

VISIBLE LANGUAGE LANGUAGE VISIBLE

We do not write in order
to be understood;
we write in order
to understand.

C. Day Lewis.

Volume XIV Number 4
Special Issue
Dynamics of Writing
The research journal
concerned with all that
is involved
in our being literate

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The research journal concerned with all that is involved in our being literate

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University College London

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Introduction

"Any fool," wrote the poet Gray, "may write a most valuable book by chance, if he will only tell us what he heard and saw with veracity." This is a nice remark and typical of the kind of thing which might have been said in the ordered society of eighteenth-century England. Today we are told that there is a "writing crisis," and that not only do young men and women of the highest education find it difficult to write decently, but that many do not *want* to write at all. Indeed, some academics appear to hate writing, as David Lowenthal and I discovered in our *Times Literary Supplement* survey. Even within my own lifetime it seems to me that writing has become more of a problem for those who are obliged to write. This may be connected with the insecurity and uncertainty of life today and the confused state of many intellectual disciplines. If one does not know what to believe, or if one feels that so much is meaningless, it may inhibit saying anything in a way which literally leaves its mark on the external world.

Anyway, my conviction in assembling these papers is that it is important to write in order to make sense of experience, regardless of whether one's interests and passions lie in the arts or the sciences, and that the process of writing is consequently uniquely gratifying. Hence, on June 5, 1979, I invited seven friends, all of whom are professionally involved in one way or another with the practice of writing, to contribute to a special issue of *Visible Language*; and, at the last moment, I was tempted to write an essay myself. I declined to restrict the scope of the contributions. For what I wanted to do was attract a number of distinctive articles about different aspects of writing. It would be wrong to suppose that there is one best way to understand how people write, or that one aspect of this process is more deserving of study than another. There is a place for hammering out agreements and disagreements, and we have set up a discussion group at University College London to consider in depth the so-called "problems" of writing. Unlike many such groups, our goal is not just talk, but a collaboratively written document on "the writing task." But this issue pursues a less convergent policy because, without benefit of face-to-face discussion, the problem appears to be open-ended.

I dislike the beguiling tones of an "overview," and so I leave you with these papers in the hope that some may strike a chord of recognition, or provide a spur for further enquiry. I should like to thank all my authors for their work, and apologize to some for the delay in getting this collection into print.

Peter Wason
University College London

Arts, Crafts, Gifts, and Knacks Some Disharmonies in the New Rhetoric

Richard E. Young

Despite sharing assumptions about the value of studying and teaching the process of composing, especially the earliest stages of discovery and invention, those teachers and scholars who have come to be known as the "new rhetoricians" are divided on assumptions about the nature of rhetorical art, some holding a vitalist theory of art and composing, others holding a technical theory. The theories influence judgments about what can be taught in the composing process and how it can be taught. The division creates a dilemma for the rhetorician since the durability of the theories and the pedagogical successes of both groups suggest that in some sense both are right.

Glamour and grammar or, in French, *grimoire* and *grammaire* were originally the same word and thus combined, even in the vocabulary, the magical and rationalistic aspects of speech.

Jacqueline de Romilly, *Magic and Rhetoric in Ancient Greece*

1 To understand the new rhetoric, at least the new school rhetoric, which is the subject of this paper, we must see it as a reaction to an earlier rhetoric. Hence I would like to begin with a series of statements by the nineteenth-century rhetorician John Genung whose textbooks, most notably *The Practical Elements of Rhetoric* (1892), helped establish the paradigm that has dominated the teaching of rhetoric in the United States for nearly a century. "Rhetoric," he says, "is literature, taken in its details and impulses, literature in the making; . . . it is concerned, as real authorship must be, not with a mere grammatical apparatus or with Huxley's logic engine, but with the whole man, his outfit of conviction and emotion, imagination and will, translating himself, as it were, into a vital and ordered utterance" (1901, p. vii).

However, Genung argues that, in spite of rhetoric's being — in theory — concerned with the entire process of making literature, any *practical* treatment of the subject must exclude those acts we would call creative, particularly those associated with the genesis of the composing process: "All the work of origination must be left to the writer himself; the rhetorical text-book can merely treat of those mental habits and powers which give firmness and system to his suggestive faculty . . ." (1892, p. 8).¹

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Genung makes a similar point in explaining what he means by "practical rhetoric." Certain rhetorical capacities, he says, "though very real and valuable, are not practical because the ability to employ them cannot be imparted by teaching. They have to exist in the writer himself, in the peculiar bent of his nature" (1892, p. xi).

Since creative ability cannot be taught, he argues, a practical rhetoric must be limited to the conventions and mechanics of discourse—for example, to the modes and structures of discourse, the characteristics of various genres, the norms of style and usage—a knowledge of which is valuable primarily in organizing, editing, and judging what has already been produced by more mysterious powers. "Literature is of course infinitely more than mechanism," he says, "but in proportion as it becomes more, a text-book of rhetoric has less business with it. It is as mechanism that it must be taught; the rest must be left to the student himself" (1892, p. xii). For Genung, then, the ability to write with skill requires both a creative gift and a mastery of the craft; but the discipline of rhetoric is, necessarily, concerned only with craft since only that is teachable.

By way of contrast, consider now this statement by Gordon Rohman, written a dozen years ago when "new rhetoric" was becoming a fashionable term:

Writing is usefully described as a process, something which shows continuous change in time like growth in organic nature. Different things happen at different stages in the process of putting thoughts into words and words onto paper . . . We divided the process at the point where the "writing idea" is ready for the words and the page: everything before that we called "pre-writing," everything after "writing" and "re-writing" . . .

What sort of "thinking" precedes writing? By "thinking," we refer to that activity of mind which *brings forth* and develops ideas, plans, designs, not merely the entrance of an idea into one's mind; an active, not a passive enlistment in the "cause" of an idea; conceiving, which includes consecutive logical thinking but much more besides; essentially the imposition of pattern upon experience (1965, p. 106).

For Genung, rhetoric was a body of information about the forms and norms of competent prose and their uses in the later stages of the composing process—the rhetoric of the finished word. For Rohman, rhetoric includes a craft of writing but goes beyond it, for it also includes—and assigns primary importance to—that effort of origination that Genung argues lies beyond the boundaries of a practical rhetoric. "Students," Rohman says, "must learn the structure of thinking that leads to writing since there is no other 'content' to writing apart from the dynamic of conceptualizing" (1965, p. 107).

In these statements by Genung and Rohman we can see the century-old tradition of school rhetoric and what has become the principal argument against it. And this argument—i.e., the insistence on the importance of what Rohman calls the "dynamic of conceptualizing" and elsewhere "creative discovery"—is for many the distinctive feature of the new rhetoric, at least the rhetoric that is now establishing itself in the schools. W. E. Evans and J. L. Walker describe the difference between the two positions this way:

While traditional rhetoric was concerned with skill in expressing preconceived arguments and points of view, the new rhetoric is concerned with the exploration of ideas . . . The new rhetoric, in short, is based on the notion that the basic process of composition is discovery . . . (1966, pp. 53-4).

Much of the recent work of rhetoricians has been devoted to finding ways of teaching the process of discovery, of making it part of a rhetoric that is both new and practical.

2 Yet the new rhetoric is not nearly so homogenous as this characterization suggests, for we can discern in the developments to which we give that name two apparently irreconcilable positions. And the difference between them is as important theoretically and pedagogically as the difference between the new and the old rhetoric.

One of these positions has been called the "new romanticism." The term is Frank D'Angelo's (1975, p. 159) and is, I think, an appropriate one. Though we lack the historical studies that permit generalizing with confidence, the position seems not so much an innovation in the discipline as a reaffirmation of the vitalist philosophy of an old romanticism enriched by modern psychology. It maintains that the composing process is, or should be, relatively free of deliberate control; that intellect is no more in touch with reality than non-logical processes; and that the act of composing is a kind of mysterious growth fed by what Henry James called "the deep well of unconscious cerebration" (1934, pp. 22-3). Above all, it insists on the primacy of the imagination in the composing process. "The mystery of language," says James Miller, an advocate of this position,

is, in large part, the mystery of the processes of the imagination . . . For too long the assumption has been made that language used by an individual originates in the orderly processes of his rational mind, in his reason, in his faculty of systematic logic. Instruction in language-use has therefore been largely aimed at this logical faculty, in the belief that the teaching of orderly processes will result in good writing. The result, though, has too often been not good writing but dead writing, obedient to all the inhibitions and restraints drilled into the reason, but generally dehumanized and unreadable (1972, pp. 3-4).

The new romanticism presents the teacher of composition with a difficult problem: i.e., how does one teach a mystery? William Coles makes the point well when he says that "the teaching of writing as writing is the teaching of writing as art. When writing is not taught as art, as more than a craft or a skill, it is not writing that is being taught, but something else . . . On the other hand, art because it is art, cannot be taught" (1967, p. 111). Like Genung, Coles believes that the art of composing, as opposed to the craft, cannot be taught; but unlike Genung, he does not on that basis regard a concern with the creative process as impractical: "What is wanted, then, for the teaching of writing as writing, is a way of teaching what cannot be taught, a course to make possible what no course can do" (1967, p. 111).

The solution to the dilemma is to change the role of the teacher. He is to be no longer a purveyor of information about the craft of writing but

a designer of occasions that stimulate the creative process. Or to put it another way, the expository mode of teaching is to be replaced by the hypothetical mode (Bruner, 1965, p. 83). In contrasting what he calls the "classroom of correction" and the "creative classroom," Miller (1974, p. 42) says that the latter would be "a place where language would be surrounded not by dogma but by mystery — the mystery of creation" And, he continues, "the teacher would be free, and would not be telling, but would be exploring with the students, alert for the spontaneous, the intuitive, the innovative." Such a situation need not be devoid of rigor, a frequently heard accusation against the new romanticism. For example, Coles (1978) establishes a kind of apprentice-master relationship with his students, encouraging them to emulate his own tough-minded intellectual probing and linguistic precision. They learn to be good stylists, in the broadest sense of that term, by observing and trying to imitate the way a good stylist works. If, as the new romantics maintain, the art of writing cannot be taught, the teacher can nevertheless offer students situations in which it can be learned.

The primary difference between the new romantics and those representing the second position I want to discuss — those we might call, for want of a better term, the "new classicists" — is a difference in what constitutes an art. For the new romantics, art contrasts with craft; the craft of writing refers to skill in technique, or what Genung called "mechanics," a skill which can be taught. Art, on the other hand, is associated with more mysterious powers which may be enhanced but which are, finally, unteachable. Art as magic, as glamour.

For the new classicists, art means something quite different: it means the knowledge necessary for producing preconceived results by conscious, directed action. As such, it contrasts not with craft but with knack, i.e., a habit acquired through repeated experience. An art, for the new classicist, is the result of an effort to isolate and generalize what those who have knacks do when they are successful. The distinction is apparent in the opening sentences of Aristotle's *Rhetoric*:

All men . . . endeavor to criticize or uphold an argument, to defend themselves or accuse. Now, the majority of people do this either at random or with a familiarity arising from habit. But since both these ways are possible, it is clear that matters can be reduced to a system, for it is possible to examine the reason why some attain their end by familiarity and others by change; and such an examination all would at once admit to be the function of an art (1959, p. 3).

In the *Rhetoric* we find a clear instance of what R. G. Collingwood (1958, pp. 17-29) called the "technical theory of art" — art as grammar.

Aristotle pursues the distinction between knack and art in the *Metaphysics* (1941), where he argues that art comes to men through experience, emerging as they become aware of the causes of success in carrying out a particular activity. Both the man of experience (i.e., the man who has a knack) and the man who has an art can carry out that activity, but, he says, we view artists "as being wiser not in virtue of being able to act, but of having the theory for themselves and knowing the causes"

(1941, p. 690). One crucially important implication of this difference, he maintains, is that the artist can teach others to carry out the activity, while those who merely have a knack cannot: "It is a sign of the man who knows and of the man who does not know, that the former can teach, and therefore we think art more truly knowledge than experience is; for artists can teach, and men of mere experience cannot" (1941, p. 690). Aristotle is no doubt the most appropriate spokesman for this position, but it is apparent today in the work of rhetoricians such as Richard Weaver, Edward Corbett, Richard Hughes, Albert Duhamel, Ross Winterowd, Francis Christensen, and those of us working on tagmemic rhetoric. As this list suggests, one need not be an Aristotelian to embrace the theory.

3 Specifically, what is it that the new classicists teach? The question is worth answering in detail, partly to clarify their conception of art and to dispel misconceptions, which abound, and partly to elaborate on what is in practice a fundamental difference between the two groups of rhetoricians. But a detailed answer also suggests that there may be a basis for accommodation between art as grammar and art as glamour.

What is taught? The answer is "heuristics," that is, explicit strategies for effective guessing. Heuristic procedures are not to be confused with rule-governed procedures; for if we fail to make the distinction, we end by rejecting the use of explicit techniques in composing since there are few rule-governed procedures possible in rhetoric. A rule-governed procedure specifies a finite series of steps that can be carried out consciously and mechanically without the aid of intuition or special ability, and if properly carried out always yields a correct result—for example, the procedure for making valid inferences in syllogistic reasoning. On the other hand, a heuristic procedure provides a series of questions or operations whose results are provisional. Although explicit and more or less systematic, heuristic search is not wholly conscious or mechanical; intuition, relevant knowledge, and skill are also necessary.

The use of heuristic procedures implies certain assumptions about the process they are designed to facilitate. First, their use implies a generic conception of the process. For to use a heuristic appropriately the writer must see the situation he is confronting at the moment as a specific variant of the *kind* of situation for which the procedure was designed; he must behave as though in some sense he has been there before. If he regards each situation as unique, he has no reason to believe that a technique that was useful once will be useful again. Second, the use of heuristic procedures implies that some though not necessarily all phases of the process he is trying to control can be carried out deliberately and rationally. That is a condition for using a heuristic procedure, at least while it is being learned and before it becomes a habitual way of thinking.

If the creative process has generic features, if some of its phases can be consciously directed, and if heuristic procedures can be developed as aids,

then it can be taught. Or to be more precise, certain aspects of the creative process can be taught. We cannot teach direct control of the imaginative act or the unanticipated outcome. But we can teach the heuristics themselves and the appropriate occasions for their use. And this is important, for heuristic procedures can guide inquiry and stimulate memory and intuition. The imaginative act is not absolutely beyond the writer's control; it can be nourished and encouraged.

These generalizations about heuristics and the technical theory of art become clearer if we recall Francis Christensen's generative rhetoric of the sentence (1967), a technique that uses form to produce ideas. After a close examination of the practice of modern writers who have a knack for good prose—Hemingway, Steinbeck, Faulkner, et al.—Christensen identified four principles operating in the production of cumulative sentences, i.e., sentences whose modification is primarily right branching. First, that we make a point by adding information to the noun and the verb, which serve as a base from which the meaning will rise. Second, that the modifiers usually follow the base clause rather than preceding it or being embedded in it. Third, that complexity and precision arise from various levels of generality in the modifiers. Finally, that density and richness are the result of the number of modifiers used.

A heuristic procedure enables the writer to bring such principles to bear in composing by translating them into questions or operations to be performed. A procedure for producing cumulative sentences might look something like this: study what is being observed, write a base clause about it, try piling up at the end of the clause analogies, details and qualities that serve to refine the original observation. The result, if the writer is observing well and has reasonable control of the language and the heuristic—and is lucky—is a sentence like

He dipped his hands in the bichloride solution and shook them, a quick shake, fingers down, like the fingers of a pianist above the keys (Christensen, 1967, p. 9).

"In composition courses," Christensen says, "we do not really teach our captive charges to write better—we merely *expect* them to. And we do not teach them to write better because we do not know how to teach them to write better" (1967, p. 3). What can one teach if he is interested in his students writing elegant and original sentences of this type? One answer is Christensen's four principles and the heuristic derived from them, along with whatever else is necessary to make their use effective.

Consider another example, this time from tagmemic rhetoric (e.g., Young, Becker, Pike, 1970). The conception of the creative process in tagmemic rhetoric draws heavily on the extensive psychological literature on creativity and problem-solving—on the work of Graham Wallas, John Dewey, George Miller, and Leon Festinger in particular. Although the creative process may seem mysterious and beyond analysis, certain kinds of activity do recur from instance to instance. The writer feels some sort of difficulty or dissonance and makes an effort to understand it. He explores data related to the difficulty and seeks more. He intuits tentative solutions, and he evaluates them. Interspersed are periods of unconscious activity,

most notably between the exploration of problematic data and the intuition of possible solutions. Notice that this conception does not insist on the primacy of reason nor does it repudiate non-rational activity; instead it assumes a subtle and elaborate dialectic between the two. In the conscious phases of the process, heuristics can be used—for example, a heuristic for exploring problematic data.

If we give a very young child an object that is for him interesting and enigmatic he will use all his physical abilities in an effort to understand—touching it, smelling it, shaking it, breaking it, putting it in his mouth, and so on. More mature minds, when confronted with problems, do not abandon physical manipulation, but we do rely more heavily on its intellectual equivalent. Rather than things, we manipulate symbols, which immensely increases the range, subtlety, and efficiency of exploration. We compare, contrast, classify, segment, re-order, shift focuses of attention, and so on. By these means, we try to coax intuitions of reasonable solutions. To paraphrase a line by William Stafford (1962, p. 17), we do tricks in order to know.²

But I am concerned here not only with what we do when engaged in intellectual exploration, I am also concerned with what we can do to increase our control over the activity, to make it more effective than it might otherwise be. The answer offered by tagmemic rhetoric is a heuristic based on the principles on tagmemic linguistics, a linguistic theory developed primarily by Kenneth Pike. These principles, Pike maintains (e.g., 1964, p. 129), are universal invariants that underlie all human experience as characteristic of rationality itself. For example, one such principle (there are twelve of them) is that to describe any unit of experience we must know its contrastive features; otherwise we could not distinguish it from other units. We must know how it can vary without losing its identity; otherwise we could not recognize it again. And we must know its distribution in various systems, since all units exist in contexts, and a knowledge of such contexts is what enables us to discuss roles, make definitions, predictions, and assumptions about appropriateness of occurrence, and in general perceive systemic relationships that are part of what the unit is.

A heuristic based on these principles (Young, 1978) might ask the inquirer to change his mode of perception of the same unit, viewing it as a static, sharply defined particle, as a wave of activity, and as a field of relationships. In each mode he is asked to note the unit's contrastive features, variations, and distributions. In this way he is led through a set of complementary lines of inquiry that direct his attention to features of the unit he might otherwise overlook, help him bring to bear information that he already has in his memory, and identify what he does not yet know. "Discovery," Jerome Bruner observes, "... favors the well-prepared mind" (1965, p. 82). We can see the exploratory procedure as a way of moving the mind out of its habitual grooves, of shaking it loose from a stereotypic past that wants to be retrieved, of helping the writer get beyond the superficial to levels tapped by the romantic's muse.

The great danger of a technical theory of art, of art as grammar, is and has been in the past that it may over-rationalize the composing process. In their preoccupation with analysis and method, those holding the theory may ignore our non-rational powers, inadvertently trying to turn heuristic procedures into rule-governed procedures and devising strategies for carrying out processes that are better dealt with by the unaided mind. It is a danger, but it is not an inevitable consequence of the theory.

4 I have been arguing that two conflicting conceptions of art are discernable in that conglomeration of developments that we call the "new rhetoric." The conflict, however, is not new. De Romilly has explored it in the rhetorics of Gorgias, Plato, Aristotle, Longinus, and others; it is clearly apparent in the work of the new rhetoricians of the eighteenth century and romantics like Coleridge in the nineteenth. It reemerges every time men think seriously about the discipline. "After all," de Romilly remarks, "it amounts to a struggle between the spell of the irrational and the desire to master it by means of reason . . ." (1975, p. 85).

The durability of these two fundamental conceptions of rhetorical art and the effectiveness of the pedagogical methods based on them suggest that in some sense both are true—in spite of the fact that they seem incompatible. We can respond to this conflict by partisan denial of one of the truths, as some have done, though the price of partisanship strikes me as excessively high. Or we can cultivate a Keatsian negative capability and live with the conflict, exploiting one or the other of the conceptions as it suits our needs as teachers. Such a strategy is not necessarily an evasion of intellectual responsibility. "Both-and" may well be, for the moment, a more appropriate response than "either-or." For as Niels Bohr (1958, p. 66) once observed, the opposite of a correct statement is an incorrect statement; but the opposite of a deep truth may well be another deep truth.³ Or we can consider the possibility that behind art as glamour and art as grammar there may be a more adequate conception of rhetorical art that does not lead us to affirm the importance of certain psychological powers at the cost of denying the importance of others. If we choose this last course of action, we might begin by investigating more carefully than it has been investigated the role of heuristic procedures in the rhetorical process, since they call into play both our reason and our imagination.

1. Compare Genung's more detailed statement that "The first stage [of invention], the finding of material by thought or observation, is the fundamental and inclusive office of invention, the distinctive power that we designate in the popular use of the term. Herein lies obviously the heart and centre of literary production; it is what the writer finds, in his subject or in the world of thought, that gauges his distinction as an author. Yet this is, of all processes, the one least to be invaded by the rules of the text-book. It is a work so individual, so dependent on the peculiar aptitude and direction of the writer's mind, that each one must be left for the most part to find his way alone, according to the impulse that is in him" (1892, p. 217).

2. The original (Stafford, 1962, p. 17) is

I do tricks in order to know:
careless I dance,
then turn to see
the mark to turn God left for me.

3. Bohr comments that "In the Institute in Copenhagen, where through those years a number of young physicists from various countries came together for discussions, we used, when in trouble, often to comfort ourselves with jokes, among them the old saying of the two kinds of truth. To the one kind belong statements so simple and clear that the opposite assertion obviously could not be defended. The other kind, the so-called 'deep truths,' are statements in which the opposite also contains deep truth. Now, the development in a new field will usually pass through stages in which chaos becomes gradually replaced by order; but it is not least in the intermediate stage where deep truth prevails that the work is really exciting and inspires the imagination to search for a firmer hold" (1958, p. 66).

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"I don't see writing as a communication
of something already discovered,
as 'truths' already known.
Rather, I see writing as a job of experiment.
It's like any discovery job;
you don't know what's going to happen
until you try it,"

William Stafford

Conformity and Commitment in Writing

Peter C. Wason

It is argued that conformity to stereotyped styles of writing tends to conceal a sense of commitment to what is being said. The effect is both to alienate the individual from the practice of writing, and to encourage a kind of obscurantism which may be inimical to clear thinking. The conditions for recovering a committed voice and the benefits of so doing are described.

