attractive Averages and Composite Beauty: The Aestheticising Gaze of Composite Portraiture

The aesthetic potential and beautifying effect of composite portraiture was recognised even before the first actual photographic superimpositions had been produced.¹ Their specific aesthetic quality was the result of the images' technical production, which softened all contours and produced facial features that were perceived to be more attractive than those of their individual component portraits.² Galton was fascinated with this effect of composite portraiture and remarked: "The result is a very striking face, thoroughly ideal and artistic, and singularly beautiful. It is, indeed, most notable how beautiful all composites are."³ In spite of this observation, the Victorian scientist never explicitly used the technique for its artistic quality, and in his photographic work, the visualisation of the phenomenon of attractiveness played only a secondary role. His contemporaries Arthur Batut and Georg Treu, however, appreciated and discussed the aesthetic potential of composite portraiture. And even today, composite portraits and facial morphing are used in, sometimes questionable, scientific research on attractiveness. The aestheticising perspective resurfaces in late twentieth and early twenty-first-century popular culture, in the soft-focus digital composite faces of predominantly female stars and models, and in the creation of artificial faces.

¹ A.L. Austin, in a letter addressed to Charles Darwin and forwarded to Galton, noted the pronounced improvement in beauty in the visual composition of female faces by means of stereoscopic glasses. See Austin, A.L.: Letter addressed to Charles Darwin, 6 November 1877, Galton Collection, UCL GALTON/2/8/1/1/2.

² This was observed by the early practitioners of composite portraiture and has recently been evaluated in empirical studies by psychologists. See among others: Langlois, J. H.; Roggman, L. A.: "Attractive Faces are Only Average." In: *Psychological Science*, 1, 1990, 115–121.

³ Galton: *Inquiries into Human Faculty*, Appendix, 240.

The aestheticising gaze of composite portraiture has a strong normative dimension. It became oriented at ideal physical qualities and conceptions of beauty that in the neo-classicist nineteenth century were derived from ancient Greek and Roman arts. But the aestheticising gaze extends beyond the mere perception or evaluation of beauty, and was linked to the concepts of health, mental ability, and genetic fitness. The (physiognomic) materialist glance at the surface of the body promised a deeper analytical perspective: an insight into the moral constitution, as well as a phenotypic glance into the genetic features and the evaluation of an individual's eugenic quality. And here the average form, situated at the binomial peak, became defined as the ideal figure. This physio-aesthetic ideal could, naturally never be archived or be embodied in a singular physical shape, but maintained an immaculate, spiritual detachment. I therefore read composite portraiture's aestheticising function not in the sense of the formation of aesthetic objects, but as a lexi-visual practice of evaluating and shaping a deficiency-oriented ontological understanding of the human. This composite understanding of beauty was setting a normative standard and an affective ideal – a future-oriented target for biopolitical intervention against which every body must rank as inferior and which keeps all humans in a continuum of becoming.⁴

Even though neglected by the founding father of composite photography, the quest for an ideal of beauty and aesthetics of composition, in particular in relation to nineteenth-century classicist beauty ideals, played a major role for the creation and reception of the technique. Among others the influential writings of the German art historian and archeologist Johann Joachim Winckelmann, of the painter and writer William Hogarth as well as the painter Joshua Reynolds and later the anatomist Charles Bell, fostered a cult of Greek and, to a lesser extent, Roman art. The proponents of classicist aesthetics shaped the idea of what could be understood as a form of composite beauty; the composition of individual human forms and body parts in order to achieve aesthetic perfection and ideal beauty. And, while this artistic formation of

⁴ The term aestheticising gaze is not frequently used in academic literature. In a few instances it is employed in relation to travel writing to express the specific quality of the selective gaze of the tourist or flâneur. In individual articles gendered notions of a (hetero)normative aesthetics are addressed by means of the expression. See: Whitmarsh, Tim: "The Erotics of Mimesis: Gendered Aesthetics in Greek Theory and Fiction." In: Michael Paschalis, Stelios Panayotakis (eds.): *The Construction of the Real and the Ideal in the Ancient Novel*. Groningen: Barkhuis Publishing, 2013, 275-291; Pataki, Éva: "On the Move: The Tourist and the Flâneur in Nirpal Singh Dhaliwal's *Tourism*." In: *The AnaChronisT*, Vol. 17, 2013, 264-278; Donald, James: "This, Here, Now: Imagining the Modern City." In: Sallie Westwood, John Williams (eds.): *Imagining Cities: Scripts, Signs, Memory*. London: Routledge, 1997, 181-201.

human beauty is decidedly different from the approach of photographic merging of entire facial portraits performed in composite portraiture, the processes share a common conceptual basis and a composite ideal that united arts and science in the nineteenth century. No less important are the aesthetic writings of the philosopher Immanuel Kant, who with his "normal idea of beauty"⁵ had anticipated the photographic technique of composite portraiture. His treatment of optical superimposition as a metaphor for the formation of ideas and concepts might have entered Galton's thinking directly, or via the writings of the French-Belgian statistician Adolphe Quetelet.⁶

In what I refer to as the aestheticising gaze of composite portraiture, concepts of physical attractiveness and inner beauty, substantiated by genetic and statistical arguments, became merged in the evolutionist climate of the late nineteenth-century. Beauty became conceptualised as the representation of physical and mental health, of moral integrity, of genetic purity and intellectual ability.⁷ The discussion of aesthetic ideas of beauty in the artworks of classical antiquity became enriched with statistical conceptions of an average norm, such as in the writings of Quetelet. The astronomer and statistician positioned the physical average, regularity, and equilibrium in the centre of his description of the ideal human, establishing a new representation of a statistical ideal of the beautiful and the good.⁸ In Galton's reasoning, this statistical regularity of the bell-curve became an almost divine visual form that found its expression in visual constructions by means of the composite technique.⁹ This form of a mechanical and photo-chemical aesthetics has a strong normative dimension, and it constructed an ideal that could not be embodied by any individual. The aestheticising gaze of composite portraiture worked *ex negativo*; only the deviation from the predefined ideal could be measured and evaluated, in a continuum that at its outer borders revealed the reverse of beauty – the ugly and the monstrous.

⁵ See Kant, Immanuel: *Kritik der Urteilskraft*, in: Wilhelm Weischedel (ed.): *Werke in zwölf Bänden*. Frankfurt: Suhrkamp, 1977 [1790]. An English translation was published as *Critique of Judgement*. London: Macmillan, 1892 [1790].

⁶ Galton's contemporary Georg Treu had already observed and discussed this proximity of Kant's aesthetic writings to the composite technique. See Treu: "Durchschnittsbild und Schönheit." This was also discussed by Sekula: "The Body and the Archive."

⁷ See chapter 6.

⁸ See Quetelet: *Treatise on Man*.

This composite aesthetics of the regular, of the attraction of the average with its implied moral and genetic implications, shows the technique's relevance for Galton's central concern: the eugenic advancement of humankind and the construction of eugenic role models that were to exhibit a fusion of beauty of body and mind.¹⁰ The normative aestheticising gaze entails the reduction of individuality and irregularity in the compound figure. It constructs an ideal of beauty that unites classicist aesthetics with idealist conceptions of an average norm as a prerequisite for immaculate beauty. These ideas formed the basis for the visual-statistical and eugenic-normative notions that informed the attractive averages visualised by means of composite portraiture.

This chapter begins with an examination of the classicist perspective on composite aesthetics: with eighteenth- and nineteenth-century art-historical aesthetic conceptions of beauty and their influences on composite portraiture. This will be followed by a discussion of the eugenic-aesthetic perspective put forward by the nineteenth-century photographic experiments on attractive averages conducted by Francis Galton. The idealist notion of composite aesthetics and the significance of Immanuel Kant's normative ideas of beauty are subsequently discussed in relation to the photographic and analytical work by Arthur Batut, Georg Treu, and David Katz. And the appeal of composite aesthetics continues today: the idea of a superiority of composite beauty lives on in current constructions and perceptions of attractiveness and human beauty. This is examined in a final section exploring scientific projects around the turn of the twenty-first century which employ the technique in the study of attractiveness and as an indicator for (rather questionable) social-evolutionary and gendered explanations. This diachronic perspective on scientific explanations of attractive averages and composite aesthetics is complemented with contemporary artistic works by Krzysztof Pruszkowski, Nancy Burson, and Thomas Ruff that call into doubt the aestheticising gaze of composite portraiture and its normative quality.

⁹ Allan Sekula has observed on this relationship of the composite portrait to the binomial curve and notes that: "[...] Galton believed he had translated the Gaussian error curve into pictorial form. The symmetrical bell curve now wore a human face." Sekula: "The Body and the Archive," 48. See also the study by Josh Ellenbogen, who refers to the technique's relationship to an aesthetic, almost spiritual understanding of the binomial curve: Ellenbogen: *Reasoned and Unreasoned Images*, 9.

¹⁰ See chapter 7.

¹¹ Winckelmann: *History of Ancient Art Among the Greeks*, 43.

¹² Winckelmann: *History of Ancient Art Among the Greeks*, 198.

¹³ Winckelmann: *History of Ancient Art Among the Greeks*, 52.

¹⁴ Winckelmann: *History of Ancient Art Among the Greeks*, 44.

Classicist Composite Aesthetics and the Photographic Production of Beauty

Eighteenth- and nineteenth-century art-historical writings established an understanding of composite aesthetics that already shows a conceptual proximity to the photographic technique of composite portraiture. And in turn, the normative aestheticising gaze of the technique is based on classicist beauty ideals. Inspirations from the aesthetic writings of the day became influential for the development and perception of composite portraiture. Most directly, this relationship became expressed in the production of photographic meta-portraits of representatives of ancient ideals of beauty.

The German art historian and archaeologist Johann Joachim Winckelmann argued that human beauty advanced to perfection in the imitation of divine forms: in conformity and harmony, expressed in balanced proportions, "heightened by unity and simplicity."¹¹ His influential *History of Ancient Art* positioned Ancient Greek art and sculpture, in particular the face in profile, as the epitome of beauty,¹² contributing to the rise of neoclassicism and classical beauty ideals in the eighteenth and nineteenth centuries. Winckelmann proposed this divine immutable form of composition as the ideal towards which artists were to strive. Ideal beauty, he reasoned, could be achieved by the "selection of the most beautiful parts and their harmonious union into one."¹³ He urged artists to "produce a figure which is neither peculiar to any particular individual, nor yet expresses any one state of the mind or affection of the passions, because these blend with strange lines, and mar the unity."¹⁴ He is thus prescribing the absence of individuality and a neutral facial expression,¹⁵ a claim that corresponds with Galton's remarks on composite portraiture as a supra-individual aggregate and his emphasis on the absence of emotional expression in the composition of faces in repose.¹⁶ Furthermore Galton proposed the technique as a handmaid to artists for the production of more natural and reliable representations of typical physical appearance.¹⁷

¹⁵ Winckelmann furthermore argued that emotional expression altered the features of the face and negatively influenced the forms that constitute beauty. See Winckelmann: *History of Ancient Art Among the Greeks*, 155.

¹⁶ This strategy was also prescribed for identification photography, an utilisation of the photographic technique that sought true human nature in individual appearance as in Alphonse Bertillon's influential technique of personal identification, the so-called Bertillonage. See Bertillon, Alphonse: *Signaletic Instructions Including the Theory and Practice of Anthropometrical Identification*. Lindon: Werner Company, 1896.

As a form of composition towards an immutable ideal, Winckelmann's model of assembling and uniting body parts seems to have been influential for composite portraiture. At the same time the composite technique is decidedly different, since it sought to aggregate the whole figure, or face into an ideal and meaningful visual form. A form that was to eliminate artistic subjectivity – with recourse to the mechanical objectivity ascribed to the medium of photography – in the construction of typical representations. For the most part, it was the deviation from the good and beautiful – monstrosity in opposition to beauty – that set the focus for the composite portraits. In these instances, the beautifying effect was perceived as a distraction from the actual physiognomic truth.¹⁸ With positively connoted subjects, however, the same effect constituted a welcome addition that made the technique appealing, as in the field of family portraiture as well as in the production of eugenic role-models and truthful likenesses of historical persons; and it opened an entirely new arena for composite portraiture: the examination of attractiveness and beauty.

The eighteenth-century painter Joshua Reynolds, while embracing classicist ideals of beauty, expanded on Winckelmann's eclectic position and brought it in closer alliance with the reasoning of composite portraiture that focused on the whole countenance.¹⁹ Reynolds highlighted the relativity of beauty in different natural species and ethnical groups, arguing that in "creatures of the same species, beauty is the medium or centre of all its various forms."²⁰ He assumed the existence of a variety of permanent and determinate forms, around which the nature of beauty was circling. In order to distinguish and represent these ideal forms, artists had to be familiar with many individuals of a group and needed to be able to evenly reproduce and compose these medium peculiarities:²¹ "For perfect beauty in any species must combine all the characters which are beautiful in that species."²² Reynolds's conception of the combination of medium attractive forms appears to echo the writings of the painter and

¹⁷ See Galton: *Inquiries into Human Faculty*, 216.

¹⁸ See Galton's discussion of his composite portraits of criminals: Galton: "Composite Portraits" [1878], 96–97.

¹⁹ Josh Ellenbogen has observed the relationship of Reynold's thinking and contemporary art historical writings with the technique of composite portraiture. See Ellenbogen: *Reasoned and Unreasoned Images*, 85–86.

²⁰ Reynolds, Joshua: *Sir Joshua Reynolds' Discourses: Edited, with an Introduction by Helen Zimmern*. London: Walter Scott, 1887, 283.

²¹ Reynolds: *Discourses*, 279.

²² Reynolds: *Discourses*, 32.

social critic William Hogarth, who had sought the principles of beauty in the balanced outer shapes of bodies, their lines, their volume and combination.²³ Any deviation from these ideal forms of beauty was commonly characterised as confusion, deformity, and degradation, a conviction shared by the protagonists of human and facial aesthetics: Winckelmann, Hogarth,²⁴ Reynolds,²⁵ and Bell²⁶ – and by the proponents of composite portraiture. As part of his quest for an "abstract idea of [...] forms more perfect than any one original,"²⁷ Reynolds proposed what could be described as a meta-composition of *ideal* sculptural representations from classical antiquity to gain insight into the form of the accumulated beauty ideals.²⁸

It is unclear whether Francis Galton was directly inspired by the works and writings of Reynolds himself and his proposition of producing a meta-composition of beauty, or rather by the painter's aesthetic considerations as passed on by the anatomist and neurologist Charles Bell, who added a materialist, anthropometric perspective to the discussion.²⁹ But in his early experiments with the photographic technique, Galton endeavoured to reach exactly what Reynolds had proposed: a meta-composition of classical artifacts. Galton superimposed photographs of Greco-Roman statues – statues that were presented in profile, following what Winckelmann had proposed as the ultimate reference.³⁰ The enhanced marble beauty that Galton presented shows a delicately cut, barely clad figure, her head inclined subserviently downwards, eyes half-closed. At least one of the statues is part of the collection of the British Museum and can be identified as a reproduction of a Roman sculpture idealising female beauty.³¹ For the production of the composite, the three dimensional artistic

²³ See Hogarth, William: *The Analysis of Beauty*. London: Reves, 1753; repr. Pittsfield, Mass.: The Silver Lotus Shop, 1909.

