

SOME ASPECTS OF WRITING DEVELOPMENT

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Summary

Writing constitutes a modality-specific frame of action for textproduction. The general communicative and linguistic abilities, which are adjusted to the conditions of oral communicative practice have to be transformed according to the action conditions in writing. Based on empirical research on macrostructural coherence patterns the following paper lines out a developmental model. The emerging problems of writing turn out to be a developmental factor themselves rather than a result of spontaneous steps of cognitive development, as the piagetian tradition puts it. The medium -that is to say the historically evolved, culturally bound literacy-norms guiding its use- forces learning writers to modify and rearrange their textual, syntactic and lexical knowledge continually. Argumentative letters of 120 (= 4 x 30) pupils and students aged 13,16,19 and 23 have been examined following the idea of text "as a trace of process". The main empirical subject matter to illustrate the theoretical framework in this paper is the development of macrostructural coherence principles. Four types of coherence pattern called "Textordnungsmuster"(TOM) are distinguished, which relate relatively closely to four steps of "equilibration" in cognitive and communicative development.

1. Some aspects of writing development

Writing is a technical answer to specific cognitive and communicative needs, which occurred in the history of human society and still are occurring in the actions of the individual (cf. Goody et.al. 1986, Ong 1985). The development of written language (that is to say, the continuing changes in its lexical, syntactic and textual organization) is an extremely culturally determined process. Therefore it is not development in the literal sense of the word, it's not acquisition in the sense f.e. of Chomsky's LAD. There is no sensitive period, when the process has to begin and it's impossible to say, when it's finished. It's an open-ended process, that makes use of an acquired linguistic competence, but necessarily requires a metalinguistic and metacommunicative competence. It's "completely artificial", like W.J. Ong(1985:82) says. Writing development empirically is determined by the process of learning to write, that means learning the historically evolved and culturally bound modality-specific norms for written text (cf. Scribner/Cole 1981).

But "speaking and writing", "orality and literacy" are indicating not only different ways of encoding the same message, corresponding to different norms, but different systems of communicative actions or action frames. Therefore writing development also means learning to master the cognitive and communicative action problems occurring in a specific modality of language use. To explain writing development we therefore have to focus on the individuals action problems in writing.

I am now going to start the discussion of some theoretical aspects of writing development, which have been the basis for our investigation and the interpretation of the empirical data.

2. Communicative action problems and writing development

We consider writing to be a problemsolving communicative action, like a lot of other researchers have done (Flower 1981, Antos 1982, Martlew 1983, Molitor 1984, McCutchen 1986). But larger, empirically based attempts for a theory of writing development starting from the text- or action level are seldom (Britton et.al.1975, Wilkinson et.al.1980, Augst/Faigel 1986, Feilke/Augst (forthcoming)). The main problems of writing are consequences of properties, which are inherent in the modality and the conditions of written communication. These modality-specific factors are intensifying the general communicative action problems. They constitute a new frame of action for cognitive and communicative development.

2.1 General communicative action problems

With reference to Karl Buehlers (1934/82) organon-scheme of the linguistic sign we distinguish between three main communicative action problems and are adding a fourth one. Like Habermas (1981) has shown, these problems are corresponding to general communicative norms. Please compare the following figure.

Problem of expression: When communicating actors are expressing their own feelings and attitudes. They have to articulate implicitly or explicitly their kind and grade of subjective interest and involvement in the matter, the communication is about. Even in expository or explanatory communicative actions this problem may not be neglected. The general communicative norm to be met here is *sincerity*.