1 CONFORMITY

"You a member of the establishment then?" I was talking to a small group of trainee managers from a leading computer firm about a pet deductive problem of mine. "It's those funny words you use in your writing. When you talk to us it all becomes clear." Remote and forbidding, my prose had apparently been perceived as an example of what Claire Lerman (1981) calls the "institutional voice," cultivated over about twenty-five years to fit the constraints of learned journals. I defended myself by saying that if I were to unpack my words for an untutored audience, then my articles would have to be very much longer, but this argument didn't satisfy my managers at all. Still, they had a point. They felt, and I think a lot of us would agree, that a great deal of what lands on our desks is impenetrably obscure. Furthermore, they implied by the term "establishment" that it was needlessly and perhaps deliberately obscure. Increasingly, it would seem, the voice of a person with something to say is lost.

In some cases one would be inclined to think this is a good thing. Consider technical reports which purport to provide no more than factual information, e.g. "The Loads Exerted by Grass Silage on Bunker Silo Walls"—surely to write about that in a committed way would be inappropriate. And yet I am unsure. In the nineteen-fifties a flourishing group, The Presentation of Technical Information Group, was set up at University College London, led by the late Professor R. O. Kapp, precisely to study ways of rendering such information more interesting and palatable. I am reluctant to draw a limit between different kinds of writing, although I suppose that a philosophical paper allows more scope for commitment than a technical report. What I try to do in this essay is to sketch the forces which induce conformity on style, and speculate on how commitment may be recovered through writing.

At its very worst, a peculiarly offensive style does seem to infect the literature of the social sciences and relatively new disciplines which borrow concepts from a variety of older ones, e.g., semiotics and design. This style

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is conspicuously absent in philosophy (especially the philosophy of mind) and in the natural sciences. One may ask why it is tolerated and published when it appears to be so unintelligible. Perhaps the layman, anxious to increase his knowledge, is being held at arms length.

There is a counter-argument to this criticism. In an influential book, Kuhn (1962) pointed out that even the observations of the scientist are determined by the paradigm in which the research is done. They are certainly not "objective." Hence, if something as basic as observation is conceptually loaded, it is hardly surprising that the reporting of results is similarly affected. But this counter-argument is a defence of specialized, or technical, literature and I exempt such writing from my attack. The unfortunate tendency of the layman to dismiss anything he can't immediately understand will be corrected.

1.1 Three types of obscurity

I distinguish three types of obscurity in writing; (1) is venial, (2) is unavoidable, and (3) is pernicious.

(1) There is a fairly common, but relatively trivial kind of obscurity which results from grammatical error. It is often manifested in ambiguity which seldom has really serious consequences. All of us in the trade would, I'm sure, be guilty at times of this kind of obscurity if our writings were to be put under the microscope of the purist. We delight to pounce on it, especially when it occurs in our students' essays, but I shall say no more about it here because I don't want (now) to be a nag.

(2) There is the obscurity of technical, or specialized writing. A moment's reflection will persuade one that it is inevitable and legitimate. The development of knowledge in nearly every domain entails an increasingly specialized vocabulary so that it is notoriously difficult for experts in even related fields to understand each other. Some specialists affect to despise the vulgarizing works which seek to interpret such literature, but that seems to be their own limitation. In any case, I am not alarmed by this problem.

(3) There is the obscurity of power which I shall call *obscurantism*. I believe it to be particularly important as an obstacle to effective writing. It is represented by the language of some social institutions, and it aims to be objective and impersonal. Its effect is to delimit an area of enquiry so that the uninitiated fail to understand it, but remain suitably impressed by what they take to be erudition. In the social sciences, at any rate, the abstruse has a compelling attraction, especially for some students who may imitate this style for two reasons. First, it appears to set the seal of scientific respectability on their own writing, and second, it need not betray original thought or commitment. This institutional style may also be inimical to the exercise of thinking—a plausible hypothesis anticipated in politics by Orwell (1948), and argued with zeal by Andreski (1972) in relation to the social sciences.

It is with this third type of obscurity that I am concerned. I present a test to distinguish it from the obscurity of specialized language, but first I consider its influence on (a) academia and (b) bureaucracy. Both these institutions share the attempt to be objective and to impose conformity.

1.2 The language of academia

It is as a university teacher that I am primarily concerned about the effects of the obscurantist style. The issue has been admirably summed up by one of my correspondents who had been a student counsellor:

"Somewhere along the line we take nice, co-operative children or adolescents, and we convince them that if you write incomprehensibly you are an expert, and if simply, puerile. In fact you personally, and perhaps a majority of the members of staff in most universities, would more or less reverse that. If you write simply, you are an expert. If you write simply about very difficult topics, you are an outstanding expert. It is incomprehensible writing which is puerile. But given the apparent fact that most staff prefer simplicity, or at least say they prefer it, how does it happen that those nice, co-operative students become so invincibly certain of the direct opposite?" (Malcolm France, personal communication, 5/5/1975).

Not only students. Quite a time ago I offered to republish the paper of a friend in a book I was editing if only he were to rewrite it in such a way that it would be comprehensible. My offer was declined. Perhaps he thought the paper was wrong, or intellectually worthless, even though I thought it highly original. After all, creative people do often denigrate their earlier work, or perhaps he thought the paper would be in some way less objective if it were to be expressed in plain English. Who can tell? Another correspondent illuminated for me the roots of conformity:

"My own theory is that these peculiarities of style result from an inferiority complex on the part of psychologists and sociologists: (they are comparatively rare with physicists, biologists, doctors, etc.—except psychiatrists). We feel that we are not yet accepted as really scientific, so we try to impress ourselves and our public, by adopting what sounds like a scientific vocabulary. At the same time, to show how widely we read, we take both our ideas and our language from foreigners rather than compatriots—in my day it was German authorities who were usually quoted (Wundt rather than Sherrington or Ward); later French (Binet rather than Galton); now of course it is American . . . 'Girls of seven have another way of saying the same thing' sounds too humdrum: so it becomes 'The seven-year-old female school population are differentiated by an idiosyncrasy (sic) in the strategy of their learning behaviour'. . ." (Cyril Burt, personal communication, 19/12/1969).

In rather the same vein, other academics (e.g., Mahoney, 1976, p. 85; Van den Berghe, 1970, pp 97-98) have, tongue in cheek, cautioned the student to use "seasoned jargon" if he wants to get anywhere at all. J. Scott Armstrong of the Wharton School, University of Pennsylvania, forgoes irony in saying virtually the same thing: "It soon becomes obvious that the

purpose of writing is not to communicate but to impress. The ability to write in an incomprehensible way is useful for people who have nothing to say. And in the time you spend making it easier to read, you could be writing another incomprehensible paper" (*The Times*, 9/4/1980).

Finally, I cannot resist quoting the start of a letter by Bob Short (sic) entitled "Monosyllabic Writing" which appears in Faraday's (1816-1846) unpublished commonplace book: "Sir, I think it would be well for all if our mode of speech could be made more plain as well in what we write as what we say—so that each myght read as he runs. I know there are those who will laugh at this but why should they?" The criticism of verbosity and obscurantism is clearly not a contemporary phenomenon, but the forces which perpetuate it are too entrenched to yield to individual voices. I might add copious examples of pretentious writing from my own data base, but I have done this elsewhere (Wason, 1980). In any case, it seems a little unfair to slang the efforts of my own students and associates, when anyone might dig up similar cases in my own papers. But it is not just our seats of learning which are responsible for the cultivation of obscurantism. In fact, it pales into insignificance when it is compared with the style of officials. In the spirit of fairness, and for the sake of the record, I shall describe my own attack on official language before returning to my target.

1.3 The language of bureaucracy

The language of official forms and instructions has long been accepted as a minor irritant and a feeble joke. I think Sheila Jones and I were the first academics to become seriously interested in this problem in the mid-nineteen-sixties (e.g., Jones, 1968; Wason, 1962; Wason, 1968). We even received a grant from the Medical Research Council to investigate it, and we introduced the term *logical tree* (which subsequently became *algorithm*) into the vocabulary of government circles. We demonstrated experimentally that in several cases the language of inter-related rules was almost impossible to understand in continuous prose because of the complexity of the syntax, and we forecast that the problem would be exacerbated in the future because the drafting of legislation proceeds by accretion. Moreover, we developed a technique which, in principle, eliminates consumer difficulty.

After a few ripples of excitement and much shuffling around from one government department to another, guided by a more or less benevolent Treasury, the interest appeared to wane. But it gets aroused again periodically, as one group of assiduous proselytizers after another takes up the cause. The most active of these groups today, The Plain English Campaign, led by Chrissie Maher and Martin Cutts of the Salford Form Market, have developed a missionary zeal in their desire to root out all symptoms of officialese. This has involved the shredding of forms in front of the Houses of Parliament, a gesture which apparently achieved only an evanescent publicity.

The problem is a real one, and in an ideal society it would not exist, but it is more complex than most critics appreciate. After a fair amount of experience of dealing with enlightened officials spurred on by the interest of

the media, my submission is that piecemeal onslaughts and articulate advocacy will change nothing. It might be an interesting psychological exercise to penetrate the mental processes of the writers of official leaflets (as we once contemplated doing), but the dominance of bureaucratic obscurantism would remain untouched because it is motivated (in a very broad sense) by political interest. Lucidity is not the prime consideration of those who wield power, as even a socialist Minister of the Crown confessed to us in a casual remark. In such cases control is truly exerted through the written word: rules are made to bind people.

1.4 The obscurantism test

Consider, if you will, the following six extracts taken (respectively) from works on psychology, sociology, semiotics, philosophy of science, mathematics, and the philosophy of politics. The first three I shall claim are obscurantist, the fourth and fifth specialized, and the sixth a model of expository prose.

(A) "The purposive base of science is all too readily forgotten. We are both pushed and pulled towards presumptions of anonymity. We are pushed because purpose is in our blood and creeps all too readily into what we know. We have none of us wholly escaped our self-centred past—so self-centred, indeed, that it was unaware of its own relevance." (60 words)

(B) "An element of a shared symbolic system which serves as a criterion for selection among the alternatives of orientation which are intrinsically open in a situation may be called a value But from this motivational orientation aspect of the totality of action it is, in view of the role of symbolic systems, necessary to distinguish a 'value-orientation' aspect." (And so on for another 272 words, 331 in all)

(C) "Thus Derrida's thought denies itself the facile illusion of having passed beyond the metaphysics of which it stands as a critique; of having emerged from the old models into some unexplored country whose existence such a critique had implied, if only by the negation of a negation. Instead, his philosophic language feels its way gropingly along the walls of its own conceptual prison, describing it from the inside as though it were only one of the possible worlds of which the others are nonetheless inconceivable." (85 words)

(D) "We can now ask the corresponding question about theory-constitutive metaphors: Given that it is possible to employ a nondefinitional account of reference to defend the view that theory-constitutive metaphorical expressions should be understood as referring, why is this view preferable to the view that theory-constitutive metaphorical expressions are non-referential and are merely heuristically useful?"

(E) "During the last few years some interest has been shown in the problem of classifying up to homotopy the spaces of H-spaces of small rank."

(F) "Methodological essentialism, i.e., the theory that it is the aim of science to reveal essences and to describe them by means of definitions, can be better understood when contrasted with its opposite, *Methodological nominalism*. Instead of aiming at finding out what a thing really is, and at defining its true nature, methodological nominalism aims at describing how a thing behaves in various circumstances, and especially, whether there are any regularities in its behaviour. In other words, methodological nominalism sees the aim of science in the description of the things and events of our experience, and in an 'explanation' of these events, i.e., their description with the help of universal laws. And it sees in our language, and especially in those of its rules which distinguish properly constructed sentences and inferences from a mere heap of words, the great instrument of scientific description; words it considers rather as subsidiary tools for this task, and not as names of essences."

Wright Mills (1959) translates (B) (Parsons, 1951) thus: "People often share standards and expect one another to stick to them. In so far as they do, their society may be orderly". He claims that this translation, which reduces a passage of 331 words to 23 (a ratio of 0.07), loses none of the explicit meaning; it contains "all that is intelligible in it." Inspired by his example, I translate (A) (Holmes, 1977) as: "We are attracted to science because we are human beings," a reduction of 60 words to 10 (a ratio of 0.17); and (C) (Jameson, 1972) as: "Derrida's thought just manages to avoid being metaphysical," a reduction of 85 words to 8 (a ratio of 0.09). These translations, following that of Mills', aim to capture only the explicit meaning of such passages.

Now we turn to prose which is obscure but not, I claim, obscurantist. (D) (Boyd, 1979) is infelicitous because the author is trying to say too much in too few words. You would have to know about "reference" and what the terms "theory-constitutive" and "nondefinitional" mean in contemporary philosophy of science, and some of this information might be gleaned from the context. But the syntactic frame is clear: "Given that it is possible to employ *b* to defend the view that *a* should be understood as *c*, why is this view preferable to the view that *a* is not-*c*?" That is packed but it is intelligible and rational. It is only the technical terms which render the sentence unintelligible, and the author could, I am sure, spell these out until we understood more than we did initially.

Similarly, we could find a mathematician to give us at least an inkling of what (E) (taken at random from a mathematical journal) is all about. If I knew the meaning of "homotopy" and "H-spaces" I might even be well on the way. I know already that the author is not concerned with H-spaces of large rank and that the interest in classification does not extend beyond homotopy. Pretty useless knowledge, you may say. But the point is that knowledge of this kind (or perhaps any kind) cannot be derived from (A), (B), or (C). (F) (Popper, 1952) is included for purposes of comparison; it requires no translation.

This analysis provides the basis for a test to discriminate obscurantism from specialized language. If an adequate translation is *shorter* than the text, then the text is obscurantist; if it is *longer*, then the text is specialized

language. Thus, as we have seen, (A), (B), and (C) can be radically reduced without loss, but (D) and (E) would have to be radically expanded by an expert to be made comprehensible. The adequacy of such a test obviously depends on the knowledge and sensitivity of the analyst. Furthermore, it is a test only of expository prose which purports to elucidate an argument directly. There is an interesting style, used especially by some philosophers and theologians, which is closer to poetry than expository prose; it is allusive and analogical. For instance, Wisdom's (1952) *Other Minds* consists of an inconclusive dialogue about a well-known philosophical problem. The arguments are clarified through a kind of dramatic presentation of contending points of view. Writing of this kind is clearly exempt from any test designed to assess lucidity. In justice, it seems that (A) may belong to this genre, and hence should not be subjected to the obscurantism test.

2 COMMITMENT

Intentionally, or unintentionally, an obscurantist use of language conceals the commitment of the author. In contrast, *The Open Society and Its Enemies* (Popper, 1952) is written with a highly distinctive and committed voice. It is something which is essentially human and individual; neither a machine nor a committee could write in this way. And contrary to popular belief, I think it cannot be imitated. It comes from having a particular attitude to what you want to say. But how do you find out what you have to say? Perhaps you knew it all along. This I seriously doubt.

2.1 An affective problem

"Why don't you write an article analysing exactly what is wrong with all those monstrous sentences you have in that file?" somebody once said to me. He thought it would be helpful to be made aware of error in writing. But in spite of numerous manuals, and in spite of the rather bourgeois obsession with the niceties of style (typified by Philip Howard's column in *The Times*), we know deep down that the possession of prescriptive rules does not overcome the central problem of writing. It is generally acknowledged that writing is hard work, but it is not like giving a lecture, or playing chess, which are just as intellectually demanding, but which possess sufficient constraints to start and terminate performance. "It's a skill, isn't it?" a former student has just said to me on the telephone. "Yes, it's a skill," I replied. She meant that it is something which improves with practice. Partly right—practice is a necessary, but not a sufficient condition for what I call "happy writing," a kind of writing, familiar to experienced writers, in which the output is associated with a sense of elation and commitment (or engagement). My answer on the telephone had ignored the affective problem (Wason, 1980).

Any kind of serious writing involves a confrontation with the self because it creates an object which is both a part of the self and a part of the world of ideas. In reading the text, or working over it, the writer is shown a reflection of himself. The object can be criticized, elaborated, or destroyed. And

doing any of these things, I have argued, modifies the consciousness of the writer (Wason, 1970).

Such processes are basically affective. They involve a perception of the self and especially self-esteem. Lionel Trilling told me that, when he was teaching rhetoric at Columbia University in the nineteen-thirties, some of his students expressed an admiration for his own writing, but said they could not possibly write like that because "they were not gentlemen." A similar elitist assumption, held by more than one of my friends, is that writing is a gift which they do not (regrettably) share. One has only to think about the fetishistic rituals that some authors have performed before starting to write, in order to appreciate that writing, or at any rate happy writing, does not seem to respond to a volitional act. One does not surround oneself with rotten apples before sitting down to do the income tax; there is no need to invoke a muse for such a menial task. Elsewhere I have disputed this "natural function theory" (the wait-for-it effect) as stemming from our romantic notions of creativity, and I cited journalism as a counter-example. But I am now inclined to think I was wrong.

Happy writing demands a relaxed attitude. All too often, most individuals are convinced that writing is going to be difficult, and so of course it does become difficult and peculiarly unpleasant. Hence I am impressed by some of the techniques advocated by Rohman (1965), such as analogical exercises, in his "prewriting method." Like meditation, or prayer, writing depends on an inner dialogue which is non-volitional. It is something which is not entirely under conscious control. The importance of this problem has been more widely acknowledged in the United States with the attention paid to writing workshops in university departments. More conservative academics, of course, will view this particular scene with scepticism and distaste because it touches on the emotional life.

2.2 The myth of conceptual innocence

One might entertain the romantic fantasy that voice has been lost through experience. One might suppose that in some golden age we saw the world with fresh eyes, and could write about it in an unaffected way, and that we ought to be able to recover that vision. This idea which derives from Blake, Rousseau, and Wordsworth (among others) is obviously attractive and does not seem to me entirely false. It is attested by the aesthetic quality of young children's drawings.

In *Zen and the Art of Motorcycle Maintenance* (Pirsig, 1974) the protagonist Phaedrus, a teacher of rhetoric, encounters one of his students who wants to write a five-hundred-word essay about the United States. This is never even attempted. Success only comes when the topic is finally restricted: "Narrow it down to the front of one building on the main street . . . the Opera House. Start with the upper left-hand brick." The result is a five-thousand-word essay. This release from a block is attributed to a fresh found ability to look and see rather than to repeat what she had already heard so many times before. As a result of trying out further exercises, Phaedrus concludes that the compulsion to imitate (absent in young children) has to be broken down

before real rhetoric teaching could start. The recovery of voice is achieved through detailed descriptive writing. The analysis seems to me basically correct: conformity to a stereotyped objective standard has a stultifying effect on the writing of most students. The value of the exercise, however, remains unclear. The critical question is whether such writing would help the individual to write in other ways, especially in more abstract or general terms which do not depend on observation. At any rate, Nancy Kuriloff, a writing therapist in California, who specializes in the treatment of writing block, seems to have developed a similar technique: "Write about stone . . . Don't stop. Don't correct. If you get stuck, write about how it feels to get stuck." (*Time*: 14/6/1980). She has a profound but simple point: the important thing in writing is to keep going. The superior wisdom of everyman's "Critic" (as she calls it) must be denied.

2.3 Discovery

In 1970 the editor of *Physics Bulletin* invited me to write an article on writing scientific papers, perhaps expecting some useful hints and rules of composition put over in an encouraging manner. He received an hypothesis about the generative power of writing, and I received six requests for off-prints (Wason, 1970). My technique, described in that paper, consists in the serial alternation of two distinct modes of writing: (a) an uncritical exteriorization of thought, and (b) a critical re-writing of the exteriorized mass. Hartley (1980) claims that this technique is idiosyncratic, and I am delighted to hear that I escape the charge of redundancy. My argument is that when these two modes are allowed to interact (successively between drafts, not concurrently within drafts) they facilitate, clarify, and enlarge thought. Happy writing becomes an important source of discovery. Let me repeat myself and say just a little about these two modes.

Exteriorization may seem inimical to intellectuals because it implies the production of an object in a free-associative manner, akin to Freud's primary process. Particularly repugnant, one would think, is the toleration of the rubbish often produced by this mode. So much incoherent, hackneyed, and altogether bad material may tempt the writer to correct as he goes along, or start afresh. Such a bow towards Kuriloff's "Critic" tends to induce inhibition because the mode of trying to say something cogently interferes with the mode of finding out what to say at all. This would be the point at which the pen is laid down on the desk.

The more considered mode which attacks and moulds the exteriorized object in a critical way would also appear alien to many individuals. Personally, I find it congenial to see what I think and then analyse what I say. However, Murray (1978) in a perceptive essay claims it possesses a vaguely clandestine quality. He argues that the discovery of meaning through re-writing from the "zero draft" has not been studied because it has not been experienced (or admitted) by writers in the less imaginative forms of writing, and because it is not considered academically respectable. Two professors of his acquaintance implied that they were ashamed of writing in this way, and did not discuss it with their students. My own experience

confirms that many individuals simply do not know what it means to re-write anything in a different way. One of my friends even claims that her successive drafts get worse instead of better. There is, to a large number of people, something odd about the very idea of re-writing. Is it that unconsciously re-writing is like prevarication in speech? Or is it connected with the idea that self-expression implies a self which is somehow sacrosanct and inviolable?

The thesis that discovery (or invention) is a function of writing, and especially of re-writing, is more familiar to rhetoricians (e.g., Young, 1978) than to experimental psychologists. Techniques of writing need to be developed in the psychological laboratory which might enable the individual to be liberated from that tunnel vision which forces only a narrow point of view, and hence precludes discovery. Our experience suggests that some school children are highly receptive to novel techniques in composition (Wason and Williams, 1978). The Whorfian hypothesis (that language moulds thought) does seem to have stronger claims in writing than in speech. This, of course, is an optimistic declaration which befits publication in an American journal. Actually, I am sanguine that the undoubted fruits of writing can be captured in an experimental investigation. The counter-argument is that the control entailed by an experiment is incompatible with the conditions for happy writing.

2.4 Therapy

Committed writing may be (in computer terms) a unique way to empty the store so that more space is made available for new ideas. It follows that what is written is not necessarily of value to anyone else. The writing of angry memos, without sending them, is proverbially supposed to have a cathartic effect on the emotions of frustrated managers. Similarly, the headaches caused by intellectual confusion might be alleviated by putting them down on paper. I owe this interesting hypothesis to a conversation with Ivor Stilitz, and recently observed a concrete instance of the effect which was more compelling than any experimental result.

June 10, 1980. Jan Smedslund from Oslo discusses with me some problems of rationality and the extent to which this is an empirical issue. I am not conscious that I can help much beyond listening sympathetically. He is blocked in his thinking about the problem, and tells me that this is stopping him from writing. I suggest (of course) that it might help to write.