²⁴ Hogarth writes: "[W]hen the eye is glutted with a succession of variety, it finds relief in a certain degree of sameness; [...] I mean here, and every where indeed, a composed variety; for variety uncomposed, and without design, is confusion and deformity." See Hogarth: *Analysis of Beauty*, 31.

²⁵ See Reynolds: *Discourses*, 30.

²⁶ With reference to Winckelmann and Reynolds, Charles Bell concluded: "In proceeding to define beauty, all that the writers on art have been able to affirm is, that it is the reverse of deformity." Bell, Charles: *Anatomy and Philosophy of Expression as Connected With the Fine Arts*. London: John Murray, 1844 [1806], 21.

²⁷ Reynolds: *Discourses*, 29.

²⁸ Reynolds: *Discourses*, 32.

²⁹ See Bell: *Anatomy and Philosophy of Expression*.

³⁰ Winckelmann: *History of Ancient Art Among the Greeks*, 198.



Galton, Francis: Contadine etc., c. 1879; co-composite in leather frame. Galton Papers, University College London, Special Collections, GALTON 2/8/1/3/5.

renderings of these ideal and artificial figures are photographically reduced to monochrome two-dimensionality before being superimposed. By means of composite portraiture, these artistic and materialist perspectives become united in a normative meta-construction of classicist beauty, showing the aestheticising gaze of the technique.

Normative Attractive Averages

Galton saw the ideal of beauty realised in his composite portraits of ancient representations and produced further composites of the facial imprints of Greek and Roman women on historical coinage.³² But he never used his images in a general discussion of attractiveness or beauty. For him, beauty implied intellectual, moral and genetic qualities, qualities whose genesis could be explored by means of the aestheticising gaze of the composite technique. And here the

³¹ I could identify the first statue among the collection of the British Museum. It is a marble bust of Roman origin that was recut in the eighteenth century, depicting the nymph Clytie or Antonia Minor (the mother of the Emperor Claudius). Museum number: 1805,0703.79. The other is probably also a bust of Roman origin.

classicist view on composite aesthetics takes a turn towards the celebration of an average norm that becomes elevated to a normative, biopolitical ideal, as expressed in Adolphe Quetelet's figure of the average man.

On the above chart that was presumably produced to be presented as an illustration in one of Galton's talks,³³ he assembled frontal compositions of photographic portraits and paintings of Italian peasant women, "Contadine," next to the classical composite statue.³⁴ Galton here combines portraits of different artistic media, from different times, but originating from a similar regional and implied ethnic and genetic background. The objective seems clear: tracing classicist beauty ideals through the centuries, from depictions of Roman statues, via unknown painted representations of Italian women, to nineteenth-century ethnographic photographic portraits of the rural population of the Italian Peninsula. This genealogical construction of attractive female faces links the classicist composition of ideal beauty with Galton's hereditary, eugenic perspective, and the aestheticising gaze merges with the eugenicising and racialising gaze of the technique. The composite faces are treated as ideal physiognomies, proposed by a scientist who was convinced of the superiority of classical intellect and beauty as a blueprint for future genetic evolution.³⁵ A co-composite of the frontal photographs and the paintings is preserved among the *Galton Papers*. Apparently the result of his experiments seemed to the Victorian scientist so awe-inspiring that he felt the need to enclose his ideal of hereditarily grounded classical female beauty in a leather frame with golden embossing.³⁶

³² In an article Galton described the Roman composites as a "singularly beautiful combination of six Roman ladies, forming a charming ideal profile." See Galton: "Generic Images," 165. See also the composite portraits preserved among the Galton Papers: Galton, Francis: *Likenesses of 6 different Roman Ladies and the composite of them in the Centre and Composite of Greek Ladies and components*, composite portraits, c. 1879. Galton Papers, UCL, GALTON 2/8/1/3/8; GALTON 2/8/1/12/3.

³³ Galton referred to the images in his presentation at the Royal Institution in 1879. See the "Appendix on Generic Images" in Galton: *Inquiries into Human Faculty*, Appendix, 229.

³⁴ The representation of pastoral beauty in the guise of Victorian ladies in rural costumes as "Contadine" became a popular genre in late-nineteenth-century photography and painting, for instance in the photographs of Julia Margaret Cameron. See Cameron, Julia Margaret: *Mary Emily Prinsep (1853–1931) as "La Contadina,"* 1866, National Portrait Gallery, NPG x18046.

³⁵ See Galton: *Hereditary Genius*, 327–328.

³⁶ The composite is preserved as a leather-framed print: Galton Collection, UCL, GALTON 2/8/1/3/5 and as a glass slide: GALTON/2/8/1/13/11. The only other composite preserved in a frame among the Galton Papers is one of Welsh Baptist ministers. See Galton Collection, UCL, GALTON/2/8/1/3/3.



Galton, Francis: *Likenesses of 6 different Roman Ladies and the composite of them in the Centre*, c. 1879. Galton Papers, University College London, Special Collections, GALTON 2/8/1/12/3.
Galton, Francis: *Cleopatra 5 Components*, c. 1879. Galton Papers, University College London, Special Collections, GALTON 2/8/1/3/4.

Apart from some examples of his work on family resemblance, these are among the very few composite portraits of female subjects produced by Galton.³⁷ Women are in general conspicuously absent from the scientist's work, even though they were attributed an even share in hereditary transmission in his simplified genetic explanatory models. If at all, women are referred to in relation to charm and moral virtue and as reproductive partners. And even in the historical likenesses of ancient artifacts, the sexist undertone prevails: while the historical likenesses of men are described in terms of their bodily and intellectual powers, women are reduced to mere objects of a male gaze.³⁸

This, however, is only partly true in relation to a composite portrait of Cleopatra (VII Philopator) compiled from different historical depictions. In his early publications Galton had attributed "personal beauty and vigour"³⁹ to the last ruler of the Ptolemaic dynasty.⁴⁰ Yet after the composition of her portraits he concluded that the composite fails to "give any indication of her reputed

³⁷ See chapter 8.

³⁸ See Mulvey: "Visual Pleasure and Narrative Cinema."

³⁹ Galton: *Hereditary Genius*, 145.

⁴⁰ See the discussion of other composite portraits of the Ptolemaic dynasty in chapter 9.

beauty; in fact her features are not only plain but to an ordinary English taste are simply hideous."⁴¹ This reminds us that beauty lies in the eyes of the beholder, and one has to add, in their socio-cultural background. For Galton, whose perception of beauty was shaped by Victorian classicist ideals of beauty, the composite depiction of the powerful historical female figure that could not fit his ideas of femininity and whose depiction partly adopts Egyptian iconography must have been disqualified as a personification of beauty.

Adolphe Quetelet, whose statistical writings influenced the technique of composite portraiture, exhibited a different view on beauty than the earlier proponents of a classicist aesthetics. His normalising aesthetic conception did not originate in, or reproduce, classical ideals, but has been described as subject to a continuous process of evolution. Quetelet criticised the imitation of the beauty ideals of classical antiquity as anachronistic and highlighted the variability of the human type.⁴² In his argument on "social statistics," which sought to link biological and social normality with statistical frequency, he defined the qualities of the ideal average figure as incorporating, in a given period, all the positive qualities. This ideal figure, he argued, "should be considered as that type of all which is beautiful – all which is good."⁴³ This positions the ideal of beauty in the statistical centre of society, at the peak of the curve of normal distribution. This normalising ideal, however, only existed statistically and could not be embodied by any individual. An approximation to this ideal figure would then represent beauty in an aesthetic, moral, intellectual, and bodily sense; a deviation from these perfect proportions and the parameters prescribed by the "average man" opens a continuum of degeneration and, at the extreme end of the spectrum, monstrosity. In the eugenic climate of the late nineteenth century, this normative statistical average and the aestheticising gaze of composite portraiture developed into a biopolitical instrument. On the one hand, the composite images served as a role model and aim towards which positive eugenic intervention could be directed; on the other, as a marker of deviation effecting a pathologisation of physical appearance that invited negative eugenic responses.

The protagonists of composite portraiture, however, only partly followed Quetelet's cry for a liberation from classical ideals. Their works were incorporating

⁴¹ Galton: "Generic Images," 164–165.

⁴² See Quetelet: *Treatise on Man*, 97.

⁴³ See Quetelet: *Treatise on Man*, 100.

his statistical-averaging orientation, but the aestheticising gaze of the technique often retained a prescriptive orientation at classicist ideals of beauty and a normative understanding of aesthetics. These early composite visualisations of beauty and the art-historical background of the technique already touch on many aspects of the later discussion on the aesthetics of composition by other protagonists of the composite technique. This aestheticising gaze and its normative celebratory, as well as its exclusionary function also manifests in composite portraits of patients and military men, as well as in the college composites produced in North-Eastern America that were discussed earlier, revealing its proximity to the eugenicising and pathologising gaze of composite photography.⁴⁴

Critical Idealist Beauty and Artistic Composite Aesthetics: Arthur Batut, Georg Treu, David Katz, and Immanuel Kant's "Normal Idea of Beauty"

For some nineteenth- and early twentieth-century practitioners of composite portraiture, the beautifying effect of the technique was perceived as its central value. The French photographic pioneer Arthur Batut argued that composite portraits offered seminal insights for aesthetic studies of the human form and its artistic representation. The German art historian Georg Treu highlighted the technique's value in constructing an ideal of immutable beauty, as proposed by Immanuel Kant. In Treu's view it was this composite ideal, as expressed in the writings of Kant as well as in composite portraiture, towards which artistic representation should strive. Likewise, the Swedish psychologist David Katz highlighted the technique's aesthetic quality and positioned it as an artistic analytical technique.

Arthur Batut, the French pioneer of composite portraiture, positions the quest for ideal representation and beauty in the centre of his argument on composite portraiture. He refers to works representative of classical ideals of beauty, such as the Venus of Milo, but also to thirteenth-century Christian representations, such as a Virgin Mary at Notre-Dame de Paris, and their supra-individual – and hence, supremely beautiful – physiognomies. Batut argues that, thanks to the new medium of photography, an artistic form of analysis and synthesis could

⁴⁴ The composites are discussed in chapters 4, 6, and 7.

be conducted by means of composite portraiture: of working out the “guiding lines” of general familiarity, while heightening regularity and beauty.⁴⁵ The technique is here represented as an artistic analytical tool, a means of fashioning the ideal physical shape of a group of people at a given time and place. In contrast to the advocates of classicist aesthetics, following the line of argument proposed by Quetelet, Batut did not seek for an immutable, prescriptive form of (female) beauty. He stressed that every epoch had its ideal type of beauty, and that it was these types that could be scrutinised by means of composite portraiture. Assuming that the artists were inspired by the general attitudes and physiognomies, the technique would be able to uncover the type of inhabitant mirrored in contemporary artworks and thereby access their historical milieu.⁴⁶ In his photographic work, however, Batut did not fashion composites of historical artworks, but focused on the people of his own time: in ethnographic composite visualisation of the inhabitants of different parts and villages of the Pyrenees and their ethnic backgrounds.

A specific application of the technique, where Batut's visual historical ethnography becomes united with the quest for beauty, is a portrait of the typical woman of the French village of Sémalens, produced in the 1880s. The composite face was commissioned as a model for a sculpture of Alexandrine-Rose Barreau, a local heroine of the French Revolution, who was, due her bravery and resolve, likened to Joan of Arc.⁴⁷ Her “lost” countenance was supposed to be reclaimed by a reconstructed, ideal representation: the combined beauty and charm of the average female inhabitant of the village. The aestheticising gaze of the photographic construction here assumes a self-affirmative quality; the composite face becomes an identification figure for the village community and noteworthy (female) qualities in general. While Batut usually chose to reveal his source material, in this case, the individual portraits were not presented alongside the composite.⁴⁸ This further strengthened its perception in terms of a group-identity, all faces dissolving into the prototype for a heroine of the past and a local ideal of beauty. This use of the composite technique could be understood in terms of the construction of an everybody figure aimed at addressing and

⁴⁵ Batut: *La photographie appliquée*, 9–10.

⁴⁶ Batut: *La photographie appliquée*, 21–22.

⁴⁷ Rose Barreau was recognised and remembered for her courageous act even in Germany, where an epitaph was published in the *Oberpfälzisches Zeitblatt*, Amberg, 15 March 1843, 173–174.

⁴⁸ Now the *Espace photographique Arthur Batut* in the photographer's hometown of Labruguière presents the composite, along with its components, in its permanent exhibition.



Batut, Arthur: *Portrait de Sémalens pour le monument Rose Barreau*. Exhibition view and detail, Collection Espace Photographique Arthur Batut / Archives Départementales du Tarn.

involving the public, offering an identifying surface for the common person, while promoting and popularising a distinct version of Frenchness that could be embraced by the community.⁴⁹ This identificatory figure was realised by means of the aestheticising gaze of composite portraiture, which softened the facial features and proclaimed a local ideal of feminine beauty.

Another protagonist in this special arena of the technique was the German archaeologist and curator Georg Treu, who examined the technique in relation to experimental aesthetics and the delineation of beauty in 1914. He highlighted composite portraiture's analogy to the blending of mental images into general types and its proximity to artistic practice. Both processes, he argued, succeeded in bringing out permanent character traits by achieving a likeness that was surpassing the appearance of the individual. The resulting composition is described as characteristic and beautiful – an archetype exhibiting the expressive power and permanence characteristic of monumental artworks.⁵⁰ The beautifying effect is presented as the central characteristic of composite portraiture, and Treu observes an increase of this impression, linear to the number of component portraits.⁵¹

⁴⁹ See Gschrey: "Facing Everybody?"

⁵⁰ Treu: "Durchschnittsbild und Schönheit," 435.



Treu, Georg: Composite plate of American students (Bowditch/Lovell) and reproduction of classical sculpture. In: Treu, Georg: *Durchschnittsbild und Schönheit*. Stuttgart: Verlag von Ferdinand Enke, 1914, plate I.

In Treu's publication, this observation is substantiated with composite portraits of American college students by Bowditch,⁵² in particular a larger composite portrait that hovers above a triptych of smaller images of male and female students flanking a Greco-Roman bust. This composite of 449 students is presented as the archetype of "regular beauty [...] of the Anglo-Saxon race."⁵³ These composite images and their assumed immutable beauty and implied

⁵¹ Treu: "Durchschnittsbild und Schönheit," 439.

⁵² These images are further discussed in relation to the technique's eugenicising gaze in chapter 7.

