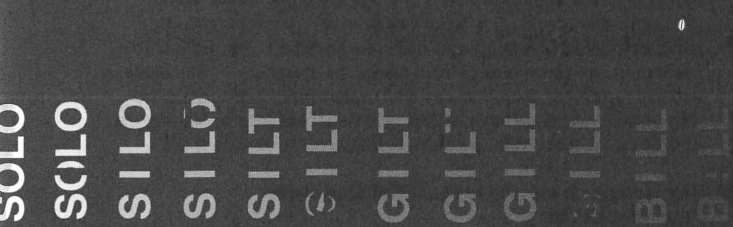
Contents Visible Language 30.3



TRANSFORMATIONS

Richard Kostelanetz

Richard Kostelanetz lives in New York City and is widely recognized in both the fields of art and literary studies.

Among the many publications to his credit are:

Beyond Left and Right: Radical Thought of Our Times,

John Cage,

Assembling Assembling,

Conversing with Cage,

Merce Cunningham, and

Book Notes, 1958-1993.

141 Wooster Street
New York, New York 10012
Visible Language 30.3
Richard Kostelanetz,
244-245 and throughout

While an earlier printed poetic sequence of mine, increments, depended upon changing the meaning of a word by adding a letter to either the beginning or end of the word, this project depends upon changing a letter within a word for a similar semantic end. These transformations would be best realized as film animation, where the screen progresses from one image to another slowly, so that pixilation occurs between the images – the changing letters pass through kinetic shapes unique to film with an element of surprise ideally accompanying each change.

The printed version of *Transformations* presented here uses the moment of page change to create real time – the poem is presented as a flipbook. To animate the poem, quickly thumb the right hand pages from front to back and then thumb the left hand pages from back to front.

Better information presentation: *satisfying* consumers?

David Sless

Professor David Sless is research director and cofounder of the Communication Research Institute of Australia, Australia's independent, non-government, not-for-profit institute for communication research. He is professor in Science Communication at the Australian National University, and the director of Advanced Studies courses at the International Institution of Information Design.

A researcher and commentator in visual communication, information design, semiotics, communication theory, and communications policy, he has held academic appointments in Australia and the United Kingdom and is an advisor to senior management in both government and private enterprise.

Some important questions

The main purpose of this paper is to provide some pointers to critical debates about the practice and purpose of information design.

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Visible Language 30.3
David Sless, 246-267,

The title of this paper suggests a simple truth: if we use better information presentation methods we will satisfy consumers. But if we look behind the title, as it were, we find a number of important questions. What methods can we use to design better information presentation? What do we mean by better? In what sense should we understand this idea of consumer satisfaction? And is the category of 'consumers' sufficient to characterize those who use information?

I would like to discuss these fundamental issues in an attempt to develop a deeper and more critical dialogue about our practice of information design. I would also like to bring into this dialogue an underlying concern for the moral-aesthetic dimension of information design. I am prompted to do so by a recent debate among information designers which, in my view, creates a false dichotomy between the performance of a design on the one hand, and its look and feel on the other. This false dichotomy has been used to argue that performance or usability is not concerned with aesthetics – making objects appealing and pleasant – and is only concerned with utilitarian measurement of such things as error rates and comprehension (Stiff, 1995).

This paper is to some extent an attempt to lift the debate beyond this false dichotomy, though at first it may not seem obvious why I have chosen to do so by linking the aesthetic

with the moral and talking about the moral-aesthetic dimension. However, I hope that this will become clear as I develop the conversation.

The conversational metaphor

You will notice that I recurrently use the metaphor of a conversation to shed light on information design issues. This is not a simple conceit – a metaphor of the moment – but part of a deeper theoretical conviction that has informed our work at the Communication Research Institute of Australia over the last ten years. Along with many others in the field of communication research we have been developing a theoretical view of communication as primarily arising from, and unified around, the concept of conversation (Penman, 1993). This work is located within what has become known as a constructionist paradigm, one which assumes that we construct our social realities in and through our communicative actions. This view has its intellectual origins in the social philosophy of Margaret Mead and John Dewey, the moral philosophy of Martin Buber and the linguistic and literary criticism of Mikhail Bakhtin.

If all of this seems too abstract for such a pragmatic context as information design – too much concerned with theory – let me remind you that it is precisely this type of theory that has informed and given coherence to our Institute's highly pragmatic information design work (for example Fisher and Sless, 1990; MacKenzie, 1994; Rogers, 1994; Sless, 1994). Moreover, to those of you with an aversion to 'theory,' let me suggest that theory is always present in our actions whether we see it or not. The danger of ignoring its presence is that this allows the theory to drive us, rather than allowing us to determine the theory we use. But there is no escaping theory. Having said that, I do not believe that theory in information design should be a great burden, a realm of obscurity. Like our design practice, our theory should be guided by principles of economy, clarity, simplicity and elegance.

I will now turn to each of the questions implicit in the title of this paper to open a dialogue for your consideration.

Design methods for better information presentation

From our point of view at the Institute, information design is now a mature craft concerned with making information accessible and usable, a craft that generates artifacts enabling people to conduct useful conversations with the information in their environment. Information designers have available a relatively stable and powerful set of techniques for developing these artifacts to the highest standards, whether in the traditional media or in the new electronic media. This may not be apparent to those from such disciplines as experimental psychology or human factors who have taken an interest in information design issues (e.g., Laughery et al, 1994), or indeed to those from cognate crafts such as graphic design.

The experimental psychologists' exclusion of all knowledge except that derived from experiments make it difficult for them to see the other substantial and mature types of practical craft knowledge at work within the field. But then I think the psychologists' search for invariant laws of human behavior, regardless of context, is philosophically at odds with our attempts to solve practical problems of conversation, in a particular culture, at a particular historical moment.

Graphic designers have often assumed, incorrectly, that information design is just a specialism within their own craft, failing to see the subtle but substantial difference between their own largely studio-based practice, informed by aesthetic judgment, and the information designers' contextualized interdisciplinary practice, informed by user expectations and needs. As information designers we do many things that take us outside the studio, both conceptually and practically.