The next day he telephones to say that immediately after leaving me he wrote for two hours without interruption and covered four pages. "What came out was totally unexpected, and this really surprised me." It was also wrong, but it apparently clarified the topic, and enabled the writer to locate the source of the block in his thinking. Thus a conceptual difficulty had been illuminated, not by thought or discussion, but by emptying the store of deficient material.

I was blocked before writing this essay, and indeed, I could not decide whether to write it at all. This indecision is unusual for me because I generally find writing can be relied upon to put myself into a good mood. Moreover, I

set myself firm deadlines which I invariably meet ahead of time. On holiday I realized I was not taking my own medicine, so I wrote down a kind of scenario which, like Smedslund's piece, was also unplanned (see appendix). On reflection, it represented a statement to myself of how I stood at the moment of writing, but the effect was to make me feel less alienated from my own thoughts and feelings. I experienced a disproportionate exaltation after having written something objectively trivial. And in a couple of days I was at last able to begin a first draft without too much trouble. It was as if this writing of a scenario had to be done before more serious work could start.

Let me cite one more example, a more serious one, of writing which may achieve a similar purpose. In 1979 Virginia Valian sent me some essays in exploratory self-analysis written in a particularly fluent and natural style. Many of the topics clustered round the problems of being a woman in a predominantly male academic world. For instance, the attitude towards difficulties in cooking and in academic work are compared. The overall impression to me was that such writing was an attempt to render an individual life more meaningful and coherent. What interested me, however, was that the author possessed an unusual need to write, for just these purposes, and I pointed this out to her. She confessed that, before reading my letter, this idea would have seemed incredible because of the pain she experienced in writing, but now its truth seemed obvious. Indeed, the essays are being cast in the form of a book, *A Life's Work*.

These three examples, Jan Smedslund's, my own, and Virginia Valian's, illustrate the therapeutic power of committed (and yet perhaps involuntary) writing. It is evident that such writing may empty the store, or, at a higher level, impose a pattern on daily experience. And perhaps for some people this kind of writing is necessary (even though it may not be recognized as such) in order to get on with the main business of living. My constant attempts to cajole friends and colleagues into writing may have some rational justification.

3.0 CONCLUSION

Beneath the surface of this essay there is the continuous awareness of the sorrow and difficulty which so many people experience in writing. It has been written in the faith that this apparent difficulty is not resolved by exhortation or by precept, but that it can be overcome if only such people were to free themselves from the tutelage to stereotyped models to which they assume (consciously or unconsciously) that they should conform. Through the process of writing and re-writing a committed voice can be recovered in which such individuals are allowed to find out what they think, say what they think, and then stop. To them this essay is dedicated.

APPENDIX

A scenario: the setting of a scene: July 17, 1980

Let me set the scene. I am writing this in our Suffolk cottage. It is a typical summer day — cold, damp, and overcast. This morning I mowed an incredible amount of grass, and then had a nap in the afternoon. Ming returned from Sudbury market to announce that she is starting a campaign for the more humane treatment of pigs. I think this is a splendid cause, and we talk about it. After a bit I continue to stare out of the window. Two crammed note-books and four files lie on my desk giving the illusion of industry and scholarship. Away from it all, as they say: no students, no committees, no tedious bus journeys to College, the ideal situation for productive work. Perhaps. We have a nice vegetarian meal. I write down a couple of sentences, and then stomp about my study. I walk into the main room only to be confronted by Mr. Reagan at the Republican Convention. Even this does not depress me; I cannot get on but I am totally preoccupied. I write down a few more sentences, stoke up the boiler, and then decide to go to bed. But a torrent of thoughts assails me as soon as I hit the pillow. A familiar situation, I can hear you saying: a case of writing block. Not familiar to me. Well, instead of making such a fuss about it, you should write that other paper — you know, the one about pragmatics — which will probably go much better. You haven't written anything for at least four months, you know . . . (At this point the scenario turned into a dialogue with myself.)

Shop Hill Cottage, Alpheton, Suffolk.

"The impulse of the pen.

Left alone, thought goes as it will.

As it follows the pen, it loses its freedom.

It wants to go one way,

the pen another.

It is like a blind man
led astray by his cane, and what I

come to write

is no longer what I wished to write."

Jules Renard

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The Effect of Conflicting Goals on Writing

A Case Study

David Galbraith

It is proposed that a major source of writing difficulties arises from a conflict between the goals of expression and presentation. This leads to problems in both generating and revising prose. A case study is presented in which the effect of this conflict is illustrated and some exercises designed to alleviate the problem are described. The effectiveness of these exercises is discussed and related to aspects of self presentation in writing.

1 The source of writing difficulties

Why does written thought so often appear impoverished in comparison with the reflective thought which prompted its creation? Here is one writer's description of the problem and the way he overcame it (Winograd, 1980, p. 209).

In its earliest drafts, this paper was a structured argument, presenting a comprehensive view of cognitive science, criticizing prevailing approaches to the study of language and thought and advocating a new way of looking at things. Although I strongly believed in the approach it outlined, somehow it didn't have the conviction on paper that it had in my own reflection. After some discouraging attempts at reorganizing and rewriting, I realised that there was a *mismatch between the nature of what I wanted to say and the form in which I was trying to say it* . . . I found myself wanting to describe a path rather than justify its destination, finding that in the flow, the ideas came across more clearly. (my emphasis)

In this paper I shall claim that this conflict between form and content is the major source of writing difficulty and that it arises because of the way people go about writing.

Writing can conceal thought because of the relative ease with which we transform our experience. Ideas are not essential forms, they occur in the process of achieving goals—as our goals change so do the contents of our thought. Writing, because it involves goals over and above those of reflective thought, necessarily transforms our ideas. The surprising feature of this transformation is not that it takes place, but that it so often has a detrimental rather than a beneficial effect on reflective thought. Fluent and effective writing depends on reconciling topic and goal; is, in Winograd's terms, matching content to form.

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How do topic and goal become dissociated in the first place? Writing involves a variety of goals, not all of which are directly related to the topic. It is the way these goals are achieved that governs whether this dissociation occurs. Let me outline three types of goal in writing. First, and most obviously, there is expression per se, the formulation of ideas in words. Second, there is coherence; the ideas must be structured to show their relative importance and interrelationships. Finally, writing fulfills a variety of social functions; it illuminates, persuades, impresses, etc. Above all, it presents an image of the writer, be it scientific and detached, or personal and impassioned. Now obviously the way a person expresses himself can be more or less coherent, and more or less impassioned; the distinction is between whether he sets out to be so, or becomes so in the process of expression—only in the first case can he be said to have a goal. The goal of expression places no constraints on the form of the final product; whereas the goals of coherence and self-presentation do. This means that when the latter goals govern the form in which ideas are expressed, there is the possibility that the ideas will be distorted. The writer's thoughts will be governed by the need to be coherent and the image he has of himself in the particular social context rather than by the topic alone. He will not say what he thinks, but what he thinks he thinks, or, even more confusing, what he thinks he ought to think.

This idea, that writing is disrupted by a conflict between expression and presentation has been proposed by Wason (1970) and Elbow (1971) (see also Wason, this journal). From their experience with their own and others' writing they suggest conflict can be removed by separating the two processes. In Wason's words, his first draft consists of an "uncritical exteriorization of thought," while later drafts consist of a critical rewriting. Form emerges from what has been expressed rather than being imposed on the process of expression. This separation of goals enables the writer to express himself more fluently and alleviates the anxiety engendered by their conflict. Furthermore, this mode of writing leads to the generation of novel ideas, so that, not only do "the ideas come across more clearly . . . in the flow" as Winograd found, but new ideas emerge in the course of writing. The gradual development of intention ensures that goal and topic are united.

I will return to this idea that novel trains of thought are stimulated in the course of writing. But now, let me add the proviso that the extent of the conflict presumably depends on the familiarity of the ideas the writer is expressing, and that there may well be other ways of overcoming it. However, when ideas are in the process of development, their form will be uncertain, and imposing form on expression will lead to conflicting trains of thought. By contrast, when the goals of expression and presentation are separated, then form will emerge from content and conflict will be avoided. Writing, rather than impoverishing ideas, will make them more purposive. I want now to present a case study in which I have explored the effects of these contrasting methods on a writer's performance.

A Case Study

The writer in question, whom I have given the *nom de plume* of Carolyn, was writing her doctoral thesis. Ironically it was concerned with the way in which postgraduates cope with the demands of a Ph.D.—indeed, one of her findings was of how widespread her own difficulties with writing were among other postgraduates. In her case, these difficulties were of two kinds; she found it very difficult to start writing at all and then to keep going; secondly, both she and her supervisor found the final product disjointed and lacking in conviction.

The study took the following form. I tried to discover her intentions and ideas through our discussions and her writing. I then suggested ways of writing which might alleviate the conflict in goals which I thought responsible for her problems.

In order to present this I have summarized two conceptions of her research—from before and after “therapy.” I shall call these the Institutional Conception and the Private Conception (hereafter IC and PC respectively). I shall suggest that IC, designed to achieve a set of extrinsic goals (i.e., those she deemed appropriate for a Ph.D. thesis) distorted her own ideas about the topic and led to incoherent prose. I shall then describe the course of therapy and show how this led to the emergence of PC, designed to achieve a set of intrinsic goals (i.e., those appropriate to her topic) which had a beneficial effect on her writing and thinking. Finally I shall discuss the features of the therapy responsible for the change in the way she thought and wrote.

2 The Institutional Conception

The following summary, constructed from our discussions (unquoted) and extracts (in quotes) of her writing, shows Carolyn’s initial conception of her research. I shall try to show that her goal was to present her ideas according to a stereotyped and institutionally acceptable form. This form led to a particular way of writing and thinking which resulted in unsatisfactory prose and obscured her ideas.

A variety of people, including academic supervisors and journalists, have expressed dissatisfaction with the results of the Ph.D. training. Areas of concern have been: supervision, writing the thesis, and the concept of originality. There is, however, no systematic information on the factors involved in doing research. The present work has been based on the assumption that “the aim of the training is to produce an autonomous research worker.” “The passive learning model of receiving knowledge and information is not appropriate to the study of the process of doing a Ph.D.” The literature on creativity and problem solving is relevant because the “Ph.D. degree is awarded for an original contribution to knowledge.” The most suitable method of “establishing some basic data and concepts for further investigation and development” is one involving “a longitudinal, idiographic approach.” Repertory grids are ideal for providing such information, especially since they allow us to enter the world of the subject. . . .

“In order to begin to understand the processes involved in changing the new postgraduate into an autonomous research worker in three years, a case study approach was used that incorporated the theories and methods of personal construct psychology. Some of the questions that have been asked are:

- 1. What is the role of the supervisors in the development of self-confidence by their students?*
- 2. How do postgraduates impose structure and plan their work?*
- 3. Why is writing the thesis so difficult and what is the role of writing in the research itself?*
- 4. In what ways do the postgraduates’ perceptions of what they are doing change as they progress through their course?”*

This conception was designed to accommodate her readers’ hypothetical demands, rather than express her own ideas about the topic. It can be seen as her response to four questions: Why?, Other Research?, Method?, and Framework? The way she answered these questions was governed by the threatening nature of her relationship to her readers, who would after all be her examiners. This combination of stereotyped outline and socially derived anxiety governed the form in which she expressed her thought. Thus, to Why?, she cited examples of others’ concern, relying on external authority rather than her own formulation of the problem and presenting herself as a mere collector of information about a previously unexplored topic. To Other Research?, she provided a brief review of some work on learning, problem-solving, and creativity, despite her own opinion that it was irrelevant and her sketchy knowledge of the area. She felt, in fact, that there was little relevant literature, but rather than admit this or find out more, she chose to try to cobble some together. She was also very anxious about the scientific status of her methods, so her Method was justified in vague terms as necessary in “long-term,” “in-depth,” “idiographic” research. Finally the Framework was presented as a list of four questions which appeared as if from nowhere, without any discussion as to why these questions should be more important than any others.

Carolyn, rather than pursuing a train of thought, was trying to manufacture one which would satisfy her readers. This meant she had great difficulty in expressing herself at all; her writing, lacking any natural momentum, was continually postponed or interrupted. Over and above the inhibiting effect these goals had on her expression, they also showed themselves in a variety of features of the final product. More importantly, her misrepresentation of herself led to a particular framework for the problem which prevented the development of her thought. I want now to consider the effect of IC on these latter two aspects—her prose and her thought.

The effect of IC on her prose.

First, her prose lacked coherence because of a lack of specificity in her impressions of her readers. They seemed to require certain topics to be included, but these topics weren't related to one another, so that the links between them were weak. For example, she described some "studies of research" with little comment, then said, "These findings are very similar to those of psychologists working in the area of problem-solving and creativity." This was followed by a brief summary of some results of some research in creativity. Finally, she concluded that "The literature on creativity overlaps that on problem-solving as both are concerned with originality. They are relevant to the study of postgraduates learning to do research because the Ph.D. degree is awarded for making an original contribution to knowledge." These straws were made to appear bricks by her use of vague authoritative sounding phrases such as "the autonomous researcher," "a longitudinal, idiographic approach," and "the passive learning model of receiving knowledge and information is not appropriate to the study of the process of doing a Ph.D."

Her conception of what was required meant, not only that topics were spuriously linked, but that the content of these passages was superfluous. For example, "The Ph.D. degree usually takes three years from inception to completion, so that the process involved in getting from start to finish will be well stretched out. The changed perception of an activity after it has been completed is probably due to what occurs during the process of getting from the anticipated (or prospective) to the retrospective stage." This expansion and repetition of redundant information contrasted with the extreme compression of her own ideas. The amount she wrote about a topic seemed to be related to the extent to which it conformed to her plan rather than its intrinsic interest. Thus "Personal construct theory was first introduced by Kelly as a result of his experiences in supervising postgraduate students" received no further comment. Presumably this did not conform to the themes of a "poverty of information" or the need for "idiographic methods in exploratory research".

Carolyn's attempt to conform to her readers' demands led to a poorly interrelated plan consisting of isolated topics. In order to make this plan appear coherent unimportant points were elaborated, stereotyped pieces of jargon were introduced, and potentially important topics were either compressed or ignored. Her writing lacked conviction because she imposed an inappropriate form on the expression of her thought.

The effect of IC on her thought

Apart from making it difficult for Carolyn to write about her ideas, IC had a detrimental influence on her thought. It prevented her from developing her ideas about the topic and confused and inhibited the ideas she already had. It led to a particular way of looking at the problem which conformed to her theme. Since this lacked coherence the problem appeared as four isolated questions, the contents of which were derived from "areas of concern." This framework then biased the way she inter-

preted the results of her data. Thus she summarized the results of interviews of students and their supervisors as shown in Table I.

TABLE I.

"When a supervisor provides a student with the clear guidance and well structured situation that he requires, the contented student takes until almost the end of his degree course to become an autonomous researcher. Conversely when a student has to organize his own work and understand learning as an active seeking out of information rather than a receiving of knowledge from his supervisor, then autonomy develops from that experience by about halfway through his course, if he does not drop out."

The three pages of which Table I is a summary consisted of similar assertions, without any evidence of their grounds or discussion of their import. To conform to her presentation of herself as a "collector of information," the interviews were reduced to bald statements of fact. Aspects which she obviously considered important, such as autonomy (the phrase "autonomous researcher" recurred throughout the piece), were left unexplained and unexplored. The framework which had developed from IC was effectively a barrier to any further interpretation of her results.

In this section I have tried to show the pernicious effect of IC on Carolyn's writing and thinking. Much of this argument has rested on the implication that she could do better under other circumstances. In the next section I shall describe the procedures I recommended to help alleviate the problem and shall show how these led to the emergence of a private conception which did indeed have a more beneficial effect on her writing and thinking.

3 Therapeutic procedures: (a) Telling a story

I attributed the source of Carolyn's problem to her attempt to impose an inappropriate form on the expression of her ideas. The therapeutic procedures were designed to help her exteriorize her thought in the manner advocated in the introduction. I hoped that she could then use this representation of her ideas as a means of developing a form which was compatible with the topic.

Initially I suggested that she write about the interviews, letting her progress be governed by her thoughts as they came to mind. She found, however, that she was unable to produce anything other than a disconnected series of notes (on reflection this was hardly surprising given the vague nature of the instructions). Accordingly I suggested she describe the course of the relationship between one student and his supervisor in the form of a story — beginning at the beginning and allowing "events to take their course." This was designed to overcome the anxiety, which the totally unstructured task had stimulated, by providing a minimal amount of organization to narrow the range of the topic. I hoped that the

task would be open-ended enough to allow her to pursue any interesting ideas that occurred, but would be sufficiently organized to prevent the need for spurious links and jargon.

She completed this task in a day, producing a five-page profile, effortlessly by comparison with her previous tortuous attempts. One of the people who read the result complimented her on her unaffected language and the concision with which she described events. The piece still read, however, as a matter-of-fact description of the relationship; its continuity stemmed from the natural succession of events rather than from the interpretation she had given them. Thus, although the story format had enabled her to write fluently and clearly, it had not led to the emergence of new ideas. I said earlier that IC resulted in the expansion of superfluities and the compression of her own ideas—this task removed the superfluities but without a corresponding expansion of her own ideas. Carolyn, however, was enthusiastic about the ease with which she had produced the profile and decided to write up the other student/supervisor relationships in the same way. These were again clearly and fluently expressed but lacking in interpretation. This form appeared to be compatible with the expression of her ideas, but too stereotyped to allow their further development. The next exercise was designed to bring about the development of her ideas.

(b) Revision: A conflict between reading and writing

The idea that the conflict between goals can be alleviated by a series of drafts depends on the writer's ability to read and revise his own work. I had hoped that Carolyn would be able to use revision as a means of introducing more interpretation into her discussion of the interviews. I asked her to rewrite the profile, introducing her own interpretation of events; the revised versions were, however, almost unchanged except for a few alterations of grammar and order. This inability to revise was one of the most prevalent of her difficulties, and the most disheartening for the idea that separation of goals might alleviate the conflict.

Initially I suspected that her method of revision was responsible; she tended to read through her prose, altering passages as she read and was extremely reluctant to introduce completely new passages. Two factors could have been at work here. First, focusing on her prose, sentence by sentence, might have overwhelmed her with detail, and prevented her from extracting the overall theme. Second, alterations and introductions might have threatened the coherence of the complete passage. Both of these would have occurred because she was fixated by the presence of her words before her. I therefore suggested she read through the profile, put it aside and write a summary of it, noting the most important points. She could then use the summary as a basis for rewriting. When she rewrote, however, it remained virtually identical to the original.

On reading her summary the reason for this failure became apparent. Earlier she had made an outline of the topics relevant to her results which was based on IC. The summary corresponded to this

outline and ignored other equally important points mentioned in the profile. In other words, her reading of her own prose as well as her earlier writing was governed by IC. The most peculiar aspect of this was that when she rewrote the profile the points ignored in the summary were included once again. So the first draft of the profile was governed by the story format and included different material to IC. The summary of this profile conformed to IC, but the rewrite of the profile included the points ignored in the summary.

This suggested to me that she was unaware of her own interpretation of events—IC was imposed on her thought by default. The story form, while it enabled her to organize her prose more coherently than IC, didn't provide her with an alternative interpretation. One way out of this impasse might be through a different method of revision. This would involve forcing the summary to relate to the contents of the profile rather than her expectations. First, she would have to write a sentence summarizing each paragraph of the profile; secondly, she would have to use this summary to write a completely new profile. Revision would be governed by what she had actually said rather than by what she thought she had said. Unfortunately I was unable to test this idea with her.

The kernel of this idea—that an artificial procedure might force the abandonment of IC—guided my final attempt at therapy.

(c) A sense of threat

Carolyn appeared to lack a conceptual framework for her research. This lack of organization led to a sense of threat whenever she contemplated writing. She tried to overcome this by manufacturing a form to impose on her expression—IC. This inhibited the expression of her ideas, led to the inclusion of irrelevant material, and resulted in a lack of conviction in her prose. The story format, while it helped her to write more fluently, was too stereotyped so that her point of view remained descriptive. The problem was to enable her to write fluently, but without providing a stereotyped framework. Two things she mentioned in our discussions suggested a solution. First, the process of writing lessened her anxiety; once she got going she worried less about the goals of presentation. Usually she paused frequently and her anxiety would reappear. Second, the main function of the story format was that its familiarity lessened the need to pause; it enabled her to keep going. So, the solution lay in enabling her to maintain momentum without also providing a form which would inhibit the development of her thought. Accordingly I suggested she should write about the development of her research from her initial pilot study, and that she should write a set number of pages (we agreed upon seven) without stopping or attending to the quality of what was produced. This was designed to force her artificially to keep writing about the disorganized area which was the source of her anxiety. I hoped that this would enable her to write about the theoretical background to her research without being anxious and without imposing

either IC or the story format. With any luck this would lead to the development of form and allow her to interpret her results more appropriately.

This was a dramatic success; PC (summarized below) emerged in the course of her writing. In the next section I shall compare the goals associated with PC with those of IC, and show the effect on her writing and thinking.

4 Her Private Conception

In this case her goal was to maintain momentum. This led her to try to interrelate her ideas serially, rather than make them conform to some externally imposed form. This had a beneficial effect on both her prose and thought.

Interest in problem solving behaviour has shifted from the processes involved in reaching a solution to a specified problem, to those involved in the formulation of problems. In a pilot study subjects had been asked to formulate interpretations of an ambiguous problem and to estimate the amount of time they had taken to achieve a solution. (The estimate of duration was used as an index of the amount of cognitive organization that had occurred.) This had shown that subjects who knew "they were going to receive" no feedback "about their progress . . . took significantly longer to begin . . . than subjects who" received feedback. These subjects also overestimated the time it took to complete the task.

"This had led to the study of doing research." The Ph.D. required and indeed encouraged the formulation of new problems. The extended time period would make it easier to examine the changing organization of a person's thought and his ability to estimate the time required for aspects of the research. The questions associated with the pilot study and the methods used to investigate them in the context of the Ph.D. were as follows:

1. *How differently is the problem perceived after having completed it to the time when it was first presented? (grids)*
2. *How accurately can people assess their own progress? (record sheets)*
3. *What is the effect of feedback on the progress towards solution? (supervision)*
4. *How helpful are intermediary goals and a grasp of the overall structure of the work to successful completion? (planning)*

Whereas the topics included in IC formed an isolated group related only by their common relationship to the reader's demands, the topics included in PC were closely related to one another. The ideas were related internally rather than to a preformed external plan; PC's plan was internally generated. Thus, the original problem was described, followed by its method of investigation, and its results were discussed. The similarity between the pilot study and the processes involved in the Ph.D. was shown. Where time estimation was used as an index of cognitive organisation in the pilot study, repertory grids were used in the Ph.D. research. This pursuit of a sequential train of thought culminated in the framework represented by the four questions and a novel relationship

between feedback and supervision was expressed. The final framework was closely integrated both internally and with what had gone before. Her goals rather than conforming with a particular stereotype, were now designed to establish interrelationships among a succession of ideas.