⁵³ Treu: "Durchschnittsbild und Schönheit," 440 (my translation).

intellectual superiority, are compared with the frontal photographic reproduction of a marble bust of Hermes, ascribed to the Greek sculptor Praxiteles.⁵⁴ The classical head is presented in a rectangular frame with three added lines; fiducial marks positioned as prescribed by Galton for the production of composite portraits are highlighting the proportions of the sculpture. On both sides, this image is framed by composite portraits of male and female students in a circular frame, exhibiting a similarly dark background. In the sculpture, as well as in the male composite face, a shadow partly obscures the right side of the face. The distribution of light in the female composite is reversed, which results in the impression that light is emanating from the centrally placed ancient sculpture, linking Treu's analytical study of composite portraiture visually with classicist conceptions of beauty.

With reference to its origin in the elite all-female Radcliffe College (today integrated into Harvard University), the female figure is described as a singularly beautiful combination of a "selection of fine heads,"⁵⁵ and its facial features are likened to Hellenic art. The student composites, Treu observes, look as if they were brother and sister.⁵⁶ And the pair of siblings is positioned as the incarnation of an immutable ideal of a racial, intellectual, and class-oriented beauty – a beauty that was believed to be grounded in Ancient Greek aesthetic ideals, but also in the observance of a norm oriented at average proportions and the arithmetic mean. In his composite analysis of beauty, Treu attributed wide-ranging explanatory power to the photographic technique:

[Composite portraiture] establishes the experimental confirmation for two important facts: [...] first of all, that the approximation of the facial features towards an average of the type of a specific race is perceived as beautiful, and furthermore, that of all historical artistic periods, the Hellenistic representation has embodied the typical-beautiful in the ideal of our race [...] in the purest and most accomplished way.⁵⁷

Composite portraiture and its aestheticising gaze are here employed as an experimental analytical technique in the field of aesthetics and the study of attractiveness and at the same time as an empirical tool for an art-historical

⁵⁴ This again follows a practice established in earlier art-historical writings in which the representation of ideal beauty, as an abstraction from individual humans in the sense of a common humanity, is compared to the representation of super-human, godlike figures. See Winckelmann: *History of Ancient Art Among the Greeks*, 43.

⁵⁵ Treu: "Durchschnittsbild und Schönheit," 440.

⁵⁶ See Treu: "Durchschnittsbild und Schönheit," 440.

⁵⁷ Treu: "Durchschnittsbild und Schönheit," 441 (my translation).

argument. Treu refers to Winckelmann's classical immutable beauty ideal, based on de-individualisation, but also observes the proximity of the average images⁵⁸ to Immanuel Kant's writings. He remarks that Kant's normal idea of beauty in his *Critique of Judgement* "sound[s] like an anticipation of composite portraiture."⁵⁹

And indeed, Kant's view of aesthetics and the concept of a normal idea of beauty seem like a conceptual prototype for composite portraiture.⁶⁰ Kant argued that the construction of the idea of beauty was not a mere rational operation, but a subjective judgement based on experience. Therefore, universal criteria for an ideal of the beautiful were unachievable.⁶¹ Yet, in relation to nature's production – flora, fauna, and humankind – an ideal of beauty in the sense of its structurally perfect realisation could be established in the creation of a composite form, combining all elements of a given species. The formation of this normal idea was to represent the type or genus by means of de-individualisation, while at the same time deducing general characteristics from individual cases. This aesthetic ideal and its proportions, Kant argued, could be represented in a concrete prototypical model.⁶² He employs psychological but also optical explanations for the production of these normal or general ideas:

[T]he Imagination can, in all probability, actually though unconsciously let one image glide into another, and thus by the concurrence of several of the same kind come by an average, which serves as the common measure for all. Every one has seen a thousand full grown men. Now if you wish to judge on their normal size, estimating it by means of comparison, the Imagination (as I think) allows a great number of images (perhaps the whole thousand) to fall on one another. If I am allowed to apply here the analogy of optical presentation, it is in the space where most of them are combined and inside the contour, where the place is illuminated with the most vivid colours, that the 'average size' is cognizable [...] And this is the stature of the beautiful man.⁶³

⁵⁸ Treu refers to the images as "average images" (*Durchschnittsbilder*). See Treu: "Durchschnittsbild und Schönheit."

⁵⁹ Treu: "Durchschnittsbild und Schönheit," 441 (my translation).

⁶⁰ More recently the American artist and critic Allan Sekula has emphasised this connection. See Sekula: "The Body and the Archive," 3. The German psychologists Kalkhofen, Müller, and Strack have likewise examined the connection. See Kalkhofen, H.; Müller, A.; Strack, M.: "Kant's 'Facial Aesthetics' and Galton's 'Composite Portraiture' – Are Prototypes Beautiful?" In: L. Halasz (ed.): *Proceedings of the XIth International Colloquium on Empirical Aesthetics (IAEA)*. Budapest: n. p., 1990, 151–154.

⁶¹ See Kant: *Critique of Judgement*, 85.

⁶² See Kant: *Critique of Judgement*, 88.

What Kant proposes here is nothing less than the optical superimposition of individual images in order to deduct a general visual type, a normal idea that later became expressed in the, albeit monochrome, photographic compositions of facial features. Kant defines this average figure as the prototype of the beautiful form, as a general image and an archetype of the species floating “between” its individual representatives, without being realised to perfection in any one individual. Kant elaborates that the normal idea was the condition for all beauty and constitutive for the establishing of aesthetic rules, by whose means a judgement on beauty would become possible in the first place. But this normalised representation, he cautioned, was not to be confused with a different, more profound ideal of beauty.⁶⁴

This expression of the average in its formal purity and as the universal basis for aesthetics and beauty, either directly or via the statistician Adolphe Quetelet, who in his concept of the average man revealed himself as a keen student of Kant’s philosophy, can be seen as an impulse for the development of composite portraiture and as a key element for its understanding. But while Kant, in his critical idealist delineation of archetypical beauty of the human form, had complemented this mechanistic definition with a moral and epistemic counterpart – namely, the ideal image of the human as an expression of purity in ethical composure, rationality, and power of imagination.⁶⁵ It was exactly those non-visual characteristics that Galton sought to visually measure by means of composite portraiture. In Galton’s composite faces, the categories that remained distinct in Kant’s philosophy: the normal idea of the beautiful and its moral ideal, become merged in the blurred photographic superimpositions. The aestheticising gaze of composite portraiture construes a normative, average idea of beauty – an idea of human perfection fixed into a concrete form, a composite shape that develops prescriptive potential. At the same time, it is a deeply culturally constructed gaze, oriented at historical conceptions of aesthetics and exhibiting nationalistic, racist, and sexist sentiments, which became elevated to the status of scientific truth by means of a mechanistic rationale based on numeric, statistical, and anthropometric as well as photographic-indexical reasoning.

⁶³ Kant: *Critique of Judgement*, 87.

⁶⁴ Kant: *Kritik der Urteilskraft*, 152.

⁶⁵ Kant: *Kritik der Urteilskraft*, 152.

Still, many writers on aesthetics around the turn of the twentieth century did not see artistic synthesis and aesthetic production realised in the photo-mechanically produced composite portraits. In their opinion, the notions of artistic genius and instinct were the defining elements of a truly artful representation of beautiful forms. With recourse to Kant’s thoughts on ethical beauty ideals as opposed to his normal idea of beauty, Treu argues that the normal type expressed by the composite portraits had to fall short of expressing the Kantian archetype of ideal beauty in an artistic sense.⁶⁶ His compatriot, Heinrich Bulle, who used the composite image of the college students as an illustration in a chapter on ideal heads in his monumental work on antique beauty, judged that this composite type could only be an approximation to what could be called beautiful. He argued that neither by means of the photo-mechanical technique, nor by means of other reason-based methods of the natural sciences could an “ideal” (in an artistic sense) evolve. He was convinced that true beauty could only result from instinctive, hand-made artistic synthesis.⁶⁷

David Katz, who worked with the composite technique well into the 1950’s, likewise addressed its beautifying aspect and the effect of composite aesthetics but observed fundamental differences to artistic creation. Among other subjects, Katz and his team produced a series of composite portraits of winners and finalists of local Swedish *Lucia* beauty competitions of the year 1950, in profile and in frontal view, with a neutral expression and smiling. For the analysis of the composite portraits, Katz takes an interesting psychological and reception-analytical approach. Rather than making a statement on the images himself, he asked artists to comment on the photographic compositions – and the artists seemed elated by the average images and compare them to masterpieces in painting and sculpture. They agree that the images had an artistic air and that their smooth and regular aesthetics had a great appeal and that the images appear to be more vivid than normal photographs. Two painters are in agreement on their vague, mysterious quality and their unseizable indifference. Another sculptor notes that they presented a condensed human representation that was elevated into a sphere of higher unity, and he seems unsettled that the photo-mechanical process could come to a result that had seemed to be reserved to artistic production.⁶⁸

⁶⁶ See Treu: “Durchschnittsbild und Schönheit,” 445.

⁶⁷ Bulle, Heinrich: *Der schöne Mensch im Altertum*. München/Leipzig: Hirth, 1912, 431.

⁶⁸ Katz: “Durchschnittsbild und Typologie,” 31–33.



Katz, David: *Lucia 1950. 10 components. Age: 20–22.* In: Katz, David: *Studien zur Experimentellen Psychologie*. Basel: Benno Schwabe, 1953, plate 27.

Notwithstanding the comments that Katz had collected on the aesthetic quality and artistic nature of the composites, he denied that the photographic technique could be creating beauty or “aesthetic substance.” In contrast to fine arts that were able to create sublime aesthetic objects, he described composite portraiture as a mere method of refinement, of photographically sublimating

the beauty already immanent in the human form.⁶⁹ He hereby seems to return to Galton’s perspective, who did not consider composite portraiture an artistic technique, but saw its strength in the visualisation of ideals and types embodied in groups of the human species. Still, Galton argued that composite portraits could offer a tool for artists and that the “beautifully idealised features of these composites [were] capable of forming the basis of a very high order of artistic work.”⁷⁰

A Long Afterlife: The Aestheticising Gaze of Composite Portraiture in Arts and Science

The aestheticising gaze of composite portraiture drew on ancient models of beauty in terms of a correspondence between a physical, external attractiveness of the human body and face and the beauty of inner and moral disposition. This conceptualisation of beauty remained prevalent in modern physiognomy, as well as in the eighteenth- and nineteenth-century revival of classicist aesthetics in art history and popular culture. In the late nineteenth century, it became enriched with evolutionary thought and hereditary explanations. This added the deeper, embodied assumption of genetic fitness to the equation of outer bodily attractiveness and inner moral beauty. With its roots in conceptions of a physiognomic equation of outer and inner beauty and the assumption of their genetic disposition, as well as in the adaptation of a neo-classicist composite aesthetics and conception of beauty, composite portraiture developed an aestheticising gaze that was appealing to scientists around the turn of the twentieth century and far beyond.

The development of composite portraiture was based on the kind of classicist composite aesthetics proclaimed in art-historical writings of the eighteenth century as an ideal of artistic representation, which sought the ideal of beauty in the merging of individual beautiful aspects into a whole, celestial composition. This eclectic, notional form of composition, enriched with statistical reasoning on average characteristics and ideal proportions of figures as a whole, developed into the experimental assertion of an ideal of composite aesthetics in terms of

⁶⁹ Katz: “Durchschnittsbild und Typologie,” 33.

⁷⁰ Galton: “Composite Portraiture” [1881], 145.

the photographic merging and superimposition of whole faces into average and ideal representations of the human form. The nineteenth- and early twentieth-century discussions retain a separation of the photographic technique from “art proper,” questioning its creative potential in producing original syntheses of artistic quality.

And still, the discussion surrounding the visualisations of attractive averages reveals the composite technique’s origins in the aesthetic realm. As a means of visual synthesis and aggregation, it constitutes a form of artificial visualisation producing images that could not have a direct correspondence in “real life.” Here the indexical status of photography is severely questioned and the images, in all their diffuse representation, become signs and signifiers for a deeper, invisible meaning. It is precisely the experimental productive process, the creation of something new that had not existed before, which constituted the appeal of composite portraiture – with the added benefit that it was not something fundamentally new. The images still exhibit a humanoid appearance, a face whose staring gaze is amplified by the focus on the eyes. This face-to-face, eye-to-eye encounter, combined with the increasing soft-focus to the margins, draws the viewer almost hypnotically into the picture and accounts for the pronounced suggestiveness and affective quality of composite images. This quality can be considered as a driving force in the technique’s reception, in particular in the context of composites that were produced of college classes and in other educational facilities, uniting the technique’s aestheticising and eugenicising gazes.⁷¹

The beautifying effect of composite portraiture, the loss of irregularities, was resulting in a soft-focus effect that was also employed in contemporary art.⁷² Not only in its aesthetic form, composite portraits showed proximity to artistic representation, but also in relation to the representation of typical appearances and ideal representations. Common aims were the production of ideal-looking physiognomies and typical, representative visualisations that sought to visualise the invisible and grasp the essence of the human. Still, the protagonists of scientific composite portraiture always struggled to maintain a distance from the realm of arts and maintain the technique’s independence as a mechanical-objective, analytical device. The attractive and attracting averages produced by means of composite portraiture and its aestheticising gaze partly disowned their origin in the artistic sphere, while at the same time drawing on the aesthetic appeal of the composite form.

The appeal of composite aesthetics continues today. In the final decade of the twentieth century, a number of scientific studies on the perception of attractiveness and beauty were conducted that utilised the digital tools then available for the composition of faces. In 1990, researchers based at Göttingen University, Germany, conducted an experimental study with digital composite portraits to verify the hypotheses voiced by Treu and Kant. The study worked with the visual combination of several frames of a video taken of students, hereby reproducing by digital means what could be called truthful living likenesses.⁷³ In a second step, researchers co-composed these composites by means of an algorithm into several ideal images of beauty with varying scales of regularity. These were then ranked by a group of students according to perceived attractiveness. By means of digital composite technology and psychometric reception analysis,⁷⁴ the researchers believe to have substantiated Treu’s thesis that the attractiveness of composite faces increases with the number of components, but could find no confirmation for Kant’s hypothesis that faces are perceived as more beautiful when they approach the medium appearance.⁷⁵

Likewise, Judith H. Langlois and Lori A. Roggman directed the aestheticising gaze of composite portraiture to the perceived attractiveness of university students in 1990.⁷⁶ They used the digitised portraits of 336 male and 214 female faces of American students and employed computerised averaging techniques to produce composites containing varying numbers of components. Their results suggest that the digital compositions were indeed perceived as more attractive than the majority of component portraits and that the effect increased with the number of faces added to the composites.⁷⁷ The researchers conclude: “Our results [...] confirm the subjective impressions of those who, in the last century, have viewed composite faces and commented on their striking

⁷¹ See chapter 7.

