

The Smell of the Lamp: Bad Writing in the Behavioural Sciences*

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An academic who writes badly does so for one or more of three reasons: He (or she) may be insufficiently sophisticated in the uses of the language; he probably shares the peculiar linguistic habits of an insular community of academics; and he may be under some distortive pressure from the habits of thought and language inculcated by his particular discipline. Writers in the fields of human science, in particular, are led and even encouraged to deploy reifications copiously and incautiously, to neglect such rhetorical problems as the clarifying of contrast or comparison, and to fall into traps set by the seeming similarities of syntax or metaphor. In all this they are typically beguiled by the demands for quantification and generalization that dominate their disciplines, and by some rather simplistic assumptions about the nature of language.

Lorsqu'un universitaire écrit mal, l'une ou plusieurs des trois raisons suivantes est habituellement en cause: sa connaissance des usages de la langue peut manquer du raffinement nécessaire, il (elle) a probablement développé des habitudes linguistiques propres à un groupe restreint d'universitaires, enfin, il se peut que les habitudes de pensée et de langage inculquées par sa discipline contribuent à déformer son expression. Dans le domaine des sciences humaines, en particulier, les auteurs sont amenés et même encouragés à recourir abondamment et imprudemment aux réifications, à négliger certains problèmes méthodiques tels que la clarification des contrastes et des comparaisons, et à tomber dans le piège tendu par les similarités apparentes de la syntaxe ou de la métaphore. Dans tous ces cas, ils sont induits en erreur par les exigences de quantification et de généralisation qui dominent dans leur discipline et par quelques hypothèses simplistes à propos de la nature du langage.

The language that people most often use in psychology and sociology, and of course in education, must have something to do with the frequent failure of studies in these fields to earn much credibility with colleagues in other fields or with the general public. It is a language that confines itself almost exclusively to abstract nouns, impersonal or passive constructions, and statements so heavily qualified that they cannot seriously be called assertions. On the one hand it displays a generally shared academic inclination to dwell on what has gone on in the writer's mind and on relations between concepts rather than on relations with actual events. On the other hand it reflects faith in a research practice that has been committed to achieving defensible generalizations by working almost exclusively with large numbers and with probabilities. Hence to suggest to many people working in these fields that their reports would benefit from

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some concrete and specific vocabulary, personal and active constructions, and unhedged assertions, is to run up against an entire system of disciplinary taboos.

The blocky language of abstract nouns unwieldily predicated by inert verbs and long-dead metaphors is not just the invention of the scientists of human behaviour, but of course is part of the baggage of the academic in almost any field. Mina Shaughnessy (1977) has presented very fairly the various considerations that determine typical academic discourse, and that make learning to use abstract language such an exacting and (we assume) necessary experience for thinking people. For her, one of the two major conventions governing academic discourse is that of "ranging widely but in fairly predictable patterns between concrete and abstract statements, between cases and generalizations." She proceeds to expound various ways of teaching her students to do this. Though she is well aware that writers must move along this range in both directions, it is after all natural that her suggestions are concerned on the whole with helping students move *up* the ladder of abstraction. The problem we face here, however, is getting many academic writers, who seem to be stuck petrified like kittens at the top of the ladder, to move *down*.

The patterns of "ranging between concrete and abstract" differ with different disciplines, and are not common throughout a university. I have focussed my attention here on the social and behavioural sciences because they are my journal's chief resource for manuscripts, but not only is the problem of excessive abstract language in these sciences particularly obtrusive, it has particularly unfortunate consequences. For the paradox is that the behavioural sciences, that set out to account for the actions of human beings, seem continually to discuss this task in a language that is almost exclusively impersonal and general. To other observers, it would seem plain enough that human beings typically act for reasons that are highly specific and personal. Individuals continually escape the sociological generalization, not because of the incompetence of the generalization but because of the personal competence of individuals. In particular, the evident incompatibility of the language of human sciences with the humanness of their subject would account for much of the aforementioned unwillingness of intelligent people to yield much credence to your average psychologist, sociologist or educational researcher.

ERRORS GENERAL AMONG ACADEMICS

To attack the particular problems of poor writing in the behavioural sciences, however, I must first deal briefly with those that infest the writing of academics in general, rendering it notoriously and needlessly difficult to read. It is indeed the exceptional university professor, in any discipline, who writes reasonably clearly by current public standards.

Accordingly, I shall return later to deal specifically with the linguistic

difficulties that are particularly attributed to the behavioural disciplines, creating what I call a third category of error. First, I shall provide examples of two other categories of error to which researchers in the human sciences are of course also subject along with other members of the academic community. The first category, in brief, contains those shortcomings in linguistic sophistication that are shared by many academics with a great number of other quite well-educated people, simply because no one has ever firmly brought to their attention the remedies for these errors. These errors are of the order commonly but vaguely referred to as matters of “grammar.”