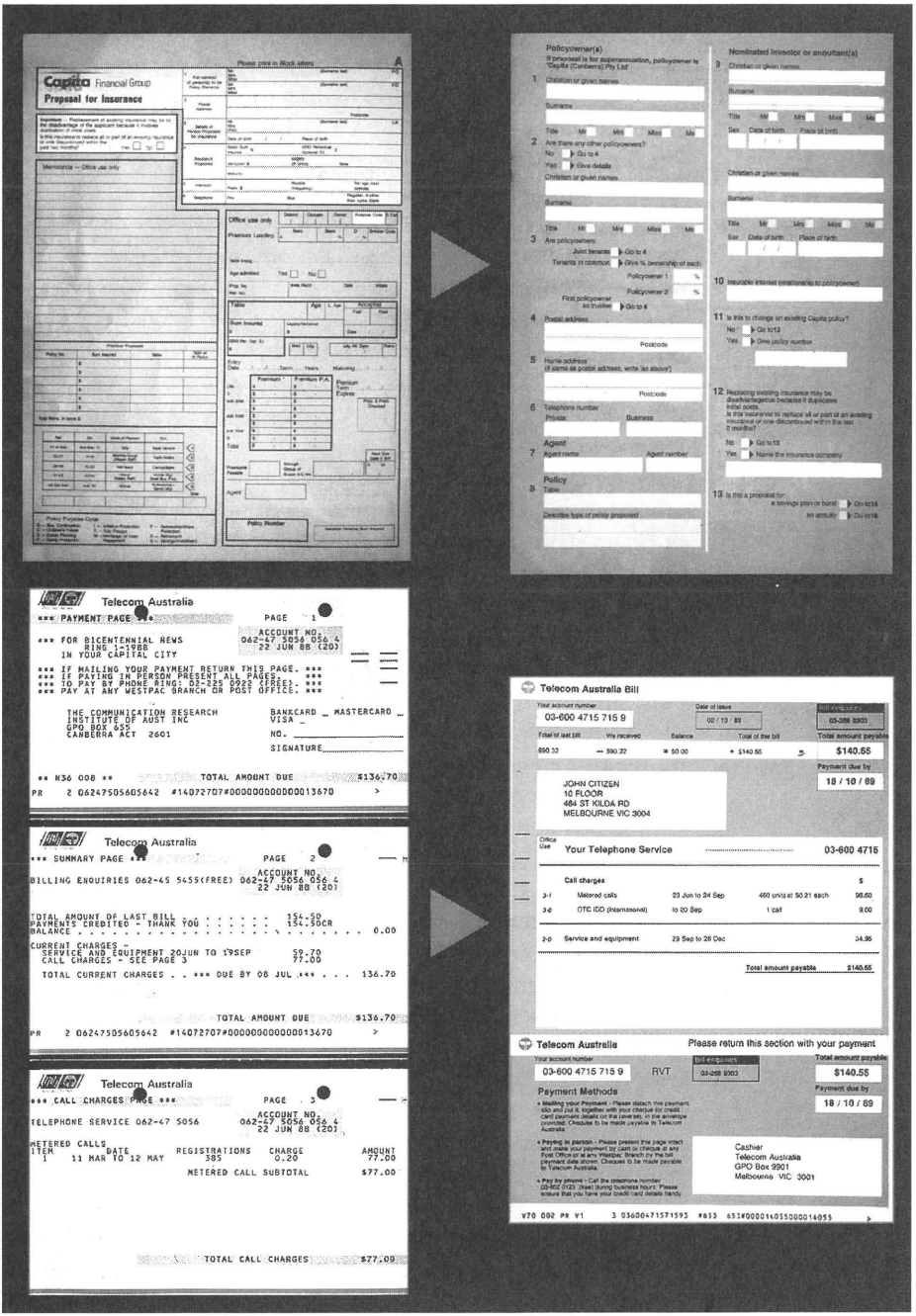
Not withstanding these professional blind spots in our colleagues, the maturity of information design can be seen if we take a broad view, encompassing within our craft the many lessons from the general field of design methods (e.g., Jones, 1980), from specific studies in information design methods (e.g., Sless, 1978), from the growing field of design for human computer interaction (e.g., Nielsen, 1993), and from the growing body of valuable case histories in our field (e.g., Waller, 1984, Fisher and Sless, 1990; Penman and Sless, 1992).

Looked at from this vantage point, it is possible to discern the basis of a coherent interdisciplinary craft (Sless, 1992a). In this cumulative tradition we can discern a continual refinement of a process for managing dialogues. The emergence of rapid prototyping and iterative testing as one of the central components of information design methods is no accident, but a clear indication of the dynamic conversational process that is at the heart of information design. Just as in everyday conversation, where meanings emerge – negotiated through the dynamics of dialogue – so too in information design we construct the outcomes as a result of a dialogue between ourselves and the eventual users of the information.

Within the profession, information designers give many different accounts of their own understanding of the craft, and give it their own distinctive emphasis. (This was apparent at two recent international meetings: the Public Graphics symposium in Lunteren in 1994 and the Vision Plus symposium in Götzis in 1995.) But through the Communication Institute's research into information design methods and the accumulated case histories cited above, the Institute now knows how to develop better information presentation, using interdisciplinary skills, testing and evaluating designs at various stages of development, and taking account of the complexity and fragility of the systems within which the designs work. We know the range of interdisciplinary skills that are needed to solve complex information design problems; we know the sequences of procedures and methods to use; and we know what types of data and crafts help us solve information design problems.

If you think my confidence in our own work seems misplaced, you should note that in the specific area of information design concerned with human computer interaction there is no lack of confidence, and in that area of activity many of the methods which we would regard as part of information design go under the much more confident, if inelegant, title of Usability Engineering (Neilson, 1993).

Figure 1:
Before and after designs of Capital insurance forms and the Telecom bill.



What do we mean by 'better'?

Implicit within any craft that claims to improve something is an ideological commitment to change something for the better. In the case of information design, we see our work within a more general framework of social improvement and reform – making information more accessible and usable for people, making better conversations possible. At the same time, to make this activity appealing to clients, we have claimed that better information design can make industry and government more efficient. Often the claims have run ahead of the evidence. But in our research program over the last ten years at the Institute, we have been collecting evidence that sheds critical light on both the claims and the evidence.

Better performance

The idea that information design can help industry and government gain efficiency and productivity has been borne out by the evidence. We have shown in a number of high-profile model projects that it is possible to achieve very substantial improvements in efficiency and productivity. For example, in our work for the insurance industry in Australia, we showed that it is possible to massively reduce the error rates on insurance application forms. In one case we reported a reduction of 97.2 percent, with savings of over $500,000 in the one year on the processing of 44,000 documents (Fisher and Sless, 1990). In another case, after the redesign of a telephone bill, complaints due to the design of the bill went down from 47 to 4 percent (Sless, 1992b).

These are spectacular cases. And it is important to note that both documents were very poor to start with (*figure 1*). In one case, the document was the victim of what I call "administrative sedimentation": a process of design neglect in which new features and pieces of information are added progressively over the years with no understanding of the overall effects of these additions on the capacity of people to use the document. In the other case, the document was a multi-page screen-dump from a poorly designed low-resolution character-based accounting system. One could argue, with some justification, that anything would have been better. Nonetheless, our measurements of productivity before and after rede-

sign demonstrate clearly that applying information design principles can improve documents.

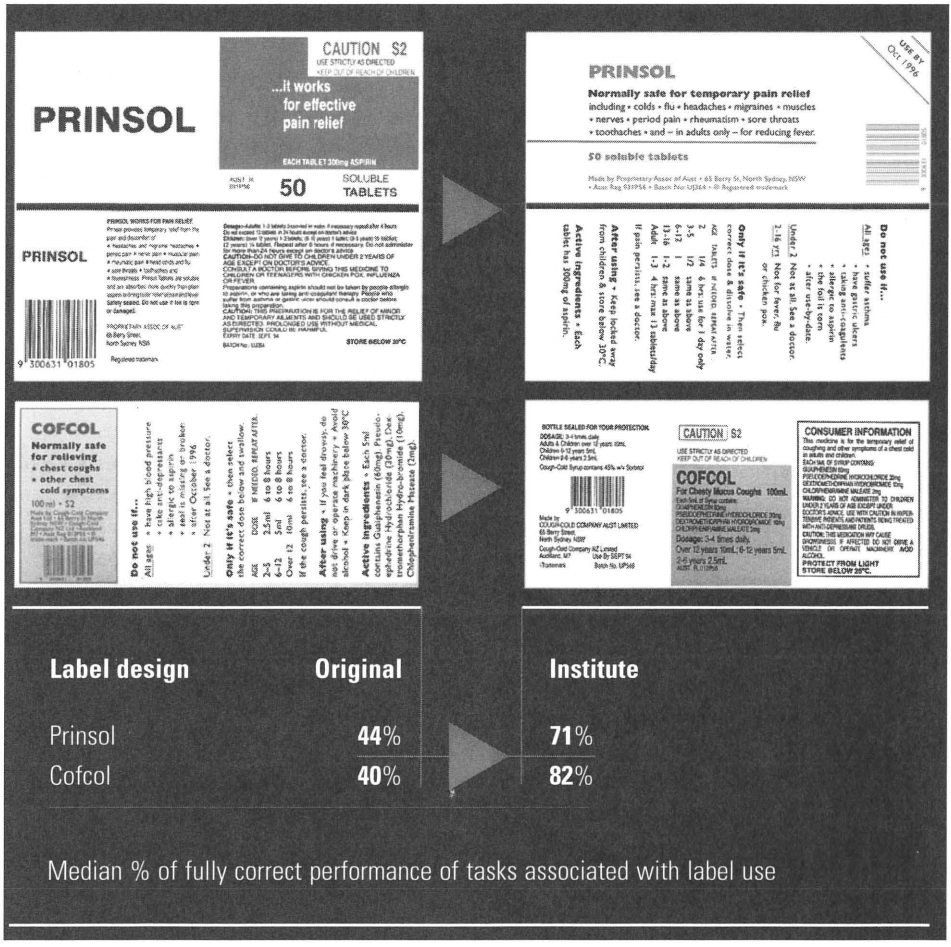
How far can we take improvements? What is an optimum performance beyond which the effort outweighs the cost?

