

The Psychology of Written Composition

Carl Bereiter

Marlene Scardamalia

Preface

The subject of this book is the mental activities that go into composing written texts. For brevity we will often refer to the subject simply as *writing*, but the term should not be taken too literally. In this book we are not concerned with the physical act of writing, except insofar as it influences other processes. The mental activities of writing considered in our research are the same kinds of higher mental processes that figure in cognitive research on all aspects of human intelligence. They include goal setting, planning, memory search, problem solving, evaluation, and diagnosis. Writing is, of course, easily recognized as an activity in which a good deal of human intelligence is put to use. Its neglect, until very recently, by cognitive scientists is, however, easy to understand. Cognitive research has been gradually working its way from well-defined to ill-defined problems, from tasks that draw on limited knowledge to tasks that draw on large bodies of knowledge, and from tasks that are easily constrained experimentally to ones that are more susceptible to intentions of the participants. On all of these counts, writing lies far out on the yet-to-be-reached end of the continuum.

Theorizers about the composing process face a difficulty that is not faced by theorizers about even such closely related processes as reading. It is that people will judge your theory against an elaborate set of intuitions of their own, formed from their own experience as writers. Reading, along with many other cognitive processes, tends to go on with little conscious awareness of the process itself. But writers, especially when grappling with a difficult task, tend to be keenly aware of at least certain aspects of what is going on in their minds. This is no accident, we shall argue: Skilled writers need to be able to exert a measure of deliberate

control over the process. As a by-product, however, experienced writers tend to have rich intuitive theories, in contrast to which the theoretical propositions emerging from a young science are likely to seem rather thin. It is perfectly reasonable to insist that a psychology of writing should not violate our intuitions—at least not without putting up a good argument. But it is not reasonable to insist that a psychology of writing in this day and age should do justice to all our intuitions. For our intuitions about what goes on in writing range across all dimensions of the human spirit.

A theory of writing that could explain writing in all its fullness could pretty much send all other psychological theories packing. We believe it is a mistake, however, to try to build a psychology so as to encompass the widest possible range of intuitions. Such efforts win plaudits, but they neglect the basic task of science, which is to tell us things we don't already know.

In an effort to find out things about the nature of the composing process that are not already intuitively known, we have concentrated on comparisons between the composing processes of unskilled writers and those of more expert writers. The body of intuitive knowledge about writing is, after all, knowledge accumulated by people of mature intellect for whom writing is a significant enough activity that they have taken the trouble to introspect about it. Is writing basically the same process for beginners, with a few parameters set differently, or does it follow a qualitatively different mode? These are questions we have pursued through comparative studies of older and younger writers, writers of the same age, skilled and less skilled, coupled with experimental and instructional interventions designed to reveal aspects of writing that are normally hidden from examination.

The upshot of this research is that we have come to believe that there are distinctly different strategies that involve writers in different kinds of thinking when they write. These differences have structure and are not simply a matter of more of this or less of that. Producing discourse without a conversational partner—which is what writing amounts to—is a formidable task for novices. To

cope with it they devise a simplifying strategy. Expertise in writing does not come from refining this strategy or from mastering the use of it. Expertise comes from subordinating the simple strategy to another that is a great deal more complex. In the following chapters we present evidence leading up to this view of writing competence and investigate what is involved in moving from the simpler to the more complex strategy.

The book is aimed at three classes of readers. One is people who are generally interested in cognition or cognitive development, and who we hope will find that research on writing contributes knowledge relevant to understanding major issues in these fields. Another class is people primarily interested in writing, but who are curious about how the mind copes with this task. We believe that the story to be told about the composing process is sufficiently fascinating and garnished with surprises to repay the effort of wading through some psychological jargon and experimental details in order to get the story. The final class of people is instructional psychologists. Instruction is both a goal and a tool of our research. That is, we use instructional interventions to test theoretical ideas but also have an eye on devising instructional approaches that are effective for difficult-to-acquire abilities.

Because the book does include instructional research, it may be helpful to say a few words about how it relates to what is currently happening in the teaching of writing. There is a reform movement afoot, concerned with making writing a more substantial, meaningful, and successful experience for students. A salient notion guiding this movement is that children have a great deal more natural aptitude for writing than is revealed under traditional school conditions (Graves, 1983). It is easy to see how our claim that novices and experts follow qualitatively different models could be construed as a denial of children's natural aptitude for writing.

In point of fact, we also argue that children have a great deal of competence that is not manifested in their typical school writing. Differences have to do with interpretation. Some take the finding of how much better students write when

they are in a supportive environment and allowed to write on what really matters to them, to mean that we already know enough to sweep away the obstacles to expert competence. We are struck by how much more dependent novices are than experts on environmental supports on particular genres-most particularly the personal experience narrative-and on the topic of writing. We see a major unsolved educational problem in enabling students to sustain high-level parts of the composing process independently, in a variety of genres and topics, not simply those most suited to their strategy.

Educationally, our interest is in what it takes for students to grow beyond their dependencies and acquire the autonomous competence of the expert writer. As for the issue of what children can and cannot do at a certain age, it is probably safe to declare that this is always a false issue as far as contemporary developmental psychology is concerned. Cognitive developmental psychology tends to be concerned with what develops and how (see, e.g., Siegler, 1978). But *when* it develops is of interest only insofar as issues of synchrony and asynchrony, prerequisite conditions, and the like are concerned. In the pages that follow we present strong contrasts between mature and immature competence in writing. But it is the contrast between two different executive systems for composing that is of interest. There is good reason to believe that many educated adults follow the immature model. This is, in fact, a reason for believing that the study of these contrasting models is of educational as well as psychological importance. If someone could show us a seven-year-old who followed the mature model or (better yet) could show us an educational program that turned out children who follow the mature model, this would be of considerable interest but would not undermine claims we make about these models.

In both instructional and noninstructional research, our persistent interest has been *the effects of the composing process on the ideational content of what is written*. Language production itself has been considered mainly insofar as it may aid or interfere with the processing of content. When writing is viewed from the standpoint of language, it often seems that children do a better job of expressing what is on their minds than adults do of expressing what is on theirs, and so the

challenge to writing instruction becomes that of preserving and nurturing the early genius. When writing is viewed from the standpoint of ideational content, however, it becomes clear that children have something important to learn. Mature competence is not merely a more sophisticated way of expressing what is on one's mind. It is a whole different way of interacting with one's knowledge, a cultural attainment of a high order, and one that we are only beginning to have inklings about how to develop.