Compare the summary of the results of the interviews about supervision in Table II with that expressed under the influence of IC in Table I.

TABLE II

"It is the supervisor that the student looks to for feedback and information, and differences in supervisory style result in differences in the postgraduate's behaviour, just as the feedback and no feedback conditions of the pilot study resulted in different behaviour between the groups of subjects.

The length of time it takes a postgraduate to become an autonomous researcher is determined by the kind of supervision he receives, even though he is continually receiving feedback from the results of his work. The important thing here is whether or not he is able to interpret for himself these results or whether he relies upon his supervisor to do so."

Here "autonomy" is defined as the ability to interpret the feedback from one's actions unaided. The relationship between student and supervisor is shown to be crucial for the developing ability to use feedback to further the solution to problems. Previously this had been presented merely as one more fact which had been collected. PC not only culminated in a more integrated train of thought than IC but enabled her to interpret her results in a more fruitful way. Both the framework and the interpretation of the student/supervisor relationship occurred to Carolyn in the process of writing.

Where before, her own ideas had been compressed and redundant information had been expanded and "jargonized," this time her own ideas had developed and the "excess weight" had been eliminated. Where jargon (unexplained specialized terms) was used, it was as a kind of shorthand rather than as a hopeful means of evasion. Thus under problem-solving she had written, "Psychologists working in this area have noted such characteristics as trial and error, mental set (Luchins), and functional fixedness (Dunker) which may delay or inhibit eventual solution. Other characteristics which may facilitate the outcome are such things as insight (Kohler) and structural combination (Maier)." This served as a note to herself to investigate these areas further rather than as a means of accommodating the hypothetical desire of her readers for some reference to the literature. In contrast to IC the amount she wrote about a topic depended on its intrinsic interest rather than some external plan.

Not the least of the benefits of this exercise was that for the first time she had found writing enjoyable, even exciting. The maintenance of momentum had at the same time alleviated her anxiety by allowing

her to "decenter" from the social context, and stimulated the development of her own ideas.

5 Therapy: success or failure?

Carolyn's initial difficulties stemmed from the inappropriate form she had imposed on the expression of her thought. I tried to overcome this by encouraging her to focus on expressing herself without worrying about coherence or self-presentation. Initially her anxiety prevented this; she was unable to write without imposing some form, either IC or the story format, neither of which led to the development of her thought. The imposition of a deadline, however, forced her to write continuously which prevented her from referring to an external outline and led to the development of an integrated conceptual framework. Two factors were influential in this development. First, once she had begun, the task rapidly became easier; writing itself helped to alleviate her anxiety. Second, as she continued she found that a theme began to develop; she discovered (or created) structure in her thought where none was originally apparent. Although she had been aware of some of the elements of this framework before, it was only in the course of writing that she saw their interrelationships. One way of investigating this further would be to examine the relationship between the rate or rhythm of expression and the evolution of ideas. The crucial difference between the two methods of drafting I discussed in the introduction appears to be that; when goals are separated, momentum is maintained, whereas when they are combined it is inhibited.

This part of the therapy was highly successful; Carolyn now enjoyed her writing and had developed a conceptual framework with which to interpret events. Unfortunately, this is not the whole story, despite her acknowledgement of the success of the final exercise, the framework of four questions in PC was crossed out and rejected as too personal. Furthermore, the introduction to the thesis is based on IC; indeed, I have used extracts from it in constructing the summary of IC since it contains some of the clearest examples of her problems. This is reminiscent of the reimposition of IC which occurred during the revision exercise (see section 3(b)). In both cases she has been unable to use an initial exteriorization of thought as a basis for presenting her ideas to her readers. It may be that the initial focus on expression per se, while apparently so beneficial, merely postpones the problem without solving it. It might still be overcome if an effective method of revision could be found, or perhaps all that is needed is some moral support to enable her to have the courage of her convictions. Unfortunately she has taken a job elsewhere and the therapy has been discontinued. A tantalizing development has been her decision to rewrite the introduction using PC. Whether this works remains to be seen. At present her difficulty in revision remains an untackled obstacle.

Conflicting goals in writing reflect a more fundamental conflict between private and public thought. The separation of goals enabled Carolyn to express her private thoughts to herself, but failed when it

came to presenting these in public. An alternative approach might be based upon a reconciliation of goals, fusing the private and public self. This would involve manipulating the social relationship between writer and reader; the writer might pretend her reader was someone of similar knowledge but less authority than in reality, or she might adopt the role of someone with more authority. This would be designed to prevent conflicting trains of thought by unifying the disparate goals. Whatever the procedure, the fundamental idea would be to engender a fluent train of thought, rather than to manufacture one to conform to an externally derived plan.

Carolyn is not alone in her difficulties; they seem to be widespread among postgraduates. It remains unclear what the eventual outcome might have been if therapy had continued (or indeed might still be if she carries out her intention of rewriting). However, the case study did suggest two hypotheses about the relationship between writing and thought: rhythm or momentum plays an important role in the evolution of thought, and writing, while often inducing anxiety, can also alleviate it.

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Writing as Conversation

Richard Stack

Good writing is not, at least in the usual sense, a skill; that is, something that can be taught directly. The basis of good writing is fluency, not correctness. Fluency can only be acquired through play: it is too complex a functioning to be programmed. We learn to speak through play and we should learn to write in a similar fashion. Conversation is the fundamental form of verbal play: it is dialogical rather than didactic, exploratory rather than definitive, the expression of a desire for self-representation rather than of submission to external control. A new, non-prescriptive pedagogy of writing, based on this concept of writing as conversation, is called for. An addendum describes an experimental writing course, Writing from Life, based on a design borrowed from the traditional life-drawing class.

We learn to play the language-game by playing it. We learn to speak through play, and with this learning as a basis we can then go on to modify this native gift to fit specific situations. It is only because we already know how to speak that we can learn to modify it. It would be absurd to think we could do it the other way around. Yet this absurd way is just how writing is taught; a dozen or more years are wasted on the rather trivial accomplishment of correctness while fluency, which should be the prerequisite, has to wait. If, after learning the alphabet, children were encouraged to encode the language freely (as, for example, in a good kindergarten children play with poster-paints), they would soon enough pick up the common codes without the dreadful paraphernalia of "work-books" and the like, which really have the effect of systematically discouraging the child's natural impulse to self-representation.

Fluency, not correctness, is the crucial mark of the good writer. And fluency is attained through the enticements, excitements, and exigencies of play, which is, conceptually, the very opposite of schooling. Fluency is a naturally good functioning. Once it has been attained, modifications may be easily accomplished. But until it has been, there is nothing there to modify. It is the mark of play that it is spontaneously and voluntarily undertaken. It is the expression of freely willed activity. And thus what is learned in the course of play is not burdened with the stigma of an alien will. Consequently it is hardly thought of as learning at all. In play, you learn as you go, learning what you need when you need to learn it. At school you learn what the book (and therefore the teacher) presumes you need to learn, in the order in which the book presumes you need to learn it, and at a

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pace dictated (at best) by the average capacity of the class. It is, as we all know, a recipe for boredom and alienation; you are the object of the book's indoctrination, rather than the subject of your own learning. It may be that there are some school subjects that can only be dealt with in this way, but it is a disaster for learning to write. Means should be found to encourage the child in exuberant linguistic play of all sorts (perhaps, in the earliest stages, through dictation to someone able to manage better the pen or typewriter) so that he or she may discover the power and the delight of self-representation through written as well as spoken language. Children should be constantly producing their own magazines, broadcasts, plays, and so forth, instead of handing in tiresome homework for the teacher's crabby corrections.

Good writing is, at bottom, conversation; and conversation is the name we give to verbal play. (We are accustomed to opposing play to work, which is not unreasonable. But in its reasonableness it masks the fact that many serious kinds of human work—for example, the work of the artist and the scientist—have play as their fundamental structure.) Conversation, as a form of play, has these features in common with it: it is composed of a to-and-fro movement; this movement, though ordered, is unpredictable; and it conforms to no externally defined purpose. It is not constituted by the subjectivities of the participants but is, rather, a set of rules, however loose, to which the participants submit. Like any other game, it exists before and after the players. Saussure's *langue* is an elaborate game in which the *parole* of the conversationalist is set to play.

Conversation has the complexity of a thing woven from materials which are themselves already complex and woven. The overt dialogue between two or more speakers reflects a host of other overt or inward dialogues, and the actual track of a particular conversation has many unexplored side-tracks, hints thrown out but not followed up, perhaps to be taken up at a later time. At each moment in a conversation there are a large number of possible (even if improbable) directions that it may take. "Oh, that reminds me . . .," "Oh, by the way . . .," and similar indicators of digression testify to this constant possibility. It is when a conversation is most open and (at least in the short run) unpredictable that we recognize it to be most "conversational." This points to an essence: if a conversation is rejected as, say, "boring" then it has probably moved towards some other essence; towards, say, the didactic.

Writing shares these characteristics. Not all writing, of course. But writing which points towards its essence. As writing moves away from conversation, as it ceases to be aware of being listened to, as it ceases to incorporate the responses of the other, as it begins merely to "get the job done," it moves away from its center and origin. Particularly if we are considering writing from the perspective of learning to write well, we must start with this center and origin. Secondary forms, such as the purely didactic discourse, should not be undertaken until a foundation of writing-as-conversation has been firmly established, for this is the source of fluency. Whereas didactic writing has the specific character of knowing what it is about before it is begun, conversation—which rules that its

participants, formally at least, are equals and must therefore move according to the weave of motive supplied by those participants — is itself a fundamental mode of learning. It might be objected that it is a strange form of conversation which necessarily silences one of the parties involved (namely, the reader). But it is a central axiom of literary criticism that good writing always requires the active participation of the reader in the construction of meaning.

But these shared characteristics are not the only grounds for attempting to assimilate writing to conversation. It is also a word which carries a highly appropriate *ethos*. This becomes clearer if we view the word "conversation" historically. The modern sense — a stretch of convivial talk — is a reduced, narrowed sense. But somewhere, lurking behind this sense, there is a more encompassing etymological resonance. The word derives from the deponent of the Latin verb *convertere*, which is *convertari*. The deponents were relics of the Greek middle voice, for which there was no direct equivalent in Latin. The middle voice had generally a reflexive and frequentative meaning; thus *convertari* seems to have meant something like "to turn oneself and turn oneself again." Instead of the turning being the result of some external force or will (*convertere*), the word represented an inwardly motivated turning, or perhaps an aptitude for so turning oneself. In the Middle Ages a person in a state of grace could be said to be "conversable," or "in conversation" with God. That is, he was thought to be the kind of person God could be expected to invite to his at homes in the Above. The word did not specifically refer to talk; indeed, it could even refer to animals in relation to their favoured places of congregation. It certainly comprehended sexual relations, and in general seems to have denoted a capacity to allow the continuation of social intercourse, to one's "liveability," if you will. The extraordinary scope of the word may be inferred from Milton's tract against the prohibition on divorce, where it is perhaps the key term in his argument: where there is no "conversation" between a man and his wife, the relationship is no better than slavery.

There is no modern word which quite captures this range and depth of meaning. The recent campaign on behalf of "convivial" (as opposed to "schooled") institutions conducted by Ivan Illich perhaps represents an effort to remedy this lack, as does the espousal of the term "dialogical" by South American radical theologians and social theorists. (It is the key term in Paulo Freire's *Pedagogy of the Oppressed*.) But the special virtue represented by the word resists being sloganized. Conversation which revels in the unexpected is not easily conformable to quickly defined norms. Perhaps one could say that it points to the kinds of things we find hard to name when we say we "get on well" with someone. It is a modest word, but it seems to carry, in its modest way, some of the calmer implications of loving.

The reason that the *ethos* of the word matters so much is that it helps to illuminate a neglected but nevertheless crucially important political dimension in the teaching and learning of writing.

This political dimension is perhaps more masked in English than in other languages due to the peculiar problems of graphic encoding our language presents. These problems derive from the odd circumstance that

the advent of print technology fossilized the graphic code at the moment when the language was undergoing its most rapid phonemic development, so that grapheme and phoneme present radically disparate pictures of the language. This, in turn, undoubtedly contributed to the overwhelming concern with the criterion of correctness in the teaching of writing. And this emphasis led, in its turn, to the appropriation of "writing skills" as an instrument of social control, a social sieve, so to speak, which could be used to control access to the ranks of privilege and power.

But writing is not, properly speaking, a skill. It is simply too complex and subtle a function to be usefully subsumed under that category, for ordinarily a skill is an essentially repetitive function rather than an essentially creative one, and is thus, in principle at least, susceptible to analysis and therefore to being taught. But one cannot really teach writing, beyond the rudimentary level. You have to teach yourself. The skills routines through which schoolchildren are pushed are manifestly ineffective for at least a large proportion of them. And it is by no means clear that it is primarily those routines which are responsible for the success of that proportion which does become fluent. It seems quite as likely that this group finds itself in a position to teach itself, due to circumstances of family and class. The net result of this state of affairs is the production of a large proportion of young citizens who have been successfully convinced, through a lamentably inadequate pedagogy, that they can have no real access to writing as an instrument of personal, and therefore of social self-representation. And since writing is so patently the property of the powerful, this conviction has the effect of legitimating and perpetuating existing patterns of inequality.

One reason why it is so hard to make a dent in the way writing is considered is the apparently inevitable synonymy of "writing" and "written." Writing is taken to be identical with, if you like, "visible language." It is true, of course, that graphic encoding has manifold and significant consequences for verbal utterance, but is it the case that writing "has its being" in its "graphicality"? If so, what are we to make of the hundreds of years of poetic composition, memorization, and performance which certainly preceded any form of graphic representation? Would it be reasonable to say that Homer and the nameless Beowulf poet were not participating in the same kind of way of "being with language" as their grateful inheritors, such as Milton, Wordsworth, and Joyce? Furthermore, what are we to make of the fact that "The Prelude" was composed while its author was pacing up and down a stretch of gravel path, and subsequently committed to paper through dictation to the faithful Dorothy? In general it is more precise to consider writing as the composition of language such that it may be reproduced, and to consider its graphic encoding as simply the first occasion of such reproduction. What such a formulation entails is the view that writing is fundamentally a mode of performance, of address to the other; that it is, in fact, conversation.

We must find a way to give people — people in general, not just the usual select bunch — the chance to discover and delight in the power of the written word as a mode of self-representation. Writing is the way we make

ourselves heard, and if one is not heard, one is unlikely to listen. It is my contention that a consideration of writing as a kind of conversation can offer a direction for the reinvention of a pedagogy of writing which can begin to do this more effectively than prevailing methods.



ADDENDUM: A Letter to a Novelist

Dear —

I have heard, through the grape-vine, of an incident at a cocktail-party at which you were heard to express dismay at the idea of a course I am offering entitled *Writing from Life*. It seemed to me that your interest in the course, though I gather dismissive in character, nevertheless provides an occasion for giving some explanation of its nature and conception, for sending you a copy of some of the work produced during the last version of the course a year ago, and, finally, for inviting you to attend a class meeting.

Certain disciplines—notably dancing, drawing, and fencing—have traditionally been taught outside the academy and consequently developed their own rather special pedagogical structures and arrangements without the normative constraints of the school or university. Many teachers of these disciplines work in effect, as small entrepreneurs who stand or fall by their ability to attract and hold their clients. An institutional setting tends to protect salaried teachers from such direct pressure—at least to some degree. This protection seems to impose on salaried teachers (like me) a special responsibility to make good use of the relative freedom it affords, and not to settle comfortably for certain well-worn but untested assumptions about how best to do the work.

I dare say that you have done some teaching of writing at some point, and, if so, that you are aware that the question of how best to do it is a matter of doubt and controversy. On the whole, it is badly done, or at least uncertain in its results. It is not implausible, therefore, to think that some fundamental rigidities of conception in the design and execution of such courses may contribute to their widespread failure. The purpose of my course is experimental: it is to see whether adapting a pedagogical design which has an ancient and proven value in the visual arts (namely, the life-drawing class) to the purposes of learning to write may be an effective way of circumventing some of these rigidities of conception.

I have taught for some fifteen years now, and over this period I have developed certain general criteria to enable me to distinguish between a good and a bad class. In a good class the student is thinking about the subject he is studying and the teacher is thinking about the student's thinking—in short, teaching is subordinated to learning. In a good class the student is working actively, getting real exercise, and not merely sitting and (perhaps) listening. In a good class the student is continuously aware of

the work being done by other students, their successes and failures. In a good class, finally, the object is to discover what can be done, not merely to repeat oneself or others.

These four general criteria seem to be of broad (though not exhaustive) validity, but they are particularly apt criteria for a class in writing. It is not altogether obvious how to design a course which will effectively respond to them, but I believe that *Writing from Life* does at least begin to do so. Let me try to explain how.

The class is given in a studio rather than a classroom setting, and thus inherits some of the aura of the practical work associated with such a setting. As in a life-drawing class, the focus of attention of the students is on their efforts to render their response to a model, rather than on the teacher. The teacher is thus free to circulate around the outside of the class, rather than being pinned to the centre. He is thus able to attend to the student's writing at the moment of its composition and to help with difficulties as they emerge.

The class is organized as a series of exercises, and after each exercise is completed the results are read aloud to the class. This is not a rigid rule, but enough is read so that a student can get a feel for the range of possible solutions to the problem posed by the exercise and can gauge their relative effectiveness. At the end of the course we will generally contrive to produce some sort of publication of the best material, as in the magazine I have enclosed.

Although the exercises which comprise the class are fairly specific and frequently have rigid and arbitrary limits, they never imply any particular solution. In effect, they are provocations to write, occasions for writing, rather than problems in the usual sense of the word. There is no question of grading what is produced, but rather of trying to discover what works.

Doubtless the notion of using nude models in a writing class strikes one as eccentric (or worse). I have a number of reasons for thinking it to be a good idea, and have encountered no seriously reasoned objections so far. The human body is an extraordinarily absorbing and interesting object: it is the locus of a range of emotions and feelings broader and deeper than any other. The nude body in a studio pose is an object located in a specifically imaginative space: the nudity of the model removes both his or her character as a particular person (with a given name, occupation, history) and his or her location in a particular place. He or she acquires, automatically, a symbolic and imaginative presence akin to that, say, of a dancer. Thus the writer is free to imaginatively place, clothe, and give a history to the model without hindrance. Furthermore, the presence of the model creates a certain urgency, a sense of obligation in the classroom which, it turns out, provides a powerful motor for student work. The nude presence is unambiguously what it is: it's there for you, and you are there to study it.

Although writing "from" the model is the most important recurring element in the design of this course, it is worth noting that many of the class exercises do not involve the model at all. However, writing from the model does obviously define a rather particular attitude towards the kind of work on which the course will focus, and this attitude pervades all the

exercises. It should perhaps be noted that the object of the exercises involving the model is by no means restricted to the description of the model. Indeed, one thing that becomes apparent very quickly is that writing is a strikingly limited tool for the mere description of the external world, and that its real forte is the externalization of inner states.

One might have thought, perhaps, that the nudity of the model might prove sexually provocative and therefore embarrassing (or worse). In practice however, this does not appear to be the case, except perhaps initially for a few moments. It turns out that the body has far more interest than mere sexiness, and it is more likely to be the very unfamiliarity of the body that is disconcerting rather than its sexiness.

I am aware that designing a course in this manner is a provocative act. But it seems to raise a healthy challenge to prevailing pedagogical designs. Oddly enough, the students cotton on to the idea easily, and seem enthusiastic about the possibilities it offers of active studio work in writing.

The success of a class, I believe, depends more than is usually thought on its pedagogical design, which is what I have stressed here. But of course it also depends upon the acumen and sensitivity of the person conducting it. However, it has been my observation that the teacher tends to see the relation between his work and the student's achievement as a relation of cause and effect. It would be more accurate to see the relation as analogous to that which obtains between setting and action in a play. One of the virtues of the pedagogical design I have described is that it could serve as a model for a teacherless class, or at least that it could help clarify the relatively modest degree to which learning is directly dependent on teaching.

I have deliberately refrained from giving any details as to the actual exercises which constitute the class in the hope that you may find yourself sufficiently intrigued to come and have a look. The students would get a kick out of it and so might you . . .

"A writer keeps surprising himself . . .
he doesn't know what he is saying
until he sees it on the page."

Thomas Williams

Mixing Levels of Revision

David Lowenthal

Orderly and straightforward revision, in which editorial tasks are delimited draft by draft, breaks down with lengthy and complex tasks. In rewriting a book, I have had to combine various stages of revision in each draft — adding new material, reshaping thoughts, striving for coherent expression, and polishing prose simultaneously instead of serially. This kaleidoscopic way of working yields unexpected advantages that compensate for its untidy clutter: it helps to maintain the pace of revision, resolves problems left over from previous drafts, and stimulates new ideas and reconsiderations which, at a late stage in the editorial process, come as necessary nuisances.

For some years I have followed a regular system of rewriting. This tried and true routine has recently failed me in rewriting a book. Rather than working in an orderly sequence I have had to backtrack to previous tasks, undertaking late much of what should be done early in the process of revision. Confusion and anxiety result.

Why has this happened? The explanation suggests a remedy. My present task is too complex and prolonged for the normal routine, one draft after another, each with a set goal. Instead, I now have to consider problems of content, structure, meaning, and style in the same draft, amalgamating various stages of rewriting.

Let me be specific. My book concerns the ways we use the past and how we transform it in doing so. My sources are enormously varied: they range from discussions of the meaning of history and dissertations on memory to debates about architectural preservation and appreciation of old movies, antiques, family trees, and science-fiction time travel. Some of these materials are quite easy to deal with; straightforward and lucid, they need little reorganization to fit my framework, emerging only slightly altered from their original form. Other sources, by contrast, pose extraordinary difficulties; to unravel and render accessible convoluted arguments couched in opaque, jargon-laden prose may require several revisions.

These disparities endure through several drafts, with some sections long seeming more finished than others. Certain segments will be intelligible, even elegant, other portions awkward or unclear. This unevenness was initially distressing, for it not only upset my writing habits but cast doubt on my presumptions about revising. Let me first detail these habits and presumptions.

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I habitually type out the first draft of a paper completely, if possible without a break, never turning back to review or alter what I have written. After several days, sometimes longer, I re-read and revise the draft. I then re-type the altered version and again wait several days before embarking on the next revision.

Each draft entails its own specific tasks and aims. The purpose of the first draft is to externalize my thoughts, setting on paper the gist of what concerns me, without reference to notes. The actual process of writing also shows how my materials and ideas fit together and suggests conclusions. Thus the first draft goes beyond what I previously knew, leading me to new discoveries.