The second category is of those failures in communication that are attributable to the linguistic customs of the closed society of universities. These customs are characterized by ornate and oblique vocabulary, involved and baroque syntax, and recondite allusion. Although generally much admired and too much deferred to, they amount to an obscurantism that has an almost conscious cultural function – to protect the status of a privileged caste – and that runs counter to the ostensible function of language, that of facilitating understanding. If it be objected that this kind of language *does* facilitate understanding, within the group of specialists who understand the code, the point is made: codes deny understanding to those who do not share them.

Early on in my work for this article, in order to test things out on an example of good academic writing, I considered an essay review appearing in the *Harvard Educational Review* and written by a former acquaintance who has earned a good reputation in his field. What follows is based on my notes written at the time on K's' essay: “Generally a clean, lucid style, carrying no excess weight of vocabulary, and having direct, relatively short and simple syntactical structures with familiar but energetic and active verbs. On the whole an admirable model.”

CODE, OROTUNDITY, AND AMBIGUITY

Like anyone speaking out of a disciplinary background and in its context, K was inclined to use *in code* certain words that would otherwise be familiar to the lay reader. Such words in this essay were *construction* (e.g. “... their *construction* of the foundations of learning ...”), *efficient*, *revolution*, *resolution*, *appropriation* and *reappropriation*, and *inform* (e.g. “These books not only created the world we live in but also continue to inform it through constraints, theories ...”). Now had K written *shape* for *inform*, in the example quoted, it would have made no perceptible difference to the quality or elegance of his argument, and would have made it more accessible to many readers.

The same applied to his occasional *academic orotundities*, where the purpose of the usage was not to render a meaning precise but merely to give it an air. There were very few of these in the essay, by the standards of

accepted academic discourse, but they did come in little bunches. Slightly stilted phrases cropped up in the same sentence. And at times *K* embarked on whole rolling orotundities, in which the sentence structure itself as well as words and phrases appeared designed only to parade in academic robes for the moment: "For *how better* can we *initiate* our students into the *pursuit of those truths that* concern us and our departments? *How better* can students learn reflective inquiry *than by engaging* in it through critical *encounters with those books that set* our field apart?"

None of all this mattered much in the flow of thought that the essay existed to present. There was hardly any serious interference to meaning arising from the language used, except in the following passage, which illustrates a type of unsuspected ambiguity often found among the abstractions of academic language:

The insistence that education be useful – whether for private or public utility – creates a paradox because it construes learning as a means instead of an end, goal, or purpose shared by all human beings. "All human beings by nature desire to know," according to Aristotle.

The difficulty of this passage hinges on the choice of the word *learning*. Learning is the means to an end that, however, is also called *learning*; it is hardly a paradox that one acquires learning by learning. To add to the confusion, when I think of learning in either sense, *purpose* strikes me as a means rather than the *end* with which it is sonorously grouped here. A complete analysis of the difficulty would be a lengthy affair, but there is a hint here of *K*'s inadvertent use of what Ogden and Richards (1959) call, rather splendidly, the Ultraquistic subterfuge. It is a coincidence that they offer a very similar example: "Knowledge may refer to what is known or to the knowing of it. The Ultraquistic subterfuge consists in the use of such terms for both at once of the diverse referents in question." They comment that it "has probably made more bad argument than any other controversial device" (p. 134).

My study of a model of good academic writing thus did establish, even in this very healthy piece by *K*, a few instances of two types of weakness characteristic of the language customary in academic society – academic coding and academic orotundities, to name them as I have; and a case of syntactical ambiguity, which belongs rather in the category of linguistic sophistication. To correct for the latter, a writer would have to learn to monitor his or her text with suspicion for all words ending in *-ing*, knowing that they are often ambiguous. (Does *driving anxieties* mean anxieties *about* driving, or anxieties experienced while driving, or even anxieties that drive you?) But a writer wishing to correct for the former errors needs to acquire a heightened awareness of the reclusive state of academic society, and an acute sensitivity to everyone's weakness (including his own) for linguistic pomp and abracadabra. (Of course this is quite easy to say.)

BOOTLEGGING, AND LINGUISTIC FATIGUE

As I worked through other articles, further examples of the same things appeared, together of course with new phenomena. The writers of these seemed in greater difficulty than *K* had been, for I was now looking for writing where communication had failed.

The opening section of *R*'s article was unduly turgid with compressed statements, the vocabulary dense with allusion and coded words, and the syntax often strained by inversions, interpolations, and appositions. The following is characteristic, and also offers a clear example of *bootlegging* (or slipping something past us): "This Hellenistic view of language*, continued by the trivium and reinforced by Cartesian rationalism, has pervaded the teaching of language for 1900 years or more and for the most part still continues to do so."

In its context, the sentence is abrupt in its mention of *Hellenism*. The word is suddenly introduced in a syntactically secondary role, as an adjective, structurally subordinated to the subject and predicate of the sentence. The subject and the predicate, or main clause, are apparently intent on making some point about how long things have been going, a point which in semantic terms, however, is subordinate to, or follows from, the major premise that this "view" had been "Hellenistic" (1900 years does take us back to the Greeks). This structural subordination of the major premise in an argument is characteristic of the technique of bootlegging. The footnote (*), which tells us to look elsewhere for any support for the writer's assertion that this view of language is indeed Hellenistic, is also a familiar device of the species.