We recently undertook a study for the Australian government into consumer product information in the pharmaceutical industry. Our purpose was to develop a set of usability guidelines for the pharmaceutical industry. We designed them to help the industry produce high quality information about medicines for consumers, in accordance with government regulatory requirements (Sless and Wiseman, 1994). As part of the study, we iteratively tested and developed a number of documents for a variety of different medicines, and concluded that ninety percent of the literate population could be expected to find specific information on the documents, of whom ninety percent could be expected to use the information they found appropriately. In the guidelines, therefore, we set the minimum standard at eighty percent. In practice, most documents about medicines which use our guidelines exceed this standard. This compares with an average of fifty percent in previously reported studies.

In another study, in which we attempted to make improvements to medicine labels, we specifically tested older people who are known to have problems with the use of medication (Rogers et al, 1995). With this group we managed to achieve significant improvements over previous attempts, though rarely reaching the same level of performance as in the study to develop usability guidelines. The reason, apart from the specific limitation of the group we tested, was the limitation that the packaging size imposed on the presentation of the label's information.

The methodology for improving the labels involved iterative diagnostic testing and modifications of the design to achieve optimum performance with older people. We then tested the performance of the new labels against the old. The new and old labels are shown in figure 2 which also shows a summary of the performance results for each.

Figure 2:
Before and after label designs and a summary of relative performance data.



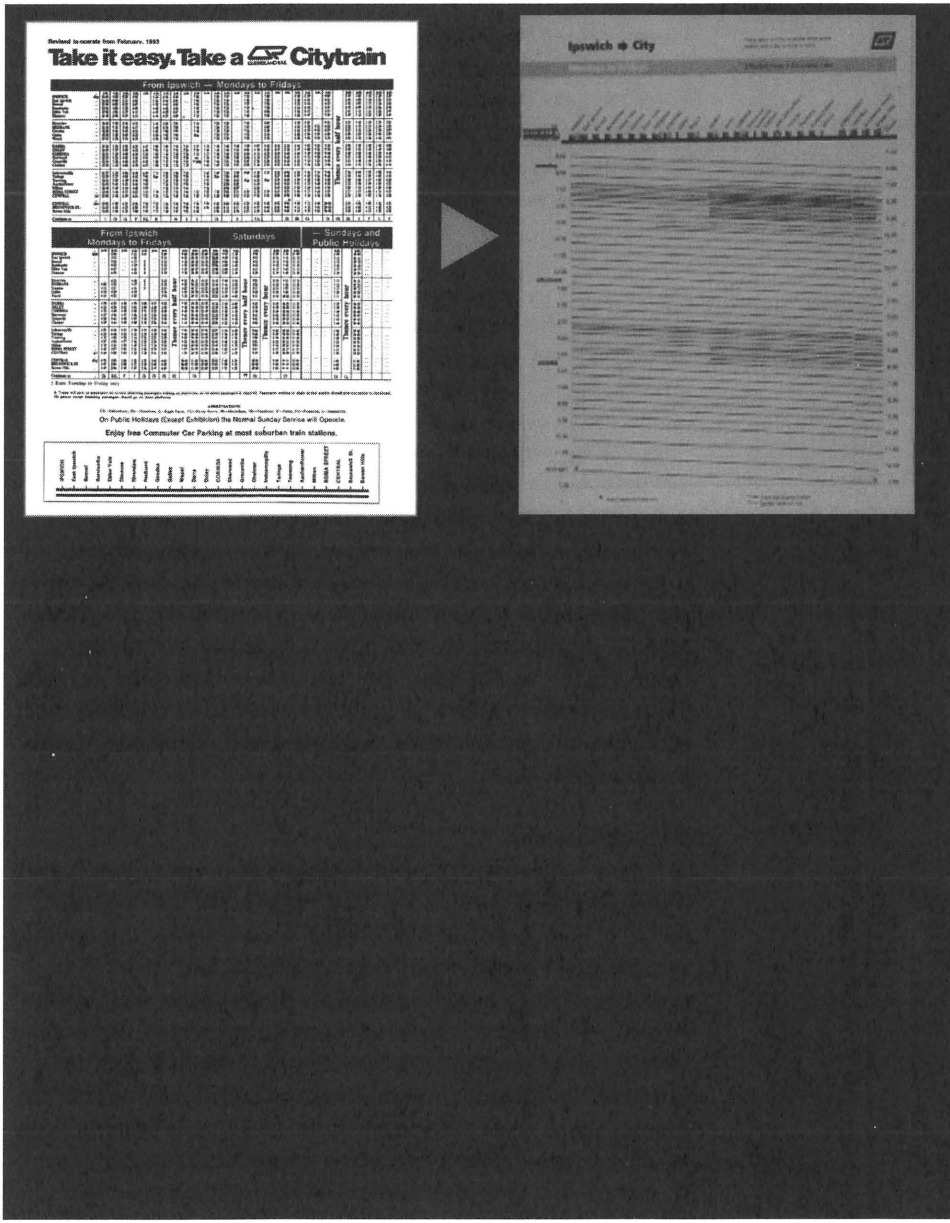
These findings have been extremely important in establishing the appropriate issues in future labelling regulations in Australia (Federal Bureau of Consumer Affairs 1995, Industry Commission 1995). This suggests that information design may be useful politically in establishing baseline performance standards for regulating all types of consumer product information.

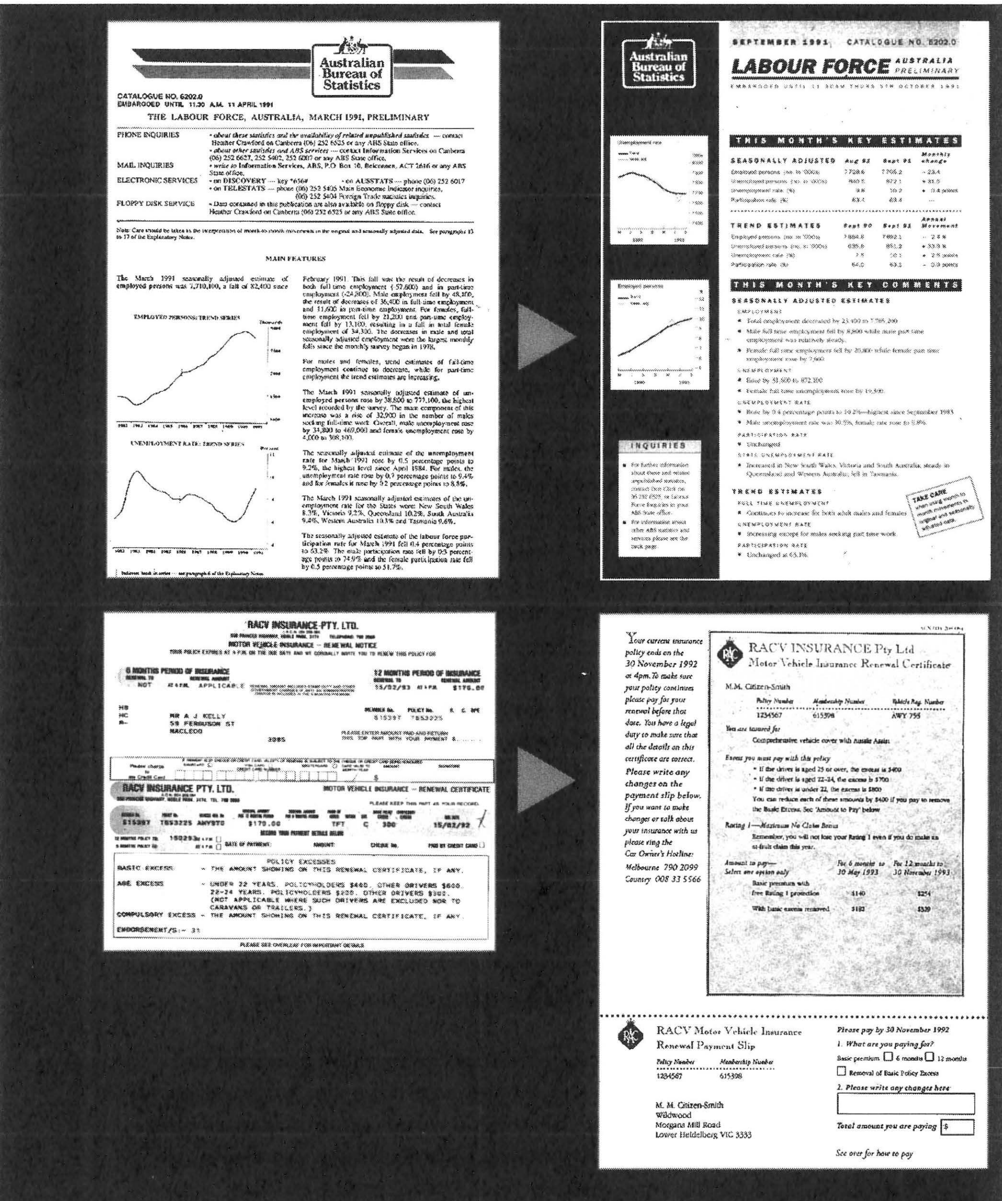
Yet these measurements of error rates and performance only give part of the picture and leave something unspoken, something of great importance. If viewed narrowly, these measurements could be taken to suggest that people are mere mechanisms whose information processing have to be optimized along with all the other mechanical components of the system. Within such an utilitarian view, the information designer's task would be entirely concerned with optimizing the transfer of information by developing suitable stimulus material. Such a narrowly behaviorist view would also suggest that human communication is merely the transmission of information. But if we look at some of the examples of the work I spoke of there is something else at work; there are other voices within the conversation than those of efficiency and performance, command and obedience, stimulus and response.

