Symbolic Interaction

Corporeal Interactions in VRChat: Situational Intensity and Body Synchronization

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Erving Goffman's work on interaction in everyday life focuses on joint spatio-temporal and face-to-face situations and denies the constitution of social situations via mediatized interaction. In contrast, we argue that shared immersive media such as Social Virtual Reality enable intense, delocalized forms of co-present interactions that constitute closeness and intimacy. By discussing Goffman in the context of current works that open up his perspective for mediatization, we present an understanding of social situations that focuses on intensity and synchronized embodiment—physical, digital, and corporeal. On the Social VR platform VRChat, synchronized bodies allow for intimate corporeal practices, such as cuddling, dancing, or cybersex. Virtual Reality technology facilitates delocalized forms of affective-bodily interaction, thereby contributing to the social negotiation of mediatized closeness and intimacy—despite physical distance. Our findings are based on a digital ethnographic analysis of lifeworlds and practices of enthusiast VRChat-users, combined with qualitative semi-structured interviews.
Keywords: social virtual reality, online interaction, immersion, body synchronization, online intimacy

APPROACHING CLOSENESS WHILE DISTANCED IN SOCIAL VIRTUAL REALITY

On the Social VR platform VRChat, users embodied in self-made or self-edited avatars and tracked via VR hardware relate to each other in user-generated virtual worlds. The immersive online gathering space's release on Steam, an online gaming platform, popularized it in 2017 and VRChat has since approached user concurrency

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counts similar to screen-based virtual worlds like Second Life (Au 2022). There is no major pre-programmed game incentive or goal on the platform besides creating and socializing. Users are encouraged to make environments and avatars they want to situate themselves in or embody. Therein, close encounters, dancing, social drinking, and even intimate and sexual contact (ERP)[1] occur in a novel, physically *and* digitally embodied state that affords renewed inquiry into how we approach and analyze mediatized interactions, bodily closeness, and intimacy. Perspectives on Social VR-users' embodied, lived experiences and their emic understandings of closeness in media are needed — especially now that large tech companies like Apple and Meta have committed themselves to bringing VR technology to the masses.

In contemporary society, digital media technologies are facilitators of delocalized social situations and, consequently, of a separation from bodily co-present gatherings. This shift prompts critical scholarly discussion on substitutions of face-to-face interaction with mediated communication. For instance, Elisabeth von Thadden (2018) explores social transformations of touch in social interaction structures and the contribution of digital media to a "touchless society."[2] Therein, people become increasingly separated from each other, impacting human relationships of closeness. Arguments such as these refer to a dichotomy between social closeness based on interactions and mediated communication. In this understanding, closeness is exclusively achieved during face-to-face interactions: a direct confrontation at the same time, in the same place.

However, in deeply mediatized everyday life (Hepp 2019), broad parts of society do connect via media in some capacity. Digital media technologies, such as instant messaging or video telephony, enable social interactions despite spatial distance, which allows people to establish and uphold relationships. Theorizing these online-interactions proves difficult, as in media sociology and communication sciences, relating physicality-based interactions and co-presence to digital media technologies remains controversial. Beyond positions that fundamentally deny encounters in virtual environments their corporeality (Misoch 2006, 2018) as well as their interactional richness and empathy (Turkle 1995, 2011), the concept of interaction is increasingly split into *bodily interaction* and *mediated communication*. Neuberger (2007) distinguishes, for instance, between confrontational (physical-present and face-to-face) and actional (possibility for distance and disembodiment) scenarios.

Instead of a simplistic reduction of social closeness to physical interaction and co-present bodies, the constitutive potency of digital media technologies for and in situations must be examined. Here, we propose that differences in *interactional intensity* should be considered. Virtual Reality (VR) head-mounted displays (HMDs), for example, bypass some issues that previously prevented the perception of media as genuine "sites of the social" (Schatzki 2002). With proximity audio, eye tracking, lip-syncing, full-body motion capture, and interfaces for haptic integration, the richness of expression and perception in Social VR increases by mirroring physical interactional qualities.[3] Since VR environments are perceived spatially from a first-person

perspective, social gatherings therein require less translational effort. Compared to screen-based media, Social VR retains some aspects of physical co-presence while still being mediatized.

In this article, we aim to show that closeness and intimacy in VRChat are mediatized *and* bodily experience. Interactions on the platform occur in a sensory hybrid state; the tracked body standing in the living room and the digital avatar that mirrors this body are experienced simultaneously. Saker and Frith (2020) refer to the doubling of perceived spatiality as "coextensive space." In physical-digital environments, the convergence of two parallel levels of perception can lead to challenging but unique social phenomena and sensory anomalies such as dizziness (cybersickness) or "phantom sense," the experience of digital sensory cues with one's physical body (Heinzel and Heinzel 2010). Grounded on online ethnographic analysis (Boellstorff et al. 2012; Caliandro 2018; Hine 2015; Pink et al. 2016) of VRChat and its experienced users, we refer to interactionist, body- and media sociological theory to bridge underlying dualisms. We argue that digital media technologies can hardly be understood as delocalizing and disembodying drivers of a touchless society. Mediatized situations are never truly disembodied as they co-involve corporeality on a referential (Waskul 2004) and immersive (Knorr Cetina 2009) level. However, we propose that theoretical perspectives on mediatized interactions must be open for a wider scale of interactional intensity and corporeal involvement. For this, we will first discuss Goffman's interactional perspective with current works on the mediatization of his concept. Here, we elaborate *affectual intensity* as a condition of the constitution that arises from the entanglement of VR technologies, the body, and other constituents of a situation. Focusing on Social VR, we propose the concepts of *situational intensity* and *body synchronization* that we will finally present more in-depth through ethnographic insights into the embodied activities of VRChat-users.