⁷² Josh Ellenbogen has examined the formal qualities, the soft focus, and blur of composite portraits and their similarities to contemporary artistic photography, noting that many influential nineteenth-century photographers like Henry Peach Robinson and Oscar Gustave Rejlander, the early protagonists of combination printing, but also Julia Margaret Cameron, used this soft-focus effect. See Ellenbogen: *Reasoned and Unreasoned Images*, chapter 5, 129–154.

⁷³ See chapter 9.

⁷⁴ Interestingly, Galton counts as a pioneer of psychometric analysis; see Gillham, Nicholas Wright: *A Life of Sir Francis Galton: From African Exploration to the Birth of Eugenics*. Oxford: Oxford University Press, 2001.

⁷⁵ See Kalkofen; Müller; Strack: “Kant’s ‘Facial Aesthetics’ and Galton’s Composite Portraiture.”

⁷⁶ Langlois, J. H.; Roggman, L. A. (1990). “Attractive Faces are Only Average.” In: *Psychological Science*, 1, 1990, 115–121.



Nature: Cover of *Nature*, 17 March 1994.

attractiveness.”⁷⁸ But what makes a face attractive? Is it really the absence of individual peculiarities in the faces that, with a larger number of 16 or 32 components, were judged to be strikingly alike?⁷⁹ And do these findings really allow for the conclusion that “the averaging procedure, in addition to producing

⁷⁷ Likewise, by means of composite portraiture, DeBruine et al. have argued that average alone is not the key to attractiveness and that there must be another factor. See DeBruine, Lisa M.; Jones, Benedict C.; Unger, Layla; Little, Anthony C.; Feinberg, David R.: “Dissociating Averageness and Attractiveness: Attractive Faces Are Not Always Average.” In: *Journal of Experimental Psychology: Human Perception and Performance*, 33:6, 1420–1143.

⁷⁸ Langlois; Roggman: “Attractive Faces are Only Average,” 119.

⁷⁹ See the study by Alley and Cunningham: Alley, Thomas R.; Cunningham, Michael R.: “Averaged Faces Are Attractive, but Very Attractive Faces Are Not Average.” *Psychological Science*, 2:2, 1991, 123–125.

attractive faces, also seems to produce a typical face”?⁸⁰ What could the face computed by the psychologists be typical of: the human face in general, which then would have to be considered as inherently beautiful? Or the group of students photographed for the compositions? *The* young American intellectual? Or the young “Caucasian American,” with “trace amounts” of 6–8 per cent Asian and 8–11 percent Hispanic students that the authors identify among their sample? It remains unclear what happened to the even less white student body, but it seems likely that this group was excluded altogether, specifically due to their skin colour. And here the exclusionary, normative force of the aestheticising gaze of composite portraiture becomes renewed.

More than century after Galton’s initial article on composite portraiture in *Nature*, the technique even made it back to the cover of the scientific journal in 1994. Two articles in the issue discussed composite portraiture; one delineating evolutionary psychological perspectives on beauty, the other, comparing female “Caucasian” and “Asian” composite faces.⁸¹ Nancy Etcoff, who later published the controversial book *Survival of the Prettiest: The Science of Beauty*,⁸² mentions Galton, but there is no critical perspective on the racist, classist, and eugenicist history of the technique. The cover art, obviously taking its cue from the *Time* magazine cover presenting “The New Face of America,”⁸³ is following the attention economy of sexual attraction, and the caption “Beauty is more than skin deep” hints at a deeper explanation for attractiveness, but also at its inevitability as part of a person’s genetic constitution.⁸⁴

And the afterlife of the aestheticising gaze of composite portraiture continues and descends into even murkier depths. The phenomenon has been studied from an evolutionary psychologist perspective by Donald Symons.⁸⁵ He argues that “humans evolved psychological mechanisms of attractiveness perception

⁸⁰ Langlois; Roggman: “Attractive Faces are Only Average,” 119.

⁸¹ See Etcoff, Nancy L.: “Beauty and the Beholder.” In: *Nature*, no. 368, 17 March 1994, 186–187; Perrett, D.; May, K.; Yoshikawa, S.: “Facial shape and judgements of female attractiveness.” In: *Nature*, no. 368, 17 March 1994, 239–242.

⁸² Already the book’s title reveals its Neo-Darwinist position: Etcoff, Nancy L.: *Survival of the Prettiest: The Science of Beauty*. New York: Anchor Books, 2000.

⁸³ *Time* magazine: “The New Face of America: How Immigrants Are Shaping the World’s First Multicultural Society.” 18 November 1993, cover.

⁸⁴ A more exoticising composite portrait of Japanese girls by the Austrian ethnologist Karl Grammer made it to the cover of the German *Zeit Magazin* with the caption “Verführung nach Maß”, i.e., “Seduction Made to Measure” (my translation). See *Zeit Magazin*, 5 January 1996.

that operate in a manner analogous to composite portraiture: the mechanisms (unconsciously) average [...] the faces each individual observes, and thereby generate a male and a female template of facial attractiveness.”⁸⁶ Deviations from this template, he reasons, reduced attractiveness – and evolutionary selection preferred the central tendency and average features. Symons here proposes that an evolutionary psychological mechanism based on mental composites governs mate selection and thereby human evolutionary development. His problematic biologising explanation of attractiveness and its role in reproduction centers on the attractiveness of women and the sexual attraction of men and thus reduces women to an object status, so familiar from nineteenth-century scientific discourse. And this sexist and racist sub-tone prevails when Symons puts forward awkward assumptions on so-called “ancestral populations,” as well as on skin colour that are on the limit to open racism.

This evolutionary-biologist perspective is also relevant in recent scientific publications on the perception of attractiveness and beauty. A number of authors from the fields of evolutionary psychology and behaviour science have worked on a phenomenon referred to as “evolutionary aesthetics,” and have often utilised composite portraits as part of their research.⁸⁷ The basis of beauty in this explanatory model of sexual attraction and mate selection is defined by the influencing factors of averageness, symmetry, and sexual dimorphism based on hormonal markers. One of the protagonists of this approach, Karl Grammer, argues by means of composite portraits that in female composite faces, averageness was perceived as beautiful, while the averaging effects of composite portraiture had negative influences on the perception of attractiveness of the male faces.⁸⁸ Darwinian or evolutionary aesthetics essentially presuppose a formation of cross-cultural beauty ideals according to human mate-selection criteria and characteristics perceived as indicating health, fertility, and strength by the representatives of the other sex.⁸⁹ The visual icon and prototype of this biological view of human beauty appears to be the female composite face.

⁸⁵ Likewise, Victor S. Johnson has used composite portraits in a study on mate-choice decisions and facial beauty. See Johnson, Victor S.: “Mate Choice Decisions: The Role of Facial Beauty.” In: *Trends in Cognitive Sciences*, 10:1, 2006, 9–13.

⁸⁶ Symons, Donald: “Beauty Is in the Adaptions of the Beholder: The Evolutionary Psychology of Human Female Sexual Attractiveness.” In: Abramson, Paul R. et al. (eds.): *Sexual Nature/Sexual Culture*. Chicago: University of Chicago Press, 1995, 80–118, at 97.

⁸⁷ See Rhodes G., Zebrowitz L. A. (eds.): *Facial Attractiveness: Evolutionary, Cognitive, and Social Perspectives*. Westport, Connecticut: Ablex, 2001; Volland, Eckart; Grammer, Karl (eds.): *Evolutionary Aesthetics*. Berlin: Springer Verlag, 2003; Swami, Viren; Furnham, Adrian.: *The Psychology of Physical Attraction*. London: Taylor & Francis, 2008.

As we can see in the studies on beauty and attractiveness in the final decade of the twentieth century, the aestheticising gaze of composite portraiture continues to be cast on the phenomenon of beauty – and in particular on the female face. In those studies, a return to evolutionary, genetic explanations can be observed that lead away from social definitions of beauty and attractiveness. In their discussions, the researchers, in favour of quantitative statistical methodology and mechanistic explanations, largely exclude socio-cultural and historical constructions of attractiveness. And the list of the physical items determined as beautiful is revealing: high cheek bones and large eyes etc., representing ideals of beauty that are highly culturally constructed and are established and reinforced in popular culture, in advertising and social media – and attributes that can be enhanced through make-up. Fittingly, these composite role models are recognised as blueprints in the field of plastic surgery.⁹⁰ The aestheticising gaze of composite portraiture still focuses predominantly on young women and reproduces old assumptions and prejudices in the guise of a new empirical repertoire and new digital means of composing ideal faces. In these gendered views on human beauty, a male and sexist gaze predominates that constructs women as desirable objects and shames irregularities and physical deformations – a perspective that originates in historical conceptions of attractiveness that have been amplified by the scientific protagonists of composite portraiture.

Arts and Artificial Facial Aesthetics: Binomial Peaks and Uncanny Valleys

Composite portraiture and its aestheticising gaze were rediscovered in the visual arts around the turn of the twenty-first century. Many of these photographic compositions, however, now follow a different agenda. They entail a deconstruction of the normative aestheticising gaze by highlighting the cultural and

⁸⁸ See Grammer, Karl: *Signale der Liebe. Die biologischen Gesetze der Partnerschaft*. München: dtv, 1993, 147–207.

⁸⁹ See Grammer, Karl; Fink, B.; Möller A. P.; Thornhill, Randy: “Darwinian Aesthetics: Sexual Selection and the Biology of Beauty.” In: *Biological Review*, 78/3, 2003), 385–407.

⁹⁰ Etcoff speaks of increased interest by practitioners in the field of plastic surgery in studies of composite aesthetics. See Etcoff: “Beauty and the Beholder,” 186. See also Wegenstein, Bernadette: *The Cosmetic Gaze: Body Modification and the Construction of Beauty*. Cambridge, Massachusetts: MIT Press, 2012.

medial construction of beauty and attractiveness. They do so by focusing on gaps and irregularities, by emphasising the uncanny monstrosity of the facial shapes that are not perceived as wholly human. Another current fashion is the construction of entirely artificial faces that are constructed by artificial intelligence and are almost undistinguishable from images of actual persons.

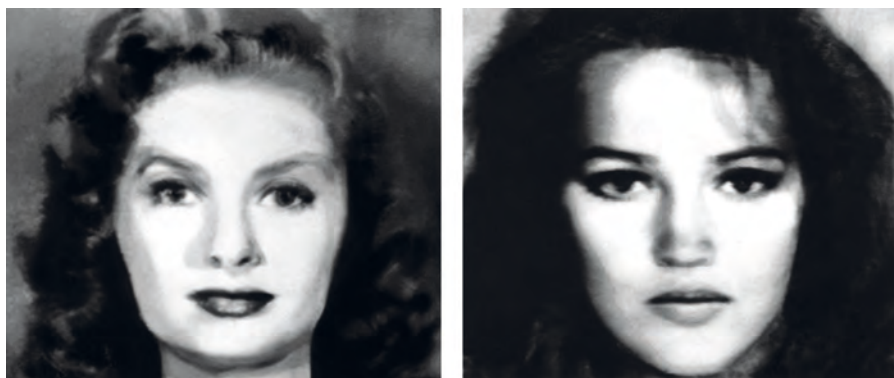
The earliest late twentieth-century artistic composite portrait that adopted the aestheticising perspective was produced by the French artist Krzysztof Pruszkowski, who in 1975 superimposed eight portraits of models of the Paris based agency *Christa*. The grainy, high contrast black and white close-up image emphasises the lower part of the face; the chin and the heavy make-up accentuate the eyes and the mouth. The component images seem to be enlargements of the printed material distributed by the model agency. Grid patterns, which results in a coarse texture that gives the impression of a pencil drawing are visible in the composites and the accentuated contrast has a mask-like effect. Rather than evoking the representation of combined beauty, of smooth skin and immaculate facial features, the composite portrait seems to hint at the *frictions* and at the faces' reproducibility in the fashion apparatus.

In the 1980s the New York-based artist Nancy Burson produced a series of computer-generated composite portraits of female actors in cooperation with IT programmers. The algorithm created images by mapping facial coordinates and computing their mean values. Burson's digital composite portraits present two versions or styles of female beauty of actresses by combining portraits of icons of American cinema and popular culture. The first seems characteristic of beauty ideals around the middle of the twentieth century, while the second seems to follow a beauty ideal that dominated the final decades of the century and seems to prevail in the twenty-first. Both composite faces seem strikingly familiar, but it is difficult to pinpoint individual markers of familiarity or characteristics of the individual components. This familiarity might be due to the omnipresence of the component faces in media and public imagination. All female faces that entered into the composition were already public property, mediated portraits that emerged from the Hollywood machinery that was dominated by a male gaze and functioned as projection screens for femininity and beauty for generations of Western viewers. The composite seems to further enhance this effect, the loss of individuality and the loss of definition – contours that dissolve into an almost monochrome white skin, a blank space inviting all kinds of ascriptions and projections.



Pruszkowski, Krzysztof: 8 mannequins de l'agence Christa Modeling, FOTOSYNTHEZA (composite portrait), 1975. Courtesy of the artist.

Nancy Burson contrasted her female versions of beauty with a diptych of male movie stars two years later. And here the representation of different “generations” of movie actors becomes even clearer. The components in the first were born in the early years of the twentieth century, those in the second towards mid-century, and thus they each represent beauty ideals prevalent in American popular culture of their respective times. In the case of male attractiveness, however, the styles and beauty ideals seem to change more slowly. While adopting the aestheticising gaze of composite portraiture, the resulting images

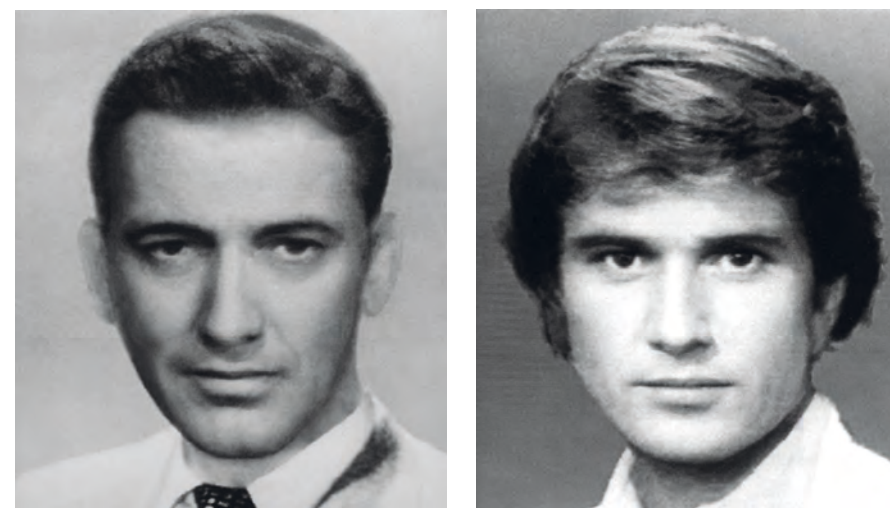


Burson, Nancy: *First Beauty Composite* (Bette Davis, Audrey Hepburn, Grace Kelly, Sophia Loren, Marilyn Monroe); *Second Beauty Composite* (Jane Fonda, Jaqueline Bisset, Diane Keaton, Brooke Shields, Meryl Streep), 1982. Courtesy of the artist.

contradict its epistemological basis and expose the strong normative dimension of attractiveness coined in the American media industry.