I shall select another sentence from this writer, to show what can come of sustaining the academic manner for long. "The traditional classroom, in contrast, generally fails to see that a concept is at best only slightly developed in 'vocabulary building' by synonyms, which are approximations and can only identify." (A simpler version is: A traditional teacher believes that building a vocabulary of synonyms will teach a concept. At best it does very little; synonyms, being approximations, can only identify a concept, not explain it.)

The general fault of this sentence is its prevailing indirectness. The metonymy (literally, change of name) of *classroom* for *teacher* conceals a person, and this figure of speech becomes slightly absurd when the classroom *fails to see* something. What it fails to see is *that a concept is at best only slightly developed*, which is a negative way of referring to something that teachers actively try to do. The quotation marks around "*vocabulary building*" are a favourite academic device for exhibiting your disdain for someone else's thought without actually saying anything. The phrase *in contrast* has no referent at all, either explicit or detectably implicit, in the preceding text; this is rather too common a phenomenon among well-educated writers. The prepositions are loosely chosen: "developed *in*

vocabulary building *by* synonyms” should read “developed *by* vocabulary building *with* synonyms.”

Although the writer of this article was a scholar of language, all these errors (except the depersonalizing effect of the metonymy) are really failures in linguistic sophistication. I account for this sort of lapse with the conjecture that the effort of keeping up with linguistic custom is indeed tiring when it is attempted as intensively as it was here.

DOCTRINAL EXHORTATION, OR CANT

The authors of the next examples, *C* and *H*, offer a surface of discourse that is just as difficult to read as *R*'s opening remarks, though it is all written in a much more relaxed and less formal manner. It is also if anything more baffling to edit, for in their text are to be found all three categories of error, having all three kinds of root cause, in a kind of tangled growth that seems to defy remedial pedagogy.

The first example seems to begin harmlessly enough:

In conclusion, if there is any message from the evidence of this study, it is suggested by the large number of parents who felt that teachers initiate no contacts for the purpose of conveying positive messages about their children's performance in school. One might label the practice of deliberately initiating such contacts as an “outreach” function in parent-school communications.

Up to the word *felt* this is reasonably plain language for the assertion of a tentative conclusion from the evidence. I shall have more to say about that disarming tentativeness later, but *it is suggested by* and *if there is any message* are quite suitable uses of impersonal and passive constructions for describing the impersonal emergence of a thought. From there on the sentence means (and should have read) “felt that teachers do not call when their children are doing well.” This is more or less exactly the wording used by the authors for the particular item, in the study's questionnaire, that had received the strongest response from the parents. Why then did *C* and *H* not write such a simple and readable sentence into their “discussion”?

What is happening in the paragraph (and in these two sentences) is that the “message” is being translated into doctrine. Hence *initiating a contact*, which stresses the conscious effort on the part of school staff that the authors are about to recommend in order to improve practice. “Making a call” or just “calling” would say nothing explicit about the need that they see for teachers to take some initiative. Yet will teachers, I wonder, change their habits more readily if they are asked to “initiate a contact” rather than simply to “call”? The authors wish, however, to draw a moral, and to do that in terms of a theory, by converting teachers from *not calling to deliberately initiating such contacts* and by urging them to do so *for the purpose of conveying positive messages*.

This pressure on the readers to change their ways, clothed in a series of

euphemistic generalizations, I began by calling “doctrinal exhortation,” borrowing somewhat from I. A. Richard’s (1929) pleasant invention of “doctrinal adhesions.” (He applied that term to the same sort of phenomenon working in reverse, whenever his students interpreted poetry as advocating or contradicting some doctrine that they cared about.) We seem very susceptible in our time to this sort of linguistic puffery, and so we are constantly subjected to doctrinal exhortation in our daily conversation, whether it is about dieting or personal relations or bringing up children. Marin County’s mellow talk is full of it. The simpler word for the phenomenon, of course, is “cant.”

The formulations of the second sentence in the above example are the doctrinal payoff from the first. Thus it begins: *One might*, a persuasive ploy to include the readers, though still tentative; *the practice* suggests imposing some institutional rules as well as changing people’s personal habits. *Deliberately* demands an effort; *initiating a contact* portends something more professional, permanent, and reciprocal than simply *calling*. “Outreach” is in quotes because it is in fact the “label” that is mentioned, rendering *function* quite superfluous and a clearly doctrinaire intrusion. *Parent-school communications* is bootlegged in as an entire department of a school’s organization, having various “functions” of which this is only to be one.