FROM PHYSICAL INTERACTION TO INTENSIVE MEDIATIZED SITUATIONS

In his interaction theory of everyday life, Goffman distinguishes between "expressions given and expressions given off" (Goffman 1959:4). The exchange of information thus occurs through physically expressive behavior in shared face-to-face situations or communication with others. Goffman emphasizes that the spatial simultaneity of the actors constitutes the basis of interaction. In this sense, he understands interaction "as the reciprocal influence of individuals upon one another's actions when in one another's immediate physical presence […]; the term 'an encounter' would do as well" (Goffman 1959:15). Goffman's concept of situational behavior is also based on this spatial simultaneity of the interaction partners, which he separates into front- and backstage. The "frontstage" is a public domain where persons are aware of each other and interact. Their behavior is organized by situation-specific norms and modes of behavior, such as rules of politeness and decorum (Goffman 1959:66f.). The "backstage" instead pertains to a private space from which third parties are

excluded from a situation by perceptual barriers and authorization control. It offers individuals a space of rest from situational conformity (Goffman 1959:69f.). Through this segregation, social practices are formed in certain situations. The direct spatial and temporal confrontation of persons is central to his argumentation in relation to interactions. Here, individuals experience the other through a linkage of their "naked senses" (Goffman 1963:15): unfiltered, direct, and bodily co-present. In this sense, the core element of social interactions is the basis of a shared presence:

> The full conditions of *copresence*, however, are found in less variable circumstances: persons must sense that they are close enough to be perceived in whatever they are doing, including their experiencing of others, and close enough to be perceived in this sensing of being perceived. (Goffman 1963:17, emphasis in original)

In situational gatherings, physically co-present participants adapt their behavior according to the prevailing patterns of action of the social occasion and mutually condition each other in their correct execution (Goffman 1963:18). This *physical-sensory interaction* constitutes Goffman's analytical concept. If perceptual barriers such as walls and doors lead to spatial segregation of individuals, the situation is restricted and takes on a reduced character of one-way information-transmission (Goffman 1963:17, 1959:106). Here, Goffman distinguishes various *degrees of intensity* in which people meet or can be perceived sensually — i.e., by seeing, hearing and/or smelling. But nevertheless, interaction in Goffman's work is limited to co-present situations.[4] Thereby, Goffman underlines that humans interact reciprocally in social situations through spatial and temporal unity. Although he mentions media such as letters and telephones in his works, he assumes that "presumably the telephone and the mails provide reduced versions of the primordial real thing" (Goffman 1983:2).

However, media holding the potential for shared situations without physical presence becomes increasingly plausible as media modalities and literacy increase. Various works have therefore attempted to mediatize Goffman. For the example of television, Meyrowitz (1985) shows how an extended public sphere can be constituted via media. He concludes that television blurred the differentiation of social places, eliminating the Goffmanian distinction between front- and backstage. Electronic media creates an in-between without the need for physicality (Meyrowitz 1985:46f.). They have the potential to interweave different situations.[5] This media-induced change in situational nesting directly affects the actors' actions and restructures social order and identities (Meyrowitz 1985:52f.). Considering Goffman's concept of co-presence, Houben (2018) proposes a conceptual deepening for digital interaction by elaborating a sphere between co-presence and co-reference with five types: co-presence, mediatized presence, directed reference, undirected reference, and non-reference.

In addition to their temporal and spatial (un)simultaneity, the types differ particularly in the density of information conveyed. By discussing Goffman and

Luhmann with studies about media interaction and the sociology of technology, Hirschauer (2014) proposes a praxeological perspective on interaction for mediatized situations with the concept of "intersituativity." He aims to overcome the classic dualism between micro and macro perspectives by pleading for the interconnectedness of situations[6] through media while also arguing for broadening the concept of interaction, whereby the body is not limited to its physicality. Hirschauer does not mean to "bind interaction to moments of reflexive perceptiveness […] but instead to reserve a place in interaction for genuine increases of abstraction in the world (Hirschauer 2014:124).

Also, Knorr Cetina proposes an advancement of Goffman's interaction theory that takes into account the realities of digital media technologies more explicitly. From such a perspective of mediatized situations, she introduces the terms "scopic media" and "synthetic situations" (Knorr Cetina 2009). Scopic media generate shared spaces of interaction on screens, despite physical distances, and make actions visible to the participants. Using empirical observations of the global financial market, she argues that "*their bodies and the screen world melt together* — an apparently total immersion in the actions in which they are participating" (Knorr Cetina 2009:64f., our italics). During social gatherings, despite physical distances, scopic media thus create their own "synthetic situations" (Knorr Cetina 2009:65). These situations are not necessarily generated by a physical presence through physical proximity but rather constituted by a coming-together of people using digital media technologies. The potential for interactions in synthetic situations already emerges when mutual observation through scopic, screen-based media is achieved. Knorr Cetina is primarily concerned with the "response presence" (Goffman 1983:6) of situations (Knorr Cetina 2009:74). If interactions are constituted by vivid reciprocity, they can emerge in many mediatized scenarios. However, it depends on the interactional partners' abilities to make a connection happen in the first place, as Knorr Cetina shows in her analyses of financial traders and PC gamers (2017). In both domains, a response presence emerges when people are bodily engrossed together in digital environments; they closely observe and react to their immediate actions and thus experience reciprocity. Although Knorr Cetina's concept remains cognitivist and mostly focuses on information exchange, its genuine potential lies in also taking bodily involvement into account. Knorr Cetina sheds light on the *intensity* of a situation:

> I would here like to define intensity not simply as a form of mental concentration but as a physical connectedness […] In one sense, intensity is, in the vocabulary of the American psychologist Mihaly Csikszentmihalyi (1990), the flow experience that matches a flow situation — but the happy absorption Csikszentmihalyi describes is not just a mental state but also a bodily engrossment and involvement. Therefore, not just the gaze but all the sensory equipment aiding our processing capacities must be attuned to the situation. (Knorr Cetina 2009:75)

In this sense, the "situation at large" (Goffman 1963:18) is more complex than classical concepts of face-to-face interactions or cognitivist mediatization attempts thereof. The body plays a significant role even in online interactions.

