GFL

German as a foreign language

Introduction

Jens Loescher, Berlin

Introduction

Jens Loescher, Berlin

There has been a long history of writing research in the realms of psychology, didactics, and philology. Two decades ago, with the rise of brain imaging techniques, an old strand of brain research interested in speaking and writing was revitalized. Finally, writing as a language production faculty has been of interest to language production research, albeit not at its centre. Consequently, there are a number of different approaches to the topic. The most surprising fact seems to be that there is practically no cross-fertilization between the disciplines, especially between 'classical' writing research in psychology on the one hand and language production research and brain imaging on the other. Didacticians and a few literary scholars tried to establish their own 'field' with the founding father Lew Vygotsky.

Thus, the basic idea of this volume is to bring together the isolated strands of research. Empiricists and 'didacticists' were asked to refer to the kinds of questions asked in the other discipline. Didacticists were to refer to classical models of writing, empiricists were to think about didactic consequences of the hypotheses they had put forward. Now, disciplines exist because different kinds of discourse patterns and research habits are necessary with respect to different kinds of epistemic objects. An interesting fact about writing is that there seem to be several kinds of epistemic constructions of this object. 'Writing' psychologists are (for the most part) not interested in different pathways of language production with respect to output-modality (writing or speaking) – a matter of heated debate between Willem Levelt and Alfonso Caramazza, two major researchers in the field of language production research. Didacticists abhor the narrow scope of 'cognition' in the sense of problem solving (Hayes & Flower 1980) and tend to adhere to the dictum that 'the brain is a black box'. Brain imagers, in turn, seem not to be familiar with the vast research into writing in psychology and – at the present time – work on localizing one or several writing centres without asking too many questions as to what cognitive faculties are involved in the activation of certain brain regions. Philology, finally, clings to media

history on the one hand and editorial scrutiny on the other, ignoring – again at the present time – a possible master competence for writing research as the discipline dealing with exceptional writers and writing processes *per definitionem.*

Ever since Hayes & Flower's model, writing is supposed to be problem solving. A writing plan is generated or retrieved in relation to a writing task, then it is 'translated', meaning encoded into language, finally there is a phase of reviewing the text produced so far. The monitor is a supervising faculty which governs all the steps, including planning procedures.
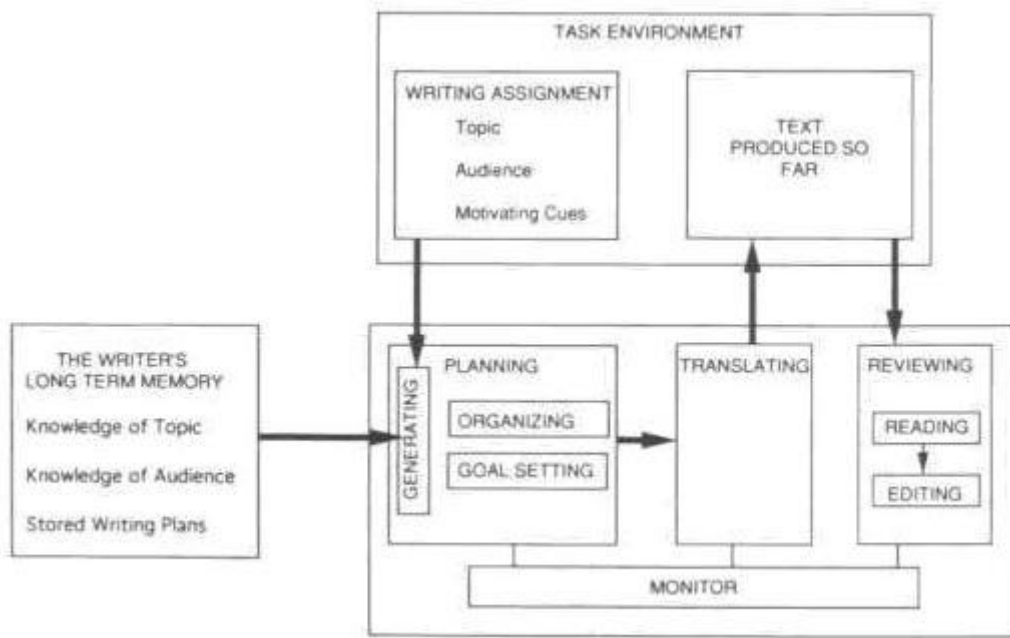
Fig. 1: The Hayes-Flower model proposed in 1980