Now the article from its very first sentence had argued for “an effective program of school-parent communications,” and did so quite comprehensively. But we may note that in our example the authors seem to consider the reversed version *parent-school* interchangeable with *school-parent*, even though the sequence in which things are to get done seems to matter a good deal to them. They might have been less indifferent to the point had they not used the depersonalizing metonymy of *school* instead of some word for the actual people they meant to persuade such as *staff* (to include principal as well as teachers). What they are focussing on then (if we must use the formula) is *staff-parent communications*.

PERHAPSISM

A second example from these authors concludes our preliminary look at examples of errors to be found in academic writing at large.

... As an active rather than a reactive form of communication, outreach may place the school in a better position to exercise leadership in dealing with an increasingly complex and active environment. Moreover, as the findings of this study have suggested, it may also contribute to the perceived openness of the school, and such an image seems essential to the establishment of an environment that will be supportive of the school.

We can find here coding (*perceived openness*), cant (*be supportive of*), and some inflated and fuzzy language of academia (in which an *environment*

can be *active*). That the authors are also prone to commit frequent linguistic inaccuracies is shown by an absence of any referents for *better* and *such* (in *such an image*), and a rather loose use of *as* to mean *because it is*.

But I have included this particular example in order to point up another common phenomenon in academic linguistic custom, what I call *perhapsism*. In perhapsism the writer avoids getting himself committed to anything in literal terms, while nevertheless appearing to make the assertion he really wants to make. If challenged he may thus always claim that “I only said that *perhaps* it was so.” In our example above, outreach *may* place the school in a *better* (no referent) position, and it *may* also *contribute* to an image that *seems* essential (that “seems essential” is an especially neat example of perhapsistic finesse). Perhapsism can be really valuable in university language as a way of exploring unknown ground, as scholars perpetually attempt to do; but it is far too frequently exploited in situations where the risk is minimal and need not be underlined. It often gives rise to a timid frenzy of redundancies: “It might sometimes happen perhaps, should the circumstances arise ...”

A REVIEW — SOME GENERAL ACADEMIC ERRORS

Our dossier thus far has collected some examples of shortcomings in linguistic sophistication: syntactic ambiguities; omissions of the referents when words of comparison or contrast have been used; loose use of prepositions; and negatives and passives that have rendered statements needlessly obscure. I have also demonstrated certain linguistic customs more or less peculiar to academia: academic coding, ranging from the specialised use of an everyday word to the making of a recondite allusion; academic orotundities, that embellish words, phrases, or entire sentences; bootlegging; cant (or doctrinal exhortation); and perhapsism.

There is nothing particularly novel about these except perhaps some of my terms for them. Some of the failings I have discussed may be ascribed to having adopted a “set.” Such a set will predispose a speaker or writer to select certain kinds of words; to formulate phrases or sentences so as to express a sense of distance and detachment, or so as to conform to certain kinds of sonorities in pacing and rhythm; and to resort to certain limited and academic classes of experience for their colour and tone. Other failings – bootlegging, cant, and perhapsism – represent, on the other hand, a particular group of foibles to which academics seem particularly susceptible as they seek advantage in argument. Such foibles are apparently tolerated, if not encouraged, in the social climate in which they live and work.

The linguistic, objective remedy – once the writer is convinced that he will gain many interested readers and lose none by following it – is presumably to apply some general maxim of the “plain words” variety. It may seem harmless that many academics automatically say and write

frequently instead of *often*, or *opportunity* instead of *chance*, but when the same kinds of multi-syllabic choice follow word after word for page after page the effect can be marked: a blurring of the reader's attention to those words that really matter in the communication.

Another remedial tactic here would be to adopt a subordinate maxim to the plain words one: "Take nouns out of the text." Instead of *exercises leadership* write *leads*, instead of agreeing *to the selection of* agree *to choose*, and instead of a school principal *having a negative attitude toward parental contact*, let him or her simply *dislike parents who call up*. This zapping of everything that moves into the rigidity of nouns has a long, pre-academic history, especially in the language of human relationships, and hence it is particularly difficult to dislodge, especially from the language of the behavioural sciences. Yet it is particularly rife throughout academia, because of an everlasting compulsion on scholars to appear objective and hence to objectify, or make objects of, every event in sight. Thus are created innumerable "phantoms, due" as Ogden and Richards (1959, p. 96) observe, "to the refractive power of the linguistic medium." Our world becomes crowded with "things" that only "exist" because we have invented nouns as well as verbs for them.

THE EFFECTS OF A DISCIPLINE: NOUNS LIKE STONES

Let us now sink to greater depths in some examples of writing from the behavioural sciences. These are not extraordinary cases, however, indeed they seem quite mild; but they may furnish some insight into what I believe is the toughest problem for remedy, a disciplinary ethos that presses (though it does not compel) its academics to evolve continually many gross distortions of the language.