We are not arguing that digital media produce a sense of emotional belonging through emotional energy (Maloney 2013) or that emotion determines practices in mediatized situations (Laube 2016). Instead, if mediatized situations reach high amounts of *affective intensity* through engaging with and relating to the other, they are experienced on a corporeal level. The decisive criterion for social interactions is not the physical presence of people in the same location and therefore does not imply the need for a dichotomy between interaction and communication. Rather, we propose that social situations are most appropriately explored from a viewpoint that recognizes their scalability, whereby every constitutive aspect of social situations should be holistically included. We cannot reduce social situations to physical face-to-face interaction but must examine the different elements of a situation — body, media, environment, infrastructure, and so on — regarding their impact. Their interplay constitutes social interactions, affective perception, and expressive action with varying degrees of intensity.

Analyzing interactional intensity allows for a more nuanced approach to social situations, where both interaction and communication are understood on the same continuum. Consequently, corporeal expressions in Social VR and commonly used media for information-transmission are equally encompassed. Situations are intense when their reciprocity has an *affective-bodily* impact on people and entangles them closely. Then, people are affective-bodily immersed together.

INTERACTIONAL INTENSITY IN IMMERSIVE MEDIA

Immersion entails myriads of meanings, even in the specific context of Social VR. Early studies on VR in the 90s defined it primarily as a property or affordance of certain technical media (Slater et al. 2013) — as immersion induced by technological systems. Consequently, case studies on VR focused on how the addition or deprivation of certain modalities increased or decreased participants' feelings of being situated in digital space. Contemporary meta-studies shed light on changes this line of thinking has gone through as concepts of immersion became multifaceted (Nilsson et al. 2016). Sensory or perceptual immersion, for example, focuses on how participants individually are able to sense VR-environments — shedding light on different sensory channels and subjectivity (Witmer and Singer 1998). Fictional or narrative immersion (Agrawal et al. 2020:406; Ryan 2001) describes involvement in stories on an imaginative level. Users are then immersed when narratives grip them. Challenge-based immersion (Csikszentmihalyi 1990) describes flow-like states of absolute focus that occur when users face tasks which challenge them in just the right amount.

In line with mediatization research (Couldry and Hepp 2013; Krotz 2009), we reject technologically deterministic and cognitivist views on immersion while keeping our focus on the social negotiation of technology. Instead of framing media immersion as purely cognitive or guided by affordances (Bowman 2018), we emphasize the affective-bodily constitution of social situations (cf., Seyfert 2012; Kwek and

Seyfert 2018). From our perspective, immersion describes a state of heightened situational intensity that derives from a "constitutive intermediate" (Seyfert 2019:125) of technological and corporeal interrelations. Social, corporeal, and technical contributing factors of said state should be equally considered when analyzing lived practice in shared situations. Such situations give rise to a "*synchronization of the affecting and affected body*" (Seyfert 2014:800, emphasis in original).

We conceptualize immersion in VRChat as inherently corporeal and social, connected to the intensive affect users perceive in shared, avatarially embodied interactions with others on the platform. Currently, VR-embodiment can neither be understood as digital puppetry (Dekker 2012) or scripting (Waskul and Martin 2011) of avatars via controller or mouse, nor as full neurological transferal into digital cyberpunkian worlds. Instead, attaching tracking hardware on their physical bodies leaves users in a state of partial, hybrid corporeality which needs to be negotiated, accepted, and re-learned. VR-technologies do not replace human sensory systems but serve as "body extensions" (McLuhan 1964), entangling physicality and virtuality in an "embodied parallelism" (Bollmer and Suddarth 2022).

To fully grasp this intermediate state, a phenomenal perspective is needed for the space in which users feel situated. Referencing de Souza e Silva's "hybrid space" (2006), Saker and Frith (2020) elaborate on the phenomenal state experienced in VR; "coextensive space" contains bodies that can feel fragmented and doubled at the same time. VR-technology primarily engages our dominant sense of sight (Gerrig 2013:85) and spatial hearing. The remaining senses for instance perceive the physical space by feeling a carpet under one's feet or the weight of VR-tracking-hardware. In VRChat, both impressions combine and are experienced simultaneously in mediatized social situations. This merges users' sense of digital and physical location and their mediatized and corporeal embodiment.

It is the entanglement of physical and digital corporeality in a coextensive, shared environment where mediatized situational intensity reaches new heights — a process we call *body synchronization*. The coextensiveness of a physical and avatarial body implies that one's physicality is always perceived. Both bodies are subject to an ongoing synchronization process of "physical and digital blending" (Saker and Frith 2020:1439) — a complex "body project" (Plummer 2003:526f.) that spans both tracked and mediatized corporeality. This is a process full of hindrances, setbacks, and challenges. Affective-bodily immersion in mediatized situations is not instantly achieved by putting on an HMD, although VR-technology certainly is an aiding factor. Instead, it has to be learned and is constantly socially reaffirmed in virtual lifeworlds and embodied practice. Its degree of intensity depends on how synchronized one's physical-digital body is or has become.

Viewing digital media through the lens of body synchronization allows them to exceed the designations of mere representations for social situations and recognizes their potential of housing hybrid lifeworlds and intense situations. Body synchronization in the context of VRChat implies more than affectual engrossment

in synthetic media. Instead, VR-interaction predominantly involves bodies. It allows VRChat-users to reconcile their shared physical-digital entanglement to an increasingly intensive degree.