Burson's presentation of composite forms of female and male beauty is different from the approaches of nineteenth-century science and its revival in late twentieth century. Her composite portraits have an ironic undertone and do not assume a prescriptive role as representations of a universal ideal of beauty. Rather, what the composite portraits reveal are the reproductive mechanisms and evolving beauty ideals in the media industry. In her composites of actors, Burson is using portraits, which could already be described as artificial formations, to produce what could be called meta-composites of versions of attractiveness and their medial construction. While reproducing stereotypical representation of femininity and masculinity by means of the composite technique, the artistic works, in their over-exaggeration of physical markers of beauty, illuminate the prescriptive power and artificiality of an apparatus of socio-cultural construction and the aestheticising gaze of composite portraiture. The fascination with popular beauty and the composition of celebrity faces continues to flourish in twenty-first century popular culture in a number of projects by artists, IT specialists, and designers, however with far less critical potential.⁹¹ The widest-circulated of these probably was a Benetton campaign discussed in relation to its racialising perspective above.⁹²

A different perspective is offered by the German artist Thomas Ruff, who has produced a series of analogue composite portraits of two persons each. The composites that were shown prominently in the German Pavilion at the 1995



Burson, Nancy: *First Male Movie Star Composite* (Cary Grant, Jimmy Stewart, Gary Cooper, Clark Gable); *Second Movie Star Composite* (Richard Gere, Christopher Reeve, Mel Gibson, Warren Beatty, Robert Redford), 1984. Courtesy of the artist.

Venice Biennial were created with a historical identikit picture generator, an instrument that had previously been used by the German criminal police to produce artificial portraits for tracing suspects.⁹³ Ruff could draw on his own large archive of neutral frontal portraits, for which the photographer became renowned. The series *Andere Porträts* ("Other Portraits"), is a further examination

⁹¹ A composition of the ideal of beauty was attempted by the screenwriter and animator Marius Vibe, who in 2014 composed the faces of eight women rated as the most beautiful by *Maxim* magazine into "überwoman." Richard Prince created a composite portrait of the 57 faces of the titular character's girlfriends on the TV show *Seinfeld*. And in 2013, Bill Lytton, also drawing on polls, among others that of *Maxim* magazine, produced a composite portrait of two sets of 32 each portraits of male and female subjects considered attractive and unattractive, respectively. Data specialist Giuseppe Sollazzo has produced computerised composite portraits of all cover models of different national issues of the magazine *Vogue* in order to produce the faces of fashion of the different countries, thus picking up a topic for composite portraiture promoted by the fashion brand Benetton, which produced composite model faces for different cities for an advertisement campaign in 2018, which in turn drew on the project *Face of Tomorrow*, a series of facial composites of men and women of different cities produced by the South African photographer MikeMike beginning in 2004. See Hanssie: "The World's 'Most Beautiful Women' Combined Into One Pretty Composite." <https://www.slrlounge.com/the-worlds-most-beautiful-women-combined-into-one-composite> [15/01/2022]; Lytton, Bill: "What Averaged Face Photographs Reveal About Human Beauty." (2013) <https://petapixel.com/2013/05/28/what-averaged-face-photographs-reveal-about-human-beauty> [15/01/2022]; Zhang, Michael: "The Average Faces of Vogue Cover Models Around the World." (2018). <https://petapixel.com/2018/08/06/the-average-faces-of-vogue-cover-models-from-around-the-world/> [15/01/2022] and <https://rhizome.org/art/artbase/artwork/the-face-of-tomorrow-the-human-face-of-globalization> [15/01/2022].

⁹² See chapter 4.

and extrapolation of his series of de-individualised, de-emotionalised close-up portraits, which the artist had described as a “perfect surface onto which the viewer can project anything, bad and good experiences alike, [and as] vessels you can fill with all of your wishes and desires.”⁹⁴

Even though Ruff aimed, by means of the photographic manipulation, at enhancing male and female attributes, creating a “‘macho’ type, or [...] mixing two beautiful women [into] Superwoman,”⁹⁵ the resulting compositions did not yield the expected outcomes, but resulted in erratic, eerie mixtures. It turns out that it is precisely these discrepancies and visual disagreements that evoke an uncanny feeling and account for their attraction. In the creation of these mixed faces, individuality becomes merged into a compound dividuality – a disrupted unity in a facial shape that pronounces the separateness and the *monstrosity* and highlights the artefacts of incomplete transformation. It is the ruptures and inconsistencies in the facial models that hint at possibilities of digital manipulation and the computerised construction of artificial, virtual faces, which eventually could no longer be distinguished from actual faces.

Ruff’s images are different from composite portraits of the whole face, owing to their identikit origins they could be described as partial or sectional composites, a strategy that is also employed by the US-based artist Jake Rowland.⁹⁶ Ruff’s incoherent composites deconstruct ideas of composite aesthetics, of an increase in beauty and the visualisation of a superhuman form deduced from individual characteristics. They contradict the normative aestheticising gaze of composite portraiture, which aims at consistent unity, an equilibrium of form, and a universal and ideal human nature as embodied in average proportions. In reference to his photographic series, Ruff speaks of “playing Frankenstein” and refers to Lavater’s and other “misled physiognomic interpretations.”⁹⁷ The

⁹³ The manner of the image’s production does not follow the general mode of production of composite portraits, but I still consider the results to be composite faces that conceptually refer to the technique of composite photography.

⁹⁴ Blank, Gil; Ruff, Thomas: “Does a Portrait Without Identity Still Have Value to Us as People? Gil Blank and Thomas Ruff in Conversation.” In: *Influence*, no. 2, 2004, 48–59, at 51–52.

⁹⁵ Blank; Ruff: “Does a Portrait Without Identity Still Have Value to Us as People?,” 58.

⁹⁶ The US-based artist Jake Rowland also draws on the contrast between individual faces and imperfection by selectively superimposing portraits in his series of family composites, *Wife/self* (2005). See the discussion of Rowland’s family composites in chapter 8.

⁹⁷ See Ruff, Thomas: Ruff in conversation with Stephan Dilleuth. In: Amman, Jean Christophe; Biennale Venedig (eds.): *Thomas Ruff: Andere Porträts + 3D*. Ostfildern: Cantz Verlag, 1995.



Ruff, Thomas: *Andere Porträts* 122; 143A/14; 143/131, 1994–95. Courtesy of the artist.

artist seems partly aware of the background of the composite technique, but does not refer to Francis Galton or other protagonists of composite portraiture. Still his work deconstructs eighteenth- and nineteenth-century modes of visual scientific reasoning and implicitly criticises myths of the supposed mechanical objectivity of photography, as well as the reliability of identikit identification portraits.

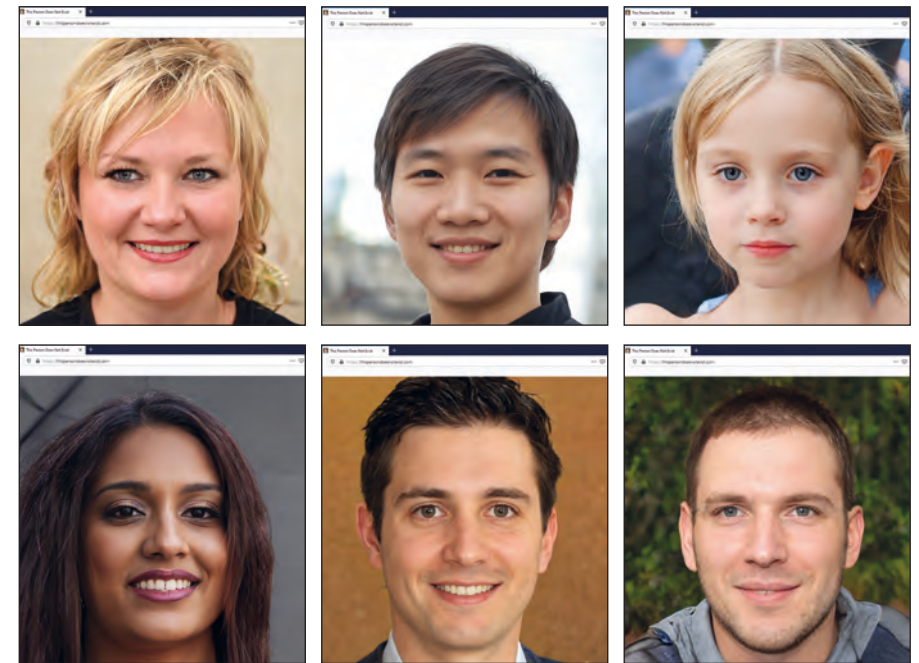
The uncanny note that is prevalent in all composite portraits, in particular in the staring gaze of the humanoid facial form that shows a face, but no individual, is particularly pronounced in Thomas Ruff’s incomplete, monstrous superimpositions, but also in Nancy Burson’s meta-composites of beauty ideals and their pop-cultural incarnations. An intangible feeling of suspicion arises in the encounter with these composite faces, in particular, when they are perceived as representations of female or male beauty. This ambiguity in the reception of composite portraits can be addressed by the concept of the “uncanny valley,” proposed by Masahiro Mori in the 1970s. The Japanese robotics expert observed that the acceptance of artificially constructed figures does not increase linearly to their anthropomorphic resemblance. A measurable gap in emotional responses, an abrupt shift from empathy to revulsion, could be observed when artificial human forms get close to, but do not completely match a natural human appearance.⁹⁸ This may explain the strange, the uncanny feeling when looking at composite portraits.

This uncanniness of the composite faces is neglected in the recent scientific studies on attractiveness, in which the initial question to the test persons should be whether they perceive the face presented to them as entirely human in the first place. The theory of the uncanny valley seems to call into question the proclamation of the realisation of the ideal of beauty at the peak of the binomial curve, from its beginning in the nineteenth century all the way to twenty-first-century psychological studies and artistic creations. In its aestheticising gaze, in particular, the composite becomes a projection screen that requires performative work in a face-to-face encounter between an artificial humanoid form and the viewer. The focus on this encounter, which provokes emotional reactions and requires a positioning of the viewer in relation to the face, reveals *reception* as a central category for the effect and impact of the technique. The uncanny valley could explain the ambiguous reactions in relation to the unseizable composite faces, which on the one hand were celebrated as a higher form of beauty and on the other as artificial constructions and eerie spectres of humanoid resemblance lacking artistic quality. The aestheticising gaze of composite portraiture, which aimed at the superhuman ideal and a supra-individual form of beauty, becomes caught in the web of its own artificiality which provokes ambiguous affectual responses to the face-like shapes it produces.

Another phenomenon that addresses the questions of the representation of individuality and beauty in the digital age is the creation of entirely artificial faces intended to look as human and as natural as possible, such as on the website *this person does not exist*.⁹⁹ This platform produces and shows facial images that were constructed by means of the software *StyleGan*, an artificial intelligence programme released by the IT company NVIDIA. The programme is based on a so-called generative adversarial network, a neural-network-based machine learning framework that, in a process of competitive comparison, creates entirely artificial images of faces that look (almost) natural to the human eye.¹⁰⁰ The facial images created by this artificial intelligence could be read as entirely artificial composites that try to subvert our perceptions of what is “real” and what looks “real” and further cast doubt on the indexical nature of portrait images, as well as on visual identification and typification practices.

⁹⁸ See Mori, Masahiro: “The Uncanny Valley.” (1970) In: *IEEE Spectrum*, 12/06/2012. <https://spectrum.ieee.org/automaton/robotics/humanoids/the-uncanny-valley> [15/01/2022].

⁹⁹ See <https://thispersondoesnotexist.com> [15/01/2022].



StyleGan: Artificial faces produced by means of the artificial intelligence *StyleGan*. Screenshots from the website <https://thispersondoesnotexist.com> [28/02/2021].

Artistic composite portraits, produced around the turn of the twenty-first century, highlight ruptures and ambiguities and offer novel perspectives on the one-and-a-half-century-old technique. They examine its peculiar aesthetic that came into existence between the fields of arts and science, when the medium of photography was still in its infancy and discussions on its indexical nature, on its evidential quality and presumed neutral depiction were at a peak. Current artistic practice and computer-generated artificial compositions expose the normative aestheticising gaze of composite portraiture. In today’s scientific studies, in advertisement and popular culture, however, the technique’s evidential claims become reasserted. Thus, the discussion of artificial constructions of human beauty and their uncanny nature appears essential for the future of media production, in which artificial and computer-generated figures are increasingly replacing or complementing human actors. This is why it seems all the more important to preserve a feeling of uncanniness in relation to these artificial facial compositions.

¹⁰⁰ See among others: Karras, Teo et al.: “Analysing and Improving the Image Quality of StyleGAN.” (2019) <https://arxiv.org/pdf/1912.04958.pdf> [15/01/2022].





11 | De-Constructing Composite Portraits and Re-Composing Perspectives: Conclusion

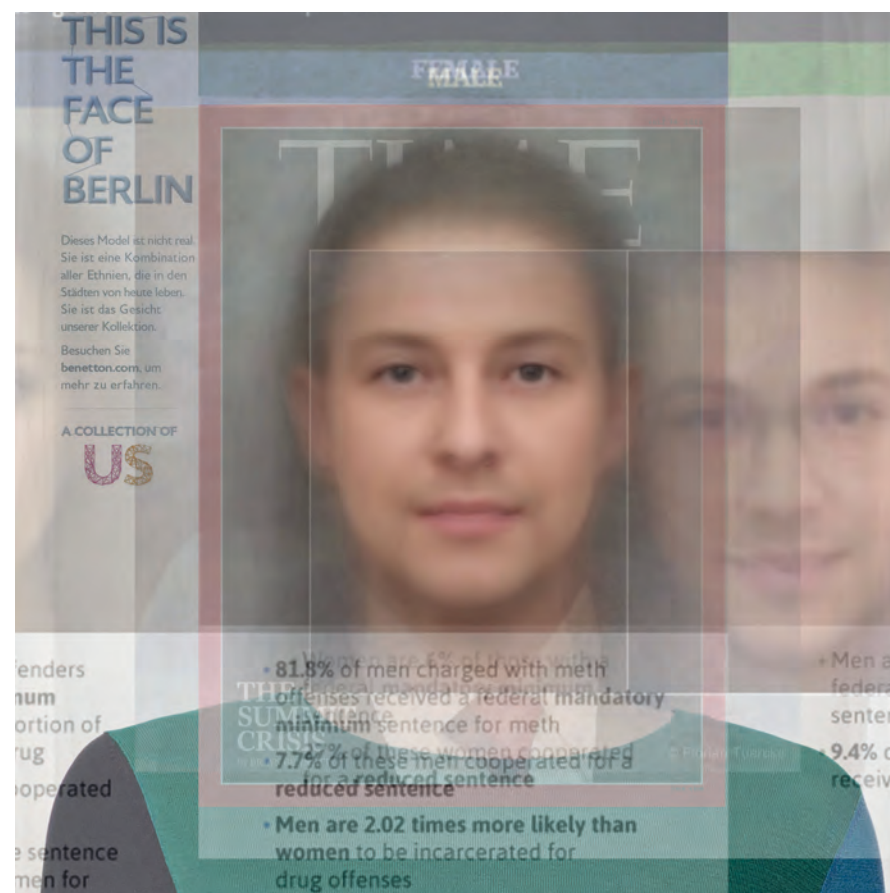
This study of the photographic technique of composite portraiture offers an in-depth examination into the diverse spheres of its utilisation over the course of its almost one hundred fifty year history, providing a systematic categorisation of the scopes and aspects of the technique in diverse fields – and for different, sometimes conflicting purposes. My intention is essentially an analytical de-composition of the lexi-visual composite formations: close readings of component images and the circumstances of their production, examination of composite portraits and their (re-)presentation in publications, as well as analyses of their role in contemporary discourses and their creator's ideological agendas. The project is likewise a re-composition, a new contextualisation, from my necessarily limited and subjective, as well as historically specific perspective.