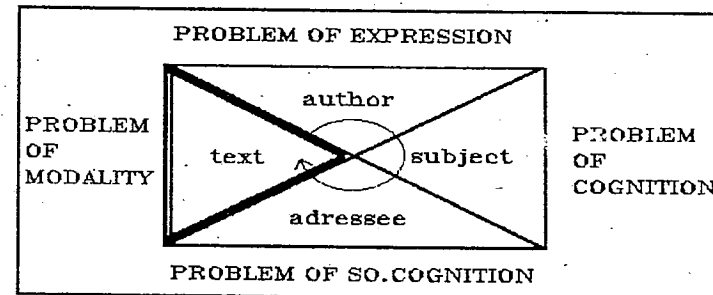
Problem of cognition: The actor is expected to give a cognitively adequate and sufficient description of the subject of communication. That is f.e. relatively easy, when speaking about an episode of our daily life and gets difficult, when we speak about abstract or complex and inter-related problems. The corresponding general communicative norm here is *objectivity*.

Problem of socio-cognition: The actor has to anticipate the addressee's view of the matter, to secure his attention and to appeal effectively to him. By use of linguistic and paralinguistic signs he has to indicate the relevant social knowledge (presuppositions) to secure understand-

ing (cf. Gumperz 1981). If he wants to achieve his aims, he must not neglect the corresponding norm of *situational and social adequacy*.

Problem of modality: The problem of modality is a metaproblem of communication. It mirrors the reflexive aspect of language use, the fact, that every instrument of action has effects on the structure of action. Each modality of language involves modality-specific problems for production and underlies modality-specific norms for text. Therefore the modality requires and allows specific modes for solving the communicative problems. The general norms here are *clearness and understandability*.

A model of action problems in communication:



The relationship between these problems can be characterized by three theses:

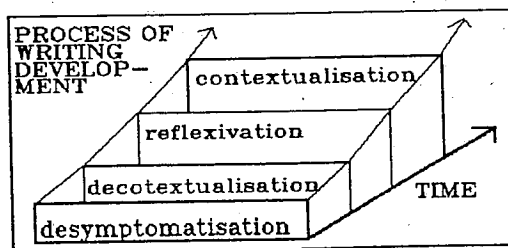
- 1) Every problem constitutes its own demands, which easily may lead the actor to neglect the others.
- 2) The solutions to the different problems very often are conflicting.
- 3) Therefore successful communication requires the functional and balanced integration of the solutions to the four problems.

2.2 Writing problems and developmental demands

In written language these problems are heightened and intensified, because the conditions for production of text require a transformation of linguistic, cognitive and socio-cognitive abilities, if the general communicative norms still shall be met. The modality causes new developmental demands. Cognitive and communicative abilities and linguistic skills have to be restructured under differing structural conditions for action. Such a process by Piaget once was called "vertical shifting or displacement" (decalage/Verschiebung) (cf. Piaget 1956/1984:49). Written communication demands the writer to integrate functionally his solutions to the several communicative action problems during the writing process. Such integration, if done well, leads to a semantically and pragmatically self-sustained and coherent text. The following synopsis illustrates the connection between writing problems and developmental demands:

Conditions for production in writing	Developmental demands
Problem of expression slowness of production > not as fast as emotion and cognition linearity/symbolicity >> no analogue communication	demand for desymptomatisation of expressive behavior/ demand for symbolic restructuring and verbal control of affects and emotion
Problem of cognition absence of suprapractic environment >> no contextual orientation of actors copresence of text >> increasing influence of synsemantic environment	demand for decotextualisation demand for active construction of a coherent cognitive frame with aid of purely linguistic signs
Problem of socio-cognition absence of audience >> writer is left for his own devices/ reduced social control of text production/ virtuality of concepts about addressees	demand for contextualisation demand for active construction of a social frame / pragmatic steering with aid of a linguistic illocutional network and explicit metacommunication
Problem of modality linearity/ copresence of text/ absence of audience >> genuine writing problems e.g. to start writing/ problems for textual coherence	demand for reflexivation demand for planning of production process and textual organisation

The four developmental demands, desymptomatisation, decotextualisation, contextualisation and reflexivation can be seen as different aspects of the process of writing development. How this theoretically deduced aspects empirically gain form in the lexical, syntactic and textual structure of written texts has been subject of our investigation (cf. Augst/Faigel 1986, Feilke 1988, Feilke/Augst (forthcoming)). Before going into the details of our empirical research I want to show to you a figure, that already may demonstrate you the general structure of the developmental process as we see it.