METHODS

For our ethnographic approach, we follow heuristics of digital ethnography (Boellstorff et al. 2012; Caliandro 2018; Hine 2015; Pink et al. 2016). Our foci are practices and phenomena that take place within the platform: social interactions, avatarial embodiment, as well as perceptions of closeness and intimacy. For this, we follow communities and explore everyday life in VRChat since our field entry in 2018.[7] Our digital ethnography combines observational data inside and outside the platform as well as interviews with experienced VRChat-users.

Our observational material consists of several components. After a period of self-monitored familiarization with the technologies needed for VR, we engaged with users during participant observation. In the process, we increasingly integrated ourselves into everyday activities and explored different avenues of life on the platform, from simple meetings among friends and public parties to private events. At the time of writing, we were spending several nights a week in virtual clubs and virtual gatherings. Individual VR sessions typically last 3–6 hours. Our fieldnotes of such events capture our experiences as users and researchers. In addition to 275 field note entries, we considered 105 short videos and 150 pictures taken in VRChat for analysis. The field extends into non-VR social media, instant messaging, and forums, which helped us enter established communities, as they serve as a hub for users to organize events, discuss and plan, offer avatars and designs for sale, or even flirt and make dating profiles. Currently, we follow 56 micro-forums on the instant messaging platform Discord, ranging from 20 to over 20,000 members, and 133 VRChat Twitter accounts.

Parallel to our participatory observation, we conducted 14 interviews with VRChat-users. Our purposive sampling aimed to fill knowledge gaps for communities and experiences we could not experience and describe autoethnographically. For this, we private-messaged users on Discord for acquisition after seeing comments about their experiences online or having talked with them in VR. The interviews themselves were held avatarially embodied in VRChat and lasted an average of 102 minutes. We asked questions about users' avatarial embodiment (e.g., "Does your avatar feel like clothes or a body to you?") as well as more general questions about communal aspects of VRChat (e.g., "How would you describe the VRChat community and its members?").

For our analysis, we combined our fieldwork and the transcribed interviews. We coded interview data in MAXQDA, along with contextual fieldnotes and social media screenshots. We base our qualitative data analysis of our online ethnographic protocols, video footage, and interviews on grounded theory (Glaser and

Strauss 1967; Strauss 1987). We first successively coded and sorted action strategies, interactions, and phenomena to open up the material (open coding) and condensed and elaborated our concepts in constant comparison (axial and selective coding). The continuous writing of memos accompanied the coding to work with and on theory in the sense of "theoretical empiricism" (Kalthoff et al. 2015). We compared and discussed coding and theorizing among ourselves and in data session meetups. For this submission, we focused on embodiment codes such as "avatarial embodiment," "embodied practice," and "intimacy."

According to the ethics code of the German Sociological Association, we hold our participant observation as well as interviewing process to high ethical standards. All interviewees gave informed consent. Interviewees' names are pseudonymized, and traceable information is anonymized. Since users have many tools for bodily expression in VRChat, an air of ambivalence and fluidity surrounding (body-)identity permeates the whole platform and emphasizes our interviewees' need for anonymity. Unspoken rules exist around the idea that users should be accepted in how they present themselves, as who- or whatever that might be. To achieve trust with our interviewees, we do not investigate or ask about users' physical-world occupation, gender, or other demographic data unless they mention it. During our involvement in the field, our role as researchers was made sufficiently clear. In and outside VRChat, we customized our status messages and social profiles for transparency. We also openly post and talk about our profession and research among the VRChat users we meet. When using the platform's internal tools to record or film, surrounding users can see a lens and the filmed area. We verbally and textually informed users that we were not filming without permission.

BODY SYNCHRONIZATION IN COEXTENSIVE SPACE

In the following sections, we focus on body synchronization, which can easily be encountered in almost any VRChat world but are especially vivid in virtual nightlife. We analyze the emergence of social closeness and intimacy in VR through online material and interviewees' cases. They have been using VRChat for hundreds to thousands of hours and are deeply entrenched in their respective communities. Being part of communities that engage in everyday embodied practices and interactions, the users often embody and identify with only one "main" avatar. Our interviewees also regularly experience intimate closeness in VRChat with other users and, therefore, can explicate extensive body knowledge of their interactions. In tandem with our own experiences in the field, our collected findings lead us to understand how intensity in VRChat interactions arises and how affective-bodily immersion increases during prolonged corporeal engagement in VRChat. First, we will explore body practices and -synchronization performance, reconstructing physical-digital entanglements in situations. We then turn to sexual practices in VRChat to show intensely intimate closeness among synchronized bodies, despite physical distance.

Body Practices and Synchronization: Physical-Digital Entanglements in Situations

A "hybridization" (Bullik and Schroer 2015) of the body taken to glaring heights is no easy or fast process. Especially during the initial use of HMDs in VRChat, sensory crises are constantly experienced and dealt with since *a* body,[8] usually thought of as singular and static, is suddenly experienced as fragmented or doubled. One result can be severe dizziness and nausea after only a few minutes of HMD-use, commonly known as "cybersickness" (Kim et al. 2020; Yildirim 2020). In the process of body synchronization, there are other obstacles, like tracker failures or avatar issues. There is no day on the platform where everything seems to go totally right. Experienced users like *Baumtiger* have come to terms with this:

> You have to learn all these new ground rules which are, you know, oh, the menu is this way. How does the menu feel? How do I how do I operate with different things? Oh, my controller just zipped down. And now my head tracker just launched out into outer space and now I'm not tracked anymore. That's the clunkiness that I'm talking about. And with time comes, I guess the best way to put it is patience. I don't know, I don't know what the right word is for that, but it's like you start to be OK with those things and it becomes more comfortable in general, just regardless.

