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ABSTRACT

It is productive to think about literacy in ecological terms inasmuch as the literacy problem is a system of interdependent components. Illiteracy must be a concern of writers of the myriad of forms on which both the private and public sectors rely to function in this information-intensive society. In addition to helping readers, adult literacy practitioners must also work to help business and government organizations write and design documents that are potentially readable. Writers must try to put themselves in the position of their intended audiences to ensure that their writing is comprehensible. A few simple tests, such as the "museum" test, the post factum test, and the complexity test, can ensure this. Writers must consider two units of analysis: the author-text relationship and the reader-text relationship. The failures of the Plain English Movement are evidence of the consequences of concentrating solely on the message or text and completely ignoring the reader. Individuals interested in improving literacy must also fight to improve the communicative environment and must pressure business and government to improve the texts they generate. (MN)

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# Literacy: an ecological view

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## Ecological metaphor

Why is it productive to think about literacy in ecological terms? Is this just a trendy and politically correct way of seeing everything as to do with The Environment, or is there a more profound reason?

I am, of course, savouring a rare moment in my professional life when I might be seen to be both trendy and on the side of the goodies. But beyond the moral thrill of the moment—a temporary suffusion of virtuous light into my otherwise blackened soul—I am excited at the prospect of being able to share with a wider audience a view of literacy as an *interdependent* component in a much larger communicative environment.

The currently fashionable interest in The Environment has made *interdependence* a concept for our time. No longer do we see the world only in terms of simple cause effect relations, but we now see, and expect to see, that all things are in some sense *interdependent* and *interrelated*. Empty the CFC from the air conditioner, and the ozone hole grows, dangerous ultra violet comes streaming in from the sun, and we get skin cancer. This sense of interrelated events in a complex system has become part of the intellectual framework of our time. I can therefore use this ecological way of understanding as a productive metaphor for understanding literacy within a much larger system.

The ecological metaphor allows us to see the interdependence between the different elements of the system. Ecology has taught us to think holistically, and has shown us the value of avoiding reductionist ways of thinking. It has shown us that we cannot usefully examine any one element whilst ignoring its position in an overall environment (how it fits in, and how it affects and is affected by its surroundings); and it has shown us how changes in one part of a system affect all other parts of the system.

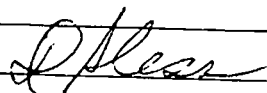
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Just as we cannot fully understand a single organism in isolation, so we cannot understand any particular phenomenon of literacy or illiteracy. We must take the system as a whole, and examine the relationships between the literate and the illiterate, between writers and readers, and between all these and the political, economic and social environment in which we are all to be found and within which we interact.

## **Is literacy a reader's problem?**

When people talk about a 'literacy problem', they generally mean that there are many people who lack adequate reading skills which make it difficult for them to work productively or manage their domestic and social life; they cannot read such things as office memos, procedure manuals, Social Security letters, telephone books, instructions on household products, medicine packaging (Wickert 1989), and the myriad of forms from both the private and public sector without which our information intensive society would grind to a halt.

Literacy problems arise with these prosaic yet essential aspects of life. The solutions to the problem tend to centre around giving people reading skills: dealing with the reader in isolation from the rest of the system.

But literacy is as much a problem for the writers of these ordinary forms of communication as it is for the reader: that is, the people who produce these texts are as much part of the literacy system as those that read them. Yet literacy is seen as a problem for the reader rather than the writer: the victim rather than the perpetrator.

Many of you at this conference spend a great deal of your time helping readers. I and my colleagues spend much of our time between the world of the writer and reader. We help organisations write and design documents that are potentially readable. Among the documents we have helped create are such things as the Telecom Bill, the Simplified S form (before it turned into the monster of the Tax Pack), and the NRMA insurance policies and application forms (Penman and Sless 1992). As part of this work we also spend time sitting alongside readers, watching how they use these documents and discussing with them their reading difficulties. Frequently, we are the go-between. We represent the interests of the reader in environments where they are unrepresented. We look at where readers fail to use documents appropriately and we then take news of this back to the authors, to persuade them that the documents have to be changed.

We see the struggle after meaning, comprehension, and social control at a crucial point in the communication environment—at the juncture between individuals and large organisations. Nature, red in tooth and claw has its equivalent in our communication environment in the form of culture, dark in power and control. We might stand in awe at the majesty and mystery of nature. We frequently stand in frustration at the incomprehensibility and power of our social formations. The communicative world, like the natural environment, can at times seem like a merciless, uncaring wilderness.

A brutal fact of our communicative environment, when seen at this critical juncture, is that incomprehension and misunderstanding are the norm not the exception. For every one of the documents we have helped improve, there stand many hundreds if not thousands that remain darkly incomprehensible—the visible manifestations of uncaring power.