In the second draft, adding subsidiary materials from collected notes and source materials, I seek to make the paper logical and complete. Some of the new data may conflict with arguments and conclusions expounded in the first draft. The second draft assesses all the pertinent evidence, old and new, and establishes the essay's essential structure. (Sometimes two drafts are needed to accomplish these aims.)

My third draft shapes the essay into coherent form. Smoothing and eliding the heterogeneous second draft, I eliminate duplications and irrelevancies, rephrase or explain what seems obscure or ambiguous, shuffle bits of the essay around to accord with its structure. I usually re-read the revised third draft carefully before and after retyping, so that I can then send it to colleagues for their reactions.

My fourth draft considers these reactions, which are diverse in type. Some concern the organization of the whole essay, others suggest materials I ought to include or arguments that controvert my conclusions, still others point to errors of fact or criticize murky or awkward constructions. This, unlike earlier drafts, deals with matters at all stages of writing and revision; additions and corrections are made at the expense of coherence.

My fifth draft shapes the patchy and heterogeneous fourth into a readable and persuasive essay. The task is mainly stylistic: I smooth linkages between sections, correct the structure of paragraphs and sentences, cut out extraneous modifiers, choose the right words.

Checking back with the original sources and compiling references discloses errors that necessitate a sixth draft. Re-checking is salutary and essential. One of my history professors at the University of Wisconsin required his graduate students to verify the sources of some staff member's article in a reputable journal. At least half the references were defective in every case, misquoting sources or mistaking pagination, title, journal date, volume. Awareness of fallibility is no cure: not only do I invariably make errors in transcribing, but I often misinterpret sources or overlook relevant points within them. Correcting such errors involves pruning duplications, adding interstitial phrases, revising arguments.

This revision sequence works well enough for brief essays, especially those that depend on relatively homogeneous source materials. But it fails to function for long monographs, especially when some sources require much more re-interpretation than others. The need to keep in mind connections and overlaps with other chapters makes it far more difficult

to revise a chapter in a book than an isolated essay of comparable length.

The continual addition of fresh material also militates against the orderly revision of any lengthy piece of work. In writing an essay I usually rest content, by the second draft, with sources already examined; other potentially useful materials can be saved for another essay. But in writing a book, I am concerned to overlook nothing. And during the long interval between the start of writing and the final draft, new sources are bound to come to light, old ideas to generate fresh lines of inquiry. I may have to integrate additional material into a late revision of the text, not merely to exemplify existing points but to re-shape or enlarge on the book as a whole.

In place of an orderly sequence of tasks taken up draft by draft, each revision now includes work which, according to my original model, ought to have been completed in previous drafts. Thus at the fifth draft, in which my main purpose is to produce a readable essay, I may have to cope also with new data, with obscurities that need clarification, and with problems of location, repetition, and consistency.

This situation at first seemed to me profoundly unsatisfactory. It implied inadequate preparation for writing, deranged my sequence of progressive revision, and raised fundamental issues at the eleventh hour. And it was terribly untidy. Here I had a fairly neat typescript of draft X; but some of its pages bore notations about sections that were out of place and lucunae to be added from other chapters and from sources at various stages of digestion: rough notes, quotes on index cards, Xeroxed sheets from journals, newspaper cuttings, marked pages of books. If only all this clutter would disappear and let me carry on with my tidy typescript to the next draft!

But the clutter will not go away; it cries out for inclusion. The additions attest to the continuously creative nature of writing, no stage of which can be encapsulated from the rest. This motley, disordered, heterogeneous mess must be dealt with, however late in the day. And as I do all these difficult things, I begin to find virtues in such kaleidoscopic revision — virtues lacking in a straightforward sequential operation. I learn to anticipate these benefits as aids in rewriting.

Maintaining pace is one advantage. At some point in any draft things come unstuck: I cannot spell out a particular idea, clarify a certain thought, find the right example, decide where something best fits. A rigorously ordered schedule would require me to resolve each of these problems before moving on. But this would delay revision and make it counterproductive. Keeping tempo in rewriting is almost as important as in the initial draft. Failure to resolve a problem in the "appropriate" revision matters less when I expect to confront it later, along with other problems similarly out of sequence. Hopeful of an ultimate solution, I no longer feel that the difficulty need be faced here and now.

A second advantage is that answers come more easily. Far from shirking problems, postponement can actually help to solve them. A problem left over from a previous revision looks quite different at the next, not simply because it patently obstructs the text flow, but also because the next editing task exhibits the recalcitrant material in a new light. Now that the text as a

whole is better organized and reads more smoothly, outstanding problems are easier to scrutinize and often fall into place with little difficulty. Many troublesome passages are now seen to be superfluous, at best worth an aside or a footnote; indeed, this may be why they were problematic to begin with.

Each successive revision demands re-reading the text in a different way — a change of pace that can yield valuable perspectives on outstanding problems. In revising for meaning and structure, for example, I may come to grief over a source so murky that I despair of elucidating it. But I can handle it on the next revision, which moves to an examination of the text phrase by phrase and word by word. Attentive to syntax more than to structure, I see how to fit in parts that previously eluded construal, and jettison the residue.

Innovation is a third benefit of editorial irregularity. Coping with new materials or with leftovers from previous revisions stimulates basic reconsiderations. Confronting unresolved problems in the midst of an otherwise straightforward task can inspire innovation. New-found evidence on a topic I have already written up and revised not only corrects or enlivens my text, but may lead me to review the whole topic, raising issues to explore further in subsequent or previous chapters. Undigested material from earlier revisions jogs the imagination like any editorial change of pace — stopping to read a book, to retype a passage, to discuss points with a colleague. Revising on several levels at once is reinvigorating. Key words and phrases, like interesting ideas, that fail to surface during close attention to the matter in hand, may emerge instead from apparently unrelated, serendipitous discoveries.

Certain risks attend this fruitful juggling of tasks. If carried too far, it endangers any sense of progress in revising; the writer needs to feel he is moving from one level to another towards completion. Complexity is another danger: to manipulate material on several levels at once requires lots of uninterrupted time, for it is difficult to come back to such a task after a break. To differentiate types of material within and among chapters requires space as well as time — space enough to shuffle heterogeneous sources at various levels of revision without losing the way.

Afterword

I have just re-read the above after a lapse of half a year and the receipt of comments from two friends. One writes: "Surely you have too many separate drafts. My solution is to retype the material when it is so heavily amended that it is difficult to read. . . . I certainly don't anticipate re-writing five times!"

And the other: "First draft. Twenty pages of incoherent fragments. . . . Instructions by me to me: Cut This Out. This Won't Do, Think about this, This Is Awful. . . . Second draft. Write the book. . . (A year or so has passed, you understand). . . . Slash ruthlessly. . . . Slash yet again."

I have not altered what I wrote, except for a few points that seemed unclear. But the passage of time and these reactions make me realize how idiosyncratic it is; the way I revise only faintly reflects how anyone else might go about it.

But my uneasiness extends beyond this. My essay does not even describe the way I actually revise; it tells how I now think I should revise, as opposed to how I used to think. I have ignored the self-generated interference involved in writing and re-writing — interference that stifles creativity, deranges common sense, and impedes the flow of work.

Moreover, my tone gives a false impression of self-confidence, as though I mostly knew what I was doing and found it good. That is far from being the case. The start of each revision, even of each day's revision, can be more painful than the first draft. Several revisions induce a sense of ennui, no matter how long I have allowed the work to rest. I feel that I have seen it all before, that I wrote it better last time, that I have failed to make essential points, that it is all banal and boring, at once too simple and too complicated. Only a ruthless and drastic re-write will cure these ills, but for that I lack both time and energy. Nor have I any confidence that the new essay would really be any better.

So in despair — and with relief — I have the final draft re-typed. Perhaps it will look better when it is cleaner. In the end, the adventitious process of arranging all the tidily printed words on a safely proof-read page resolves many of the doubts. Even the wrong words, the badly phrased thoughts, now seem more or less all right — especially if I take care not to re-read them.

Writing as Problem Solving

John R. Hayes and Linda S. Flower

A top down approach employing protocol analysis can yield valuable data about writing processes. The main features of composition apparent in the data are: writing is goal directed, writing processes are hierarchically organized, some of the processes may interrupt others, recursion is possible, and writing goals may be modified as the result of writing. The first four of these features are embodied in a process model of composition.

It's very exciting to be doing research on composition just now because a great deal is happening. Theorists are exploring new ideas and experimenters are providing us with new empirical results at an unprecedented rate. Currently, there are at least four major theoretical viewpoints guiding the work of researchers who are trying to understand composition:

1. The psycholinguistic viewpoint, represented by Kintsch (1974), Rumelhart (1975), and others;
2. The linguistic viewpoint, represented by Young (1970), Cooper and Odell (1977), de Beaugrande (1979), and others;
3. The developmental viewpoint, represented by Bereiter, Scardamalia, and Bracewell (1979), Graves (1975), and others; and
4. The cognitive processing viewpoint, represented by Collins and Gentner (1979), Nold (in press), and Hayes and Flower (1980).

A casual observer could easily find this multiplicity of approaches confusing. Even researchers active in the field may sometimes find it difficult to characterize their own research. Their attention is likely to be directed at the subject matter they are trying to understand rather than at the assumptions underlying their research methods. In this paper we will stand back from the research we have been doing for the last several years and attempt to say what it is we think we have been doing.

There are two major factors which have shaped our work on writing. First, in conducting our research we have made a number of strategic decisions about what is interesting and about how best to proceed. To put it plainly, these decisions are the incarnation of our scientific biases. Second, our research has been shaped by a refractory world which has insisted that we attend to certain salient facts about the writing processes. In what follows we will describe the strategies which we have chosen to guide our research and then the facts which nature has imposed on us.

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Strategic Decisions

Our approach proceeds from five strategic decisions which we made about how to conduct our research. Briefly these decisions were:

1. to focus on the act of writing;
2. to try for a process model of writing;
3. to model individual writers;
4. to work wholistically or "top down"; and
5. to divide the writing task into parts for easier analysis.

As we will see below, these decisions are genuine ones in the sense that we could reasonably have made other choices. Alternative approaches to the study of writing do proceed from different decisions on these same issues.

1. Our first and most important decision was to focus on the act of writing—that is, to attend to whatever it is that writers do when they produce a text. Thus, we viewed writing primarily as a process rather than as a product. We felt that by far the richest source of information about writing would be to observe step by step how the writer had actually created the essay. However, we did not intend to ignore the product. Wherever possible, we looked to the writer's essay for evidence to confirm or elaborate the more direct observations of process.

To observe writers in action we have employed process tracing methods borrowed from cognitive psychology. In our studies a typical experiment proceeds as follows: subjects appear at the experimental session knowing that they will be assigned a topic on which to write an essay and that the whole procedure will take about an hour. Further, they know that they will be asked to "think aloud" while writing. The subject is seated in a quiet office with a desk, pencil, and paper, and the tape recorder is turned on. The experimenter then gives the subject an envelope containing the writing assignment—that is, the topic and the intended audience. The subject then busily sets to work writing and commenting roughly as follows: "Well, open up the magic envelope. OK. Whew! This is a killer. Write about abortion pro and con for *Catholic Weekly*. Ok, boy! How am I going to handle this?", etc. This continues for about an hour until the subject says something like, "Well, that's it. Good bye, tape recorder (click)." The data of the study consist of a verbatim transcript of the tape recording (with all the "um's" and pauses and expletives undeleted) together with the essay and all of the notes the writer has generated along the way. The transcript is called a *protocol*. These materials are then examined in considerable detail for evidence which may reveal something of the processes by which the writer has created the essay. In general, the data are very rich in such evidence. Subjects typically give many hints about their plans and goals, e.g., "I'll just jot down ideas as they come to me"; about strategies for dealing with the audience, e.g., "I'll write this as if I were one of them"; about criteria for editing and evaluation, e.g., "For 10-year-olds, we better keep this simple"; and so on. The analysis of this data is called *protocol analysis*.

2. To understand the writing act, we certainly need to identify the processes involved—but this is not enough. We also need to know how these processes are organized to produce a text. That is, we need to know how the processes are sequenced, how one process is terminated and how the one which follows is chosen, how errors are detected, etc. Further, we want to know how simultaneous processes interact. When writers construct sentences, we want to know how they handle such multiple constraints as the requirement for correct grammar, appropriate tone, accuracy of meaning, and smooth transition. In short, we want a model which specifies the processes involved in writing and accurately describes their organization and interaction.

A model is a metaphor for a process: it's a way to describe something, such as the composing process, which refuses to sit still for a portrait. People build models in order to understand how a dynamic system works, and to describe the functional relationships among its parts. In addition, if a model is really to help us understand more, it should speak to some of the critical questions in the field of writing and rhetoric. It should help us see things in a way we didn't see them before.

Our second strategic decision was to direct our research toward the construction of such a model. Ideally, the model should be capable of telling us how writers go about producing a text when they are given a writing assignment. It should tell us what processes are involved, in what order they occur, and at what points the writer will experience difficulty. At present, of course, we must be satisfied with a model which is much less complete than the ideal. The ideal defines where we would like to go, but—alas!—not where we are now.

3. It is apparent that not all writers write in the same way. For example, some writers plan their essays from beginning to end before they write a single word of text, while others never seem to look beyond the next sentence. Further, some writers seem to write with their readers constantly in mind, checking frequently to be sure that they have taken the reader's knowledge and attitudes into account. Others appear serenely unaware that an audience could fail to understand what they, in good faith, have intended to say.

In modeling we can deal with such differences in either of two ways. We can choose to construct a model of the "average" writer and delay until some more propitious time the description of differences among writers. This approach has the merit of simplicity. Further, if things work out well, a model of an average writer might be useful in characterizing individual differences. Thus, models for individual writers might prove to be minor variants of the average model. However, this approach may have the disadvantage that averages sometimes suffer from—the average may be representative of no one. Thus, we sincerely hope that no one has the average number of children—two and a half—nor would we want anyone to have to eat an average course at dinner, which might be a compromise between appetizer and dessert such as oysters with chocolate sauce.

An alternative approach is to construct models which are intended to

describe individuals rather than averages of groups. The disadvantage of this approach is that it may be expensive. In the worst case, each individual may require a separate model. With better luck, models of individual writers will turn out to be variants of a small number of model types. The advantage of this approach is that it is more likely than a model of the average to capture the behavior of actual (rather than idealized) writers.

Our third strategic decision, then, was to model the behavior of individual writers rather than the average behavior of groups of writers.

4. In studying writing, we might well have started with processes which psychologists and psycholinguists have already identified as fundamental ones—processes such as short-term memory, grammatical categorization, and lexical marking. We might then have attempted to synthesize more complex processes using these fundamental processes as building blocks. This synthetic or *bottom up* approach is a very familiar one in science and has frequently been used with great success. Geometry and Newtonian physics are perhaps the best known examples.

However, research often proceeds in the opposite direction; that is, wholistically, or from the top down. Chemistry provides a good example of top down research. Chemical research often starts with a complex compound and then looks for the elementary components and their relations. The top down approach is the one we have chosen to apply in our writing research. We have started from the top with the complete writing act and have attempted to analyze it first into a few relatively complex subprocesses. As the analysis proceeds, the complex subprocesses are analyzed further into progressively simpler subprocesses. Ultimately, we hope that this top down analysis will make contact with the fundamental processes which psychologists and psycholinguists have already identified. Thus, the top down and bottom up approaches may be viewed as complementary.

The advantage of the bottom up approach is that it is rooted in fundamental processes. The advantage of the top down approach is that its results are almost certain to be relevant to real writing situations.

5. Our final strategic decision was to divide the writing task into three parts:

- A. The writer's long-term memory;
- B. The writing processes—that is, the writer excluding the writer's long-term memory; and
- C. The task environment—that is, the world outside the writer's skin. The relevant parts of the task environment are assumed to be: (1) The rhetorical situation—that is, the specifications of topic and audience to which a writer must respond; and (2) The text which the writer has produced so far. This text becomes an increasingly important part of the task environment as writing proceeds.

We chose this division because it is an especially convenient one for psychological analysis and modeling. Transfers of information between the task environment and the writer are usually marked clearly by overt acts of

Bitzer's analysis of the rhetorical situation (1968) focuses on the importance of the task environment. Lowes' classic study of Coleridge (1927) focuses on the importance of the writer's long-term memory. Our own research has focused on the writing processes.

While we don't want to present our model in great detail (that has been done elsewhere; see Hayes & Flower, 1980), we do want to show enough to illustrate how it had been shaped both by fact and by our strategic decisions.

The effect of our fifth decision—to divide the writing task into task environment, long-term memory, and writing process—is also evident in Figure 1.

The function of the monitor (see Figure 3) is to control the sequence of writing processes. For example, it determines when idea generation will stop and organizing processes will begin. The middle section of the monitor—rules 3 through 6—is variable in form to allow for differences among writers in the way writing processes are sequenced. Figure 4 shows four alternative forms for rules 3 through 6. The first form represents a writer who polishes each sentence before considering the next. The fourth form represents a writer who plans the entire essay before writing the first sentence.

We know, of course, that there are many more differences among writers than the few we have discussed. Our strategic decision to model individual writers will lead us to search for other variations in the model which will allow us to describe other individual differences. We expect, for example, that some novice writers may entirely omit one or more of the major processes employed by competent writers. We have frequently observed writers who omit the review process—that is perhaps the commonest problem found in papers handed in at the last minute—and we have found at least one writer who showed no trace of an organizing process.

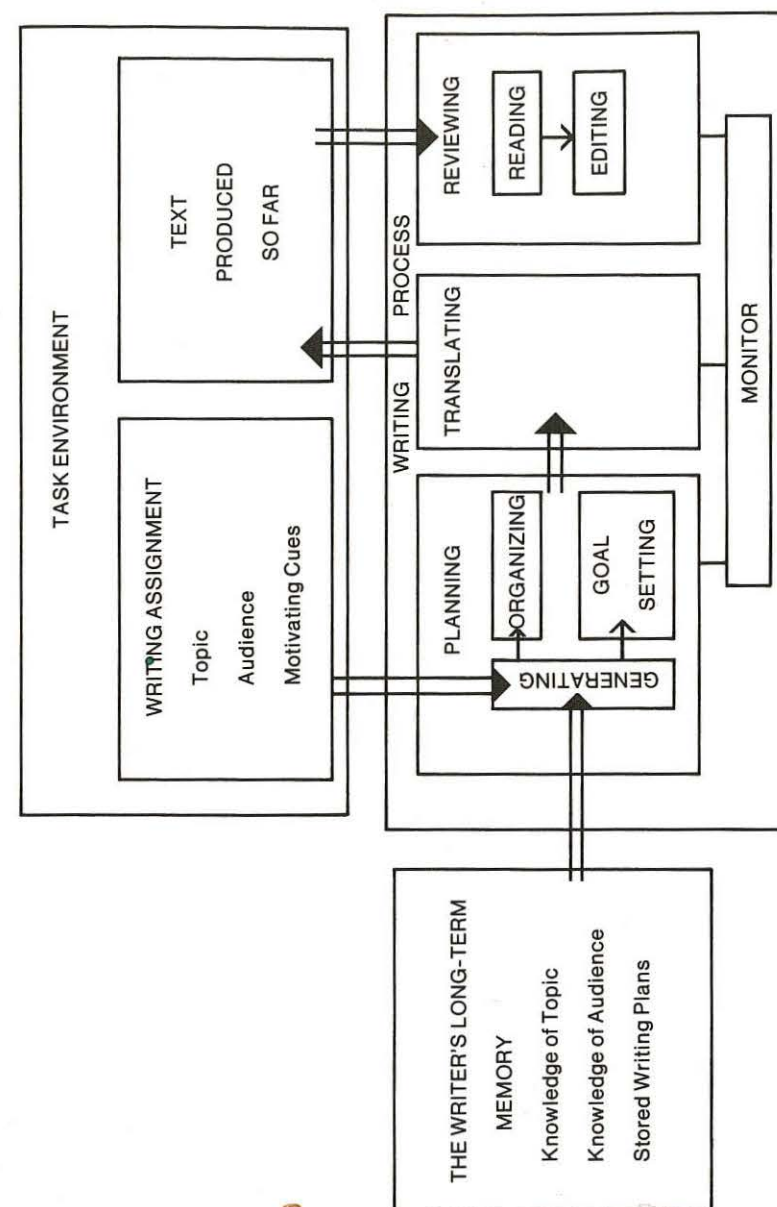


Figure 1. Structure of the writing model

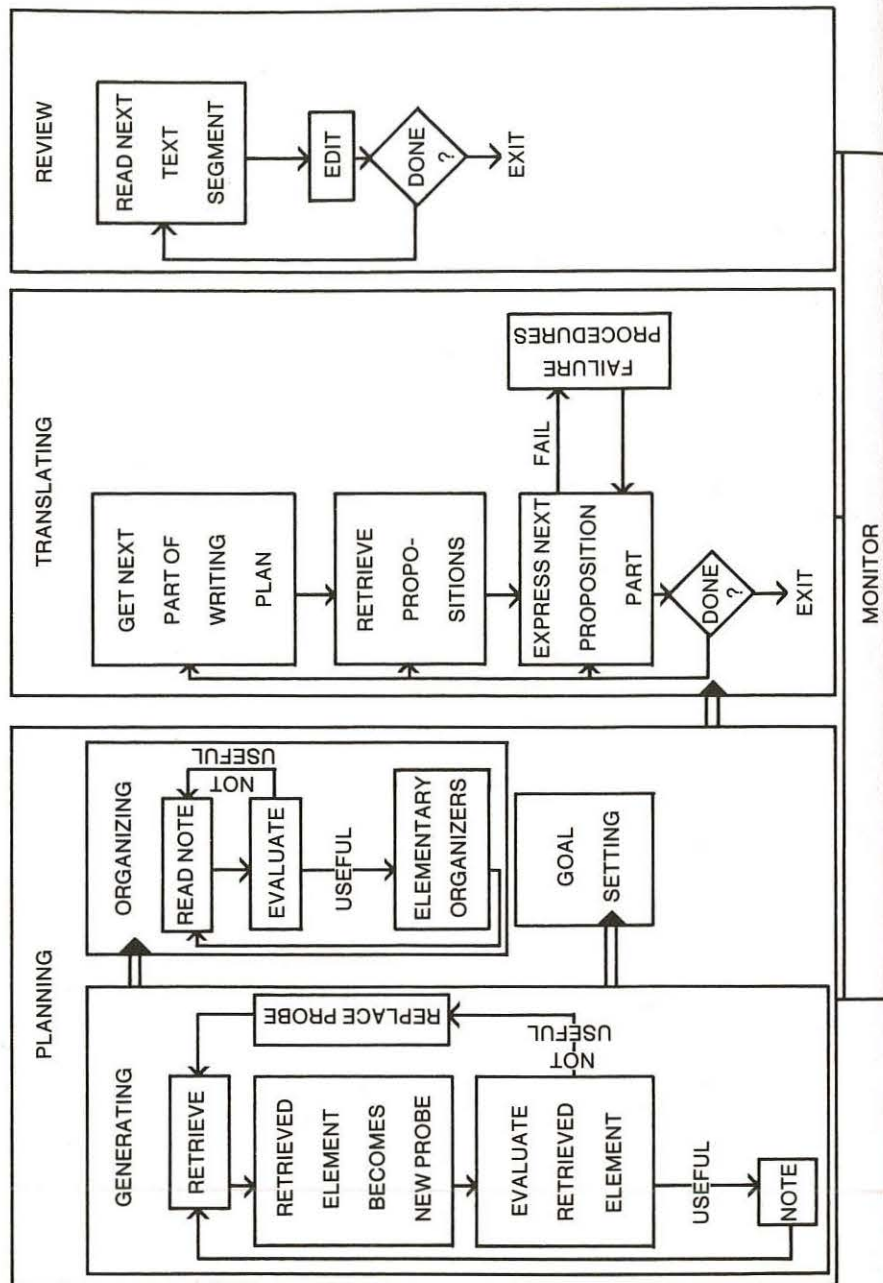


Figure 2. The writing process

1. (Generated language in STM → edit)
2. (New information in STM → generate)
- 3.-6. Goal setting productions
(These vary from writer to writer; see Fig. 4.)
7. [(goal = generate) → generate]
8. [(goal = organize) → organize]
9. [(goal = translate) → translate]
10. [(goal = review) → review]

Figure 3. Monitor.