My next example again has a combined authorship, in *A* and *Y*. (Combined authorship may reflect an aspect of the problem. Having another person almost literally at your elbow as you write is to realise in rather concrete terms the presence of a specially knowledgeable audience of fellow academics, a presence we already know to be a prevailing determinant in the syndrome of academic publication.) This article was published in a major journal of education not long ago:

Innovations representing considerable investment of time, energy and money are being continually introduced into school systems. Too often assessment of these innovations is scanty or non-existent. Of the several aspects of an innovation which should be examined, the one receiving the least attention is the level of implementation. *X* and *W* indicate that there are many determinants contributing to the satisfactory implementation of an innovation. In this study one of these determinants was examined, namely, the roles of school system personnel who are directly or indirectly involved in a curriculum innovation. A method was developed to identify the specific roles of personnel in an innovation, and to assess the extent to which these roles were being implemented. It involves the use of an idealized model of a fully implemented innovation, against which the current role behaviour of school system personnel can be assessed.

What happened? The scene is strewn with nouns like stones, inertly predicated almost throughout by passive voice constructions. The meanings of such nouns as *implementation*, *innovation*, and *level* seem blurred at every turn; indeterminate words like *considerable*, *satisfactory*, *indicate*, and *involved* prevail; tautologies are three a penny. The *level of implementation* is said to be an *aspect* of an innovation (fudged metaphor). *Roles* are a *determinant* of *level*. Roles can be *implemented*; so can innovations. Is it all a form of perhapsism, where every edge of meaning has been deliberately ill-defined? Is there an uneasy awareness on the part of the writers that there is really nothing in the study that isn't fairly plain sailing, coupled with a belief that it would be unacademic to say so?

The impression one gets, of a vague, dimly-lit region, through which various shapeless entities move having no visible means of locomotion or support, is not altogether an illusion. The authors have their minds on certain concepts like *roles*, with which they have been trying to explain certain confusing realities of the behaviour of people within organizations. Such concepts are formed in the minds of researchers when they generalize from observations of real events. If things work out, the authors hope to be able to predict other real events from their observations of the concepts. What we are listening to here is the authors' description of the concepts moving about in their thought, as their thinking attempts to model real events, but the description has as little *visible* relation to those real events as clouds have to the ocean or steam to icicles.

REIFICATION AND ANTIDOTE

So they wrote this opening paragraph, which was to establish a setting in which their study would be seen to take its place as a sensible line of inquiry to follow. They put their main subject – as they saw it – up front, and began with “Innovations.” Having done so, they needed a verb. What do innovations *do*?

There the difficulties begin. *Innovations* is a concept, a noun made from the verb *innovate*, the reification (or “conversion mentally into a thing”) of an activity. On the one hand, it is consequently ambiguous, meaning either the process of innovating or the state of affairs, or product, that that process brings about. On the other hand, the word being a generalization, it includes in its reference a great many other matters having little to do with the authors' concern here. Even under the heading of “innovations in school systems,” a lay reader may start thinking of new school uniforms or soccer for girls. Obviously, people who think like this were not intended to be in the audience for this paper; the audience of the journal in which this appears, however, does in fact include academics from many other disciplines in education, who must be considered to be lay readers so far as the field of educational administration is concerned.

However, a lay reader might certainly be expected, by searching the implications, to assume that here *Innovations*, being a matter of educational administration, signals *administrative* activities that are intended to have *educational* consequences such as the curriculum change we shall read about lower down. Unfortunately the adjunct *educational* in *educational administration* is also ambiguous: the phrase may mean administration *on behalf of education* (whether of education as process or as product) in the sense above; or it may simply mean the administration *of educational institutions* such as school systems – in which case the introduction of school uniforms would be a real issue and a reasonable way to “read” the word *Innovations*.

Reified terms such as *education*, *learning*, and *innovation* are almost certain to have a built-in uncertainty. Uncertainty in language on any scale damages the readability of a passage (and also casts doubt on the precision of its author’s mind). The fewer terms like these flung around in writing the better. So too, in planning research, investigations should severely restrict the number of concepts they will use, and define their meanings with great care. A and Y should not have begun their article with a reification, and this one was both ambiguous and outsize.

What then should they have done? One tactic from many a general writing manual would have been to start with a concrete illustration by describing, let us say, some school system that had once unsuccessfully attempted a curriculum change. Setting such an illustration out in full might involve a lengthy detour, and the writers do want to get on with it. Although a concrete example like this would indeed give repeated payoffs throughout the paper, making it easy for the writers to meet their readers’ need for specifics by referring back constantly to the illustration, we should understand the nervous reaction of our average social scientist to such an idea, with its apparent demand for a certain journalistic pizazz. We seem to be asking him or her to begin with something like “Superintendent John Jones slammed his hand irritably on the steering wheel as he drove homeward ...”

There’s nothing much wrong with pizazz, but such a line of approach would have had to be adopted, and cheerfully, before ever the paper were begun. And how do you reconcile that with the academic demeanour appropriate for “rigour,” that idol of research? Well, that’s not nearly so tricky as it might seem.