This conclusion recapitulates central findings of my study, yet it also includes observations about my role as an artist/curator/academic that influenced this study in form and content. This artistic-curatorial perspective will be examined in the beginning, followed by a summary the specific gazes that by means of composite portraiture were cast on human faces in the course of its history. The affective quality of the images and the power dynamics involved in their production and reception are revisited in the next part. This chapter furthermore intends to broaden the study's horizon by offering observations on the current importance of composite portraits and artificial facial visualisations at a time of increasing digitisation and artificial intelligence-driven big-data analysis. Here, I return to current composite artworks as reflectors, critical instances, and catalysts, exploring the subversive strategies of artistic positions in the field. The final part adopts a meta-perspective and provides an outlook on composite portraiture; it explores how to deal with future artificial composite faces and biometric recognition and their promises of providing access to the invisible by visual means.

Curating Composites

This study was shaped by my experience as an academic but also as an artist and a curator. This artistic-curatorial approach becomes apparent in the structure of the thesis and its chapters. Images and the contexts of their production, analysis and reception are presented; they are viewed in relation to one another and are compared to and contrasted with each other. Clues to their reading are proposed from different vantage points, yet the evaluation, along the lines of visiting an exhibition, rests with the viewers and readers. The chapters of this book provide historically grounded and theoretically substantiated, yet limited, perspectives – storylines that highlight specific readings of the technique in different contexts. The angles, insights, and categorisations that I provide are not exhaustive – some of them are contradictory. Still, I am convinced that this multi-focal perspective is well suited to casting light on the complexity of composite portraiture that not only oscillates between the fields of arts and sciences, but also between materialistic photo-chemical and metaphoric-conceptual understandings.

In the course of the project, I not only had the chance to visit and explore a number of archives, collections and exhibitions, but also to (co-)curate exhibitions in which contemporary artistic perspectives by and on the technique were presented in artistic and academic contexts. This perspective will be expanded in a series of exhibitions on composite portraiture that bring together (historical) scientific with artistic exhibits in cooperation with the relevant archives and collections in France and Britain, in which the originals are kept.¹ Curatorial work is characterised by the development and definition of topics, the exploration of relevant material, the interpretation and contextualisation of objects. It entails establishing connections between objects and viewers in the performative space of the exhibition. This can be summarised in terms of the formation of meta-narratives. But unlike the authoritative position often adopted in academic literature, these multi-dimensional narratives are not aimed at offering definite answers, but vantage points for the perception of the material within a contextual framework. The role of a curator is then that of a moderator in the emergence of insights and perspectives, and of a facilitator in the establishing of individual understandings. Curators, however, also take an active role in shaping the content and context. In this study, I have attempted to unite this perspective with the more analytical exploration of the phenomenon of composite portraiture.



Gschrey, Raul: *Co-composite of selected specimens of composite portraiture 2016–2020*. Digital co-composite of the images referred to in the introduction, 2022.

Following this artistic-curatorial approach, I have taken the liberty to produce a co-composite portrait of the more recent examples of the technique shown in the introduction. This co-composite offers as a way of reviewing the gazes discussed earlier. And it is my artistic visualisation of the technique's ultimate promise to visualise the invisible through the accumulation of visible artefacts – to transcend beyond the outer appearance into the inner structures of body and mind. The resultant digital composite image has a strong soft-focus effect, but is still recognisable as a facial shape – a void artificial face with a high affective potential that catches the viewer's attention in an eye-to-eye encounter. But what do composite faces actually reveal? In the nineteenth century and

¹ The project blog will report on the exhibitions and ongoing work: <https://identification.de>

now, the answer remains: essentially nothing – and whole lot. The images show an opaque humanoid form and a palimpsest of perspectives and discourses, desires and fears, ideological agendas and worldviews, hinting at all that is projected onto them. These projections take centre stage in my diachronic examination of composite portraiture, revealing a set of perspectives on and modes of reasoning with the photographic technique and its digital successors that bridge the course of its history – from the earliest experiments in the dark chamber to the artificial intelligence driven data analyses and morphings in the digital black boxes of the twenty-first century.

Composite Affects

For the understanding of the workings and effects of composite portraiture, it is also important to discuss the image's affectual qualities – as artificial portraits, showing a facial shape, but no actual human face. In general, visual representations of faces develop a strong presence that has fascinated viewers long before the advent of photography. As Jenny Edkins, with reference to Jean-Luc Nancy, argues on the involvement of the viewer and photographic representation of faces and their politics: “the portrait is not just an image organised around a face, ‘the face itself must be arranged around its gaze, around its seeing or its vision.’”² Portrayal in a modern sense, as Marcia Pointon has observed, is bound up with anxieties of betrayal, of inaccurate or involuntary representation. The images often move beyond the actors control; they are resistant to reading, opening questions of agency and complex subject-object relations.³ The process of depiction always has a violent side, as Nancy highlights, it does not reproduce, nor reveal, but produces the “exposed-subject.”⁴

Visual arts have long aspired to convey “true likeness,” to capture permanent features of the face, as well as emotions and character. Early photographers – and protagonists of combination printing – like Oscar Gustave Rejlander and Henry Peach Robinson, as well as scientists like Charles Darwin have struggled to depict emotionality in faces; judiciary photography sought to record markers

² See Edkins, Jenny: *Face Politics*. London: Routledge, 2015, 28.

³ Pointon, Marcia: *Portrayal and the Search for Identity*. London: Reaction Books, 2013, 8.

⁴ See Jean-Luc Nancy quoted in Edkins: *Face Politics*, 29.

for identification; and ethnographic photography aimed at the production of representative types of humankind. All forms of depiction, however, must fail with respect to the representation of a face in its complexity and fluctuating presence. Still, the immediacy of the visual encounter with a facial portrait is, like the interaction with an actual person, a deeply emotional and affectual affair. This haunting presence becomes amplified in the medium of photography through its indexical and temporal understanding as an “emanation of the referent,”⁵ a continuity of the gaze between face and camera that extends to the (future) viewers. Although this understanding of photography as direct (material) reference is certainly arguable,⁶ it hints the emotional, perceptive entanglement of the viewers with the images and faces of the past. Through their immediacy in addressing viewers, photographs develop a strong affective power, “the portrait exposes the uncanny relationality of subjectivity,”⁷ and attention is drawn to the portraits, glances interlink, if only in the recognition of “another presence.”

Composite portraiture constitutes a special case, an emotionalised form of artificial meta-portraiture, a de-individualised phantasm of embodiedness, representing a facial form, but no actual face. The special composite aesthetics – the frontal alignment, the soft focus, the increasing density and clarity towards the centre of the images and the focus on the eyes that are directed at the viewers amplifies the tension – drawing viewers into eye-contact with an elusive and synthetic presence. The uncanny feeling that arises towards faces that are not entirely natural, as observed by Mori,⁸ rather than alienating the viewers, seems to increase the affective power of the images. This links in with Freudian arguments on the uncanny as the strangely familiar between aversion and desire and as an ambivalent sensation that horrifies and remains beyond explanation, but still includes ample points for emotional attachment.⁹ Composite portraits thus offer an effective and uncannily affective surface for the projection of a variety of ideas, thoughts and worldviews.

⁵ Barthes, Roland: *Camera Lucida: Reflections on Photography*. New York: Hill and Wang, 1981.

⁶ This position has been criticised by Philippe Dubois. See Dubois: *Der fotografische Akt*. Susan Sontag has adopted a more index-critical position, describing photographs in terms of a pseudo-presence and as tokens for absence, hiding reality, rather than disclosing it. See Sontag: *On Photography*.

⁷ Edkins: *Face Politics*, 30.

⁸ See Mori: *The Uncanny Valley*.

⁹ See Kelly Hurley's characterisation of the uncanny: Hurley: *The Gothic Body*, 39–44.

As lexi-visual constructions, the images and their (con)texts were adopted as highly charged agents in the production and continuation of power-knowledge regimes in the disciplinary societies of late nineteenth and early twentieth centuries: in the creation of the typical and normative images of humankind and the ontological understanding of the human in relation to the normative mean and the aestheticised average. The affective dimension extends to the performance of the composite gazes, to the practices and asymmetries in the act of photographic composition in the nineteenth century. For the production of the component portraits in the makeshift studios installed in disciplinary institutions of the time, sitters were pressed into submission in front of the inquiring and normalising lens. These power relations find expression in the iconography, as well as in the faces of the sitters, sometimes leading to disobedient and oppositional gazes of the “objects under scrutiny.” This reveals the immediacy and force of power-knowledge regimes acting on individual and collective bodies and their visual-affectual orientation.

Composite portraits still figure as powerful affective agents in current popular culture, arts and sciences – and meaning continues to be constructed and de-constructed by means of this special form of photographic portraiture. Current artistic and popular-cultural perspectives seem fascinated with the affective quality and in-concrete presence of an artificial “common” face. This form of “visual reasoning” appeals to the more intuitive sense of people and their readiness to believe what they see, rather than making sense of the world through textual mediation. The primacy of the affective in image reception and the sub-conscious responses were noted by Brian Massumi¹⁰ – and Sara Ahmed has argued that affect and sub-conscious processes play a major role in the formation and perception of collective bodies.¹¹ This nexus the immediacy of visual reasoning and the representation of collective figures, paired with a firm belief in the objectivity of the photographic medium, now and then, explain the high affective power of composite portraits. Current artworks likewise draw on this quality; yet, they mirror the changes in relation to the socio-cultural understanding of technique and they call into question the idea of the face as an indicator for character and “mirror to the soul.”

¹⁰ See Massumi: *Parables for the Virtual*, 24.

¹¹ Ahmed, Sara: “Affective Economies.” In: *Social Text*, 22:2, 2004, 117–139.

Reviewing Composites: General Observations and Specific Gazes

The recapitulation of my findings on composite portraiture seeks to highlight the technique’s overarching aims and claims and their relevance in nineteenth-century science and beyond. The section furthermore provides a short, but more specific review of the central aspects of the different gazes expressed in composite portraiture and how these perspectives constructed knowledge about the human, its outer features and inner characteristics. This allows for the integration of the findings of my diachronic perspective and offers spotlights on current uses of the technique in arts, sciences and popular culture.

In the historical analysis, composite portraiture appears as a paradigmatic visual practice of the nineteenth century, a visual analytical attempt of forming taxonomies and bringing (visual-semiotic) order to the chaos of the human crowd¹² and thereby making it manageable in the ever-refining network of specialised disciplinary institutions of the prison, the asylum, the clinic, the school, and the army. Composite portraiture goes beyond the mere descriptive; it constituted a productive lexi-visual practice and an active epistemological agent in the establishing of normative ideals and ostensibly objective knowledge on groups of people.¹³ These visual stereotypes were forged against the background of earlier assumptions and contemporary biases and contributed to labelling groups as deviant.¹⁴ In their visual-statistical attempt to define typical characteristics and unite general aspects of a pre-defined group, composite portraits can be understood as a tautological condensation of the archive into a single artificial visualisation.¹⁵ In composite portraits, the individual face dissolves and becomes transparent, in order to facilitate its reading as a meta-signifier and its hidden signs and deeper truths.

The explanatory power of composite portraiture was taken even further. As I have shown, the composite meta-portraits can be seen as a photo-chemical re-enactment of modes of visual reasoning in medical and scientific practice,

¹² This takes up Susanne Scholz’s perspective on composite portraiture and combines it with a Foucauldian perspective on disciplinary and normalising society. See Scholz: *Phantasmatic Knowledge*.

¹³ This draws on the writings of Bruno Latour on actor-networks and the importance of scientific techniques, apparatuses and material surroundings in the production of scientific knowledge. See Latour, Bruno: *Reassembling the Social: An Introduction to Actor Network Theory*. Oxford: Oxford University Press, 2005; Latour, Bruno: *Pandora’s Hope: Essays on the Reality of Science Studies*. Cambridge: Harvard University Press, 1999.

such as in the formation of clinical pictures of diseases. In their metaphorical understanding composite portraits were seen as explanatory devices for cognitive processes and for theories of genetic transmission – and later for dream imagery and analyses, as well as language-philosophical considerations. Beyond that, composite portraiture was positioned as a spectral gateway into the past and as predictive device for the eugenic future of humanity. This attests to the high flexibility of the composite as concept and the interpretative openness of the visual form of composite portraiture and its specific aesthetics that continues to fascinate artists and scientists alike. Here an almost iconic status of composites can be observed that relies on the images' peculiar aesthetics. In what Dieter Mersch has described as visual epistemics and the aesthetics and logic of showing,¹⁶ the discussion of the aesthetic form of composite portraiture is necessarily a political one.

The examination of nineteenth-century composite portraiture shows that the technique was a long-term interest and a decisive factor in the work of Francis Galton that is intricately linked to his well-received work on genetic transmission, statistics, anthropology and anthropometry, identification, and most importantly to his eugenic project. The technique had its heyday in the late nineteenth century and continued to be used well into the twentieth century, confirming ongoing interest in composite portraiture in wider scientific circles. Its utilisation in anthropology, criminology, medicine and eugenics, shows the position of composite portraiture in contemporary disciplinary and normalising society and the role of the visualisations in biopolitical management. The study of the technique's origins, the iconographic specifics and the photographic prerequisites for composite portraiture has led to my definition of component photographs as disciplinary portraits. Again following Foucauldian terminology, I have described nineteenth-century composites as biopolitical portraits.¹⁷

¹⁴ The processes of labelling that were described by Frank Tannenbaum and Howard Becker in relation to the construction of the criminal can here be expanded on the other phenomena of deviance at which the gaze of composite portraiture was cast. In the visual labelling by means of the composite technique, their producers appear as moral entrepreneurs engaged in the formation of these images of moral, physical and social deviance. See Becker, Howard S.: *Outsiders: Studies in the Sociology of Deviance*. New York: Free Press, 1963; Tannenbaum, Frank: *Crime and the Community*. Boston: Ginn, 1938.