Better conversation

In figure 3 are a number of before and after examples of work undertaken by our Institute. They are two punctuated moments of conversations. The "before" examples are the opening gambits of a dialogue; the "after" examples are a brief moment of closure, following many moments in which alternatives were tried with users, changed and retried. The users were involved in a collaborative conversation in which the "after" is the outcome – a moment of agreement. The conversation is itself invisible – mute at the moment when you look at these designs – but nonetheless powerful in shaping the transition that you observe. Something has happened in this process that is far more than the optimization of information transfer.

Figure 3:
Three examples of before and after designs which achieved improvements in performance: a train schedule, a statistical report and an insurance form.




Australian Bureau of Statistics

CATALOGUE NO. 6202.0
EMBARGOED UNTIL 11.30 A.M. 11 APRIL 1991

THE LABOUR FORCE, AUSTRALIA, MARCH 1991, PRELIMINARY

PHONE INQUIRIES
MAIL INQUIRIES
ELECTRONIC SERVICES
FLOPPY DISK SERVICE

MAIN FEATURES

The March 1991 seasonally adjusted estimate of employed persons was 7,710,100, a fall of 82,400 since

EMPLOYED PERSONS: TREND SERIES

UNEMPLOYMENT RATE: TREND SERIES

Australian Bureau of Statistics

SEPTEMBER 1991 CATALOGUE NO. 6202.0

LABOUR FORCE AUSTRALIA PRELIMINARY

THIS MONTH'S KEY ESTIMATES

SEASONALLY ADJUSTED

TREND ESTIMATES

THIS MONTH'S KEY COMMENTS

SEASONALLY ADJUSTED ESTIMATES

TREND ESTIMATES

INQUIRIES

TAKE CARE

RACV INSURANCE PTY. LTD.

MOTOR VEHICLE INSURANCE — RENEWAL NOTICE

6 MONTHS PERIOD OF INSURANCE

12 MONTHS PERIOD OF INSURANCE

MR A J KELLY
59 FERGUSON ST
MACLEOD

RACV INSURANCE PTY. LTD. MOTOR VEHICLE INSURANCE — RENEWAL CERTIFICATE

POLICY EXCESSES

BASIC EXCESS

AGE EXCESS

COMPULSORY EXCESS

ENDORSEMENT/S:- 31

PLEASE SEE OVERLEAF FOR IMPORTANT DETAILS

Your current insurance policy ends on the 30 November 1992 at 4pm. To make sure your policy continues please pay for your renewal before that date. You have a legal duty to make sure that all the details on this certificate are correct. Please write any changes on the payment slip below. If you want to make changes or talk about your insurance with us please ring the Car Owner's Hotline: Melbourne 790 2099 Country 008 33 5566

RACV INSURANCE Pty Ltd
Motor Vehicle Insurance Renewal Certificate

M.M. Citizen-Smith

Policy Number	Membership Number	Vehicle Reg. Number
1234567	615398	AWY 795

You are insured for
Comprehensive vehicle cover with Aussie Assist

Excess you must pay with this policy
- If the driver is aged 25 or over, the excess is $400
- If the driver is aged 22-24, the excess is $700
- If the driver is under 22, the excess is $800

You can reduce each of these amounts by $400 if you pay to remove the Basic Excess. See 'Amount to Pay' below

Rating 1—Maximum No Claim Bonus
Remember, you will not lose your Rating 1 even if you do make an at-fault claim this year.

Amount to pay— Select one option only	For 6 months to 30 May 1993	For 12 months to 30 November 1993
Basic premium with free Rating 1 protection	$140	$254
With basic excess removed	$182	$320

RACV Motor Vehicle Insurance Renewal Payment Slip

Policy Number	Membership Number
1234567	615398

M. M. Citizen-Smith
Wildwood
Morgans Mill Road
Lower Heidelberg VIC 3333

Please pay by 30 November 1992

1. What are you paying for?
Basic premium ☐ 6 months ☐ 12 months
☐ Removal of Basic Policy Excess

2. Please write any changes here

Total amount you are paying $

See over for how to pay

First, it is important to understand something of the quality of the conversation that has taken place. The quasi-scientific term "testing" is often used to describe what goes on between information designers and users at the moment when a designer consults a user. But this terminology is misleading. These moments of dialogue are social occasions between people, not events between experimenter and subject. In our construction of these social occasions we try to make clear to the participants we invite to help us that we are seeking their advice; we want to understand the problems they have while trying to use the designs. We usually suggest that someone else is responsible for the design, so that they do not feel under an obligation to be kind to us by being kind about the design before them. Our job, as we describe it to the participants, is to find out what is wrong with the design, so that we can advise others what to do to change it. Thus we create a three-cornered dialogue between ourselves, the participant and the design, in which we interrogate the faults in the design. As part of this dialogue, we usually ask participants to perform certain tasks with the designs, asking them to identify problems as they proceed. We also observe and note the moments when problems occur. While we obviously control the social occasion and many of the tasks performed within it, we provide many opportunities for open-ended dialogue in which the participants can control the direction of the conversation. Underlying this process is one of respect for and interest in the words and actions of the participants. It is their view of the design that is given legitimacy and which is articulated in the conversation. Thus the before and after cases that you see in figure 1 are the punctuated moments of an extended conversation, the result of a dialogue that respects the participants' voice.

Second, between these two moments there has been the application of information design skills; the language, graphics and typography of the designs have been transformed and refined, making the objects not only usable but also more appealing and pleasant. Participants in our "testing" vary greatly in their capacity to articulate and recognize the visible evidence of design skills. They make comments about the improved versions, such as "it looks professional," "it's easy to

read," or "it's nice to look at" which give a sense of something underlying what is articulated.

Here we begin to see how our contemporary concern for performance blends with Stiff's concern for traditional aesthetics. Our strong advocacy of performance-based assessment does not constitute a dismissal of aesthetics, as Stiff (1995:44) says. On the contrary, our design processes take account of the "look and feel" of a design, to use Stiff's phrase, and indeed we take care to evaluate the aesthetic performance of designs. But I would like to give this traditional concern a new inflection, more consistent with our craft of information design and with our sense of communication as conversation.

I believe that our improved versions give users a sense that the designers respect and care about both the information and the people who have to use it. Users of these designs can see that pain has been taken, time and effort have been expended, and craft has been deployed; the design speaks, as it were, in a voice that the user can understand. But, importantly, this is not a conversation in which one of the parties shows off. Unlike the designs that win awards – the outcome of conversations amongst designers displaying their skills to each other – these designs speak with a modest voice, taking a place in the conversation that is respectful of the other voices and listeners in the dialogue. These designs offer the possibility of a good conversation.