A simpler prescription, either for the initial approach or for subsequent revisions, is to compose any general statement by first finding a word for the action, as a predicate, and *then* one for the agent, as subject of the sentence. Thus the action, here, might be worded *bring in new practices*. Then the agent, if one doesn’t wish to get into unnecessary detail, could be simply *people* – and we are human at last. “People bring in new practices. They invest much time, energy, and money. They rarely try to assess the results.” Once you have a really active agent like a human being, other

predicates in the following sentences will seem to come easily and naturally.

I submit this quite time-honoured recommendation, of searching for a verb that defines the event and then for a noun for the agent, with the all-important rider that in the human sciences, wherever possible, the agent be human – real, not ideal or conceptual. This is a maxim, of which my own application above is of course idiosyncratic; adequately applied, it might conceivably correct many of the problems of expression, and behind them of definition, that plague the social and behavioural sciences.

CONGLOMERATIONS OF NOUNS

I offer also at this point another maxim, to cope with the ambiguities inherent in reification and with a type of consequent error very common in these disciplines, namely reifications used as adjuncts to nouns. The type is represented by such phrases as *educational administration*, *role behaviour*, and *system breakdown*. As we shall shortly see, it includes hideous conglomerates of as many as five reifications at a time, multiplying the number of possible meanings by permutation and combination of ambiguities, to a degree of uncertainty that baffles the mind (or, to apply the regrettable technique, to a high degree of ambiguity permutation-combination mind bafflement).

The maxim, then, is as follows: “Represent any relations between concepts by small words, not by juxtaposition.” Thus the juxtaposition in the phrase *role behaviour* might suggest the behaviour expected *of* a person *in* the role (a description of the job), or else the behaviour aroused *in* a person *by* his or her role (a result of doing the job), which is often quite different. Does *system breakdown* mean breakdown *inside* the system, or breakdown outside it but caused *by* the system? Applying the maxim would prevent a writer from using in his discourse labels like these that are inherently ambiguous, and that remain so whether or not they have been previously defined. The writer must either continue to use a small word like *for* (*behaviour for a role*) once it has been defined, or discover – as he or she often will – that a single word like *behaviour* alone, once defined, works perfectly well after all.

I turn to a manual designed to instruct graduate students in educational administration. Whereas it cannot represent all those manuals of thesis writing to which hundreds and thousands of future academics have been referred in their time, being the personal ad hoc effort of an individual professor, *O*, it does suggest that some of the havoc I seek to remedy is a matter not of accident but of intent. Rolling broadly through the social science disciplines there evidently flows this massive river of modelling and instruction in writing, in resistance to which any proposals to change matters might seem as futile as the struggles of a fly.

This manual follows the familiar sequence in the table of contents of a

conventional thesis, from abstract to references, and it gives several examples under each heading, "taken from the best journals in the field." A short preface by *O* urges the student "to think and write scientifically: choose precise words and phrases; be specific and avoid ambiguity and vagueness; present your ideas orderly and sequentially; use an economy but smoothness of expression."

These well-intentioned if sometimes ill-formed precepts are then left quite devoid of any realistic support; the examples that follow in the manual proceed to break them on a massive scale, and yet the compiler remains silent, offering no specific comments. The first example in the manual, one of several under the heading of abstracts, follows in full.

This study examined the moderating effects of organizational independence. Survey data were collected from 211 quasi-professional employees in one firm and from 111 hourly employees in another. Many findings were contrary to the hypothesized relationships. Specifically, job scope and leader hierarchical influence were more positively related to satisfaction for employees who perceived organizational independence than for employees with no such perceptions. Also, leader consideration and leader technical competence were more positively related to performance for employees perceiving organizational independence.

An obvious feature is the number of reifications in juxtaposition: *organizational independence* (independence of the organization from something else, or from the organization of its employees?), *survey data* (why not just data?), *hypothesized relationships* (or *hypotheses*), *job scope* (scope in the job or of the job?); *leader hierarchical influence*, *leader consideration*, *leader technical competence*. These clumsy and puzzling labels should surely be made understandable to a quick reader of the abstract; after all, no abstract is so desperate for space that it cannot afford a phrase like "the influence of a leader on the hierarchy" (if that is what that label means).

CLARIFYING CONTRASTS AND COMPARISONS

There are other quite unnecessary obstacles to understanding in this abstract. *Moderating effects* in the first sentence has no referent to tell us what is being moderated. The second sentence has numbers in it, serving no purpose here, and a mystifying pseudo-contrast between *quasi-professional* and *hourly* employees, not at all explained by the later comparisons between *employees who perceived organizational independence* and those *with no such perceptions*.

Reports of experimental studies like this must frequently present contrasts and comparisons between groups of people. And yet one is struck repeatedly with the weakness of many writers in these fields in using quite customary rhetorical devices for displaying contrast or comparison. It often seems that a writer has deliberately avoided plainly identifying a contrast, as he might have done here by using a matched pair of phrases like *part time* and *full time*, but has instead resorted to some

capricious (and rarely elegant) variation of vocabulary such as *hourly* and *quasi-professional*. It does show a rudimentary sensitivity to rhetorical considerations (by avoiding a repetition of similar terms), but this is misplaced when the consequence is confusion.