Configuration 1 (Depth first)

3. [New element from translate → (goal = review)]
4. [New element from organize → (goal = translate)]
5. [New element from generate → (goal = organize)]
6. [Not enough material → (goal = generate)]

Configuration 2 (Get it down as you think of it, then review)

3. [New element from generate → (goal = organize)]
4. [New element from organize → (goal = translate)]
5. [Not enough material → (goal = generate)]
6. [Enough material → (goal = review)]

Configuration 3 (Perfect first draft)

3. [Not enough material → (goal = generate)]
4. [Enough material, plan not complete → (goal = organize)]
5. [New element from translate → (goal = review)]
6. [Plan complete → (goal = translate)]

Configuration 4 (Breadth first)

3. [Not enough material → (goal = generate)]
4. [Enough material, plan not complete → (goal = organize)]
5. [Plan complete → (goal = translate)]
6. [Translation complete → (goal = review)]

Figure 4. Alternate configuration for the monitor.

The Facts

Over several years, as we applied our research method to the analysis of writers in action, we were forced to a number of conclusions about the writing process. Among these conclusions, the most important in shaping our model of the writing process are these:

1. Writing is goal directed.
2. Writing processes are hierarchically organized.
3. Some writing processes may interrupt other processes over which they have priority.
4. Writing processes may be organized recursively.
5. Writing goals may be modified as writing proceeds.

1. *Writing is goal directed.* Evidence that writing is goal directed is easy to find in the protocols. Typically, writers comment on their major goals early in the writing session. For example, one writer who was asked to write about a woman's role for a hostile audience, said: "If an audience were hostile the worst thing to do would be to defend yourself—so I would try to humor them—to make them—uh—more sympathetic maybe. . . ." A second writer assigned this same topic said: "I'm trying to decide whether. . . I want to convince my audience of something specific about—uh—for instance the Equal Rights Amendment or whether something general about women should have the same rights as men. . . and I also need to decide if I want to actively convince my audience or simply state my point of view. . . ." A few lines later she decides: "I'll try to convince them of what it's like to—not to have certain rights. . . ." A third writer said, "I'm not really trying to persuade these people of anything, I'm simply being descriptive. . . . I'm saying this is the way the world is. . . ."

Goals enter into the model at several places. First, the goal-setting part of the planning process (see Figure 2) uses information from the task environment about the rhetorical situation and information from the writer's long-term memory about the topic and the audience to establish goals for the essay. Examples of such goals are seen in one writer's attempt to make her audience more sympathetic to a point of view and another writer's recognition that her essay for 10-year-olds must be made "very interesting."

Second, the monitor (see Figures 3 and 4) sets goals for carrying out writing processes. Such goals are reflected in statements such as, "Let's organize this mess," and, "OK, let's get it down on paper."

2. *Writing is hierarchically organized.* When writers have identified their major goals, e.g., the particular aspect of the topic they want to discuss and their general approach to the audience, they frequently identify subgoals on the route to these major goals. Indeed, the subgoals may in turn have their own subgoals. A writer who had as his main goal to write about the "worries" of a particular group set up subgoals to write about the subtopics "the political issue" and "the philosophical issue." Under each of the subtopics he specified a list of three or four sub-subtopics. Thus, his major goal was expanded into a hierarchy of subgoals.

In the same way, the writer who said that he was "simply being descriptive" elaborated his goal as follows: "I think what I really want is to present maybe one (point) with a lot of illustrations." He then went on to state the point and to develop a list of eight illustrations. In many cases, then, writers tell us in their "thinking aloud" protocols that their goals are hierarchically structured. Even if the writers didn't tell us explicitly though, there would still be plenty of evidence that writing processes are hierarchically organized. For example, many writers start the writing session with a period of planning in which they try to develop an outline to write from. To do this they may first try to generate ideas freely. When they feel they have enough ideas, they try to organize them into an outline. Generating and organizing are part of planning, and planning in turn is part of writing. Clearly these processes are hierarchically organized.

The model reflects the hierarchical organization of writing processes in two ways. First, the structure of processes in the model is intended to match the hierarchical structure of processes observed in writers. Second, operators within the ORGANIZE process allow the model to construct a hierarchical arrangement of goals.

3. *Priority interrupts.* Editing appears to take precedence over all other writing processes in the sense that editing may interrupt the other processes at any time. The generating process appears to be second in order of precedence since it interrupts any process except editing. Here are two examples of edits (in italics) which interrupt the writer while he is generating new ideas: "The problem is to make the uses more general and acceptable—*that's the wrong word—I mean important seeming*"; "Basically the idea is that if one has a special marker in a building that—*which—means stop. . . .*"

Interrupts by the editing process often appear quite abruptly. The writer no sooner has the wrong word out than the editing process leaps on it in the middle of a sentence and changes it. Interrupts by the generating process typically wait for the end of a sentence. However, they also appear rather abruptly. For example, while one writer was busily generating sentences according to his writing plan, he unexpectedly said, ". . . possibility of a pleasantry I suppose at that point. . . ."

The mechanism for priority interrupts in the model is located in the monitor (see Figure 3). The first two rules in the monitor control editing and idea generation. The fact that these two rules come before the goal setting rules (3-6) gives these processes priority over all others.

4. *Recursive processes.* The term "recursive" is used here in the mathematical sense. A recursive process is one which can contain itself as a part. Perhaps the best way to make this term clear is to start by discussing recursive definitions and to proceed by analogy to recursive processes.

A term is said to be defined recursively when its definition contains the term being defined as a part. At first glance, this situation may seem to involve an unacceptable circularity, but as we will see, everything works out all right. Let's take an example from linguistics. Consider the following (incomplete) definition of a sentence:

Sentence = noun phrase + predicate, or
sentence + "and" + sentence.

This is a perfectly workable definition even though the term being defined appears in the definition. Consider the problem of deciding whether or not the following string of words is a sentence:

"Frank has warts and Betty has hiccoughs."

Since the string doesn't have the form "noun phrase + predicate," we test to see if it has the form "sentence + 'and' + sentence." To do this, we have to show that the strings before the "and" and after the "and" are sentences. They turn out to be, since both have the form "noun phrase + predicate."

Just as the idea of a recursive definition contains no intractable circularity, neither does the idea that a recursive process can contain itself as a part contain any intractable circularity. To illustrate a recursive process, we will consider the Wendy protocol. In her first draft, Wendy wrote sentence 1 of the final draft and then followed it directly by sentence 7 of the final draft. When she was editing (a part of the writing process), Wendy decided that readers would have trouble with the transition between sentences 1 and 7. As a result she called on the whole writing process to insert a small essay inside her larger essay. The whole writing process then was used as part of editing, and thus as a part of itself.

In the model, the mechanism underlying recursion is hidden in the fine structure of the editing process. We believe that when the editing process identifies a major fault in the text, e.g., lack of context or poor organization, it may employ the whole writing process in the effort to fix the fault.

5. *Dynamic modification of goals.* When writers choose goals, they are by no means stuck with them. When a goal is difficult to meet, the writer can respond to the difficulty by modifying or abandoning the goal. Consider, for example, the writer who was assigned the task of writing about "abortion: pro and con, for a hostile audience." Early in the session, she decided to include as one of the "pro" topics the point that "a woman should have the right to limit the size of her family." About half-way through the session, she came back to this point and re-evaluated it as follows: "A woman should have the right to limit the size of her family—um—and I think I'm not going to mention that—because that is not a view that is shared by the audience."

The writer mentioned earlier who was considering "a pleasantry," explored the issue in some detail, decided it wouldn't work well, and abandoned it. This same writer had established goals at various times in the session to write about the issues "individual freedom," "the impact of technology," and "attitudes toward scientific analysis." After considerable work, he discovered relations among the three and tied them together under a single heading as "the philosophical issue." Thus, three independent objectives were modified to become subgoals of a single higher level goal.

As yet, the model has no mechanism to account for the modification of goals. We assume that the mechanism must reside in the goal setting processes and that it must use information about processing failures fed

back to it by the translating and organizing processes. As yet we don't have sufficient data to specify how the mechanism works.

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Writing as a Cognitive Activity

Robert J. Bracewell

This paper examines characteristics of the mental processes required for writing. Comparisons and contrasts are made with the nature of processing required for other cognitive activities such as arithmetic, problem solving, reading, and particularly conversation. Recent research on children's writing is reviewed that reveals the advantages as well as disadvantages of superimposing writing skills over well developed language skills. This research suggests that it is the inability to access already existing skills which determine the form of language, rather than an absence of such skills, that poses the major obstacle to the development of writing abilities.

The past few years have seen a major shift in researchers' and educators' approach to the skill of writing. Until recently there was a dearth of information available on writing as an activity. Apart from the monograph by Emig (1971) and the *Paris Review* interviews of eminent writers (Cowley, 1958), information on writing was confined to descriptions of the texts that had been written (e.g., Loban, 1963, 1976). The emphasis on written text also dominated education. Teachers, charged with the duty of improving children's written language, relied primarily on the intervention of motivating the student to write well, and then evaluated the effectiveness of their motivating procedures by examining the subsequently written texts. The intervening event — the act of writing — was largely ignored both for teaching and evaluation purposes. But at the present time, as the topic of this issue of *Visible Language* attests, a great deal of work has been carried out on writing activity itself. So much, in fact, that it is now possible to compare what we know about writing as a skill with what we know about other mental skills such as problem solving, reading, and speaking. The purpose of this paper is to begin that comparison and to draw some conclusions about the nature of writing activity.

A preoccupation with written text, as opposed to writing activity, is easy to understand. In the first place writing is a private activity, at least for mature writers. It is usually done in isolation that is not only physical but also behavioural. The various idiosyncratic habits that attend writing essentially isolate and protect the activity from other behaviours. In the research carried out in Toronto by the Writing Research Group we have had a difficult time getting adults to submit their writing activity to scrutiny. We have not found comparable reticence with younger children, however, in part because writing is examined in school situations and in part because of the different characteristics of writing for children. In the second place,

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writing is a very complex activity. There must have been a feeling within the educational and psychological communities that the time to study writing had not yet come. Only with more powerful theories, better measurement techniques, and greater knowledge of the way the mind works would it be possible to study writing activity. Indeed with the kind of behaviourism characteristic of North American psychology from the 1920's to the 1960's, it would have been difficult even to begin to formulate a theory of writing activity. Only with the acceptance of an orientation such as that of cognitive psychology, which tolerates the assumption of complex mental processes, could a study of writing activity begin.

But one may still ask the question whether the time to study writing has come. In spite of the advances made by cognitive psychology, writing is still a very difficult topic to research. An indication of the difficulty can be gained from comparing research on writing with research on another difficult topic, that of oral speech development. The latter has demonstrated that an understanding of the context of an utterance can be used to recover the meaning of a child's utterance. But how can one apply such a powerful technique to writing when so much of the context for writing is inside the writer's head?

This last question neatly summarizes the problems with studying writing — so much of it goes on inside the writer's head. Writing lies at an extreme; it is uniquely different from other sophisticated cognitive activities like mathematics, speech, and reading. All these activities involve complex mental processes intervening between input variables and responses. They differ, however, in the degree to which environmental context governs mental processing, with writing being the least contextually constrained.

For a consideration of the differential effects context exerts on processing, it is useful to split the mental activity underlying the use of cognitive skills into two levels. First, there is that activity which is involved with the intention and purpose for using a particular cognitive skill. Skills at this level generally are referred to as metacognitive (Brown, 1978); the mental activity often is referred to as executive processing that is guided by executive schemes (Newell and Simon, 1972). Second, there are those activities that manipulate input and output information. Examples would be decoding processes in reading and whatever operations underlie addition. This latter level will be referred to as that of mediating activity. This label highlights the position of these activities which lie on the one hand between environmental context and responses, and on the other hand between executive processes and the environment in which a particular cognitive skill is applied. The characteristics of these two kinds of mental activity and their interrelationship serve to elaborate the similarities and differences among the various complex cognitive skills. In the following section the skills of arithmetic, mathematical problem solving, speaking, listening, reading, and writing each are briefly considered.

Arithmetic

Simple arithmetic skills are both the most contextually bound and those for which manipulation of information is most clearly separated from purpose. If my purpose is to determine my bank balance, then my mental activity is governed almost entirely by that purpose and the relevant numbers. What I do is add my previous balance and the intervening deposits, add my intervening withdrawals, and subtract the latter from the former. The relationship between the metacognitive activity that realizes my purpose and the information manipulation activity is a comparatively simple one that consists primarily of the executive activity issuing start and stop orders to the mediating activities. The separation between executive and mediating activities is shown by the fact that much of the mediating activity can be taken over by my handy pocket calculator. This separation is so marked that for instructional purposes in schools, exercise of the mediating activities can become an end in itself. Students calculate pages of sums and differences in order to consolidate these arithmetic skills. Their activity is governed by numbers and the arithmetical operator of the exercise items. This activity is also governed by a purpose, namely that the teacher has asked them to find the correct answers. Thus the executive process in the application of arithmetic skills in the classroom has a primarily external locus in the environment rather than an intrinsic one in the child.

Mathematical problem solving

It is one thing to calculate a sum as an arithmetic exercise; it is another thing altogether to solve a relative velocity problem when the context information is couched in the language of two trains approaching each other. The literature on mathematical problem solving, let alone problem solving in general, is too great to be summarized succinctly here. Those interested in analyses of the mental activities underlying problem solving behaviour are referred to Greeno (1978) and to Resnick and Glazer (1976). Generally speaking, the purpose of mathematical problem solving activity is to understand the mathematical characteristics of the problem situation. It is a mistake to assume that the purpose is simply to find the correct answer as it is with most arithmetic tasks. With problem solving, "finding the correct answer" is simply a handy abbreviation for the above more extensive purpose. The mediating activities in mathematical problem solving are the logical, algebraic, or geometric rules that can be applied to the specifics of the problem, just as arithmetic rules can be applied to sums and subtractions. The relationship between executive processes that underlie the purpose and the mediating activities that handle information, however, is much more complex than that for arithmetic tasks. Straight forward directives to start and stop mediating activities are not sufficient to solve a mathematical problem. Recognition by the problem solver that such a simple relationship between purpose and mediating activity is not adequate is, in fact, used to define a task as a problem solving one for that person (Resnick and Glazer, 1976). Unlike the arithmetic task the

problem solving task does not yield to a routinized application of mediating processes. This is because the information given in the statement of a problem is not sufficient in itself to solve the problem. What the problem solver must do is provide more information about the problem by selectively using knowledge about permissible rules of logic and so forth, hence the definition of the purpose as one of understanding. Such activity in problem solving is usually characterized as constructive.

A number of aspects of arithmetic and mathematical problem solving skills merit comment since they bear directly on the similarities and differences with writing skills. First, whether a particular task admits a routinized solution as most arithmetic tasks do, or is a problem solving task, will vary from person to person. The opening moves of a chess game are a problem solving task for the novice, but merely routine for the master. Likewise, a particular writing task may be treated either routinely or as a problem solving task. Second, how a writing task is treated does not necessarily follow a novice-problem solving versus expert-routine pattern. This seems to be the case primarily because beginning writers are already sophisticated oral language users, and there is a strong tendency for them to use inappropriately their oral language skills when writing. It is the more practiced writer who begins to move away from routine application of oral language skills to deliberate consideration of a given writing task that is more characteristic of a problem solving approach. Third, writing activity is not nearly so determined by environmental context as arithmetic or mathematical problem solving. Mathematical activities are governed by the information given as part of the task and by the limited set of rules (compared to grammar) for manipulating information. Those mathematical tasks usually found in schools lead to a single solution or endpoint; whereas a writing task is open-ended. It is the writer who must decide when the task has been completed.

These latter two differences are likely to lead to fairly profound processing differences between mathematical and writing activity. The greater degree of information given in both arithmetic and mathematical problem solving tasks probably helps to cue the appropriate mental activity. For writing, on the other hand, the writer must not only recognize a problem given relatively little information, but must also construct most of the problem situation. Furthermore, this must be done using an ability, that of language, in which the writer both is highly skilled and has developed many routinized procedures for dealing with information. The significance of basing writing activity on an already sophisticated oral language base can only be examined by considering those skills underlying speaking and listening.

Speaking

A consideration of the mental activities underlying speaking must take into account the context in which this skill is usually exercised, namely, that of conversation. The purpose of an utterance generally is to communicate something; specifically it is to act on the environment in a given way. For example, a person may wish to tell something to somebody, or may simply wish to have salt passed at dinner. Mediating activities are those processes that draw on grammar, phonology, phonetics, and information structure in language. The relationship between the intentional and mediating processes for speaking bears a distinct resemblance to that for arithmetic. Although it may seem that for speech the locus of control of the intentional processes is internal to the speaker, recent analyses of conversation have shown the great extent to which speech is contingent on the immediately preceding utterance of the other speaker (Dore, 1977; Grimes, 1975). Much of this work has been concerned with analyzing the function of utterances in a given context and is couched in the terminology of speech act theory (Austin, 1962; Searle, 1969). A consideration of the differences in function between oral and written language, and the transition the child must make in becoming a writer is presented below.

Listening

It may seem strange to include essentially receptive skills such as listening and reading in this consideration. Those considered above, and of course writing itself, are largely productive rather than receptive. There are, however, important components of both listening and reading that transfer directly to writing.

It is convenient to split the consideration of listening skills in two — those involved with short time durations and those involved with longer time durations. The former skills are used primarily in conversation and are simply the complement of the speaking skills outlined above. As such, listening skills are governed by the same kinds of processes as speech skills. The intention is usually to understand the function of the speaker's utterance and to act in accord with that function. Mediating activities are the application of grammar, phonology, etc. The relationship between intentional and mediating processes is facilitated by the conventional nature of most utterances.

More interesting are listening skills that involve longer time durations. A favourite pastime of both children and adults is listening to stories. The mediating activities of this pastime vary from use of phonological skills to use of story grammars. But what is the intention or purpose of this endeavour? It is not to understand the speaker and then respond or act accordingly since the speaker is simply a proxy and the context of the story is not immediate. On the surface the purpose of the request, "Tell me a story!" is enjoyment; but as with problem solving this purpose is simply a label for a much more complex intention. The purpose of listening to stories is to understand, but not as with problem solving to understand in order to find a solution; rather it is to understand who one is and what place one is to

take in the world. This is a goal that admits no single solution and the characteristics of the executive processes that underlie it appear to be complex indeed. On the one hand, the child identifies in a straightforward manner with the hero and heroine of the story, and undoubtedly derives vicarious pleasure from the suspense of the plot and the overcoming the villain. But at a deeper level the kinds of stories preferred by children, as Bettelheim (1977) has analyzed, provide the child's unconscious with myriad information on what at a conscious level would be very threatening subjects — information on sex roles, child-parent relations, the necessity and trials of independence, etc. The purpose of listening for extended periods of time to texts such as stories goes beyond the merely pleasurable to address issues of intense personal importance.

It is this latter function of stories that accounts for children's rather amazing development of executive processes for understanding stories at a very young age. Because of the personal significance of stories the child acquires the ability to listen to and understand extended sequences of language that are not only out of context but often foreign to the child's experience. The executive processes, then, that are involved in a child's listening to stories are very complex. Likewise, the interaction between executive and mediating processes must be complex since decoding processes applied to the language and interpretive processes dependent on semantic memory feed into both conscious and unconscious levels of the executive process. Although these complex processes remain to be illuminated by future research, one implication of this analysis for writing activity stands out: writing, like listening to stories, requires extended attention to and interaction with language. It seems likely that in order to foster and maintain such interaction the activity of writing like that of listening must fulfill some of the child's (and the adult's) deepest needs.

Reading

The view taken here is that reading skills essentially parallel listening skills in their structure. For reading the mediating processes must be supplemented by knowledge and processes of sight-language correspondences; but most of the remaining mediating processes remain the same. As with listening, a consideration of reading may be split into two divisions — reading for short periods of time and reading for extended periods of time. At least for children, reading for short periods of time is almost always a task imposed by the school. Passages from classroom readers tend to be short and are usually followed by a series of questions on factual and implied information from the story. The brevity of the text and the question-answer format that follows suggest that the mental activities involved in children's short-term reading most closely resemble activities involved in conversation and short-term listening. This may appear to be a somewhat extreme conclusion; but there is no doubt that much classroom reading has a large interactive language component.

This characteristic of short-term reading is highlighted by the contrast with extended duration reading. Children rarely and adults never answer comprehension questions about a book they are reading or have read.

Whereas to a great extent the purpose of short-term reading is environmentally imposed either by the questions to be answered or by the teacher's directive that the children participate in the interactive activity, the purpose of extended reading must be more self-determined. People engage in extended reading for the same reasons that children listen to stories — to find out more about themselves and what they can be in the world.

Writing

And finally what about writing? How can the mental activities underlying writing skill be characterized? First, the purpose of writing is primarily writer determined, rather than determined by the environment. Even where a topic is given by the teacher in the classroom, the intent of the piece must be defined and elaborated by the writer. In older terminology, the writer must determine the rhetorical situation of the to-be-written piece. Second, mediating processes that underlie writing (grammar, spelling, information structure, etc.) are overdeveloped in some respects and underdeveloped in others. In particular, those mediating processes that result in coherent text are not well developed.