Satisfying the consumer

It is the possibility for good conversation which I now want to turn to, and within this possibility I shall explore notions of satisfying the consumer. Information design, like other forms of public communication, is concerned with managing a relationship; it is a kind of managed conversation. The designer presents information with which the users can interact. It is out of this interaction that users generate meaning and understanding, and it is this kind of interaction which can be seen as a special type of conversation. The designer is setting up and managing a conversation between the information and the user. This is why I want to argue that the notion of good *conversation* is a more suitable way of discussing aesthetics in

information design than the traditional way of looking for aesthetic value in appearances.

There are three obvious senses of good when applied to conversation: the functional, the pleasurable and the moral. I want to suggest that these are also essential for good information design.

First, I can say that conversation is good functionally because I find it effective, I can use it to perform a task correctly. I can engage appropriately in the conversation, there is a sense of shared understanding. This is often what is meant when people talk about good design. It is also the sense in which I began talking about better information design. Second, I can say it is good in a pleasurable sense, if I find it delights the senses. Third, the conversation is good morally if it respects and values all participants. The process of iterative development through conversation that I described earlier is a practical manifestation of this at work, the effect of which should be apparent to users of the final design.

The visible deployment of care and craft works in two directions: it informs the consumer that the author of the information regards the information as sufficiently important to employ sophisticated design skills in its production; and it dignifies the consumer's use of the information with importance and value by making the information accessible and usable. This is the basis of a good conversation, one that is effective, pleasurable and properly respectful of the participants.

Deceptive conversations

But not all conversations are good. Let me give you an example of a type of conversation that we find worrying and not good.

In some of our work we have been critical of the plain language movement (Penman, 1992 and 1993; Sless, 1993 and 1995). Some have been surprised by our criticism. After all, the intent of the plain language movement is in many respects congruent with our own – plain language advocates want to

make written information clear and accessible. However, the problem is not with the intent but with the practice. Our criticism has been partly on functional grounds: plain language advocates have claimed that they work in the interests of the reader but they consistently fail to offer evidence from readers in support of this claim. Moreover, we have found in our research and practical information design that there are so many factors to take into account in developing good information designs, apart from the language, that calling the practice "plain language" is grossly misleading.

For example, in a recent review of best practices in forms design (Sless, 1994), I listed the following stages:

1. Identify the dominant voices in the organization's dialogue.
2. Decide what information needs to be collected or given.
3. Find out who are the users of the form.
4. Find out about the context in which the information is to be collected or given.
5. Develop a prototype of the form.
6. Test the form with users to see if it works.
7. Modify the form in the light of the testing.
8. Repeat testing and modification at least three times.
9. Introduce the form on a small pilot scale.
10. Modify the form on the basis of the results from the pilot.
11. Introduce the form.
12. Monitor the form in use, measuring against known benchmarks.

Using language appropriately (not necessarily following plain language principles) is, of course, used in some stages of forms design, but it is typically a small component in information design projects. Our experience suggests that the time devoted to "plain language" within any such team project can sometimes be as low as five percent of the total effort. Further, if one looks at the total range of skills involved in a project, one can see additional reasons why the overall title of "plain language" is misleading. Wright (1984) suggested that in addition to a skillful control of language, good forms design required skills in typography and research methods and a capacity to

interpret relevant research findings. Our subsequent research suggests that one should add skills in design methods, organizational management, organization and methods, information management and philosophical reasoning (Sless, 1992a). Forms design, like other aspects of information design, is a craft which usually involves a team of skilled people rather than a single individual. From such experience, you may well understand why I regard "plain language" methods as a misleading description of information design.

There is, however, a deeper criticism concerning the morality of plain language. I can illustrate this clearly with some recent evidence from plain language advocates themselves.

The Life Insurance Federation of Australia (LIFA) recently employed some plain language advocates to develop model insurance documents for the industry. The documents were tested by an independent market research group. Part of the data collected concerned people's preference for the new versus the old insurance policy documents. On the basis of this evidence the Chairman of LIFA proudly claimed that: "The research showed that respondents overwhelmingly preferred the structure used in the [new policy] "(12). On the face of it this might seem like good evidence of consumer satisfaction. However, as many in the research community know, preference data taken prior to usage of information – simply based on the look of the document – does not predict performance. Indeed, the evidence from the LIFA study reconfirms this finding in an alarming way, and points directly to the reasons for our moral qualms about plain language. The study showed that people made many mistakes in answering questions about the document, yet showed great confidence in the document's design.

For example, eighty-four percent of respondents got the wrong answer to a test question about the meaning of policy information. Yet, and this is the important point, only four percent thought the question was difficult to answer.

In another instance, where thirty percent answered wrongly, only two percent nominated the question "difficult to an-

swer." This type of finding recurred throughout the study, leading the independent researchers to comment: "This discrepancy highlights the false confidence held by a substantial number of respondents" (11, Appendix 1). This goes to the heart of the moral-aesthetic problem that concerns us. The document was designed in such a way that it looked pleasant and simple to use, and, by using a plain language style of writing, it seemed to take the readers' needs into account; it inspired confidence. This is the easy appeal to the eye that many of us find worrying about graphic design – the seductive surface charm that serves to entertain but not enlighten.

Yet we can all imagine the reaction of the readers who eventually find themselves disadvantaged by the conditions in a contract through their misunderstanding of the document. What is their reaction at the moment they discover their misunderstanding? Our evidence suggests that in the face of incomprehensible information most people will blame themselves for the misunderstanding; they will feel stupid or negligent. After all, if the document is in plain language they *should* have been able to understand it.

We must be skeptical of strategies that suggest that by using certain formal stylistic rules we can solve communication problems. We should resist reducing the user of a text to a cipher within the formalism. Put in conversational terms, we should avoid methods that suggest that good conversation can occur without collaboration, without mutual engagement and exchange, without dialogue. Put in ordinary language, such conversations are one-sided, insensitive, unfair and possibly arrogant. Notice how these terms all speak about the moral quality of conversation. They go to the heart of a central moral question about how it is appropriate to treat one's fellow human beings.

However inadvertently, a conversation with such documents can potentially mislead people about their rights, make them feel stupid and negligent and undermine their self-esteem. This is not a good conversation. It is neither functional nor morally responsible, and in the end it is unpleasant – whatever initial satisfaction, pleasure or comfort it provided.

It has the form– the style of a good conversation – without the substance. In keeping with many other formalist strategies for "good design, such as those taught in many design schools, the plain language movement has tried to deal with complex dynamic problems by resorting to stylistic formalisms. We cannot separate form and content, aesthetic and moral considerations. This is why I have suggested that we have to talk about the moral-aesthetic dimension of our work, rather than treat these as separate concerns.

With that question in mind I turn to the final question in this paper about whether treating people as consumers is a sufficient basis for information design practice.

Is the category of "consumers" sufficient?
Describing people who use information as consumers implies a relationship of production and consumption. In conversational terms it implies one person talking and everyone else listening. This is a very limited type of relationship, but one that has become increasingly pervasive throughout the private sector – and increasingly in the public sector – wherever the pervasive ideology is consumer capitalism. This type of narrowing or restricting is occurring in many areas of public life.

For example, in Australia, a recent government policy statement on information technology in government boldly celebrated its central objective in its title: *Clients First*. On the face of it this seems like a desirable and wholly positive objective, until one realizes that the term *client* is replacing *citizen*.

The relationship between client and service provider is a limited one. I can be a client of a prostitute or a lawyer – I pay a fee, they provide a service. This is the extent of the relationship. But my relationship to government is altogether different. For example, it is meaningless to refer to my relationship with the taxation office as one of client and service provider. I cannot refuse the "service" they offer (which is to take money out of my wallet), and there are legal controls on the extent of "service" they can provide – although sometimes it seems their "service" can be too good!

Further, it is demanding to suggest that the relationship between a citizen and a government agency providing support in welfare, education or health is offering a service rather than fulfilling an obligation to one of its citizens with rights. Further still, as a citizen, one's right to a voice within a democratic society cannot be satisfied within the client/service-provider relationship. The conversation between citizen and state cannot be limited to a commercial transaction. There are mutual ties of rights and obligation that stretch from before birth till after death, and these ties cannot be easily or lightly broken or taken up.