Each aspect of the writing process dominates a different stage. The first stage of the process is dominated by the problem of expression,

the second by the problem of cognition, the third by genuine modality problems and the last period focuses on the problem of socio-cognition.

3. Development of coherence pattern in written argumentations

3.1 Methodical problems, subjects and task

Following the idea of "text as a trace of process" (cf. McCutchen 1986, 1987) we see the structure of written texts as a result of the writing process as a problemsolving process. We have analysed argumentative letters written by 120 (4x30) pupils and students aged 13,16,19 and 23. We have focused on the period from 13 to 23 because it begins, when psychological development in the sense of Piaget is finished or has reached its last stage. We decided to explore argumentative texts, because argumentations are open to a wide spread of text organizing principles; they may include expository explanatory and even narrative elements all of which share the overall argumentative function of the text. To a developmental perspective this is very interesting as we will see.

And we decided to let our subjects write a letter, because we wanted them to have a concrete addressee for their text. Except addressee and general theme the subjects in writing should be left for their own resources. This enables a nondirective elicitation of coherence principles. The subject of our investigation, coherence, is only one aspect of the text structure. It has to be divided from cohesion. Cohesion means the linguistic "texture" of texts, the technics of intersentential sentence combining (cf. Halliday/Hasan 1976, McCutchen 1986,1987) whereas the term coherence focusses on the semantic and pragmatic overall structure of texts.

In the concrete task for our writers they were asked to write a letter to a professor at the university, who publicly had proposed to abolish homework. In the letter they should write their opinion concerning this proposal and contradict or support the professor.

3.2 Qualitative Results

The search for coherence patterns in 120 texts demands for theoretical abstractions from the surface structure of the texts. At first sight every text seems to be an unanalyzable individual. But with aid of the theoretical concepts we have discussed above it was possible to distinguish four coherence patterns, which can be interpreted as problemsolving patterns, corresponding to the four action problems in writing. Every communicative action problem in writing seems to constitute specific demands for textual coherence and therefore encourages the production of specific coherence patterns, like the following figure shows.

Problem of expression	--> dominance of expressive textual functions	--> subjective-linear pattern (36 texts)
Problem of cognition	--> dominance of cognitive textual functions	--> cognitive-systematic pattern (31)
Problem of socio-cognition	--> dominance of argumentative functions	--> argumentative-linear pattern (14)
Problem of modality	--> dominance of formal textual functions	--> formal-systematic pattern (23 texts)

Most of the texts can be divided up into two main groups very easily. These are linear texts (50) and systematic texts (54). But these two attributes are not systematically related to the age of the writers nor do they tell something about the quality of the texts. Linear texts formally can be characterized by a sequential succession of arguments, whereas systematic texts obviously are structured by two and sometimes more interrelated but relatively autonomous paragraphs very often consisting of contradicting arguments.

But analyzing the two types of text we soon found some more features, which enabled us to distinguish the four patterns listed up above. For the following discussion please look at the examples for the coherence patterns at the end of the paper (Appendix).

The subjective-linear pattern: This pattern follows, like Marlene Scardamalia (1981:90) says an "affective scheme". And she completes: "In such writing the associative mechanism follows a time sequence: each event would trigger the next." The subjective-linear pattern is such a type of quasi narrative writing. The pattern primarily is used to express how the writer personally is affected by homework in his own environment. The personal experience of the writer is structured by scenes; and a time sequence of everyday scenes is used to structure the text. This example shows, that the desymptomatisation process is not already finished. The time sequence determining the text structure is the immediate expression or symptom of the writers subjective episodic representation of his problems with homework. Therefore the text is not narrative in the sense of a rhetorical pattern. The linear-narrative structure is the only remaining possibility for the writer to solve her problem of expression. The cognitive and argumentative demands of the task are neglected. Therefore subjective-linear patterns hardly can achieve a level of generalizable arguments. The writer here seems to know this. A breakage in the second part of the text (proposal), where she suddenly jumps on a general level, indicates, that the writer knows, that she has to finish with a generalizable solution of the problem. But she is not able to derive it from her argumentation.