In order to see the problems with learning to write better, let us examine writing as a skill in the light of the other skills the child has acquired. Such an examination reveals that those activities that the child has acquired for other cognitive skills are often at cross-purposes with those that facilitate writing. At the level of intent, writing attempts to comment on experience or the world in some significant way, if not always for the reader, then at least for the writer (Flower and Hayes, 1980). Such comment demands extended interaction with language so that the author's intent is realized accurately by both the form and the content of what is written. The child who is beginning to write usually has had considerable experience with extended duration language; but this experience has been limited to receptive language activity in listening and reading. For such receptive activity the mental processes that operate on the form and content of text are completely intertwined and highly routinized. As Chafe (1970) has commented, people (including children) read and listen for meaning; the way in which things are written or said are of transitory importance and are used primarily to recover the writer's or speaker's intentions. We remember the gist of what has been heard or read rather than its exact form or content. Thus the child is familiar with extended sequences of thought as realized primarily by stories, but lacks skills that focus on extended sequences of language form and content separately from meaning. Consequently, the child both has, and does not have, the mediating skills necessary for writing. The understanding of stories indicates skills applied to information structure — grammar and the like — but these skills are applied to others' language in the service of deriving meaning, not in the service of self-expression.

In productive language activity the child displays a greater virtuosity with the form of language, but the child's manipulation of information

structure, grammar, and vocabulary, occurs over only short duration conversational turns and, moreover, is still highly dependent on the environment since the options for language form are constrained by what the previous speaker has said. The extended interaction with language that is necessary for writing requires a transfer of and expansion upon skills nurtured in conversation that deal with language form, and also a transfer of skills used to derive extended sequences of thought from a receptive to a productive mode. In both cases, the child must break free of a dependence on the environment in order to achieve self-direction on the form and content of language.

Indeed, the major problem to be explained about writing is why it is so difficult for beginning writers to put together form and content for extended sequences of language. For it is the relationship between form and content that distinguishes the good writer from the poor, the undeveloped writer from the skilled. This is so because writing is a curious skill. The activity of writing *per se* requires a minimum of perceptual integration or conceptual knowledge. Unlike other skills, such as doing arithmetic or even driving a car, writing is essentially a technique that is applied to transform the output of well-mastered language skills from an aural to a visual medium. Initially at least, writing is simply visible speech. Thus the range of skill level in writing is not between those who can and those who can't, but between those who write well and those who write poorly, and the issues in writing are issues of integration, not primarily issues of acquisition (Bereiter, 1980). All of us who attempt to write know what a struggle it is to achieve such integration. Recent analyses of language structure and of how structures function in discourse, whether conversational or literary, have begun to reveal the nature of the struggle.

Conversational skills and their transfer to writing

A basic complexity of language as it is used by adults and children lies in the frequent disassociation of language form and language function. Of course, in many cases the form of an utterance or sentence reveals directly what the speaker wishes the language to do — for example, the imperative grammatical structure serves to direct someone to do something. On the other hand, a directive function need not be realized in the imperative form. The textbook example is the use of an assertive form such as, "The window is open," which in the appropriate circumstances can act as a directive to close the window.

Further consideration of this complexity requires a brief foray into a terminological thicket. Following Austin (1962) the functions of language usually are referred to as illocutionary acts. The categorization of illocutionary acts is somewhat contentious; however, an illustrative classification is that of Searle (1975b) who identifies five general types of illocutionary act: (1) representatives, which communicate speakers' beliefs about the world, (2) directives, which get people to do things, (3) commissives, which bind speakers to some course of action, (4) expressives, which communicate speakers' attitudes toward something, and (5)

declaratives, which serve to define and label parts of the world (e. g., "I claim this land for France"). Representatives, commissives, and declaratives can be explicitly expressed using the assertive sentence form, the latter two requiring use of specific lexical items (e. g., "I promise . . ." to achieve the commissive act of promising). Directives can be explicitly expressed via interrogative and imperative forms. And expressives are made explicit by various idiomatic forms. In these explicit forms, the given illocutionary act is said to be conveyed *directly*. But as indicated above with the "window" example, a given illocutionary act may be conveyed by forms other than the explicit ones. In such cases the act is said to be conveyed *indirectly*. The assertive form in particular, which in the absence of lexical specification functions directly as a representative illocutionary act, serves to convey the other types of illocutionary acts indirectly.

One of the major purposes of this complex relationship among language forms and functions is to allow the achievement of multiple functions for a single sentence by conveying both direct and indirect illocutionary acts. For an analysis of writing skills, the significance of this complexity is that it is largely mastered by children for their oral language by the time they begin to write, as the following example of nursery-school conversation, taken from Dore (1979), reveals. The segment of conversation occurred between a nursery school teacher (T) and one of her pupils (J) during the activity of wiping a table before eating. The conversation is listed on the left side of Table I, and illocutionary acts performed are listed on the right. It can be seen by examining the utterances that most are in an assertive form and hence act directly as representatives. The obvious coherence of the conversation can be accounted for only by examining the indirect acts that are carried out. Thus, J's first utterance (1) and its repetition (2) are in assertive form and act directly as representatives, specifically as a report of a personal wish or desire. They are intended, however, and understood by the teacher as directives, specifically as requests for permission to participate in the activity of washing the table. The teacher in turn replies with assertive (3) that indirectly acts as a directive, specifically a denial of the indirect request, by referring to a previously established commitment to another pupil. The teacher continues with another assertive (4) that has an elaborate indirect function. Not only does (4) act as a commissive, specifically a promise that J can participate after eating, but also as a directive (most likely because of the teacher's higher status), specifically a suggestion that J participate after eating. Utterance (5) is a directive seeking acknowledgement of the directive in (4), and (6) functions as a repetition of (4). Evidence that these multiple indirect acts are in fact realized by (4) to (6) can be found in J's following utterances (7) and (8). Utterance (7) is a response to the suggestion, specifically a denial that it will be followed; its form is too truncated to decide whether it is a representative (e. g., I do not want to do that) or a directive (e. g., No, my actions will not conform to your suggestion). Probably both are intended. Utterance (8) replies to the promise with an expressive, one of thanks, an appropriate response since promises to be made felicitously must be intended and perceived as beneficial to the promisee.

TABLE I. Illocutionary acts from a sample of child and teacher conversation

(Dore, 1979)

Speaker	Utterance	Illocutionary Act	
		Direct	Indirect
J	(1) I want to wash the table	representative: report on internal state	directive: request for permission
	(2) I want to wash the table	representative	directive
T	(3) I told R she could do it first	representative: report of previous talk	directive: denial of request
	(4) You can wash it after juice,	representative: future action	commissive: promise directive: suggestion
	(5) okay?	directive: request for acknowledgement	nil
	(6) You and M can do it after we've finished eating	representative	commissive directive
J	(7) No,	representative?: denial of suggestion	nil
	(8) thank you	expressive: acknowledgement of commissive	nil

The conversation of Table I serves also to illustrate a second aspect of children's skill in conversation. Not only do children's conversations display comprehension and production of illocutionary functions, they also display a sophisticated skill with discourse. Conversations are not random collections of utterances by speakers, but are sequenced in time and organized around a common topic. Sequencing is achieved by turn-taking; in Table I there are three turns, one by the teacher and two by the student. These turns do not overlap but are produced successively by the speakers (Coulthard, 1977; Sacks, Schegloff, and Jefferson, 1974). The organization of the conversation is around the topic of the student's participation in cleaning the table, which is announced in (1), and is achieved primarily through sequencing of the illocutionary functions for utterances over turns. These illocutionary sequences take the form of adjacency pairs of illocutionary functions. For example, directives, since they attempt to act on the environment, solicit a response. Three such pairs occur in the eight utterance conversation of Table I: J's request in (1) with its repetition in (2) is responded to by the teacher in (3). The teacher's suggestion in (6) is responded to by J in (7) and her promise in (6) is acknowledged by J in (8). This kind of sequencing is revealed in conversation in a number of ways. These include cohesive devices (Halliday and Hasan, 1976) such as use of pronominal reference and repeated lexical items (e. g., "it" in [3] refers to the phrase "wash the table" in [2]), grammatical structure that directly indicates an illocutionary function (e. g., the use of the interrogative to

express a question), and prosodic features of speech (Gumperz and Herasimchuk, 1972).

Given that even nursery school children possess sophisticated illocutionary and discourse skills, the question arises as to why, at a later age, they do not use these skills to sustain their writing. One way to approach this question is to consider to what extent young children use the skills deliberately to structure and guide conversation as opposed to using them reactively to participate in conversation. The evidence on this point is somewhat equivocal, but tends to support the view that they are not able to mobilize their discourse skills to manipulate long stretches of conversation. Dore (1979) reports that his nursery school subjects could not tolerate extended side sequences of conversation away from the main topic of conversation. Interruption of a conversation by a side sequence was not followed by return to the main topic. Furthermore, nursery-school activities such as washing the table that were mediated by conversation were usually initiated and maintained by the teacher rather than the children, although this may have more to do with the asymmetrical status relationship between teacher and students rather than with discourse skills. Much more research on children's conversations, especially in play situations, is required to document the development of discourse skill from one that is largely dependent on environmental inputs for its maintenance to one that is under the flexible control of the language user.

Receptive language skills and their transfer to writing

Although both conversation and writing involve the use of language, the interactive nature of conversation makes it quite a different activity from the solitary nature of writing text. As indicated above, however, children do have extensive experience with non-interactive language, namely in listening to and reading stories. Research on children's memory for stories indicates that, as with conversation, children develop quite sophisticated discourse skills for understanding and remembering the stories they hear (Mandler and Johnson, 1977; Stein and Glenn, 1978). For example, Stein and Glenn analyze stories using a hierarchical structure in which a story can initially be divided into setting and episode units, setting can be divided into time and location units, episode(s) into initiating events, character responses and actions, and consequences. The results of tests of children's memory for stories indicates that they use at least some of these units to organize their comprehension of stories. Six-year-old children remember setting, initiating event, and consequent units better than other types of units (Glenn, 1978; Mandler and Johnson, 1977; Stein and Glenn, 1978); furthermore, they tend to remember multiple episode stories by episode. That is, failures in memory tend to take the form of deletion of entire episodes (Glenn, 1978). Of course, exactly such discourse knowledge is required for extended text production since it constitutes an abstract plan of the types of information required for writing stories.

Once again, given this discourse skill in a receptive situation, one can consider to what extent children use the skills deliberately to structure

stories. Data on children's use of discourse skills in the production of stories as opposed to memory for stories are only beginning to appear in the literature.

Some of the more tantalizing data, based on Labov's analysis of story discourse units, are reported in the ethnological literature on children's oral production of stories for peers or trusted adults (Kernan, 1975; Labov, 1972; Watson-Gegeo and Boggs, 1975). The Labov analysis is roughly parallel to those of Mandler and Johnson and Stein and Glenn, but superior in one respect: While Labov includes units comparable to setting, initiating events, character actions and consequences, he also specifies two additional categories labelled *abstract* and *evaluation*. An abstract is an opening statement that proclaims a story and gives an overview of what is to follow (e.g., "I once got the scare of my life . . ."); an evaluation is a comment by the narrator that emphasizes the significance of some information in the story. Both additional units lie outside the direct line of narrative sequence and serve audience rather than narrative functions. The abstract serves to capture audience attention and to define the activity as one of story telling—a necessary function in the competitive environment of children's play. Evaluations serve to maintain audience interest since they are intended to enhance audience appreciation of parts of the story. Watson-Gegeo and Boggs (1975) report that two thirds of a sample of stories recorded from Hawaiian children aged six to seven years contained setting, complicating action, and resolution units, and that one half of the stories contained evaluative comments. Rather sketchily reported data by Kernan (1975) suggested a similar pattern of story structure for seven to eight-year-olds and a full complement of Labov's discourse units for stories by students aged ten years and older. Botvin and Sutton-Smith (1977), in a better controlled study, report similar patterns of story discourse structure using a discourse unit analysis derived from Propp (1968). Thus, the use of discourse skills in oral production of stories appears comparable to memory for stories at about age seven and fairly well mastered by the age of ten or eleven years. Of course, it remains an open question whether such knowledge can be transferred to writing where there is no immediate audience first to capture and then to captivate.

A least one study suggests that such transfer is not straightforward. Brown and Smiley (1977) had children aged eight, ten, and twelve years, and a group of adults, listen to a story and then retell it in their own words. Although they tended to remember less content, children of all ages included those ideas of the story that adults considered most important. In other words, children's understanding of the story was similar to adults' but not as detailed. In a second part of the study the same children were asked to point out those parts of another story that they thought were the most important. In other words, they were asked to use deliberately knowledge of the story structure that they had used on the retelling task. On this second part children of all ages did not do nearly as well: eight-year-olds showed no consistent pattern of choice, and ten and twelve-year-olds only approximated adult choices, whereas adults performed in a manner comparable to their retellings of the first part of the experiment. The

implications of these results are that (1) children's knowledge of story structure used for retelling the story was used tacitly rather than deliberately, (2) children had difficulty using this knowledge deliberately on the choice task, and (3) more generally with respect to writing, which requires deliberate choice among language forms and content, the inability to use such knowledge presents a major obstacle to the development of the writing skill.

Cognitive processes of younger writers at the discourse level

The problem beginning writers, and indeed unskilled writers of all ages, face has been characterized as one of putting together form and content of language to achieve extended sequences of text that are coherent. The above brief review reveals that in some way children "know" a great deal about language form, both at the sentence and discourse level. They appear to experience difficulty, however, in using their knowledge and skills deliberately to guide conversations or to think about the structure of texts—a difficulty which implies serious consequences for writing.

In the studies outlined below, it will be seen that children's writing difficulties lie primarily with the language form. It is an inability to use skills that determine the form rather than the content of texts that is responsible for ineffective writing. A striking aspect of these difficulties, found at both discourse and sentence levels, is that they are not produced by an absence of skill but by an inability to access deliberately skills that are well developed and used in other language activities.

A Representative study supporting this conclusion for discourse knowledge and skills was carried out by Bereiter, Scardamalia, and Turkish (1980). Children aged nine and eleven years were asked what kinds of information would be found in a story. In other words, they were asked to give general discourse information characteristic of a story genre. Not surprisingly this is a difficult task for children of these ages to do. Almost all began by giving concrete content (e.g., it could be about school), but as a result of directions that the information had to be useable in any story, they were able to give some general discourse characteristics (the most frequent being something like, "I'd tell where it happened," which was scored as setting information). These results indicate that children of these ages can recall relatively abstract discourse information. But whether they can use such recalled information to organize the stories they write is unclear. The same children subsequently wrote a story on a topic of their own choice which was scored for the presence of discourse information using a structural analysis similar to that developed by Stein and Glenn (see above). The most significant outcome of this scoring was found when, for each child, the correlation was calculated between kinds of information named on the first task and kinds of information used in the written story. It was found that there was no correlation. This effect seems to be a general one since a similar lack of correlation was found in results for talking about and writing arguments and descriptions. Thus, even though they have some ability to talk about it in the abstract, children's use of discourse information in writing does not appear to be mediated by a conscious strategy.

A more concerted effort to investigate the role of discourse knowledge in children's writing of arguments was made by Paris, Scardamalia, and Bereiter (1980). The basic rationale and strategy of the study were straightforward: Bereiter, Scardamalia, and Turkish had found that for all three genres examined children use more discourse units in their compositions than they were able to name. The failure to find evidence of conscious use of discourse units in writing could have been produced simply by children's unfamiliarity with identifying and labelling concrete information at a more abstract discourse level. Accordingly, in the Paris et al. study children aged nine and eleven were trained to recognize and label sentences with argument discourse units. Argument discourse units were six: statement of belief, reason, example, elaboration, counter-reason, and conclusion. An example of a sentence used during training is, "This is because people might get hurt if there were no rules." A child was expected to identify this sentence as a reason discourse unit. Following this training they were asked to do various composing tasks in order to test for the effects of training.

The results from this procedure paralleled those of the Bereiter, Scardamalia, and Turkish study, yielding evidence that children knew about discourse information, but no evidence that they used this information deliberately in composing. For example, training in the identification of sentences proceeded rapidly. It was clear that this part of the study for the children was one of simply learning verbal labels for already existing discourse concepts, rather than learning the concepts themselves. (Learning did occur and was retained, however. On a post-test the trained children correctly labelled more examples of discourse units in a text than a control group of children who were just shown a list of discourse units paired with sentence examples.) But this learning was not applied to composing tasks. In one of these, children were asked to give a sequence of discourse units that they could use to write an argument by arranging a set of cards that had discourse unit labels printed on them. The most frequently given sequence was a very brief one: statement of belief, reason, elaboration, and conclusion. This was also the most frequent sequence given by the untrained control group. On another composing task children wrote two arguments, one by following a commonly found order of discourse units (e.g., statement of belief, reason, elaboration, example, counter-reason, conclusion) and another by following an uncommon order (e.g., reason, statement of belief, elaboration, counter-reason, conclusion, example.) All children were more successful in following the more common order, but just barely: most children were able to follow the common order only as far as the belief-reason sequence; whereas for the uncommon order most children had difficulty beginning with a reason. In addition, the trained group was not superior to the control group. Taken together, the results suggest again that children use discourse information in composing, but that conscious access to this information and skill in manipulating it are quite limited.

Perhaps the most surprising result of this study was the brevity of productions: increased ability to recognize discourse information did not produce expanded argument sequences. This result appears to be similar to one found for content information (Scardamalia and Bracewell, 1979).

Children aged nine to eleven were able to list appropriate content for self-chosen argument topics when given minimal probes by the experimenter (e.g., "And what else can you think of?"). They failed to use much of this content, however, in writing a composition on the topic immediately after the listing procedure. The brevity of the argument compositions, in spite of discourse and content knowledge, suggests a skill deficit in organizing available knowledge about discourse and content during composing. Children's default strategy for organizing their written arguments appears to be based on oral language skills, since the structure of the arguments resembles a conversational turn. Evidence supporting this oral basis has been provided by Scardamalia (unpublished data) who, modelling a conversational sequence, simply asked children if they could continue after they informed her they had finished writing an argument. The children readily continued their arguments, adding not only written and therefore redundant information but new information as well. Use of an oral skill basis helps explain why children readily submit to scrutiny while writing. At this age their writing is an activity that essentially assumes the presence of another.

The demonstration that children do have, or can be taught, discourse knowledge yet do not apply such knowledge to improve their writing is at best embarrassing and at worst alarming. Suppose such results were to be found at all language levels from vocabulary, through grammar, paragraph structure, to overall text structure. If this were the case, what evidence could a researcher cite to demonstrate to educators that a cognitive approach to writing held any promise of leading to better instruction, let alone to demonstrate to colleagues that a cognitive approach could begin to explain writing as an activity? Since availability of knowledge did not appear to facilitate composing for beginning writers, we decided to attempt to facilitate the composing process directly in a fairly simple (some might think simple-minded) manner by having the experimenter intervene as the child composed (Bereiter and Scardamalia, 1980; and Bereiter, Scardamalia, and Bracewell, 1979). This procedural facilitation technique is best illustrated by summarizing a specific study.

Bracewell, Bereiter, and Scardamalia (1980) hypothesized that one reason for children's well-documented inability to revise their compositions (Bracewell, Scardamalia, and Bereiter, 1978; National Assessment of Educational Progress, 1977; Nold, 1980) might be lack of skill in deliberately applying their discourse knowledge to their already written texts. Therefore, in order to facilitate revising in this study, decisions about the application of discourse knowledge were made by the experimenter as a child revised his or her composition. Children aged nine and eleven years wrote an argument composition on a self-selected topic (e.g., Should girls be allowed to play on boys' sports teams?), and then revised it with the experimenter's help. First, the experimenter underlined and labelled the sections of the child's original composition using argument units like those presented above for the Paris et al study. Second, as the child revised, the experimenter suggested additional units that might be added to the composition. These interventions follow a pre-planned procedure that led

to a composition considering positions and evidence on both sides of the topic. The language used by the experimenter was at an abstract level, non-specific to individual topics (e.g., "Why don't you put in a reason now?"); the content to realize the suggested discourse unit was supplied by the child.

Procedural facilitation techniques like these have begun to reveal the composing processes of children. For example, in the Bracewell et al study, blind comparisons of original and revised compositions revealed that revisions contained superior content, indicating that when discourse information was made salient during revision, children could use it to recall and insert appropriate content into their compositions. Where children ran into difficulty was in inserting this content to make their compositions more rhetorically effective. Revisions were not rated as being more convincing than originals in spite of their better content. This finding appears to be related to the finding that revisions also were not rated as more coherent than originals, since the best predictor of whether a revision was considered convincing was the coherence score—the higher the coherence, the more likely a revision was to be rated convincing. Subsequent examination of revised compositions revealed little use of cohesive devices, such as pronoun reference and conjunctions, and awkward topic-comment shifts between sentences where an insert had been made.

Another revision study that used procedural facilitation techniques demonstrated that children can evaluate their writing realistically, but again have difficulty using these evaluations to revise so that the quality of their writing increases (Scardamalia and Bereiter, 1980). Children aged nine, eleven, and thirteen years wrote, evaluated, and revised their argument compositions. Evaluations and revisions were carried out sentence-by-sentence as the children composed using a set of descriptors and directives for revision that were printed on cards available to the children (e.g., "People may not understand this; I'd better change the wording"). Children chose an evaluation from the set, which included the option of making no revision, and then modified the sentence according to the directive. The experimenter's overt role in this procedure was to stop the children and direct their attention to the evaluation set at the end of each sentence; otherwise children simply keep on writing. The children's evaluations were scored by having an expert adult writer evaluate children's original sentences using the set of descriptors and revisions. It was found that these adult evaluations substantially concurred with those made by the children; however, blind ratings as to whether revised compositions were superior to originals failed to favour revisions. As with the Bracewell et al study, children were unable to implement their decisions in effective prose.