Thus the category of consumer or client cannot adequately deal with the full range of relationships that may be possible between people and information, any more than listening to the voice of a single speaker defines the full extent and range of conversational possibilities.

The information designer's responsibility

I would like to conclude with some observations about professional responsibility that arise directly from these arguments.

Clearly information design is a highly interventionist practice. If, as the evidence shows, information designers can bring about changed conversations between citizen and state, consumer, and corporation – making information more accessible and usable – then the question of what counts as "better" cannot be treated lightly. The design practices that make things "better," are bound by special responsibilities and obligations which must be subject to critical review.

There is something special about design that is sometimes forgotten or taken for granted. Designers create things that do not presently exist. In however small a degree, they are creating what Christopher Jones aptly describes as "seeds of human futures" (1970). This places designers always in a position of some responsibility.

It is with this responsibility in mind that I return to the question about the moral-aesthetic dimension in information

design. Through this dimension, at the point where the physicality of the design and the relationship with the user coalesce, one can discern the quality of the relationship that information designers set up between people and information; one can see how designers position the subject within the discourse that they manage. Fundamentally, this becomes a moral question; how is it appropriate to treat other people? As so many objects of ordinary life – forms, interfaces, timetables, legal documents and signposts – are badly designed, designing them well can be a critical intervention into the status quo. Design can be, as Manzini has observed, a form of social critique (Manzini, 1995). As such, the particular moral-aesthetic dimension of information design should have a very distinctive quality, and one should not expect to judge it by the same criteria that apply to, say, mainstream graphic design in the service of consumer capitalism.

One needs to understand that information design is a social practice that works through and at times against the prevailing systems of social organization in which it is located. I tend to think of information design, at its best, as lending a quiet dignity and politeness to everyday life. But doubtless there are many other ways in which to articulate these issues. Indeed, one of the important tasks that lie ahead of us in developing our craft is to articulate a critical moral-aesthetic vocabulary that is suited to judging information design work. This task is an essential part of developing a mature craft.

Acknowledgment

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References

Federal Bureau of Consumer Affairs. 1995. *Issues Paper 2: Consumer Product Labelling.* Canberra: Australian Government Publishing Service.

Fisher, P. and D. Sless. 1990. Information design methods and productivity in the insurance industry. *Information Design Journal,* 6:2, 103-129.

Industry Commission. 1995. Draft Report: Packaging and Labelling. Melbourne: Industry Commission.

Jones, C. J. 1970. *Design Methods: Seeds of human futures.* London: Wiley-Interscience.

Laughery, Kenneth R. Sr, Michael S. Wolgater and Stephen L. Young, editors. 1994. *Human Factors Perspectives on Warnings: selections from Human Factors and Ergonomics Society Annual Meetings, 1980-1993.* Santa Monica, California: The Human Factors and Ergonomics Society.

MacKenzie, M. 1994. *Developing design through dialogue: alternative transport information systems.* Presented at the Public Graphics Conference, Lunteren, The Netherlands, 26–30 September 1994.

Manzini, E. 1995. *Dynamics of change.* Keynote speech ICSID '95 Taipei, October 1995.

Nielsen, J. 1993. *Usability Engineering.* Cambridge, Massachusetts: AP Professional.

Penman, R. and D. Sless, editors. 1992. *Designing information for people.* Canberra: Communication Research Press.

Penman, R. 1992. Plain English: Wrong solution to an important problem. *Australian Journal of Communication,* 19:3, 1–18.
–. 1993. Conversation is the common theme. *Australian Journal of Communication,* 20:3, 30–43.
–. 1993. Unspeakable acts and other deeds: A critique of plain legal language. *Information Design Journal,* 7:2, 121-132.

Rogers, D. 1994. Artifacts of conversations: bills and organizations-public dialogues. Presented at the Public Graphics Conference, Luntern, The Netherlands, 26–30 September 1994.

Rogers, D., A. Shulman, D. Sless and R. Beach. 1995. *Designing better medicine labels: Report to PHARM.* Canberra: Communication Research Institute of Australia.

Sless, D. 1978. Definition of design: originating useful systems. *Design Methods and Theories,* 12:2, 123–130.
–. 1979. Image design and modification: an experimental project in transforming. *Information Design Journal,* 1:2, 74–80.
–. 1992a. What is information design? In Sless, D. and R. Penman, editors. *Designing information for people.* Canberra: Communication Research Press, 1–16.
–. 1992b. The Telecom Bill: redesigning a computer generated report. in Sless, D. and R. Penman, editors. *Designing information for people.* Canberra: Communication Research Press, 77–98.
–. 1993. Plain English stories. *Communication News* 6 :5, 1–3

Sless, D. (1994) Public Forms: designing and evaluating forms in large organizations. Invited keynote address presented at the Public Graphics Conference, Luntern, The Netherlands, 26-30 September, 1994.

Sless, D. (1995) The Plain English Problem. *Australian Language Matters* 3:4.

Sless, D. and R. Wiseman. 1994. *Writing about medicines for people: usability guidelines and glossary for consumer product information.* Canberra: Department of Health and Human Services.

Waller, R. 1984. Designing a Government form: a case study. *Information Design Journal,* 4, 36-57.

Designing Bilingual Books

for children

SUE WALKER

VIV EDWARDS

RUTH BLACKSELL

Designing bilingual books for children

Hodgson and Saronak in an earlier volume of this journal (1987, 20) introduce the notion of 'languages in contact' and 'languages in conflict' in discussing bilingual typography. In this paper we want to look at these notions in a specific context – that of the design of bilingual children's books.

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This topic was one of the focuses of The Multilingual Resources for Children Project undertaken at The University of Reading, United Kingdom from 1992-4. The aim of this Project was to investigate the nature and use of multilingual resources for reading, writing and speaking and listening in United Kingdom primary schools. The languages the Project was concerned with – Chinese, Gujarati, Bengali, Urdu and Panjabi – are the five most widely used languages other than English in the United Kingdom. The main focus of the Project was resources for reading: both single language and dual language books.

It was clear from the outset that this Project straddled three disciplines: education, linguistics and typography. This interdisciplinary mix has been the fermentation ground for new perspectives on producing and using resources in and for multilingual schools. The research team for the Project brought together speakers of all the Project languages as well as teachers, typographers and linguists. To return to Hodgson and Saronak: "...it is necessary to cross the boundaries which traditionally have separated the various disciplines devoted to language phenomena fields as diverse as sociolinguistics, the comparative study of two or more languages, as well as typography and the analysis of literary texts – all have a contribution to make to the study of 'languages in contact and/or conflict.'"

Languages in contact

Dual language books provide a good example of "languages in contact." The design of such books

raises some interesting issues for typographers ranging from the choice of typeface to graphic organization of two languages on a page. Dual texts for children pose additional questions because they contain pictures: where should the texts be placed in relation to the pictures? Design issues such as these are discussed in full in *Multilingual Matters, building bridges: multilingual resources for children* (1995).

In the United Kingdom dual texts have been available since the early 1980s; the first of these were folk tales and myths probably because the subject matter transfers easily across languages. More recently publishers have added other languages to already popular English titles. Many dual texts, however, are published locally using local writers, translators, artists and calligraphers.

The use of dual texts in schools is somewhat controversial. While good resources are necessary for success, they will only work in schools where linguistic diversity is regarded as an asset, not a problem, and where teachers recognize that appropriate resources are not an answer in themselves, but just one part of a much wider response. What emerged from our discussions with teachers and children was that there were many perceptions about the place of dual texts in the classroom. When they were first introduced in the United Kingdom they were favorably received and seen as being useful to monolingual and bilingual children alike. Their more recent arrival in Canadian schools has met with equally favorable reactions (see Feuerverger, 1994).