Users must (re-)learn routinized "techniques of the body" (Mauss 1973), such as bipedal balance, in and for the continuous improvement and success of social situations. Our observations of VRChat-users reveal bodily practices that are only possible once high degrees of body synchronization have been reached, and familiarity with coextensive space allows for bodily practices that skillfully encompass both the physical and digital. This is especially evident in practices that simultaneously use the physical and the virtual environment to make intensive interactions in Social VR succeed. Furthermore, physical-digital convergence is evident in the VRChat community when observing "phantom sense," a phenomenon that emerges when body synchronization is particularly strong. Virtual touches are then perceived as a dull but palpable sensation of tingling warmth or coldness on the physical body (Dragora 2021). One of the authors experiences this phenomenon himself:

> I decided to get drunk and visit a virtual club called "Sanctum." In VRChat, users have the ability to throw emojis in the air, a homage to instant messaging. VR-Ravers use these to show DJs their appreciation. As the last DJ set was ending, users standing around me started throwing snowflake-Emojis in the air. I spun around and saw people next to me throw them in my direction. My physical face began to feel cold each time a snowflake "touched" my avatar's face. It was a cold tingle reminiscent of a soft pins-and-needles feeling. Since this incident, I started to develop a similar tingle on the tips of my fingers whenever other users touch my hands in VRChat.

VRChat-user *Musically* describes her experience with phantom sense and virtual touch as a "suspension of disbelief," which refers to her actively overcoming sensory doubts of her physical body during immaterial yet physical contact:

> There's a lot of suspension of disbelief, I think, built in the phantom touch. And it's okay, I think you know. My nerves aren't literally firing when I do this, but it's like, I am, I imagine it and it gets close enough.

Musically's phantom sense intensifies with increasing body synchronization which, in her case as a trans woman pre-physical transition, are the conscious and subconscious ways in which she is able to imagine herself in a female body with the help of avatarial embodiment. Through her avatar and synchronizing processes over time, she is able to feel touch on her female body even though she has not physically transitioned yet, which enriches her corporeal interactions in VRChat manifold and allows her to feel gender euphoria regularly. Among experienced VRChat-users like *Musically*, it is not uncommon for their body synchronization to be at a level where phantom senses and touches are at least rudimentarily felt. Other users, like *Preacher Tim*, experience it intensively, which introduces a clear amount of bodily risk in virtual situations:

> This one time I stood up and a friend ran into my leg and I felt like my leg, like twitched right as he ran into it […] and one other time, which wasn't so good where a friend of mine pretended to put his arm down my throat and I gagged in real life, that wasn't fun.

Learning processes[9] of coextensive corporeal feeling and knowledge in Social VR can be seen as synchronization performances of hybrid body projects in which the physical and digital planes of phenomenological environmental experiences are reconciled. Forming an idea of two-ness of embodiment and accepting one's parallel digital representation as a genuine part of one's corporeality is hard. The imaginative capacity needed for this process usually diminishes the further one extends one's tracking equipment, as fewer perceptual gaps have to be filled by users to believe in their synchronized embodiment. Affective-bodily immersive experiences like underground raves or cybersex are activities that further solidify one's physical-digital body-project.

Our initial field observations made clear that intensive situations in VRChat are corporeal. On our proclaimed interactional intensity continuum, they would be closer to co-present physical interactions than information-based mediated communication. Body synchronization enables interactional practices characterized by co-presence and confrontation. Users bring their bodily expressions into virtual situations where they are transferred — with varying richness — into Social VR. This provides users an extensive interactional repertoire toward their situational others. Physical expressiveness then contributes to the interpretation and stability of the situation in mutual interaction. The proximity and closeness of virtual bodies are not a fundamental given in VRChat but must be deliberately allowed by users

by switching off a so-called "personal space" option in the platform's menu. This function is activated by default, determining a "territory of the self" (Goffman 1971); opposing avatars are hidden should they get too close. Our observations show that newcomers to the VRChat community are commonly advised to disable this default option of personal space (Nuoance 2020). Turning off the personal space barrier is the basic prerequisite for all practices of physical proximity in VRChat. Experienced users usually deactivate this function to enable physical closeness situations in VR. This is easily observable by how prevalent cuddling or headpatting gestures are in VRChat. User *Baumtiger*, for example, comments on the high affinity of VRChat-users for such practices:

> I love me some headpats, I love me some cuddling with my bros. You know, I love, I like, I enjoy, I actually find it a very enjoyable part of VRChat is being able to cuddle with and be able to be around others. […] And, you know, and I'm one of those people that I'm like very physically. I'm physically demanding. I like my cuddles. I like being hugged and stuff like that. And I enjoy it. Uhm, and so. I don't know. VRChat was just kind of something that it just kind of fell into place. I mean, people like doing it.

The synchronization performance enables intimate bodily practices deemed "very enjoyable." Cuddling, however, does not only serve the purpose of entertainment. It is rather valued as a mutual bonding that results from the bodily-somatic circumstances of the physical-digital body synchronization. This is especially obvious in the case of *Baumtiger*, who describes himself as "physically demanding" but sees no discrepancies regarding virtual cuddling in VRChat. Petting and cuddling with friends is part of everyday life for many VRChat-users. These are not merely forms of greeting but practices that establish and stabilize relationships. One's "personal front" (Goffman 1959:24), avatars in this case, can be edited extensively and thus allows for suggestive features that invite certain interactions. For example, VRChat-users edit avatars to have animal-like features such as fur, large eyes, or cat-ears. Users that emphasize cuteness are consequently petted and hugged. In our observations, the recipients of cuddle gestures actively participated in the situational performance and shook or rubbed their heads and bodies performatively under the hands of others. In some cases, the users also provide auditory feedback by mimicking purrs or growls. Due to external role displays of "cute" avatars, headpats — patting the head of the interactional partner — has become an almost universal practice among VRChat-users. Physical body movements are necessary to succeed in intensive situations so that mutual interaction runs smoothly for the participants. However, how intensively the physical closeness and intimacy is experienced in VRChat depends on how synchronized one's doubled body is in coextensive space. Technically, a significant step in this direction has already been taken with the tracking of HMD and controllers. Still, this is usually only the beginning for users; with an upgrade to Full Body Tracking (FBT), the reference points for body measurement in VR are doubled (Figure 1).