Procedural facilitation techniques initially might appear to be a rather bizarre research method since a first impression is that the experimenter takes over a part of the writing process from the child. The method seems to imply that for the ultimate in facilitation the experimenter would write the entire composition, with the child simply copying the experimenter's output. In such an extreme one might learn something about the experimenter's writing skill, but it is unlikely one would learn much about

the child's. In fact, an important aspect of the technique is that the experimenter takes over only a part of composing activity. Such partial support allows one to see the different cognitive skills that make up the writing act, both by revealing skills that children can already do, such as evaluating their sentences in an adult-like manner, and by revealing specific skill deficits such as an inability to translate topic-relevant content into coherent prose. Moreover, it appears inaccurate to characterize facilitation techniques as ones in which the experimenter "takes over" a part of the writing process. In practice, the experimenter's activity is highly interactive with the child's, and seems to achieve effects not simply by doing some part of the writing for the child but by cueing already existing knowledge and skills. The difference between procedural facilitation and taking over a part of an activity from a child can be clarified by an analogy. In teaching a child how to hit a pitched baseball with a bat, procedural facilitation would consist of using a lighter and larger ball that slows down quickly because of air resistance and can be hit more easily, and of using a light bat with a larger diameter which can be easily swung and is more likely to contact the ball because of its size. In contrast, taking over the activity might consist of guiding the bat by reaching over the child's shoulder. With procedural facilitation the child does all the activity himself or herself; whereas this is not the case with the latter method of support. Although at present speculative, it appears that procedural facilitation works for writing because it allows the child to transfer to the writing situation and to use deliberately those language skills and knowledge that have been acquired in the course of mastering other language activities.

Cognitive processes of younger writers at the sentence level

One of the most significant outcomes of the procedural facilitation studies was the finding that in spite of effective use of skills at the discourse level children were unable to implement their discourse level decisions in effective prose. This difficulty suggests a skill deficit in manipulating language of a by now familiar kind. It is clear that by the time children begin to write they are already competent language users whose oral output reveals a mastery of most of the great variety of syntactic and lexical devices that serve to communicate meaning. Why then when they write do they not call upon this knowledge to produce coherent prose? A pair of recent studies (Bracewell, 1980; Bracewell and Scardamalia, 1979) suggests that the difficulty is again one of transfer of skills and knowledge from tacit to deliberate use.

One of the most surprising implications of these results is that reading skills may interfere with the development of writing skills. An interference effect of text syntax on revision was demonstrated when eleven-year-old children were presented with materials like those in Table II. The task was to write up in a single sentence all the information initially presented either as sentences or in tabular form. Children needed more trials to achieve the single sentence when writing from the sentence version of the materials than when writing from the tabular version (Bracewell, 1980). At the

moment this result has the status of an interesting fact about writing. Before considering what it may mean, let us turn to another set of results that clarifies somewhat the relationship between reading and writing skills.

TABLE II. Language materials used for composing a single sentence

(Bracewell, 1980)

Example of sentence materials

The bird is in the cage.
The cage is under the table.
The table is in the room.
The bird is yellow.

Example of tabular materials

<i>what</i>	<i>relation</i>	<i>what</i>
bird	in	cage
cage	under	table
table	in	room
bird	is	yellow

Example of coordinated sentence

The yellow bird is in the cage under the table in the room.

TABLE III. Language materials used for reading and writing study

(Bracewell and Scardamalia, 1979)

Example of sentence materials

1. Ernie has a dog. Grover has a cat. Grover has a canary. Grover has a dog.
2. Ernie has a dog. Grover has a cat, a canary and a dog.
3. Ernie has a dog; but Grover has a cat, a canary and a dog.
4. Ernie has a dog; but Grover has three different pets, a cat, a canary and a dog.

Example of tabular materials

Title:	Who has what pet?	<i>Who</i>	<i>Pet</i>
		Bert	hamster
		Kermit	goldfish
		Kermit	turtle
		Kermit	hamster

Bracewell and Scardamalia (1979) had children, aged seven, nine, and eleven years, read and evaluate sentence items like those presented in Table III. Specifically, a child was asked to pick that item he or she thought was the best written one, and to give reasons for these choices. Choices of items and justifications showed a developmental trend. Seven-year-olds show no regular pattern of choice and justification; but both nine- and eleven-year-olds consistently selected the third or fourth item as the best written and the first item (the one made up of four separate sentences) as the worst written. These older children were able to justify their selections appropriately, pointing out the use of conjunctions in the more coordinated sentence items as being a good way of expressing this information, and pointing out the lexical repetition of the first item as being a poor way of expressing this information.

Immediately afterwards the same children were asked to compose sentences from a table like that presented in Table III. Specifically, children were asked to compose a "best" write-up and a "worst" write-up like the ones they had just selected on the reading task. Examination of these write-ups revealed that both best and worst productions contained an intermediate degree of coordination (e.g., "Bert has a hamster. Kermit has a goldfish, a turtle, and a hamster".) that was neither as well coordinated as the item selected as worst.

The results of both these two studies (Bracewell, 1980; Bracewell and Scardamalia, 1979) suggest an inability to manipulate syntactic form deliberately on production tasks. Clearly children can "decode" the syntactic structure of the sentences in Tables II and III, otherwise they would not be able to understand them. Moreover, when reading these kinds of materials, older children have some conscious awareness of language form and whether it expresses meaning adequately. But they have difficulty using such language-form knowledge when composing.

The thread that links the results of these two studies is children's skill in reading sentences for meaning. Normally the emergence of language skills, involving awareness for language form, which can be attributed in part to increasing exposure to different forms of text as children master reading skills, would be a cause for rejoicing. But the results presented above suggest that such skills also lead to problems for writing. Although children when learning to read initially must pay a fair amount of attention to the surface features of printed text, they rapidly automatize those perceptual and cognitive processes that mediate surface structure and meaning. Indeed, given working memory limitations, it is difficult to conceive of rapid and efficient securing of information without automatization of such processes. It is now commonplace that one remembers the gist of language, whether read or heard, rapidly forgetting the surface structure. But one implication of such efficient processing is that it does not facilitate the activity of writing, where awareness of possible misleading interpretations of what is written from what was intended, and the ability to act on such awareness by manipulating language form independently of meaning, is crucial.

The significance for instruction of the gap between awareness of written forms in reading and their deliberate use in writing may be better appreciated if one examines the pattern of children's productions across age for another medium of expression — that of painting and drawing. Unlike writing, children express themselves through representational art from an early age and age-related patterns of drawing and painting have been well documented. A striking feature of the use of representational media is that it declines precipitously at the age of ten to eleven years (Lark-Horowitz, Lewis, and Luca, 1967). The decline is correlated with and probably explained by an increasing awareness of the significance of technique in representational expression (Carothers and Gardner, 1979; Lark-Horowitz, 1938), an awareness that children rarely can match in their own drawing and painting. Of course, a comparable decline in writing is infrequently observed because children often do not master the perceptual-motor components of writing until nine or ten years of age. Where this component is mastered earlier, as in Donald Graves' exemplary program, available evidence has indicated a similar sudden decline in writing output (Graves, 1980). The correspondence is an exact one. At about the age of ten years an awareness and concern for technical aspects of productions in both art and writing manifests itself. With this manifestation productions in both media decline.

Such a pattern suggests that we revise our ideas of why so little writing is done by students in school. Writing activity tends to be minimal not simply because teachers, and the educational system generally, dominate or thwart self-expression through writing (Britton, Burgess, Martin, McLeod, and Rosen, 1975), but also because children's natural development of specific skills in reading, and more general skills in appreciating the techniques of self-expression, leads them inevitably to an awareness of their own productions' shortcomings. Since one cannot do without reading, a successful writing pedagogy will have to deal with those processes of reading that hinder cognitive processes necessary for effective writing. To return to a distinction made at the beginning of this paper, one of the principal problems in learning to write is that mediating skills for language form, which use discourse and syntactic knowledge, appear to be only minimally under the control of metacognitive skills that are involved with intention and purpose in writing. Allowing students to gain deliberate control over such mediating skills should be a major objective of writing instruction. The technique of procedural facilitation, translated into instructional tasks, offers a promising starting point for effective writing instruction at the discourse level (Bereiter and Scardamalia, 1980). But it remains to be seen whether such an approach can be successful for acquiring control of language form at the sentence level.

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"Writing has got to be an act of discovery . . .
I write to find out
what I am thinking about." 1

"If I write what you know, I bore you;
if I write what I know, I bore myself;
therefore I write what I don't know." 2

"I think that one is constantly startled
by the things
that appear before you
on the page
when you're writing." 3

"A writer has to surprise himself
to be worth reading." 4

"The easiest way for me to lose interest
is to know too much
of what I want to say before I begin." 5

"The language leads, and we continue
to follow where it leads." 6

1 Edward Albee

2 Robert Duncan

3 Shirley Hazzard

4 Bernard Malamud

5 William Matthews

6 Wright Morris

Résumés des Articles

Traduction: Fernand Baudin

L'art ou le métier, le don ou l'acquis *par Richard Young*

Bien qu'ils partagent certains aprioris concernant l'étude et l'enseignement de la composition littéraire, notamment en ce qui concerne l'invention et le choix des sujets, les tenants de La Nouvelle Rhétorique ne sont pas d'accord sur la nature même de leur art. Les uns y voient une forme de vitalisme, les autres y voient une technique. Les théories influencent naturellement les idées que l'on se fait concernant ce qui peut être enseigné et la manière de l'enseigner. Leur désaccord fait problème pour le rhétoricien: en effet, elles sont anciennes et les succès obreux donnent à penser qu'elles ont raison toutes deux.

Conformisme et engagement personnel *par Peter C. Wason*

L'auteur s'efforce de montrer que le fait de se conformer à des formules conventionnelles tend à faire oublier l'engagement personnel de l'auteur. L'effet est double: d'une part, l'individu est aliéné de l'écriture; d'autre part, le conformisme favorise l'obscurantisme, ce qui est contraire aux idées claires et distinctes. En conclusion, l'article énonce les conditions nécessaires pour retrouver la voie et les fruits de l'engagement personnel.

Les conflits de la composition et de l'expression *par David Galbraith*

Les difficultés de la composition proviennent d'un conflit entre ce que l'on se propose d'exprimer et les diverses présentations possibles. De là les problèmes de production du sens et de correction de la prose. L'auteur donne un exemple concret qui illustre bien ce conflit et propose quelques exercices susceptibles de faciliter les solutions. Il examine enfin leur efficacité en termes d'expression personnelle.

L'écriture—conversation *par Richard Stack*

La rédaction n'est pas un artisanat au sens courant, c'est-à-dire quelque chose qu'on peut enseigner directement. L'essentiel d'un bon style est la verve et non la correction. Cette verve est à base de jeu et est une fonction trop complexe pour être programmée. C'est en jouant que nous apprenons à parler et c'est en jouant que nous devrions apprendre à écrire. La conversation est la forme même du jeu verbal; elle est dialectique et nullement didactique; exploratoire, et nullement résolutoire; elle est expression d'une personnalité et non soumission à une autorité extérieure. Il nous faut donc une nouvelle pédagogie de l'écriture qui soit comme une conversation.

Le mélange des niveaux de révision *par David Lowenthal*

La révision systématique et progressive d'un texte où les différentes tâches de l'éditeur sont réparties sur plusieurs frappes successives implique plusieurs corvées, longues et compliquées. En remaniant un livre, j'ai été amené à combiner plusieurs types de corrections à chaque nouvelle frappe: additions, remaniements, vocabulaire, style; le tout simultanément et non plus successivement. Cette méthode kaléidoscopique a des avantages qui compensent les inconvénients des surcharges: elle permet d'atteindre et de maintenir une certaine vitesse de croisière, de résoudre les difficultés des versions antérieures; elle stimule les idées, fait surgir de nouveaux aperçus qui seraient considérés comme des maux nécessaires lors d'une étape ultérieure.

L'écriture en tant que solution de problème *par John R. Hayes et Lynda S. Flower*

La déduction (top down approach) combinée avec l'analyse (protocol analysis) sont pleines d'enseignements concernant l'écriture. En matière de composition, les caractéristiques essentielles sont les suivantes: (1) l'écriture est téléologique, (2) ses démarches sont hiérarchisées, (3) elles s'interrompent l'une l'autre occasionnellement, (4) elles sont récursives, et (5) le changement d'objectif est un des résultats possibles de l'exercice. Les quatre premières caractéristiques font partie intégrante du processus général de composition.

La composition en tant que fonction cognitive *par Robert J. Bracewell*

L'auteur expose quelques particularités des processus mentaux mis en oeuvre par la composition; il les compare et les contraste avec d'autres fonctions cognitives telles que l'arithmétique, la résolution des problèmes, la lecture et, plus spécialement, la conversation. Des travaux récents sur la composition chez les enfants révèlent des avantages aussi bien que des inconvénients à surimposer des techniques de composition par-dessus des facultés de langage déjà bien développées. Les mêmes travaux semblent indiquer que ce sont les difficultés rencontrées en abordant des facultés déjà acquises qui déterminent la forme du langage et non pas l'absence de toute faculté; les facultés déjà en place seraient donc le principal obstacle à l'apprentissage de la composition.

Kurzfassungen der Beiträge

Übersetzung: Dirk Wendt

Kunst, Handwerk, Begabungen und Kniffe: Einige Diskussionen in der Neuen Rhetorik *von Richard Young*

Trotz gemeinsamer Annahmen über den Wert von Studium und Unterricht in schriftlicher Darstellung, besonders in den ersten Anfängen der Entdeckung und Erfindung, sind die als "neue Rhetoriker" bezeichneten Lehrer und Gelehrten geteilter Meinung über die Natur der rhetorischen Kunst, wobei einige eine vitalistische Theorie der Kunst und Darstellung vertreten, andere eine technische Theorie. Die Theorien beeinflussen die Auffassungen darüber, was am Darstellungsprozeß gelehrt werden kann, und wie. Durch diese Teilung entsteht für die Rhetoriker ein Zwiespalt, denn die lange Lebensdauer der Theorien und der Ausbildungserfolg beider Gruppen legt die Vermutung nahe, daß in gewissem Sinne beide recht haben.

Konformität und Verpflichtung beim Schreiben *von Peter C. Wason*

Es wird der Standpunkt vertreten, daß Konformität in stereotyp festgelegten Schreibstilen dazu führt, eine Art Bindung an das Gesagte zu verbergen. Dadurch wird der Einzelne von der Schreibpraxis entfremdet, und gleichzeitig eine Art Verdunkelung gefördert, die dem klaren Denken abträglich sein kann. Es wird beschrieben, wie eine Stimme davon befreit werden kann, und wozu das gut ist.

Die Wirkung widersprüchlicher Ziele auf das Schreiben: eine Fall-studie *von David Galbraith*
Es wird angenommen, daß eine Hauptquelle der Schwierigkeiten beim Schreiben in dem Konflikt zwischen den Zielen des Ausdrucks und der Darstellung besteht. Dies führt zu Problemen, sowohl bei der Erzeugung wie auch bei der Überarbeitung von Texten. Es wird eine Fallstudie dargestellt, in der die Wirkung dieses Konflikts gezeigt wird, und einige Übungen beschrieben, die dazu angelegt sind, das Problem zu beheben. Die Wirksamkeit dieser Übungen wird diskutiert und in Beziehung gesetzt zu Selbstdarstellungs-Aspekten, die mit dem Schreiben verbunden sind.

Schreiben als Gespräch *von Richard Stack*

Gutes Schreiben ist kein Handwerk, zumindest nicht im üblichen Sinne, d.h. etwas, das direkt unterrichtet werden kann. Grundlage guten Schreibens ist Flüssigkeit, nicht Korrektheit. Flüssigkeit kann man nur durch *Spiele* lernen: Es ist ein zu komplexer Vorgang, um programmierbar zu sein. Wir lernen durch das Spiel sprechen und sollten auf ähnliche Weise schreiben lernen. Konversation ist die Grundform verbalen Spiels: es ist mehr dialogisch als didaktisch, mehr erforschend als festlegend, mehr Ausdruck des Wunsches nach Selbstdarstellung als Unterwerfung und äußere Kontrolle. Es wird eine neue, vorschriftenfreie Schreiberziehung gefordert, die auf diesem Konzept aufbaut.

Die Vermischung von Ebenen
der Revision von *David Lowenthal*

Geordnete und geradlinige Revision eines Textes, bei dem redaktionelle Aufgaben Blatt für Blatt erledigt werden, ist bei langen und komplexen Aufgaben nicht möglich. Bei der Neufassung eines Buches habe ich es für nötig befunden, verschiedene Stufen der Revision in jedem Entwurf zu kombinieren—Hinzufügen neuen Materials, Umformulieren von Gedanken, Bemühen um einheitlichen Ausdruck, und Glätten des Stils überall gleichzeitig statt nacheinander. Diese kaleidoskopische Art zu arbeiten bietet unerwartete Vorteile, die für ihr Durcheinander entschädigen: Sie hilft, die Arbeitsgeschwindigkeit aufrechtzuerhalten, löst Probleme, die von vorhergehenden Entwürfen übriggeblieben sind, regt zu neuen Ideen und Neubetrachtungen an, die, wenn sie in die Endstadien der Redaktionsarbeit kommen, notwendigerweise als lästig empfunden werden.

Schreiben als Problemlösen von *John R. Hayes und Linda S. Flower*

Ein top-down Ansatz zur Protokollanalyse kann wertvolle Daten über den Schreib-Vorgang liefern. Die Hauptmerkmale der Darstellung, die in den Daten erscheinen, sind folgende: (1) das Schreiben ist zielgerichtet. (2) Der Schreibvorgang ist hierarchisch organisiert. (3) Einige Vorgänge können andere unterbrechen. (4) Rückgriff ist möglich, und (5) Ziele der Darstellung können als Ergebnis.

Schreiben als kognitive Aktivität von *Robert J. Bracewell*

In diesem Aufsatz werden Eigenschaften der geistigen Prozesse untersucht, die zum Schreiben erforderlich sind. Hervorgehoben werden Gemeinsamkeiten und Gegensätze zu der Art der Vorgänge, die für andere kognitive Tätigkeiten wie Arithmetik, Problemlösen, Lesen und insbesondere Konversation notwendig sind. Neuere Untersuchungen über das Schreiben bei Kindern werden referiert, in denen sowohl Vorteile wie auch Nachteile der Überlagerung von Schreib-Fertigkeiten und anderen sprachlichen Fertigkeiten entdeckt wurden.

Diese Untersuchungen legen die Vermutung nahe, daß die Form der Sprache eher durch die Unfähigkeit des Zugangs zu bereits bestehenden Fertigkeiten festgelegt wird, und nicht durch das Fehlen solcher Fertigkeiten, was das Haupthindernis zur Entwicklung der Schreibfertigkeit darstellt.

Resúmenes de los Artículos

Traducción: Ana Fisch

Arte, artesanía, dones y aciertos: algunas discordancias en la nueva retórica por *Richard Young*

A pesar de compartir postulados sobre el valor de estudiar y de enseñar el proceso del componer, especialmente las etapas primeras de descubrimiento e invención, esos eruditos que han llegado a ser conocidos como los "nuevos retóricos" se dividen por sus postulados sobre la naturaleza del arte retórico; algunos manteniendo una teoría vitalista del arte y de la composición y otros manteniendo una teoría técnica. Las teorías influyen los juicios con respecto a lo que se puede enseñar en el proceso de composición y cómo puede ser enseñado. La división crea un dilema para el retórico ya que la durabilidad de las teorías y los sucesos pedagógicos de ambos grupos sugieren que en un sentido ambos están en lo cierto.

Conformismo y compromiso en el escribir por *Peter C. Wason*

Se discute que el conformismo hacia estilos estereotipados del escribir tienden a ocultar un sentido de compromiso sobre lo que se está diciendo. El efecto es a su vez alienar al individuo de la práctica de escribir y estimular un tipo de oscurantismo que puede resultar hostil al claro pensar. Se describen las condiciones para recobrar una voz comprometida y los beneficios de las mismas.

El efecto de objetivos contradictorios en el escribir por *David Galbraith*

Se considera que gran parte del origen de las dificultades del escribir se origina en el conflicto entre los objetivos de expresión y de presentación. Esto conduce a problemas tanto en la prosa generadora como en la de revisión. Se presenta un caso en el cual se ilustra el efecto de este conflicto y se describen algunos ejercicios diseñados a aliviar el problema. Se discute la efectividad de estos ejercicios y se la relaciona con aspectos de autopresentación implicados en el escribir.

El escribir como conversación por *Richard Stack*

El escribir bien no es, al menos en el sentido usual, una habilidad, es decir, algo que se puede enseñar directamente. La base del buen escribir es la fluidez, no la exactitud. La fluidez se puede adquirir solamente por medio del juego: es demasiado complejo programar un funcionamiento. Aprendemos a hablar a través del juego y deberíamos aprender a escribir de la misma manera. La conversación es la forma fundamental del juego verbal: es más bien dialogal que didáctica, exploratoria que definitiva, la expresión de un deseo de auto-representación más que la sumisión a un control externo. Hace falta una nueva pedagogía del escribir, que no sea prescriptiva sino basada en el concepto del escribir como conversación.

El mezclar niveles de revisión por *David Lowenthal*

Una revisión directa y ordenada en la que las tareas editoriales están delimitadas borrador por borrador, termina con las tareas complicadas y extensas. Al reescribir un libro he tenido que combinar en cada borrador distintas etapas de revisión—agregando nuevo material, remodelando pensamientos, intentando una expresión coherente y puliendo la prosa en forma simultánea en vez de en serie. Esta forma en calidoscópica de trabajar produce ventajas inesperadas que compensan su confusión: ayuda a mantener el ritmo de la revisión, resuelve problemas provenientes de borradores previos y estimula nuevas ideas y reconsideraciones que en una etapa posterior del proceso editorial llegan como molestias necesarias.

El escribir para resolver problemas por *John R. Hayes y Linda S. Flower*

Un enfoque de arriba abajo utilizando el análisis de protocolo puede aportar datos valiosos sobre los procesos del escribir. Las características principales de la composición evidentes en los datos son las siguientes: (1) Escribir es una meta directa, (2) Los procesos del escribir están jerárquicamente organizados, (3) Algunos de los procesos pueden interrumpir a otros, (4) La repetición es posible, (5) Las metas del escribir pueden ser modificadas como resultado del escribir. Las cuatro primeras características están incorporadas en un proceso modelo de la composición.

El escribir como actividad cognitiva por *Robert J. Bracewell*

Este artículo examina las características de los procesos mentales requeridos en el escribir. Se hacen comparaciones y contrastes con la naturaleza del procedimiento que se requiere para otras actividades cognitivas como la aritmética, la lectura, la resolución de problemas y en particular la conversación. Se pasa revista a una reciente investigación sobre el escribir de los niños que revela tanto las ventajas como las desventajas del sobreponer habilidades del escribir con habilidades bien desarrolladas del lenguaje. Esta investigación sugiere que es más la incapacidad de evaluar habilidades ya existentes que la ausencia de tales habilidades lo que posa el obstáculo más grande al desarrollo de las habilidades del escribir.

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“Writing is a way to end up thinking
something
you wouldn't have started out
thinking.
Writing is, in fact, a transaction with words
whereby
you free yourself from what
you presently think,
feel, and
perceive.”

Peter Elbow

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