Very few people in these large and powerful organisations are aware of the extent of the problem. For us it is a matter of daily experience. A fairly typical example was the work we undertook for a medium-sized insurance company to improve the quality of its main business forms, those used to apply for an insurance policy (Fisher and Sless 1990). At the start of the project we measured the error rate of the forms. In a sample of 200 forms taken at random from the files, we found errors on 100% of the forms. The average was over 7 errors per form. In total there were 1560 errors on the 200 forms. Interestingly, these forms were mainly filled out by insurance agents, not the public. The underwriters in the company, whose job it was to assess each application form, attributed the high error rate to the lack of professionalism on the part of the agents—a clear case of blaming the victims. Senior management in the company were unaware of the problem until we published our results. In fact, the forms were fairly typical of the poor design of documents found in both the private and public sectors. 100% error rate is not unusual. The only thing that was unusual in this case was the willingness of the organisation to allow us to publish the results. Once the forms were improved the error rate went down to 15%. On a similar sample taken after the improvement program there were a total of only 44 errors, a massive improvement of 97.2%.

For those of you who help readers cope with this type of document in its natural unimproved state, you will know that the struggle is one-sided. Some of these documents are so incomprehensible that no amount of literacy training of readers will help. The real need in this case is training for the writers.

## Some differences

As with any metaphor, however, there are points where the analogy breaks down. Often these points are extremely interesting and merit close enquiry. In my analogy between ecosystems and literacy systems, there are three important areas of difference.

Firstly, ecosystems are *deterministic* (I will not enter into any discussion about the Gaia theory): on many levels predictable, at certain levels unpredictable, but nevertheless following formulated and theoretically measurable mechanical and biological laws. Our communicative environment, on the other hand, is *non-predictable*: it does not come into the category of scientific phenomena, and it is based on humanly-created rules, not on immutable physical laws.

Not everyone involved in communication or literacy research would agree with me. Many have a substantial investment in the scientific method, as a means of solving problems and discovering truth. They regard the failure of the field to offer scientifically predictable results as a temporary setback in the long march of science. They believe that new methods and new concepts (and more research funding) will lead in the end to truth. Ironically, perhaps, my scepticism of science arises from the evidence, whilst the advocates for science base their belief and optimism on faith.

But if I am correct, and we are dealing with a system of rules made by people, then we are also dealing with a system in which we have the power to change the rules, subvert them, or use them in ways never intended by their creators. Literacy is a continually changing practice and the changes are brought about by human action.

Secondly (given some reservations about scientific detachment and objectivity), a scientist can in principle develop a reasonably accurate and full picture of an ecosystem. But it is not remotely possible to develop such a picture of a literacy system. An ecologist is of course often part of the ecosystem he is studying, and as such cannot be totally objective; but the person studying a literacy system can have no neutrality at all: what we see depends wholly on where we are standing, what we are looking for, and what skills we have. It is not possible to enter a literacy system without some skills in reading. As readers we work within the system, as part of the system, never as observers of the system. We are always participants.

The consequences of our participatory status is that we need a special way of understanding literary systems which take account of our position and that of others relative to us within the system. We need a logic of positions, a way of mapping the world as we see it from our position in the landscape (Sless 1986). In particular we need to understand that there are always many aspects of the system which are hidden from view, that we can neither see nor comprehend.

One of the most common reasons for literacy failures is because writers cannot put themselves in the position of their readers. This is not necessarily because they lack skill or sensitivity, it is simply a fact of the logic of positions. Writers can only begin to overcome this problem if they recognise that they are in a *particular* position, and that this is problematic by its very nature.

Thirdly, events in an ecosystem always leave material traces. Events in literacy systems do not necessarily leave a trace. Administrative forms are an exception to this rule. We can observe and measure some of the problems people have with forms because of the written traces left behind when people try to complete them. But with most documents we are faced with an inscrutable, ineffable consequence whose history is invisible and non-describable.

The inequity suffered by a social security claimant because she could not understand her rights has a social consequence, but it would be hard to trace the inequity back to an incomprehensible pamphlet. Incomprehension and reading failure leave few tangible traces in themselves, though our society is littered with the social debris of failure and incomprehension; like a silent explosion, no explosive remains, no ear-shattering sound, only the rubble and shrapnel.

All these things—the non-predictability, the limitation of position, and the lack of trace left by failures to read and understand—make our collective task of fighting for a better literate environment that much harder. At times the tendency to focus on the victim rather than the system is overwhelming.