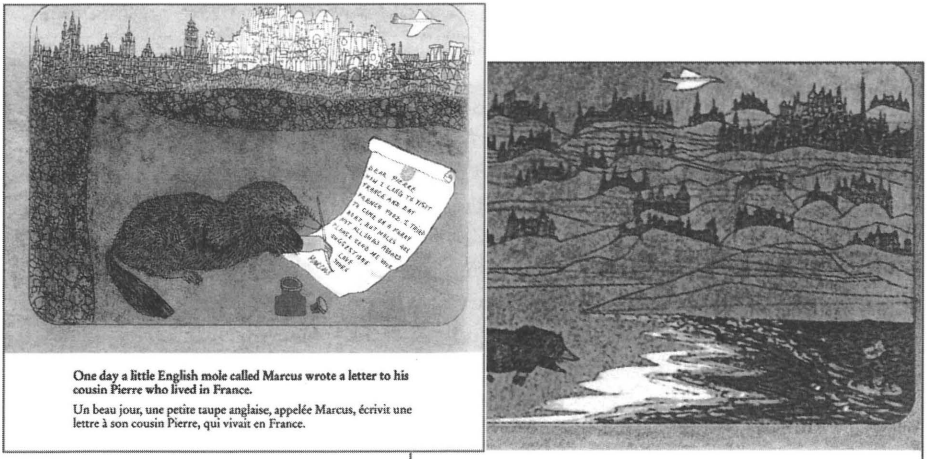
Teachers in our project schools identified various uses for dual language books. Like their Canadian colleagues they saw the potential for raising all children's awareness of multiculturalism through exposure to different languages and scripts. They also saw dual texts as a valuable bridge between home and school making it possible, for instance, for parents, grandparents and others literate in the community language to read with their children. However, teachers in community schools in the United Kingdom are sometimes adamant that dual texts are unhelpful in community language teaching

because they encourage children to concentrate on English at the expense of the other language.

Children we spoke with (both monolingual and bilingual) were positive about dual language books. An eleven year old, for instance, pointed out that: *You can work with an adult and learn how to read Gujarati at the same time as reading English ... Those who don't know English can read the Gujarati and those who don't know Gujarati can read the English.* Monolingual children spoke of reading the non-English text for fun. They also offered interesting insights into the kinds of hypotheses they were developing about how different languages work. Some children clearly think that word order remains the same irrespective of the language, and that, in translation, the two texts can be matched word for word, with each taking up the same amount of space on the page. We also asked children: given a free choice would they take a single language or a dual language book? Some were clear that their decision would be based on the subject rather than the language format of the book. Others confirmed suspicions of the community language teachers by saying they would choose a dual text because they 'knew English better.' One child explained he would take a single language book 'otherwise I would just read the English and make no effort to read the Bengali.'

The dual texts we studied in the Project showed a range of design approaches. Some, for example, emphasized the bilingual nature of the text by exploiting the structure of the book as a whole. An example of a book that falls into this category is Brian Wildsmith's *The tunnel/Le tunnel* (OUP, 1993). This book is a dual text in French and English. The cover at one end of the book is in French and, opening the book from this end the French text is dominant (it is placed above the English text and is set in bold type). When readers get to the middle of the book they are invited to turn the book around and read from the other cover which has the title in English and opens onto pages where the English text takes the dominant role.

A few dual texts integrate the two languages at the level of the chapter: one chapter in one language, the next in another and so on. *Découvrez... who stole Granny?* (Gemini Books, 1990), for



One day a little English mole called Marcus wrote a letter to his cousin Pierre who lived in France.

Un beau jour, une petite taupe anglaise, appelée Marcus, écrivit une lettre à son cousin Pierre, qui vivait en France.

Un beau jour, une petite taupe française, appelée Pierre reçut une lettre de son cousin Marcus qui vivait en Angleterre, disant qu'il aimerait venir en France.

One day, a little French mole called Pierre got a letter from his cousin Marcus who lived in England, saying he would like to come to France.

Figure 1:
Two pages from *The Tunnel/ Le Tunnel* by Brian Wildsmith, French translation by Anne-Marie Dalmais. Oxford: Oxford University Press, 1993.

In this dual text in French and English, the French text is predominant in one half of the book, when English is the dominant language, it is placed above the other in bold type.

instance, is a bilingual 'choose your own adventure story' about a French-speaking brother and sister who are visiting their grandmother in English-speaking Ontario. The first chapter appears in two languages, the English occupying the left-hand page and the French the right-hand page. At the end of this first chapter, the reader is invited to choose between two possible routes. The language of each subsequent chapter is determined by the situation.

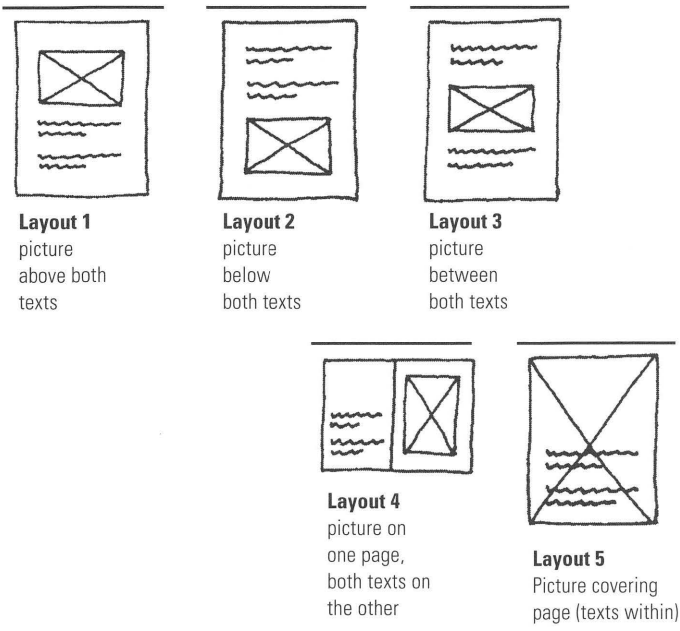
Phone conversations with the emergency operator and the police, for instance, take place in English. Conversations between the Francophone hero and heroine of the adventure take place in French. To make your way through the book, you have to use both languages.

Most dual texts, however, are designed at the level of the double-page spread or single page. In some examples, text and illustrations fall in the same position on the page throughout the book, in others the position of text and pictures varies throughout the book.

Dual texts arranged at the page level highlight the importance of the relationship between pictures and text as a key issue for designers of children's books and one that needs careful consideration (see Goldsmith, 1984 and Smith and Watkins, 1972). In dual texts this relationship has the additional dimension of another text – it is a picture/text/text configuration that has to be considered.

Take first the arrangement of the two texts. By far the most common configuration is for texts to be placed one above the other. Sometimes texts are placed side by side and occasionally one text runs vertically, the other horizontally. When pictures are added, possibilities for page layout increase as illustrated in the following table. Here the texts are consistently placed one above another, but the way the picture is placed in relation to these texts produces very different-looking pages.

Table 1:
Ways of organizing text and pictures in dual texts



Layout 1
picture above both texts

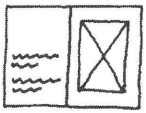
Layout 2
picture below both texts

Layout 3
picture between both texts

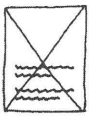
Layout 4
picture on one page, both texts on the other

Layout 5
Picture covering page (texts within)

The effectiveness of a particular page design relates closely to how a book is read – it became clear in our research that dual



Layout 4



Layout 5

texts are used in many different ways. In the Project schools they were read by monolingual and bilingual teachers with large or small groups of children or by children on their own. Sometimes the whole story was read (or paraphrased), first in one language, then in the other; sometimes the languages were alternated one page at a time, and at other times the less familiar language was read using the more familiar one as reference. It was clear there were many variables: age of child, whether the book was used in a mainstream or community school, whether the book was to be read aloud.

We asked teachers for their views about three widely used layout options (table 1, numbers 3,4,5).

• **Layout 3** where the two texts are separated by a picture tended to cause concern in community schools because it was feared that children would read only the English without referring to the other language. Some teachers (in mainstream schools), however, preferred this layout because in some teaching situations the English could be covered up and the other language focused on.

• **Layout 4** where the picture takes up one page of a double-page spread, supports reading strategies where both languages are read together. It also allows teachers to use pictures independently of the text, a useful strategy with inexperienced readers. A bilingual infant teacher confirmed this: *If the texts are on one page and the picture on the other, you can cover the text and talk about the picture – with the younger ones I prefer something like that.*

• **Layout 5** is where the picture covers the whole page and the texts are placed one above the other. Some teachers thought it better to keep text and pictures separate and were concerned that the position of the texts is likely to change from page to page because they have to be fitted in where there is space within the illustration.