FIGURE 1. Full Body Tracking with Coextensive Preparation of both Layers of Perception (ChrisQuitsReality 2020)

The intensified immersion gained by "completing" one's virtual body image through adding lower body movement is enormous. All movements are now mirrored from physical space into the digital and the "melding" (Saker and Frith 2020:1439) of digitality and corporeality increases. There are numerous ways VRChat-users use to achieve even higher synchronization with avatars with FBT. It allows users to lie on the floor or sit down without distortions and de-synchronization, which are all resistances to one's synchronized body image that are usually avoided. Through FBT-assisted body synchronization, various body practices become feasible, allowing users to dance, sleep, or cuddle in VRChat. Social relationships in VRChat solidified through such mediatized body practices generate closeness and intimacy.

Digital Nightlife: Intimate Practices in VRChat

The sensory affection of shared bodily immersion in coextensive space and practices that emerge from the body synchronization becomes apparent when dancing in VRChat; on virtual dance floors, body-tracked visitors come into contact, dance with one another, and perceive each other. When standing close together in front rows of VR raves, social behavior that previously only emerged in physical proximity becomes observable. In physical settings, users move on and off the dance floor depending on the situation. Through spatial awareness and the perceivable presence of others (Merleau-Ponty 1962), dancers in VRChat are careful to manage and maintain their own personal space in crowds or "gossip-circles," often losing orientation in their physical tracking-area in the process. To avoid running into walls or furniture,

users learn to maneuver both coextensive layers of experienced space simultaneously. Physical space-management and feelings of proximity between avatars are a permanent part of the mutually shared interactional awareness of VRChat-users in intense situations on virtual dance floors. Experienced users recognize personal spaces of their own and others' avatarial bodies similarly to physical world settings, apologizing when running through another and generally avoiding close contact without consent. In cases of desired closeness, touches, hugs, grinding, and lap dances might occur.

For such situations, the userbase discovered numerous practices for familiarizing themselves with their mediatized bodies to heighten the shared situational intensity needed for affective-bodily immersion. Notable among these is the installation of virtual mirrors in VR environments, the consumption of alcohol while wearing an HMD, and the increasing popularity of ERP in lockable virtual rooms. In addition to myriads of psychoanalytical and metaphysical implications, mirrors in VR primarily aid body synchronization through constant reaffirmation of the virtual self and one's co-extensive behavior. User-created clubs, bars, and private hotel rooms contain a multitude of mirrors, often occupying entire walls and ceiling surfaces so that users can always perceive themselves. In such mirrored environments, VRChat-users not only become aware of their own avatarial bodies and how they appear to others but also of the presence of avatars of their interactional partners around and behind them.

By providing sensory support, the VRChat community ensures that their interactions succeed and are maintained despite eventual resistance. In some cases, this includes social drinking — a common practice among users that mimics get-togethers in physical space and sometimes has the added effect of aiding body synchronization by increasing one's susceptibility to accept the digital body and environment as part of their own. In VRChat, alcohol and sexual contact share the property of being rush-inducing immersion-enhancements in addition to their usual motivations. While intimate interactions in VRChat occur when users feel affective-bodily immersed together, they also heighten intensity and body synchronization.

In addition to clubs made for partying and dancing, worlds created for a more explicit erotic purpose can also be found in VRChat. Nightclubs, strip bars, and private rooms are spaces where coextensive closeness reaches new heights. *Just B-Club* is one of the more popular VRChat worlds. It is a hybrid of a bar and a love hotel, and what goes on behind the locked doors of the upper floor is the world's most standout feature. VRChat allows users to enter publicly accessible worlds in private instances to which only invited users have access. In private worlds or rooms — understood as Goffmanian backstages — more intimate situations happen based on greater familiarity and safety from disruptive factors or unwanted bystanders. Private spaces are the place where sexual practices of the highest possible closeness and interactional intensity usually occur in VRChat. Unless partners already know each other in VRChat, erotic roleplay is usually initiated via Discord or VR-specific dating apps like *Nevermet* or *Flirtual*. Here, users post their sexual identity and orientation as well as

information about interests, kinks, or boundaries. In any case, users briefly withdraw from their previous social "ensembles" (Goffman 1959) and meet in a private world to have sex.

In its intermediate status between physicality and digitality, VRChat sex is difficult to delineate among existing terminology of online sexual interactions. Interpersonal sexual contact via body-tracked Social VR is not included in umbrella terms like "techno-sexuality" (Plummer 2003), "net sex" (Waskul 2004), "internet sex" (Dekker 2012), "techno-intimacy" (Patel 2016), "digisexuality" (Mcarthur and Twist 2017) or "sexual interaction in digital contexts" (Döring et al. 2021), although the latter is certainly closest fitting in its distinction of "sexual interaction *via* digital technology" compared to sexual contact "*through*" and "*with*" digital technologies (Döring et al. 2021:1, emphasis in original). We agree on the need for a distinct perspective on mediated sex concerned with interactional qualia beyond the symbolical or referential. In approaching VRChat sex as interactionists, we cannot view it solely from a constructivist viewpoint. In line with Plummer (2003), we predominantly care about the actual bodily act of sex when we talk about ERP in VRChat.[10]

So, how is sexual contact in VRChat possible at all? Our observations show that virtual sex depends on body synchronization, avatar design, and supportive hardware incorporation. For sexual activities on the platform, special avatar models can take off clothes and have adaptive genitals. *Raliv*'s "Dynamic Penetration System for VRChat" (Raliv 2022) exemplifies the community's ingenuity and effort to improve their sexual experiences. As the name suggests, the program was exclusively written for VRChat and enables genitals to interact if both avatars have "DPS." Most users engaging in VRChat sex use Raliv's system to visualize penetration more realistically.