Such sensitivity would have been better directed at the different rhetorical problem of the last two sentences: here we have a syntactical problem, where the key contrast between *satisfaction* and *performance* is almost completely hidden, for these words are buried in the middle of each sentence instead of taking the most conspicuous places at the ends. When one is writing for the behavioural sciences, the lack of some linguistic sophistication in the management of parallel structures thus becomes a major liability.

I cannot resist quoting the brief note that concludes this section of the manual: "As these examples illustrate, wording is precise, ideas are presented orderly, and ambiguity is avoided. Try to implement the same writing style throughout your paper."

SOME LANGUAGE FACTORS IN DEVISING RESEARCH

That something rather odd is going on when a behavioural scientist fixes upon a variable that can be "measured" is a suspicion in the minds of many (including, of course, numbers of scientists in those fields). I am now going to speculate that imprecisions in language, besides providing the symptoms of uncertain thinking after the event, may already be contributing to some uncertain thinking before it, in the following (invented) case of a behaviour study in embryo:

I am sitting by the window in my house in winter-time, and I see a black squirrel (we have black ones in Hudson, Quebec) trying to jump up onto our bird-feeder, which is brimming with sunflower seeds. The feeder is mounted on a pole recently equipped with a metal cone opening downwards, designed to prevent entry to just such unauthorized parties as this indignant squirrel, who is not taking it well. He has made several unsuccessful jumps from a nearby stump, but has come off with less dignity each time.

The sequence of statements that follow might represent the process of my mind as an idea for research takes shape.

Applying my maxim about actions and agents, I report: (1) *I see a squirrel jump for food*. All concrete words. (Perhaps a doctrinal presumption of a motivation in *for*. Strictly, it jumped *towards* the food.)

But then, (2) *I study squirrels jumping* for food. I multiply the observations, assuming all the cases to be alike. (Some however may be jumping from habit, or merely in imitation of others.) The presumption of my care and thought gives us *study*; I am now an academic.

(3) *I study the jumping* for food of *squirrels*. Note the reification of *jumping*, an unobtrusive syntactical change with serious rhetorical side-

effects. A number of leaps in the air here become a “thing,” the direct object of *study*, and moreover the lazy black squirrels of Hudson have receded into a vague background composed of the entire world population of squirrels, who are all assumed to be prone to jump for their food.

(4) I study the *food-stimulated* jumping of squirrels. The new noun acquires an adjective and the new “thing” an attribute, as if *food-stimulated* – like *high*, *accurate*, or *rapid* – could be objectively verified. (The phrase incidentally implies that food has an active property that can stimulate animals, and of course is a squashed version of *stimulated by seeing or smelling food*.)

(5) I study the *hunger-motivated* jumping of squirrels. I am now presuming doctrine (for the motive could be appetite, not hunger).

(6) I study the hunger-motivated *saltation* of squirrels. A touch of class, and of course of implied class-distinction. What might be called techno-classicism: you code a simple phenomenon, like jumping, into academically O.K., Latinate form, and so add the colour of a necessarily exclusive expertise to an otherwise simple train of thought.

(7) I study the *hunger-drive* saltation of squirrels. Another step into doctrine with the word *drive*, and with the same step, reification of the adjunct. A pair of nouns in front of *saltation* now forms a conglomerate noun phrase of the familiar Teutonic kind: we shall be lucky if the hyphen is left in, to help us sort out which noun is adjunct to which (a problem exemplified by the series of apparently independent adjectives before *stranger* in “tall loose limbed stranger”).

I reach the point of almost total obfuscation quite easily by more of the same:

(8) I study *squirrel* hunger drive saltation. (A four-noun conglomerate, staking the claim for a new field of my own.)

(9) I study *sciurine* hunger drive saltation. Just a bit of further techno-classicism, to add tone and remove the last trace of vulgar concreteness. Well, not quite. I nearly forgot ...

(10) *This study of* sciurine hunger drive saltation. Any suggestion of my personal presence is of course taboo (the Cheshire Cat principle for achieving rigour in research), and active verbs do disturb things (they suggest real behaviour).

After taking these ten easy steps to obfuscation, I begin to consider an independent variable, namely how cold it is, to account for the fluctuations in this now quite awesomely named dependent variable. Hence a hypothesis.

(1) Sciurine hunger drive saltation *is affected by* temperature. The “thing” has acquired an ability to change, and hence a dimension in which to do it. It now has an almost concrete “body.”

And with a hackneyed metaphor or two, for much the same idea, the “body” becomes alive: (2) sciurine hunger drive saltation *responds to* temperature; (3) sciurine hunger drive saltation *rises with* temperature.

What rises? The "body"?