The cognitive-systematic pattern : The solution the writer intended, but could not reach with her arguments, demands for a generalizable

cognitive frame for the subject of argumentation. That's what we have called 'decontextualisation'. The active construction of such frames dominates the structure of the cognitive-systematic pattern. You can find it in the second example.

The internal structure of the subject as the writer sees it, guides her through the writing process, most of these texts are structured by a couple of opposing cognitive issues, like in this example 'homework for difficult subjects' vs. 'homework for easy subjects'. Other couples of the cognitive-systematic pattern are f.e.:

- | | | |
|---|-----|--|
| - homework when weather is nice | vs. | homework when weather is bad |
| - homework in summertime | vs. | homework in wintertime |
| - homework for good pupils | vs. | homework for bad pupils |
| - homework for pupils living near to school | vs. | homework for pupils who have to take the bus |

It is obvious, that the problem of cognition dominates this type of coherence pattern. But even here we find coherence breakages. For example in the second part of this text the writer falls back to an associative writing, that reminds us of the subjective-linear pattern. But using a cognitive frame for structuring a text implies some more possible complications. In writing cognition underlies modality-specific constraints; the cognitive features and implications of every subject are innumerable. Under a purely cognitive perspective there are no limits to the number of arguments. This might cause problems for cognitive coherence, if there occur factual contradictions, but the main problem in writing is: it easily causes problems for textual coherence, because every text is final and all factual relations relevant for understanding have to be put in linguistic signs.

The formal-systematic pattern: A lot of writers seem to know this problem. They've found a way to achieve textual coherence independently from cognitive coherence. Please confer the third example. It illustrates the coherence pattern we've called *formal-systematic pattern*. The writers using this pattern seem to focus on the problem of modality. They are structuring their texts with aid of purely formal principles, such as the pattern *pro-contra-conclusio* or a sequential pattern like *firstly-secondly-thirdly*, which can be motivated cognitively but have not to be. Very often we therefore find such patterns only pretending cognitive coherence (cf. Molitor 1984:36). But obviously these writers are aware of some of the difficulties occurring in writing. If they have to write a text, they can write a coherent text. The formal-systematic pattern shows a writer who-already has developed affect control in writing (desymptomatisation) and who is able to subordinate the demand for the construction of a cognitive frame (decontextualisation) to the limits of textual coherence (reflexivation). But the formal-systematic

pattern is a macrostructural routine in writing; it neglects the demands for an active construction of a social frame.

The argumentative-linear pattern: An effective argumentation depends on the writers ability to construct a social frame, as a basic assumption for convincing the addressee. Therefore in argumentations the problem of socio-cognition has to be focused on. *The argumentative-linear pattern* is in accordance to these demands. It is illustrated by example four.

Here again we have a linear scheme; it includes episodes, but the overall structure of the text is not determined by a sequence of events. To say it metaphorically: the writer uses the linear scheme for taking the addressee by the hand and guiding him to his arguments and through his text. Beneath the linear structure this pattern shows a lot of elements for the pragmatic steering of the text: f.e. personal addressing, immediate appealing, supporting episodes, which are embedded argumentatively and a lot of explicit metacommunicative elements (e.g. performative verbs). All these elements are constituting a social, illocutional frame supporting the arguments. We find here, what we have called 'contextualisation'. In this type of coherence pattern the solutions to all of the communicative action problems in writing seem to be integrated functionally according to the high level goals of argumentation.