Intimacy is constituted through the broad scope of visual impressions in VRChat. As Lobinger et al. note for social media, it is precisely "the possibility to 'see' a person and their physical and facial traits are particularly important in enhancing closeness learning more about inner feelings, and in terms of sexual intimacy" (2021:158). However, virtual intimacy does not consist of graphic representation alone; it is possible to find a corresponding use of the body in immaterial environments. As explained above, sexual practices also require body synchronization and the execution of certain bodily activities. The partners physically move toward each other and interact with each other and their respective avatars. In the process, the virtual bodies of the partners touch each other and stage sexual activity. ERP is a practice that moves through both physical and digital realms, which can be observed when the performative acts stop being purely performative.[11] *Musically* recognizes this in her sexual experiences: "I've been with two cisgender women recently, one never set her controller down and the other did." When users put down their controllers to masturbate in their physical space, it might look like they disengage from the virtual situation since their arms stop moving. This is not seen as resistance or complication to intimacy but, as confirmed by *Musically*, users recognize their respective twofold

embodiment in coextensive space and adjust their practices and thinking accordingly. Both partners sense their physical *and* digital corporeality, even when just seeing one another in VR. Some might even be slightly offended if the sexual act remained purely performative in virtual space alone. User *Tammy*, who is part of a VRChat-BDSM group, realizes her partner's synchronized embodiment in another way:

> I tend to forget that a lot of people don't have phantom sense because it's so natural to me that I assume that everyone has this same experience and then very often like mid-ERP I realize like oh they are maybe not this immersed or this connected to their avatar and that's when I realize I have to shift gears.

There are several ways to translate digital into physical touch, one of them being phantom sense. If this body phenomenon is pronounced enough, touches are felt all over the body. Furthermore, even for people who have not (yet) developed phantom sense or never will, sexual contact at a distance can be established as soon as complementary hardware is used. Teledildonic products such as synchronized sex toys allow partners to control the strength of a vibrator online via smartphone applications, for example. But since intimate contact in this way is strongly mediatized via an additive device and has the character of remote control, cybersex loses some of its physical intuitiveness. Therefore, VRChat-users have adapted teledildonic-technology to follow their penetration and thrusts by modifying the toys' software. Here, the translations of digital touch into physicality happen similarly to phantom sense but more localized and tech-assisted. *Baumtiger* reports:

> Essentially, what it does is it detects how much is being touched by the another dynamic bone collider, like on a on a on a prop within VR chat or within like a hand or something like that. And what it will do is it will then depending on how much of the hand is pressed down on to it or how much or how much the toy is inserted or whatever the case would be, whatever the dynamics be, it will affect the toy's vibration, thus being even higher or lower.

While the actors are separated from each other and cannot physically touch each other, they interact on the virtual backstage, performing erotic and sexual body practices that are mirrored into shared virtuality. Through the already mentioned technologies and the body synchronization between fleshly, corporal, and virtual bodies, as well as with the synchronization product of the partner, an intensity of the situation is then generated in which sexual practices appear as corporeal and sensual.

As seen in the picture of sexual practice taken by an in-world camera by two VRChat-users (Figure 2), private rooms for VRChat-sex often include mirrors on one or several sides of the bed to aid their performance and check if their tracking still works. Although VRChat users who engage in sexual activities usually already have highly synchronized bodies, this is only added to when intertwining with sexual partners. In a rush of affection, one's own physical and digital body are closely

FIGURE 2. Sexual Interaction in VRChat (Sleeeveee 2021)

entangled, and connections to the avatarially embodied partner with *their* synchronized bodies are formed. For *Tammy*, encountering possible immersion-breakers like dislocated legs because of technical issues can be glanced over in the heat of such intense shared moments:

> It's just like the same as IRL, like you have sex and someone like farts really loudly or something, I think the best thing is to laugh it off, we're all human. Losing tracking is similar to that.

Her synchronized body project assimilates technological quirks into her understanding of corporeal selfhood, comparing tracking issues to uncontrollable flatulence. Closeness and intimacy in VRChat are always accompanied by contrary elements and daunting dualisms such as interaction and communication, the physical and virtual, the flesh and technology. In intense mediatized situations, however, many such contrasts begin to meld and form around people's lived practices and everyday interactions.

From co-present conversations, head patting, and cuddling to all-nighters, parties, celebrations, and even sexual contact behind closed doors, interactional bodily practices developed in VRChat can hardly be described as purely mediated, communicative, or disembodied. VRChat-users' state of embodiment and being around others is accompanied by a highly complex corporeal project. Closeness and intimacy in VRChat, as we show, are composed of the synchronicity of one's own body with one's avatar and the intense interactions with synchronized embodiments of other users. These synchronized and synchronizing interactions in VRChat then allow for perceptions of co-presence and even somatic-bodily touch, making practices in VR relational on an affective level. We conclude that observations of bodies and bodily practices in Social VR serve as prime examples for mediatized closeness with high degrees of interactional intensity and body synchronization.