¹⁵ This expands Allan Sekula's argument of the composite portrait as the condensation of the archive. It also refers to Dieter Mersch's media-historical typology and positions composite portraiture as an early example of artificial visualisation that he defined as an emblematic practice of scientific visualisation in the around the turn of the twenty-first century. See Sekula: "The Body and the Archive"; Mersch, Dieter: *Medientheorien zur Einführung*, Hamburg: Junius, 2006.

The analysis of scope and utilisation of composite portraiture has revealed distinct fields in which the technique was employed for diverse purposes and to different effects. In the nineteenth century it was used to "picture" criminality, illness, "race," heredity, beauty, as well as historical characters, exhibiting specific gazes that I establish as categorisations and interpretative frameworks. Yet, intersectional and overarching categories also come to the fore in my study, such as class, gender, religion, and (dis-) ability that expand the exclusionary and marginalising mechanisms at work in the composite visualisations. In the in-depth examinations of the gazes of composite portraiture, I have been able to show connections to older modes of scientific and popular reasoning of "reading off the face," and forming visual and statistical typologies such as in physiognomy and phrenology, medicine, and natural sciences – and the continuity of these perspectives in current science and popular culture.

The **criminalising gaze** of composite portraiture that is examined in chapter 3 incorporated and reinforced moral evaluations, as well as physiognomic ascriptions of criminality by construing and universalising physiognomic suspicion through the accumulation of individual markers in the convict's faces. In this gaze the physiognomic orientation of the technique becomes strongest; this went along with labeling practices based on social and economic status, revealing the role of moral entrepreneurs in the newly establishing fields of criminology and criminalistics and the ubiquity of degenerationist and atavistic theories. In this field the technique developed its strongest influences on the lives of actual people and their "management" in disciplinary institutions. Furthermore, the criminalising gaze attests to the prognostic quality ascribed to the technique and links it to twenty-first-century developments in criminology, such as in actuarial justice and the risk-based management of crime. A number of current digital composite portraits maintain the connection to physiognomic thought, in a new guise. They are presenting faces of immoral character, drawing on the disciplinary portraits produced in the Chinese and American prison industry. Artistic works, on the contrary, play with the expectations attached to images of criminality; they call into question any clear distinction between good and evil and their physiognomic realisation and therewith subvert the evidential (and moralistic) claims of the technique.

¹⁶ See Mersch, Dieter: "Wissen in Bildern. Zur visuellen Epistemik in Naturwissenschaft und Mathematik." In: Bernd Hüppauf; Peter Weingart (eds): *Frosch und Frankenstein – Bilder als Medium der Popularisierung von Wissenschaft*. Bielefeld: transcript 2009, 107–134.

¹⁷ This argument is made in chapter 3.

The **racialising gaze** of composite portraiture, discussed in chapters 4 and 5, was cast on European and non-European populations alike, albeit in different ways. It presupposed European (genetic) superiority and sought to capture the essence of physical diversity as a fundamental embodied difference, categorising humans in a hierarchical structure of “(sub-) races.” Furthermore, this gaze was oriented towards the past and the osseous remains and functioned as an explanatory device for theories on human descent and evolution. Popular cultural utilisations around the turn of the twenty-first century partly maintain some of the questionable racialising ascriptions in the composite faces. Some artistic works likewise maintain ties to nationalising and ethnic ascriptions, if only by celebrating difference in multicultural urban contexts in their composite visualisations. But most of the artistic positions focus on local contexts and decidedly argue against a racialising reading. They do so by positioning the aesthetics of the technique, its diffusion and disintegration, as well as the immaculate smoothness realised through digital morphing,¹⁸ against the racialising gaze established in the nineteenth century.

The analysis of the **pathologising gaze** in chapter 6 shows the technique’s interconnections with scientific modes of reasoning in the formation of the medical gaze and clinical pictures of diseases. The technique here takes the visual rationale in science and in medical diagnosis and its systematic categorisation of diseases literally – and re-translates it into the photographic medium. This shows the nineteenth-century understanding of photography as an ideal medium of objective recording in medicine and science and its epistemological role in these fields. The pathologising gaze was cast on patients diagnosed with mental illnesses, tuberculosis, and other disease patterns. It stands in the tradition of the earlier use of photography in the fields of medicine and psychiatry and served to maintain assumptions of the heredity of tuberculosis long after the discovery of its infectious nature. The composite technique maintains the discriminatory power and disciplinary frame already apparent in its criminalising gaze. Furthermore, the pathologising gaze of composite portraiture linked phenomena of physical, mental and moral deviance, supporting assumptions of an embodied interconnection of hereditary and moral disposition. This perspective continues in present popular cultural and scientific projects by means of the technique that are pathologising and biologising human difference such as non-heteronormative sexual orientation and they continue to associate

¹⁸ The smoothness and regularity realised in techniques of digital morphing works against historical assumptions of an inherent deficiency expressed in irregularity and deformity. See chapter 4.

disease patterns such as drug addiction with criminality and moral degradation. They even maintain the disciplinary context and draw on judiciary archives, as Galton in his earliest experiments with the technique.

The **eugenicising gaze** of composite portraiture that is discussed in chapter 7 mainly manifested in late nineteenth-century North-East America. The composite faces, constructed from portraits taken at educational facilities and among the scientific community, presented self-affirmative images of class and socio-economic status, of the mental and physical merit of a self-proclaimed intellectual elite. These visual role models were usually realised with the consent of the sitters and can be read as selective everybody figures. For the emergent eugenics movement of late nineteenth century, the portraits stood as targets for eugenic development and prototypes for the genetically enhanced future human. In this arena, composite portraits experienced their widest circulation and developed the highest identificatory effects and affective potential. In some current artistic and popular-cultural positions this affective power and emotional connection is maintained, formulating physical ideals on a national level, or a more local group ideal of a select community. Other artistic and scientific projects likewise work with material produced in educational facilities, but rather use the composite images as indicators of evolving fashion styles and the iconography of photographic portraiture in general.

The technique’s **genealogising gaze**, examined in chapter 8, depended on the participation of the public, on the families and individuals, who produced and shared their portraits. As part of these research activities on hereditary transmission in families, new methods of collective investigation and public data gathering were developed. The results of the genealogical composites, verifying grades of hereditary likeness, served to authenticate the composite technique as a hereditary-based typifying machine in other fields. The examination of its genealogising gaze furthermore shows the technique’s importance as a blueprint for Galton’s simplified theories on hereditary transmission that was basically understood as a form of blending – as the merging of inner and outer characteristics – analogue to composite portraiture. The technique promised a gateway to the deep (genetic) substrate of the family as organism. It established a composite progenitor of the family and a “visual point zero” in a broader ethnographic perspective, linking the genealogising to the racialising gaze of composite portraiture.

Family composites were, however, also used to a different end: in the work of Sigmund Freud and Ludwig Wittgenstein, the photographic visualisations become metaphors for an uncanny familiarity in mental imagery and visual aids for conceptual reasoning on family resemblance. And also for Galton genealogical composites gained a different quality towards the end of his life and took centre stage as spiritual images in his eugenicist utopian narrative. Today, the genealogising gaze experiences a creepy revival in a number of websites and apps that offer the service of predicting the appearance of babies to prospective parents. Artistic positions tend to follow a different course, highlighting incoherencies in family resemblances and therewith stressing the uncanny notion of the images, subverting and de-naturalising composite portraiture in the genealogical arena.

The **reconstructing gaze** of composite portraiture, analysed in chapter 9, has a very specific focus and develops a media-historical and analytical function. Through the combination of the subjective – and implied fallacious – artistic representations of historical characters, so the theory, a more truthful and photographically authenticated portrait was to appear of idols of the past. The technique here returns to the initial focus on physiognomic thought that was established through its criminalising perspective, but turns it into a generally positive instrument of worship of historical characters. Central to this gaze is the affective potential of the images and their role as objectified means for the encounter with faces from the past. This reception-based perspective is also relevant in artistic works around the turn of the twenty-first century, but here the focus lies on the performative process of the formation of personal perspectives in relation to the reconstructed faces of more recent characters of world history. With respect to the reconstruction of rather short-term composites portraits of individuals, the technique is perceived as an amplification of the photographic medium, adding multiple layers to the recording and perception process.

Central to the **aestheticising gaze** of composite portraiture, discussed in chapter 10, is the beautifying quality inherent to the technique. The soft focus and balancing effect of the images evens out irregularities and makes composite faces look more attractive than their component portraits. The normative aesthetics inscribed in the technique is, however, also based on (neo)classical beauty ideals in philosophical and art-historical writings. Ideas of composite aesthetics preceded the development of the technique and influenced its creation. As in the other gazes manifesting in composite portraiture, the

nineteenth-century perspective presumed an equation of the beautiful with the healthy and the morally good, linking it to physiognomic thought and attributing to the aestheticising gaze an explanatory power in broader fields such as medicine, heredity, anthropology, and evolutionary theory.

Since the turn of the twenty-first century, digital composite portraits and morphings have been used relatively widely in studies on attractiveness and the perception of human beauty. The studies are predominantly uncritical about the dark historical legacy of the technique, and some still follow crude biologising and evolutionary arguments. In the nineteenth century – and in recent years – the aestheticising gaze focused predominantly on subjects read as female, attesting to the continuation of socio-cultural expectations and traditional gender roles over the past one hundred fifty years. This is also the case for the technique as a pop-cultural phenomenon and as an affective anchor in advertisement campaigns in which the sexist and normative aestheticising perspective remains relevant. Current arts are taking a different standpoint; the technique appears as a means of questioning beauty ideals as culturally and historically constructed. The artworks highlight ruptures and ambiguities, as well as the media-constructed nature of the images as normative role models and projection screens. This composite aesthetics and its de-individualising function are also addressed in computer-constructed faces that look almost completely natural.

In the analysis of the gazes expressed in and with composite portraiture, it appears as a highly charged optical technique, as a (chemo-)analytical device – and as an epistemic, as well as ideological agent. The technique draws on the documentary and evidential paradigms attributed to the medium of photography and its objective representation of reality, while at the same time subverting them by setting out to picture the invisible in a productive but inscrutable process that takes place in the dark chamber of the laboratory. Throughout the long history, composite portraits appear to have lost little of their evidential air and their specific aesthetics continue to exert a high affective power.

Media Histories and Media Futures

The technique of composite portraiture was developed at a specific point in time when photography and science forged an alliance that went beyond the mere documentary, but sought to establish deeper hidden truths and thereby amplifying “seeing” as the central mode of insight and knowledge creation. The gazes of the technique established new epistemological foundations and truths about the human nature that, even though highly questionable, had immediate impacts on the ontological picture of the human and on the lives of people. The flexible visual form and its special aesthetics, moreover, showed a striking adaptability to various contexts and purposes, a property that continues in composite portraiture’s recent “resurrection” in the arts, sciences and popular culture. The examination of the genesis of the photographic technique shows that composite portraiture was fashioned at the nexus between the fields of arts and sciences, and it is in both of these fields that the technique experienced a revival around the turn of the twenty-first century. In its quest for the invisible and the artificial creation of typical and representative characteristics of the human form, composite portraiture can be described as an inherently artistic technique. However, as illustration and in its allegedly analytical power to visualise common aspects and statistical circumstances, composite portraiture likewise appealed to sciences; and it continues to haunt scientist’s imagination, such as in new forms of artificial intelligence-driven data analyses.

The first decades of the twenty-first century again mark a crucial point in media history. Increasing digitisation in data collection, transfer, and multi-focal analysis allow for new visual-statistical experiments. While big data analysis certainly allows for positive new insights, it likewise advances neo-materialist (and biologising) explanations of social phenomena and future oriented, actuarial risk-analyses that return to the typification and evaluation of groups. Here, artificially constructed composite faces again appear as powerful illustrations and icons, as allegedly typical – and stereotypical – images. And, as in the early days of artificial visualisations through composite portraiture, the site of their production remains an inaccessible black box.¹⁹ The inscrutable mechanisms of photo-statistical becoming, in the nineteenth-century photographic laboratories, as well as in today’s artificial intelligence systems, remain beyond

¹⁹ This understanding of the black box refers to the Actor-network-theory (ANT) as developed by Bruno Latour and Michael Callon. The black box hides the social, historical and apparatusive-technical processes of the formation of knowledge. See Latour: *Reassembling the Social*.

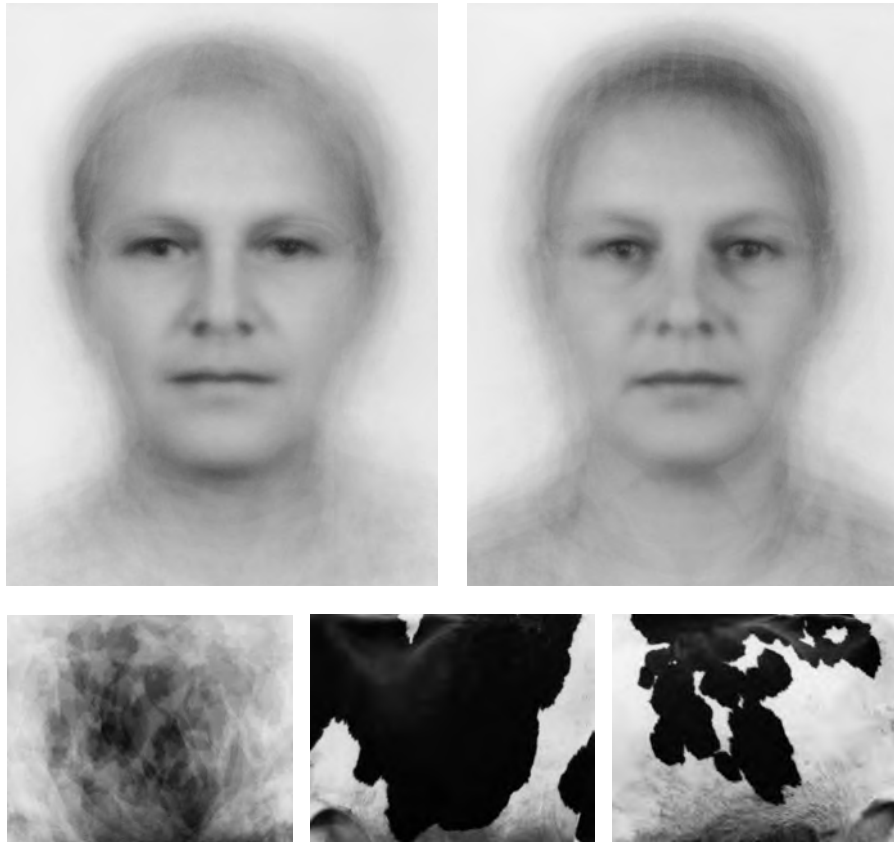
explanation. These system’s workings are based on the reformulation of human cognition and reasoning in a machine. Through this location of the decisive actor, the invisible and inexplicable instance in the black box machine, access seems denied to reason, and the “deus ex machina” – or rather “deus in machina” – principle reigns here.