Moreover, 'classical' psychologists of writing have dealt with the 'costliness' of writing as an orchestrated cognitive activity involving a host of complex processing and monitoring devices. Ronald Kellogg's seminal work on working memory 'burdens' during writing – a lucid modification of Baddeley's model of working memory – has revitalized 'classical' writing research, pointing to the fact that the model of Hayes & Flower with its sequential 'splitting' of writing activities had underestimated, ironically enough, its own term of recursive or feed-back loops of writing. If indeed the three cognitive states of planning, translating and reviewing do not imply separated epochs of writing, prospective or re-

reading activity, as David Galbraith points out in this volume[1], then the terminology and modelling still reveal the underlying assumption that writing and especially writing ideation is the cognitive 'joint' between planning and reviewing activities. However, writing ideation is dependant on implicit forms of knowledge, on the motor act of writing (including retrieval of graphomotor forms or 'trajectories'), on automatic kinds of selection tools for competing lemmas or lexemes. The *ad-hoc*-recursiveness of writing, after all, results in dense mental concepts and triggering of 'dense' lemmas and their respective lexemes. This process cannot be planned. There is no problem solving strategy involved. On 'early' levels of language production – conceptualisation and encoding in the terms of Willem Levelt – there is simply no way for higher cognitive faculties, including the monitor to interfere.

Especially intriguing with this respect is David Galbraith's contribution to this volume inasmuch as it focuses on the semantic 'processing' of bursts of linguistic entities during writing which is not subject to higher cognitive functions. Rather, the combination of semantic units into bursts can be looked at as the outcome of an 'autonomous' processing faculty. Thus there is a 'dual-path'-model: Bereiter & Scardamalia's *knowledge-transforming* means the interplay of writing goals (explicit knowledge retrieved from long-term-memory), 'translation' into language, and monitor control as to how the writing goals have been executed in the text; David Galbraith's *knowledge-constituting* means activation of implicit semantic memory and language processing *ad hoc* during writing without any explicit planning procedure. Writing ideation in fact consists of combinations of semantic units; the generative rules which govern their course of evolving are not retrieved from a set of long-term-memory-items; rather they are generated themselves during the writing epoch and cease with the termination of writing.

Since it is a long way from philological writing research via psychology to brain imaging let me elaborate a little further on the interconnections between the articles in this volume.

---

[1] "An important feature of the model, which distinguished it from a traditional product-based view of writing as a linear process of plan-write-edit, was the recursive nature of the process. Planning, translating and revising can, in principle, occur at any moment during writing – they refer to cognitive processes rather than stages in the writing process" (David Galbraith, this volume, p. 2).

Hayes has revised his earlier model considerably in 1996, including social and affectual factors and widening the scope of the term 'reflection': now reflective praxis means problem solving (including planning), but also decision making, and inferencing. (Hayes 1996: 20). Suddenly the writer's personality comes into the picture, the term writing 'goal' (in contrast to problem solving) emphasizes a deliberate act of 'mediated' communication via a written text. This 'anthropological' turn in cognitive writing research in the nineties informs most of the articles of this volume, the didactic as well as the empirical ones. The motivational factors of writing including representations of 'personae' (author, reader) are of major interest to Gerd Bräuer, whose term 'reflective praxis' draws on this kind of 'wholism' of writing activity, albeit without neglecting Kellogg's valuable insights in processing limitations of reflective writing. Task and personality variables are also stressed by Barbier & Spinelli-Jullien, who give a concise overview of current empirical research on this topic. Writers adapt their strategies to the cognitive load imposed by the writing task and the language used (L1/L2). Interestingly enough, more complicated and abstract writing assignments in L2 do not necessarily inhibit writing, but might trigger awareness of lexical and syntactic 'features' of L2, resulting in more fine grained texts. Thus, 'quantitative' and 'qualitative' research designs are by no means exclusive in the field of writing research. Producing 'hard' data as with keystroke logging tools or behavioural assessments like reaction times does not preclude looking at learning styles, subjective theories of learning (L2), motivation, and 'understanding' in the sense of world knowledge burnt down to the challenges of a particular writing situation (task). Luuk Van Waes, Mariëlle Leijten & Daphne van Weijen demonstrate that lucidly in their contribution. The somewhat ironical remarks of the *doyen* of the field, Hayes, as to the "seven year itch" (1996: 21) of one-time cognitive writing researchers performing the cultural turn do not seem to encompass the 'old Europe' of writing research: the Netherlands, France, and Germany.