## Poor theory

The existence of a non-predictive, highly subjective, ineffable system is an open invitation for all kinds of explanatory theories. Whilst my ecological metaphor will avoid the dangers of reductionist or over-narrow explanations, it does not guard against over-complex ones; and regrettably, the literacy debate has spawned theory which has given us a huge over-arching conceptual vocabulary, but a deplorably poor capacity to relate theory to practice.

We need to keep our feet firmly on the ground, and we have a right to expect theory that will help improve practice. There are plenty of theories in the realm of sociolinguistics, cognitive science, and cultural studies that can make us feel as if we *understand* literacy better: they wrap the problem in a cocoon of clever concepts. But if they do not lead to better practice then our adoption of them is mere self indulgence

Here are a few simple tests you can apply to any theory to find out whether it is worth while.

*The museum test*

Sociolinguistic theories provide us with elaborate conceptual schemes for classifying linguistic objects, much in the way that a curator uses a taxonomy in a museum to order the exhibits. The curator's purpose is to classify things within a museum: in relation to each other. So the classification system is designed to work only in the museum. But suppose you had a museum of live things, that stayed for a while but then had to be returned to their natural habitat. In such a circumstance, the curator's taxonomy would be of little value. It would not tell you how to return the exhibit to the world. The curator's taxonomy only works in one direction.

If you are using a sociolinguistic theory that only allows you to organise things—to understand them like museum exhibits—but doesn't tell you how to use them successfully in the world, then you have a poor theory to guide practice.

*The post factum test*

There are many twentieth century theories that can only explain what has happened, never tell you what will happen. The most popular of such theories is psychoanalysis, which can give a wonderfully convincing account of why someone did something, but it cannot predict with any reliability what they will or should do next. Such theories seem very plausible because of their apparent explanatory power. But the power is illusory since, again, it only works in one direction.

*The complexity test*

The world is very complicated and life is short. Theory should help us synthesise the complexity and make it easier to deal with. If you are using theory that is more complicated than the world, and which adds to your work but doesn't improve what you do, you might want to reconsider your choice of theory. Such

theories are fine for people who want to work something to death, but they are no good for people who need to make things work.

## Units of analysis

The central question in any field is: what are the units of analysis (Sless 1978)? What is the smallest unit that we can study without becoming guilty of reductionism?

In traditional communication studies there are three basic elements: a text, an author, and a reader (often described as message, sender and receiver), each of the three taken independently of the others.

There are many problems with this analysis. I have discussed elsewhere (Sless 1986) the dangers of reducing communication to these elements, and this is not the place to rehearse the arguments in detail. Briefly, it is clear that a text (message) cannot be described in isolation—it exists only insofar as it is being written or being read, and its meaning arises as a relationship between itself and its author or reader. Thus any analysis of a text must include its author or its reader. There are, then, two useful units of analysis, both relational: the author/text relation and the reader/text relation.

However, most professional communicators tend to follow the traditional way and concentrate on one part of the relationship only, the text, as if by some magical means the meaning lies in the messages and is not a function of what people do with messages. In the field of literacy, this error is particularly manifest in the Plain English Movement. The basic principle of the Plain English Movement is that certain ways of expression are difficult to understand; and they are difficult to understand *not* because of their content, *not* because of their context, *not* because of their authors' conceptions or their readers' expectations, knowledge, or assumptions, but simply because of the structure, grammatical rules, length and etymology of the words or sentences themselves. Fiddle about with the text and the meaning becomes clear for all.

Alas for the Plain English Movement! Language doesn't work like that at all, and if only these well meaning advocates would go out and test their ideas with readers they would see this. The experience of, for example, the NRMA, who had all their insurance documents rewritten into Plain English, was that it made no difference to policy-holders, who still could not come to terms with insurance law, with answering the kinds of questions insurers ask, or with most of the other



complexities of insurance forms (Penman 1990) This is not surprising. The Plain English Movement, like so many other professional message-makers, concentrates on the message or text and completely ignores the other side of the relationship, the reader.

Because reading is both idiosyncratic and highly contextualised, there are no clear ways of anticipating how something will be read. If you want to find out about readers and what they do with texts you have to observe reading in practice. Let me give you two recent examples of reading practice that could not have been anticipated from theory or principles of plain English.

Anti-smoking campaigners have suggested using the phrase  
SMOKING CAN BE FATAL

on cigarette packets. But the word 'fatal' is not present in some teenagers' vocabulary. The only context in which they have seen the word is in the film title *Fatal Attraction*. They take the word to be something associated with being sexy. They might therefore read the warning as:

SMOKING CAN BE SEXY.

I would argue that this specific reading is not predictable by any theory or principles of writing, only by direct engagement with reading in context.