Where is my black squirrel now? He's gone, of course, having given up, but that's not the point. Would I or anyone recognize the connection between him in the snow and the thoughts occupying the mind of whoever might have written these statements? Is there really a defensible connection? Is anyone who writes in this way talking about real matters, or is what's in that writer's mind not a form of the delusion to which "reasoning" so often subjects us?

SYNTACTIC AND METAPHORIC TRANSFORMATIONS

Writers in behavioural sciences thus seem liable to be beguiled by various semantic problems inherent in the factors of multiplication and quantification. So as to enable measurement by statistical means, they allow these factors to shift their attention away from the individual responsible, to the generalized acts. (Researchers who work by studying individuals and cases should not have these problems.) Reification is often a consequence of the demand for something significant to measure; because it happens easily by syntactic transformation (*I am thinking* becomes *my thinking*), it offers "something" apparently ready-made and tempting to consider as significant. If it may be measured by any contingent manifestation, such as the blood going to my head, then it becomes a variable, a thing with measurable size, sometimes greater and sometimes less in rate-of-blood flow or frequency of pulse. These changes in some given dimension may now tempt a writer to describe them in metaphors, that can either remain inert and mechanical in their implication (*rising* and *falling*) or else imply a state of voluntary or involuntary life (*responding*). Once again, the language's seeming equivalence has been a trap, this time a semantic one, in which connotation has quietly taken over from denotation.

Thus an experimenter has been persuaded to believe in the existence of a thing, because of a syntactic correspondence, and has begun to endow it with properties, because of lexical and metaphorical correspondences. The ways of language have misled his thought. Much of the English language comes to us ready-made, and cut according to a long history of fashions, but what is ready-made works like a disguise; it will seem to fit where it does not. If we want a good fit to reality we must do our own tailoring. (This is perhaps a simplistic editorial view of a set of philosophical as well as methodological problems that have been tackled by others much better qualified to do so.²)

LANGUAGE IS NOT ALGEBRA

If there is one feature of writing in the social sciences that is common to its many side-slips into loss of precision it is the rather widespread indifference to significant linguistic differences. We have had *squirrels jumping*

equated with *the jumping of squirrels*, *amount of conflict* equated with its *frequency* or its *intensity*, *rising and falling* (on a scale) equated with *responding*. Many scientists, in any field, seem to treat language as a kind of algebra in which it matters very little what letter or label you give to anything for the time being. Hence near-equivalences in words or metaphors are accepted as readily interchangeable. Likewise the order in which things are represented matters little: $a + b = b + a$. Of course it follows that if as a researcher you see the task of reporting your work in this way, as a sort of coding into near-mathematical formulae, you will be quite indifferent to the effects of connotation in vocabulary, and of different sequences of words, in syntax. Rhetoric will remain for you a closed and rather useless book.

Indeed, your approach to the organization of the report as a whole will be affected, and you will naturally adopt the particle approach. The only problem here, really, is to leave nothing out: collect everything, use a check-list, and Bob's your uncle. Here is *O's* preface again:

The structure outlined in the next pages allows you to use the "folder method" of doing research. Have a folder for each structural component; collect information, data, articles, thoughts, etc., as they occur and put them in the appropriate folder. In this way you avoid losing ideas and material, and you will know exactly what to look for and what to work on. When each folder contains sufficient material, spend one weekend to write your first draft in one long session.

A direct consequence of this particle approach is the frequent use of numbers and of lists in point form, and the consequent fragmentation of otherwise coherent matter into particles when such a treatment may be quite uncalled for. Questions of sequence are then dictated pretty well by the chronology of the experiment, or by the logic of the hypotheses. Problems like finding a controlling metaphor or appropriate examples, so as to bring about some of that ranging we have spoken of between the abstract and the concrete, simply do not arise in such a scheme of writing, for it becomes simply a question of arranging and copying your lists.

ENVOI

This article has been concerned with causes. The basic remedy for an academic writer, undergirding his or her use of any surface maxims, has to do with that writer's willingness to forego the privilege of status and to look beyond the academic community. In the case of social and behavioural scientists, the basic remedy is to free oneself from disciplinary anxieties. The target group of this paper then is not that grade of academics who already exhibit these virtues. I have assumed as an editor no more than a threshold position about the achievement of good writing, and have set up no ideals, knowing that an attentive and interested layman reading about difficult, scholarly matter is ready to

swallow a good deal of grit, without discomfort. But bad writing should set off all sorts of alarms in academia, of all places. The astonishing thing is that it doesn't.

NOTES

- ¹ Since a number of the writers whose examples I use are also known to me on what I hope may continue as a basis of friendship, I shall use letters of the alphabet for these authors and will not give further references, though I am prepared to document each case on request.
- ² See Ogden and Richards (1959), for their remarks on the dangers of misplaced trust in symbol systems, and especially a footnote on p. 96 quoting F. P. Ramsey in *Mind* (October 1925) pp. 404–5. Also their Supplement II, by F. G. Crookshank, discussing such failures of language in the study of medicine as the “hypostatization” of the word *disease*.

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