But what about 'culture'? To be sure, there are 'cognitive' writing researchers who do focus on writing ability depending on class or reminiscences of oral culture in written text, to name just a couple of examples. Even the 'cognitivist' Hayes has included factors of this approach in his new model. Still, I believe with Hayes that writing is not a cultural act like distancing in conversation, avoiding reaching out with your left hand when greeting

someone or playing any kind of 'theatre' in the social realm in the sense of Erving Goffman. That is why this volume focuses on writing as a cognitive activity, although I think that 'cognitivists' and 'culturalists' might end up with interesting hypotheses as to the construction of 'personae' while generating writing plans, the usage of the mnemotechnics of oral traditions in written texts or the 'symbolic capital' writing might (re)gain in the public realm or in subcultures.

The mutual relevance of being cognitive *and* cultural might be one reason why Vygotsky is a major anchor for Gabriele Graefen and Antonie Hornung in this volume. Writing (and speaking) as goal-directed actions imply strategies of convincing, methods of orientation (of the reader), and techniques of *origo,* as Gabriele Graefen emphasizes. Of course, this also applies to academic writing, *contra* the older applied linguistics. Antonie Hornung adapts – intriguingly – the 'between nature and nurture' theory of Elizabeth Bates, MacWhinney and later Michael Tomasello, exemplifying again the salience of a cognition/ culture stance. Rounding this section off, Stephan Porombka points out that writing fictional texts can (of course) be taught and suggests some interesting tools for accomplishing this.

Finally, I would like to turn to the new paradigm in empirical writing research: brain imaging. Rüdiger Seitz elaborates on the studies which have been published so far and points to some interesting hypotheses which might be derived from the empirical data. Yet, scepticism towards the old idea of a 'writing centre' is an apt research strategy. Brain imaging seems to evolve as a field which aims at re-performing and 'topping' all classical experiments and hypotheses cognitive psychology ever put forward. Writing research should not succumb to the thrill of 'imaging' all the laboriously carved out results and reliable effects of older techniques of assessment. On the other hand: why not give it a try with some specific hypotheses and carefully weighted experimental designs? The inter-connection of writing activity and retrieval/encoding of episodic memory, charging or alleviating of working memory components (especially the episodic buffer), and the specific 'awareness' the writing monitor rests on seem to be the kinds of questions which might be properly asked by the 'student of writing'.

References

Baddeley, A.D. (1986) *Working memory*. London: Oxford University Press.

Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Lawrence Erlbaum.

Caramazza, Alfonso (1997) How Many Levels of Processing Are There in Lexical Access? *Cognitive Neuropsychology* 14, 177-208.

Hayes, John R. (1996) A New Framework for Understanding Cognition and Affect in Writing, in: Levy, C. Michael; Ransdell, Sarah (eds.) *The science of writing. Theories, Methods, Individual Differences, and Applications*, Mahwah: Erlbaum, 1-27.

Hayes, John R.; Flower, Linda S. (1980) Identifying the organization of writing processes. In L. Gregg & E. Steinberg (Eds.), Cognitive process in writing (pp. 3-30). Hillsdale, NJ: Lawrence Erlbaum Associates.

Kellogg, R.T. (1996) A model of working memory in writing. In: Levy, C. Michael; Ransdell, Sarah (eds.), *The Science of writing: Theories, methods, individual differences, and applications*. Mahwah, NJ: Erlbaum, 57-72.

Vygotsky, Lev (1962) *Thought and language*, ed. and transl. by Eugenia Hanfmann and Gertrude Vakar. Cambridge, MA: MIT Press.

Vygotsky, Lev (1981) The genesis of higher mental functions. In: J.V. Wertsch (ed.) *The concept of activity in soviet psychology*. New York: Sharpe, 144-188.