Here is another example. We recently helped the South Australian Government develop a water rates bill for a new rating system. Prior to our involvement there had been a major ongoing media battle between the government and the public, aided and abetted by the opposition, about the seeming unfairness of the new system. There was even a court case in which ratepayers alleged that the government was overcharging for water. The case was lost, but significantly, two of the judges in their written judgement seemed not to understand how the rating system worked.

One of the central concepts of the new rating system was an access rate, a fixed charge that covered the cost of water brought to a property. Apart from that, users pay for water they use. Previously they had to pay excess if they exceeded a water allowance.

We developed some prototype bills and explanations of the new controversial rating system and we asked ratepayers to read the explanations we had prepared and explain them to us in their own words.

We discovered that a proportion of ratepayers did not have the word 'access' in their vocabulary. The nearest word in their lexicon was the term 'excess'. Thus many of the ratepayers were angry ; they did not understand why they were having to pay *excess* water rates when they hadn't used much water. Once we called it a supply charge, the problem disappeared.

Once again, I would argue that we could not have discovered the confusion between 'excess' and 'access' on the basis of any theory, but only by direct engagement with ratepayers trying to make sense of their rates bill.

## Two relationships

Thus we see how important it is to deal not with isolated elements but with relational units. Looking at the text on its own did not tell us how it was going to be read. Only when we observed the relationship between the text and the reader did we understand what was happening and how to improve it.

To return to the ecological metaphor, most research in literacy is concerned with the reader/text relationship: how to give the reader skills in interpreting and using text. The ecological metaphor tells us that the author/text relationship is equally important. If I can extend the metaphor slightly: the upstream activity of writers creates the effluent that readers are forced to digest. I think you would agree that readers deserve a better diet. But we won't get better reading matter unless we are prepared to engage in a battle with the powerful organisations responsible for the effluent.

## Current practice

Thus the state of current practice in the area of public communication is of great relevance to people in Adult Literacy programs, since, as I have been explaining, this other side of the equation is a vital part of the whole system. Teaching people to read, and, just as important, teaching them *what* to read, can have negative consequences if in their turn they do not come across readable material (and by 'readable', as I hope I have made clear, I do not simply mean 'written in short words and simple sentences'). Thus the job of adult literacy is made harder or easier by the writing practices of government and business.

And I am sorry to say that current practice is not good.

The rules of good usage which Plain English advocates have been known for a long time, long before the advent of the Plain English Movement. The fact that

Plain English was felt to be needed as a specific initiative tells us a lot about the literacy of many of the writers in the public service and business.

That Plain English has not got it quite right does not deny the great need for change. What is needed is not plain language but *appropriate* language: language that can be understood in context, and shown empirically to have been understood.

Current practice is poor not only because of the poverty of literacy levels amongst public communicators; it is poor because of the poverty of current ideas about communication. Earlier I mentioned the inadequacy of looking at messages in isolation; but this primitive notion is part of the popular way that communication is described amongst professional communicators. Communication is seen to be 'getting one's message across', and the way to do this is to construct ever more colourful and memorable messages. I doubt if we will see great changes in this area, since the commercial world has invested so heavily in it, and advertising, public relations, and other professional communication bodies play such a vital part in the economy. Like magic in primitive societies, what matters is the maintenance of the ritual, the token gestures, rather than the efficacy of the practice. And if one witch doctor cannot get even token results, just find another with more powerful magic. Many of the solutions offered by modern practitioners are little more than token ritual gestures.

## What can be done

A poor communicative environment does not help literacy. If you want to improve it, you must fight for it. Much can be done to improve the communicative environment by invoking legal controls. Section 52 of the Trades Practices Act is a very useful mechanism in making the relationship between business and consumers more equitable. Put pressure on business through this Act to improve its production of all kinds of texts—labels, bills, circulars, letters and so on.

Unfortunately, there is no equivalent Act to protect us from similar misconduct by the government (Sless 1992). Our rights as citizens are unprotected, there is no recourse in law. The problem is compounded as diminishing resources means less emphasis on good communication in those few areas where goodwill towards the public was apparent. The standard of public documents, never very good to start with, is deteriorating. As citizens we need the same protection in law from abuses by government that we have from abuses by business.

Just to give you some idea of the contrast between your rights as a consumer and your rights as a citizen, in certain contracts between you and a business, ignorance is a defence; if you failed to understand something, you are not necessarily liable. But in *all* of your relationships with government, ignorance is no defence. If you don't understand something, that is your problem.

Being aware of the system as a whole—that illiteracy is as much a writer's problem as a reader's—should give you the impetus to be very vocal in defending your constituency. If our ecology of literacy is polluted by poor writing then we must do something about it. Don't just treat the victims!

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