CONCLUSION

Mediatized interaction can entail delocalized closeness and intimacy without being reduced to mediated communication or excluding the body. This becomes clear when re-imagining interaction theory in ways that always keep the body in mind and account for varying degrees of intensity of situations. We presented embodied practices in our fieldsite, VRChat, that underline how media do not necessarily detract from corporeality through mediation but meld and interrelate with corporeality in affective relations between people online. As revealed in our analysis, numerous embodied and relationally affective practices can be found in Social VR; headpatting, dancing, and sleeping together show that generalizing mediated communication as distanced is too simplistic. Rigid definitions of online interactions and cybersex without openness or a holistic lens for corporeal interactional qualia prove ill-fitting to analyze everyday life in VRChat. When applying interaction theory to mediatized social situations, we must empirically regard them on a continuum of interactional intensity — not categorically bound to physical presence.

The role of the body in an intensive virtual situation must be taken seriously. Firstly, it is evident that the physical body is always involved in the situation: specific coextensive body techniques required for virtual lifeworlds must quite literally be incorporated, socially negotiated, and learned anew. Thereby, embodiment must always be coordinated simultaneously within the digital and physical environment. Secondly, the virtual body in avatar form represents the interactional body in virtual space. It reflects one's own body movements and thus allows for situational interaction among VRChat-users. This does not imply referentiality between body-substitutes but affectual relations between extensions of actual bodies. Thirdly, numerous embodied practices reveal the degree to which physical and digital bodies are synchronized and how VRChat-users interact with their hybrid corporeality in shared coextensive spaces. This synchronized and phenomenally intense interaction with others is constitutional to everyday life in VRChat. It allows for delocalized yet co-present situations that users perceive as such. This is particularly evident regarding phenomena like phantom sense or the multitude of physically-close social practices prevalent in every corner of the platform. The use and perception of bodies in intensive situations do not only convey information but rather generate bodily affect with which participants physically perceive and coordinate each other.

Instead of defining such situations a priori by rigid and preconceived interactional characteristics, we argue for a flexible and kaleidoscopic analysis of mediatized situations that engages with the social reality in their online communities. There, we can observe and holistically analyze contributing factors to the intensity of their interactions. This concept makes the body's contribution and our participants' experiences apparent; Corporeality can be observed in VRChat daily while people create and uphold close relationships in digital environments. Worlds there enable shared social events in which dancing, drinking, cuddling, sexual contact, and a myriad of

other social practices reveal closeness and intimacy that consistently recur to Social VR-users' physicality and bodily sensations.

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NOTES

1. "Erotic Roleplay" is a sexual practice among VRChat's userbase. The term ERP itself was popularized in MMORPGs of the early 2000 s like Word of Warcraft and is often used indistinguishably from broader descriptions of sexual acts online, such as cybersex.
2. All German citations have been translated by the authors.
3. Common VR-HMDs used in 2022 are the Valve-Index, as well as an Meta Quest 2. Experienced VRChat-users tend to upgrade to full-body-tracked (FBT) setups eventually, mostly by using HTC Vive-, Slime- or Tundra trackers. FBT is achieved by attaching two sensors on one's feet and one near the hips. This adds three reference points for tracked body movement to the existing three (Head and both hands) of every owner of a VR-HMD with two controllers. Combined with digital asset costs for in-depth avatar- and world-creation, just being present in Social VR using FBT with an avatar one identifies with can cost from around 1000€ to over 5000€. For casual users, a Quest 2 HMD for around 300€ is sufficient.
4. Although Goffman sees "the social situation as the basic working unit in the study of the interaction order," he specifically does not intend a "rampant situationalism" (Goffman 1983:4). In situations, people do not face each other without history; rather, previous actions and experiences, biographies and social relationships, knowledge and culture have an effect. It is just these "cognitive relation we have with those present before us, without which relationship our activity, behavioral and verbal, could not be meaningfully organized," which is why social relationships are also always "extrasituational" (Goffman 1983:4). He elaborates this more generally in his work Frame Analysis (1974) or thematically more vividly on gender relations in Gender Advertisements (1976). But in spite of the "institutional reflexivity" (Goffman 1977:302), the interest of Goffman ultimately remains social situations in co-presence (Collins 1980:176).
5. Using the example of digital financial trading, Laube (2016) elaborates a similar perspective and reconstructs the interlocking of front and backstage through technological artifacts in a materially rich way. In this way, he can show that the exchange of information, such as current market values, shapes the situation and the action.
6. With regard to Goffman, Collins (1992, 2000, 2005) also argues for a corresponding entanglement of situations, which he elaborates in detail in his concept of "interaction ritual chains" (Collins 2005). Applied to digital interaction, Maloney (2013) can show, for example, the extent to which online networks of pro-anorexic websites can transform one's identity through emotional connections through digital interaction.

7. Our collaboration for this paper started in an initial exploration of VRChat in 2018. During this, the concepts of body synchronization and intensity emerged.
8. In fact, the assumed "one-ness" of bodies has proven to be a highly fragile concept that remains under constant social re-negotiation through practices of "body boundary-work" (Boll and Müller 2020:585).
9. In the community, phantom sense is seen as a body technique that can be learned with time. For this, VRChat worlds are created by users to self-experiment with it.
10. As we alluded to with Musically's case, we recognize the immense symbolical power that expression and online-discussion of gender and/or sexual orientation has for VRChat users. However, we see the pursuit and actualization of "sexual selfhood projects" (Adams-Santos 2020) like this as intrinsic to synchronized body projects in VRChat, and not necessarily bound to sexual activities.
11. For similar reason, we find the term ERP rather unfitting for VRChat sex, as its dramaturgical terminology portraits something corporeal, spontaneous, and intuitive as scripted and purely performative.

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