3.3 Quantitative Results

The sequence of the coherence patterns, as I have discussed them already anticipates some of the empirical results of our investigation, which I want to present to you know. I want to bring in relation three variables:

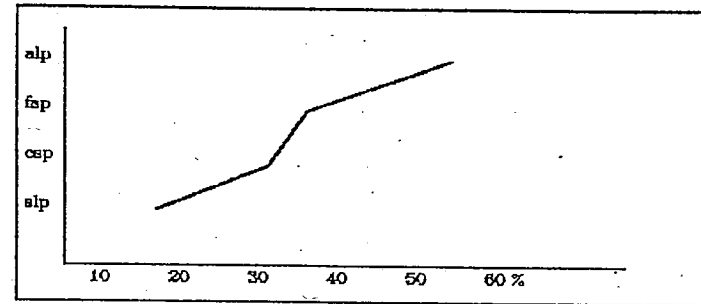
- type of coherence pattern
- rank of coherence
- age of writers

TYPE OF COHERENCE PATTERN AND RANK OF COHERENCE

I can't go into the details of our analysis of rank of coherence now (cf. Augst/Faigel 1986:126ff.). We have distinguished three ranks:

- rank 1: coherent - consistent pattern - 32 texts
- rank 2: weakly coherent - pattern changes and breakages - 72 texts
- rank 3: not coherent - no pattern - 16 texts

The following figure shows the percentage of coherent texts (rank 1) for each type of coherence pattern.

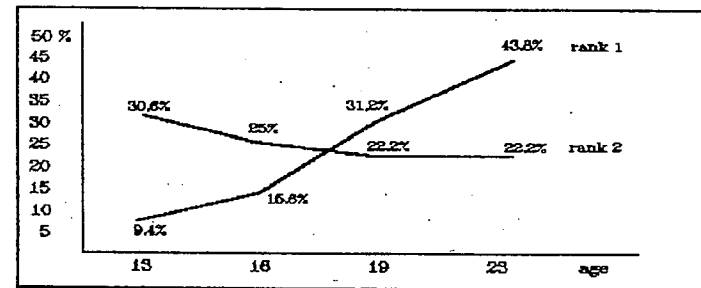


Percentage of coherent texts in each type of coherence pattern

A possible interpretation of this result is: The different coherence patterns are able to integrate the several textual functions or solutions to action problems to a differing degree. Under a developmental perspective they might develop out of one another in a differentiating process, whereby the subjective-linear pattern scarcely is differentiated and the other patterns are steps of a functional differentiating process, which is pushed ahead by deficits in the problem solving power of the patterns.

AGE OF WRITERS AND RANK OF COHERENCE

In relation to the age of the writers our analysis shows an increasing percentage of coherent texts, like the following figure demonstrates.



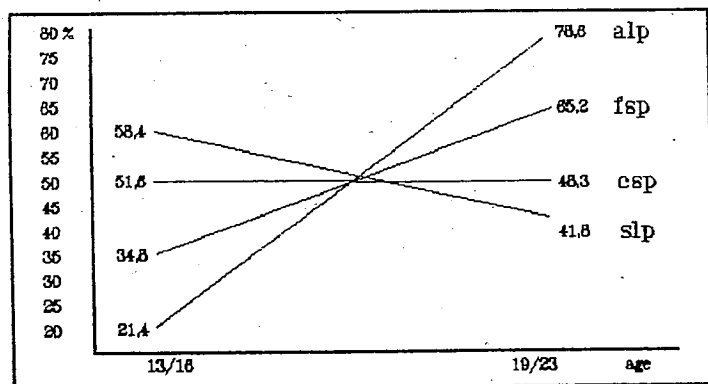
Age of writers and rank of coherence

It seems, that with increasing age of the writers they get more and more aware of the several communicative action problems in writing. They learn to integrate the solutions to those problems functionally and to secure coherence.

AGE OF WRITERS AND TYPES OF COHERENCE PATTERN

It is not possible to explain the increasing coherence of the texts written by the elder writers only by an increasing number of more coherent

formal-systematic and argumentative-linear patterns, like the two figures above might suggest. To examine the connection between age, type of pattern and rank of coherence we polarized the different groups of writers on the age axis, like the following figure shows.