The examination of digital composite portraiture in current scientific studies reveals the desire to gain access to deeper human nature through a direct, reproducible way. The analytical attributions to the technique and the over-charging of the meta-images furthermore offer a way to devolve accountability. This appears to go along with an unquestioned faith in technology and the belief in automatised solutions, which finds a strong ally in increasing managementisation and neo-liberal marketisation,²⁰ as well as the orientation towards risk-based management of society as a whole.²¹ But, in the early days, as well as now, the ostensibly impartial analytical techniques are far from neutral and objective. Strong biases become apparent in the processes and resultant images. Through the pre-coding in the archival corpus, self-learning AI systems working with facial images take over and accumulate socio-culturally and historically coined perceptions and evaluations of what a face is expected to signify, what it is supposed to look like and how it is conventionally read. Now, as in the nineteenth century, the visualising machines are caught in self-fulfilling prophecies and are reproducing and amplifying the iconographic manifestations of facial “meaning” as available in current digital archives, resulting in intersectional forms of discrimination such as due to gender, skin colour, cultural and religious affiliation, and (dis)ability. The new and digitally-enhanced composite faces may remain as stereotypical and biased as their historical predecessors. As appealing as the new and smooth composite faces might appear, it seems all the more important to maintain a critical distance to them. It is fundamental to preserve a notion of the uncanny and a focus on inconsistencies and ambiguities, in relation to the visual constructions. Here artistic works are offering vantage points and critical impulses for the evaluation of the new composite faces that we are presented with in current science and popular culture.

Some current artistic positions accept and maintain claims of the technique as a form of visualisation of a common identity and typical appearance. Even

²⁰ See Maravelias, Christian: “The managementization of everyday life – workplace health promotion and the management of self-managing employees governing work through self-management.” In: *ephemera: theory & politics in organization* 11(2) 2011, 105–121.

²¹ See Beck, Ulrich: *Risk Society: Towards a New Modernity*. London: Sage, 1992.



Lang, Gerhard: *The Typical Inhabitant of Schloss-Nauses* 1992/2000; *The Typical Marking of Farmer Jenni's Cow Herd in Schöntal*. Composite and component portraits, 2002. Courtesy of the artist.
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though they are often counteracting stereotypes by providing inclusive, multi-cultural and diverse visualisations, they inadvertently reinforce the typologising agenda and the explanatory power of the technique.²² But most artistic positions working on and with composite portraiture directly or indirectly question its evidential claims, while drawing of the special aesthetics of the composite form. By amplifying the diffusion and blur inherent to the technique, or by emphasising disparities in the facial combinations some artworks reduce all attempts to an analysis to absurdity. Here a strategy of exposing scientific methods by their appropriation becomes apparent: procedures are followed accurately and

²² Here the works of Christian Mahler (*Face of Berlin*, 2006), and Florian Tuercke (*the others are we*, 2016) come to the mind, as well as more popular-cultural projects, such as *Faceoftomorrow*.



Mahler, Christian: *100 grandfathers*, digital composite portrait, 2006. Courtesy of the artist.

whole pseudo-scientific set-ups are constructed to deconstruct precisely these allegedly objective approaches. The sometimes funny and ironic pieces present us with multi-perspectival and uncannily monstrous countenances, or dissolving, ghost-like composite facial shapes of heterogeneous groups, such as in Gerhard Lang's composite portraits of all of the inhabitants of his home-village Schloss Nauses in Germany,²³ or in his composite of the marking of a cow herd.²⁴

Another subversive artistic approach is to expand the technique to other subjects, leading to composite portraits of buildings, landscapes, print material, or whole media productions, such as in the composites produced by Jason Salavon²⁵ and Christian Mahler.²⁶ These conceptual composite artworks attempt to catch an

²³ See Lang, Gerhard: *The Typical Inhabitant of Schloss-Nauses* 1992/2000. Composite portraits.

²⁴ See Lang, Gerhard: *The Typical Marking of Farmer Jenni's Cow Herd in Schöntal*. Composite and 26 component portraits, 2002. For a closer discussion of the composite works by Gerhard Lang see Gschrey: "A surprising air of reality".

²⁵ See Salavon, Jason: *All the Ways (The Simpsons)*. Video composite, 23', 2016.

²⁶ See the series *MetaMovies*, digital video composites. See Mahler: "Interconnected Pictures," 144.



Salavon, Jason: *All the Ways (The Simpsons)*, video composite, still, 2016; *100 Special Moments (Newlyweds)*, digital composite portrait, 2004. Courtesy of the artist.

atmosphere, rather than providing readable surfaces. They implicitly call into question recent ways of (scientific) big-data analyses. The artists show that different computerised modes of data aggregation, and the application of different algorithms, such as direct superimposition, grid-based sectional aggregation, pixel sampling, morphing and vector-based systems, also lead to different visual results.²⁷ Thus, it is by no means clear that a particular and reproducible composite image must result from the digital averaging process. And this can only become more uncertain in the black boxes of artificial intelligence systems based on neural networks in which the inner workings become ever more impenetrable.

The composites of media productions, as well as of photographs taken in the private context manufactured by Salavon and Mahler, however, produce a different kind of evidence. They produce social composites that illustrate iconographies of a culture and marketing industry. In the seemingly individual and singular portraits produced as a reminder of personal histories, they reveal common structures and photographic conventions that seem to call into question claims of individuality.

The tension between the type and the individual, between typecasting and identification that was already present in Francis Galton's reasoning by means of photography likewise resurfaces in current methods of data-visual comparison

²⁷ See Mahler: "Interconnected Pictures."



Tuercke, Florian: *my_friend*, 2015. Courtesy of the artist.

and biometric identification. Galton contributed to establishing new forms of identification in dactyloscopy and photography and his work on analytical photography and composite portraiture can be seen as a model for current modes of biometric face recognition. Many of the companies that are active in popular-cultural composite portraiture in the field of family resemblance are also involved in work on automated biometric recognition and identification.²⁸ And also with regards to content there are striking similarities: the vector called "eigenface" that designates individual markers in biometric recognition defines the deviation of a face from an averaged portrait, a vectorised point zero that can be understood as a generalised composite face.²⁹

The surveillance studies scholar David Lyon, who has observed the phenomenon of biometric social sorting, has highlighted that the face resists categorisation and can be seen as an ethical point for a critical analysis of biometric surveillance.³⁰ Some of the artistic works comment on biometrics and position themselves against privacy infringements and technologies of biometric management. In his project *CV Dazzle*, Adam Harvey has developed fashion and make-up styles in order to evade computer vision.³¹ For a travelling exhibition on surveillance, I have produced DIY composite masks to wear in public to prevent recognition, compiled from portraits of random people moving in the cities in which the exhibition was shown.³² Florian Tuercke drew on his

²⁸ See for instance the activities company Luxland that also offers the so-called "BabyMaker": <https://www.luxand.com/babymaker> [15/01/2022].

²⁹ See Richtmeyer, Ulrich: „Einleitung." In: Richtmeyer: *Phantomgesichter*, 11-30.

³⁰ See: Lyon, David: "Surveillance as social sorting: computer codes and mobile Bodies." In: David Lyon (ed.): *Surveillance as Social Sorting: Privacy, Risk, and Digital Discrimination*. London: Routledge, 2003, 27-28.

³¹ See Harvey, Adam: *CV Dazzle*, ongoing project: <https://cvdazzle.com/> [15/01/2022].



Toots, Timo: *memopol II*, installation. Exhibition view, Museum for Communication Frankfurt, 2013. Courtesy of the artist.

online community to produce a “composite facebook friend,” an image that in turn became used to subvert mechanisms of biometric facial recognition of the social medium.³³ In these works strategies of veiling and evasion in relation to new mechanisms of biometric recognition are apparent and the medium of composite portraiture becomes used against its typifying and identifying agenda, counteracting claims to composite objectivities.

These subversive artistic strategies contrast with a project by the Estonian artist Timo Toots, who presents a veritable data-composite machine, the prototype of a surveillant atmosphere. Visitors can enter the installation *memopol*³⁴ using their passports and mobile phones and large screens play back personal and

³² See Gschrey, Raul: *The Typical Inhabitant, or Automated Recognition is Based on Individual Characteristics – Be Average*, DIY composite mask, 2008–2012. Local editions of the composite mask were produced for Berlin, Bremen, Frankfurt/Main, Gießen, Mainz, Munich, Potsdam, and Offenbach/Main. For a discussion of this and my other artistic works on surveillance see Gschrey, Raul: “Contemporary Closed Circuits – Subversive Dialogues: Artistic Strategies against Surveillance.” In: *Surveillance & Society, Special Issue on Surveillance, Performance and New Media Art*, ed. John McGrath and Robert Sweeny, 7(2), 2010, 144–164.

³³ See Tuercke, Florian: *my_friend*, www.floriantuercke.net/my_friend.html [15/01/2022].

³⁴ See Toots, Timo: *Memopol 1–3*, installation, 2009–2019. <https://www.memopol.ee> [15/01/2022].

vital information about them combining statistical considerations with data collected automatically from commercial and public online sources and mobile phones. The data-double that appears in the digital mirrors can be seen as a reconstructive data composite portrait of the invisible information accumulating around individuals in an ever finely woven “surveillant assemblage.”³⁵ The data-composite presented by Toots can be criticised for its reproduction of surveillance activities and the production of additional and potentially harmful data collection, but *memopol* is also a very effective means of raising awareness of surveillance possibilities and our own, often voluntary, involvement in the assemblages of surveillance and control.

In relation to the construction of completely artificial faces, through artificial intelligence, such as *thispersondoesnotexist*,³⁶ as well as in computer programmes for the design of online characters, such as *MetaHuman Creator*,³⁷ the composition of artificial faces likewise raises urgent issues. Just think of the possibilities of mapping the artificially constructed faces on the images shared on social media, on PR images and video releases, for instance to create deepfakes. Imagine meeting persons in video conferences on whose faces artificial characters have been mapped, for example, by the software *snapcamera*,³⁸ creating lifelike artificial embodiments and digital-analogue composites. What if the artificiality can no longer be seen – the uncanniness no longer be felt – in relation to the digitally composed faces? What if an AI takes over a human shape? In our online live-worlds, whose immersive factor is bound to increase during the coming years, character design may eventually mold into reality design.

³⁵ The concepts of “data-double” and “surveillant assemblage” were coined by Haggerty and Ericson for the denomination for the digital duplicate of individuals, a cloud of data accumulating around a person in interconnected information systems as well as their implications for surveillance, See Haggerty, K. D.; Ericson, R. V.: “The Surveillant Assemblage.” In: *British Journal of Sociology*, 51(4), 2000, 605–622.

³⁶ The facial portraits on the website are produced by an artificial intelligence, the generative adversarial network, StyleGAN2. See <https://thispersondoesnotexist.com> [15/01/2022].

³⁷ The company Epic has announced the browser-based app *MetaHuman Creator* that allows developers and creators to create real-time 3D character models through a kind of sectional composition of facial characteristics. See <https://youtu.be/1tjKSpoa7V8> [15/01/2022].

³⁸ In the so-called lens studio backgrounds and face templates can be created and later mapped in real time onto the faces in a video call. See <https://snapcamera.snapchat.com> [15/01/2022].

Composite Continuities: Outlook

The preoccupation with artificial composite faces and their affective potential is particularly relevant in times of an ever-increasing circulation of images in popular culture, advertisements, and social media, as well as in the visualisations of current scientific practice. This – often uncontextualised – omnipresence of artificial images is highly influential, as more and more constructed images – and, in particular, faces – surround us in what Thomas Macho has described as a “facial society.”³⁹ We are experiencing a continuity and intensification of modes of reasoning by means of images that has only gained traction since the nineteenth century. This development calls for a critical analysis of these images, including their modes of construction and the ideological agendas underlying them. Furthermore, as this study shows, composite portraiture and stereotypical assumptions of group identities based on visual appearance are still with us: in the advertisement and health industry and in socio-psychological explanations of human behavior as well as in computerised biometric recognition, which carries strong intersectional biases, furthering structural discrimination and racial profiling in the forms of algorithmic bias and discrimination.

A historically grounded perspective on composite portraiture as a technique of artificial visualisation is important, especially in relation to the creation and distribution of artificial faces in digital media, the increasing digitisation of personal data and big data analysis. Such a historical-epistemological perspective on composite portraiture as an early but continuing form of artificial visualisation at the intersection of arts and sciences, combined with an examination of current visualisations produced by means of the technique, can provide a critical instance for reflecting both on their historical predecessors and on current socio-cultural and scientific developments. The de-constructive, historical-epistemological approach may provide insights into current phenomena of artificial visualisation and practices of visual big-data analysis – and it may help to identify deep fakes and their motivations. This, I am convinced, can best be achieved by a diachronic perspective, which takes seriously historical forms of (visual) reasoning, while critically evaluating their origins and observing continuities, re-assessments, and advancements. Furthermore, with respect to the aesthetic notion of composite portraiture and the multiple fields in which

³⁹ See Macho, Thomas; Gerburg, Dieter (eds.): *Medium Gesicht. Die faciale Gesellschaft*. Berlin: Elefant-Press, 1996; Macho, Thomas: *Vorbilder*. Paderborn: Wilhelm Fink, 2011.

the technique took root, a trans-disciplinary approach that also takes into account artistic and curatorial methodology proved useful for my study of composite portraiture as a socio-cultural phenomenon, as a metaphor, and as an affective agent in the respective discourses at various times over its long history.

As this study has shown, the success of the technique is largely sustained by the belief in visual objectivity and the sense of seeing as the privileged mode of insight, as well as by a deep trust in photography as the primary medium of objective representation. The suggestive quality and the affective power of the images likewise are defining features of composite portraiture. Composite faces often become icons and affective projection screens, maintaining assumptions of an increased objectivity, while at the same time exhibiting a normative and exclusionary nature. In relation to composite faces, it is essential to preserve a sense of the uncanny, to place an emphasis on the images' incongruity and ambiguity – a strategy often seen in current artistic positions. An informed suspicion in relation to the provenance of the composite constructions, as well as to the black-box of the laboratory and the artificial intelligence systems is called for, taking into account their constructed nature and their often biased modes of operation. It is high time to reverse the gaze, to find creative ways, as some artists and academic-activists have demonstrated, to use the techniques against its own overcharged assumptions, and to brace ourselves against the suggestive and affective potential of the special composite aesthetics of the ubiquitous artificial faces.



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