Age of writers and types of coherence pattern

Now this figure makes clear, that the elder writers make more use of the argumentative-linear and formal-systematic pattern, but they also make use of the other patterns. A detailed analysis of the coherence of these texts shows, that the elder writers average more coherent cognitive-systematic and subjective-linear patterns. They are not only developing new types of coherence patterns to achieve their communicative aims; by an increasing reflexivation they also improve their ability to write coherent and functionally integrated subjective-linear and cognitive-systematic texts.

Conclusion: The development of coherence patterns can not only be characterized as a *process of differentiation*; it also is a *process of functional integration* of textual patterns. Both processes indicate an increasing awareness about the modality-specific conditions for production and understanding of written text. The resulting picture of writing development shows, that it's not a chaotic process, left for its own and without direction. It also is not a linear sequential process in which each step, each new coherence pattern, substitutes the one going before. What we've found is a multilevel process, that is pushed ahead in a fixed order by the action problems occurring in writing. They lead the writer more and more to *specificate* his expressive, cognitive and socio-cognitive writing abilities. By writing the writers learn to write and at the same time they are learning much more than to write.

APPENDIX

Example 1: Subjective-linear pattern

Dear Professor Augst,
I'm against homework. Sometimes it takes me all afternoon, and on top of that I've got to do other jobs in the house. I've got to help my mother, because my grandma's in hospital. My mother has to go and visit her every afternoon. So I've got to help her a bit with the housework. Than I've always got to help my little sister with her homework. She always cries when she doesn't understand something, and everyday there's something she doesn't understand. That's, why I'm against homework. My suggestion: Once a week may be a small piece of homework could be given in the main subjects. That wouldn't be to much. But home work shouldn't be set for the next day. Those were my views on homework.

Example 2: cognitive-systematic pattern

Dear Professor Augst,
I'm against homework. It's only time consuming and a nuisance. I can see it's necessary in some subjects (eg.maths,english,latin,french and german) in order to go over what has been dealt with in the morning. But my mother never understands my homework and has to neglect her housework if she has to spend all afternoon racking her brains over my homework. In music, geography, biology, history and other subsidiary subjects I think homework is completely unnecessary and an even bigger waste of time. While my mother is doing my homework, I've got to do her housework. Then there's also my baby brother who needs looking after and feeding. After all I want to have a bit of spare time too. While my mother was in hospital, it took me from midday right through till eleven in the evening to get through my homework. The amount of homework set should be drastically reduced. That would take some of the pressure of going to school. That is my opinion about homework.

Example 3: formal-systematic pattern

Dear Professor Augst,
I would like to give you my opinion on the subject of homework. I think it's difficult to form a clear opinion on the matter. On one hand homework speeds up the teaching process and helps pupils at home to reinforce what they've learned at school. Homework indeed involves either follow-up work or preparation. Personally I think follow-up tasks are better, as a form of repetition, as it were, since this facilitates better memorizing for tests and examinations. One the other hand homework is also a considerable disadvantage, since no one who gets home at 5 pm feels like doing two or more hours of homework. After all apart from homework there's also a lot of revising to do for examinations. In the sixth form there is more than enough to cope with in the form of afternoon classes, tests and the horror of 'A'levels, without having to do home work as well. I take the view, that anyone who attends school is entitled to three hours leisure time before 7 pm. In conclusion therefore I see absolutely no point in homework in the sixth form, particularly when one considers that about half the pupils never do their homework themselves anyway. Yours sincerely

Example 4: argumentative-linear pattern

Dear Professor Augst,
My son has informed me, that in class you have declared that you are against setting homework. I consider this to be a very progressive approach and can only express my full support. Personally I think, that six hours in the classroom are demanding enough for the pupils. I can observe, how difficult it is in the afternoon for my son to find the necessary motivation for homework. Moreover I find it unacceptable that teachers do not coordinate the setting of home work with each other, but only consider their own teaching, with the result, that they often demand more than the pupils can cope with. Perhaps teachers should try to make their lessons more interesting, so that pupils on their own free will feel like spending an hour or going back over the subject matter. I find this infinitely more reasonable than forcing pupils to work and than punishing them if they fail to achieve what is expected of them. In conclusion therefore I can only support your approach. Yours sincerely

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