Our conclusions about the close relationship between the arrangement of a dual text and its effective use would suggest that designers of these books need to have a clear understand-

	issues	key questions
Typography	One script takes precedence over the other.	Are typographic features such as size, space, weight and color applied consistently across both languages?
Production	One script is of a higher quality than the other.	What messages are sent to readers when the English text is typeset, and the other is handwritten?
Language	The typography/page layout has been compromised because of the printing process.	Has the other language been squashed in to fit an existing single language page layout?
	The translation of the non-English text is inappropriate.	Is the translation suitable for educational use?
	The text is inaccessible to the audience.	Is the language too formal or literary?

Table 2: Issues and questions in bilingual publication

ing of such issues before they can begin to design effectively for a bilingual audience.

Languages in conflict

The main motivation for producing dual language books has been to increase the status of minority languages; but ironically, inadequate attention to typography and translation sometimes has the opposite effect. Here we have a potential situation of "languages in conflict": it was clear from the outset that there were many ways that one language can be perceived as being more important than another. Some of these issues are summarized in table 2.

Giving both languages equal typographic status can be problematic when Latin and non-Latin scripts are combined. Successful integration of both languages depends in part on being aware of technical problems of typesetting and of linguistic and graphic conventions. Designing for children adds another dimension: the typography in both languages must be appropriate for young readers. The Project fieldwork gave clear indications as to which design features were thought by teachers and children to be important. These were differences

in mode of writing (whether text has been typeset, word processed or handwritten), use of space and size of type and amount of the text on the page (Multi-lingual Resources for Children Project, 1995).

Mode of writing is a particular issue when combining a Latin and non-Latin script. Many books we studied had the English text typeset at high resolution with the other text either typed or handwritten. One teacher summarized the potential problems: *They'll [children] read the nicely printed professional looking [typeset] English text . . . they might look at the other subsidiary [handwritten] text. But if they have any problems at all they certainly won't consider it . . . There is a place for handwritten texts, but in a dual text both languages should be the same.* (Multilingual Resources for Children Project, 1995, 69.)

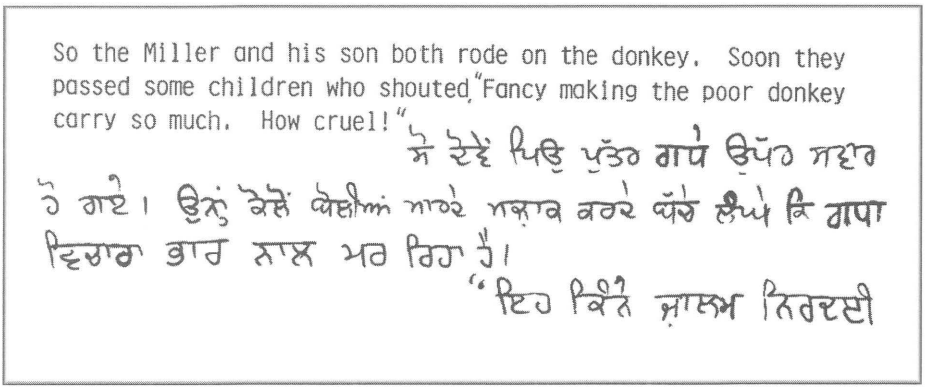


Figure 2: Detail from *The Elves and the Shoemaker and Other Tales,* English and Panjabi edition, Ilford: Newham Women's Community Writing Group, 1983.

This example shows inconsistency in line spacing from language to language.

Use of space is a key issue in typography in children's books. In the dual texts we looked at, the spacing between lines and words was often different for the two languages. Again, this can have the effect of making one language appear more significant than the other. Space as an aid to ease of reading was also noticed by children: long lines of closely spaced type were rejected in favor of shorter lines with more space between them. If one language was set with less space than the other, children immediately saw it as more difficult to read (*see figures 2 and 3*).

Size of letterforms and amount of text on the page are two characteristics readily noticed by readers. In a dual text, or indeed any piece of bilingual typography, some languages take up more space than others. In many of the dual texts we have seen, changing the size of one of the scripts is a common solution to this problem, but this raises the issue of relative size and importance. In books designed with a grid that accommodates texts of different lengths on a page, text size and spacing can be kept constant. But, when one language takes up more space than another some children expressed concern

"Little boy, check what's in my other hand."
"Nothing," said Paul. The children watched Fantismo closely. He flipped the coin with his left hand and caught it in his right. Opening his palms, each one contained a pound.

"ਕਾਕਾ, ਤੂੰ ਦੱਸ ਮੇਰੇ ਦੂਜੇ ਹੱਥ ਵਿਚ ਕੀ ਹੈ?"
"ਕੁਝ ਵੀ ਨਹੀਂ," ਪਾਲ ਨੇ ਉਤੱਰ ਦਿਤਾ। ਤੇ ਫੇਰ ਬੱਚੇ ਫੈਂਟਿਸਮੋ ਨੂੰ ਧਿਆਨ ਨਾਲ ਵੇਖਣ ਲੱਗੇ। ਉਹਨੇ ਸਿੱਕੇ ਨੂੰ ਆਪਣੇ ਖਬੇ ਹੱਥ ਨਾਲ ਉਛਾਲਿਆ ਤੇ ਸੱਜੇ ਹੱਥ ਵਿਚ ਫੜ ਲਿਆ। ਫਿਰ ਉਹਨੇ ਆਪਣੀਆਂ ਖੁਲੀਆਂ ਥੱਲੀਆਂ ਤੇ ਦੋਹਾਂ ਵਿਚ ਇੱਕ ਇੱਕ ਪਾਊਂਡ ਦਾ ਸਿੱਕਾ ਸੀ।

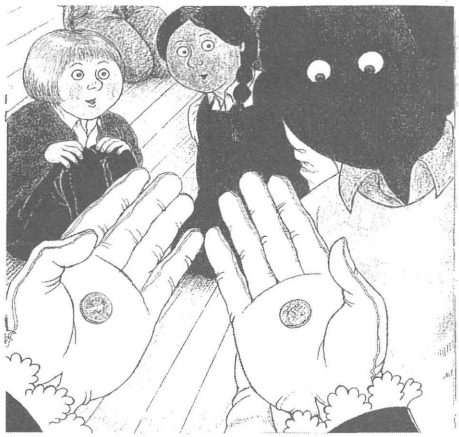
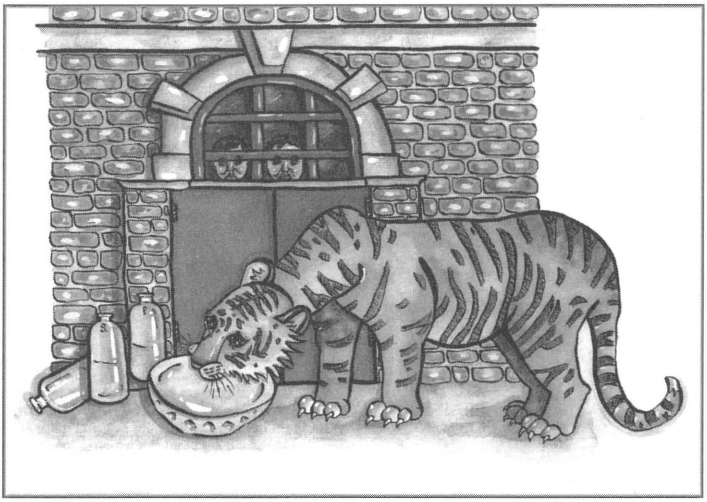


Figure 3:
Detail from *Anita and the Magician* by Swaran Chandan. Hayes: Magi Publications, 1987.

This book was consistently singled out by children as a 'good example.' They noted that both typefaces looked the same size and that the type was set with plenty of space around it.

about the balance between the two languages and thought that one had more to say than the other.

Designing in two languages raises many other questions. Even in languages that use the Latin alphabet there can be visual anomalies. A typeface that works well in English, for instance, can have a different visual effect in other Latin-script languages, and may even reduce the legibility of the text (Szanto, 1972). When Latin and non-Latin forms are combined in the same document, there are other concerns. Lubell (1993), for instance, raises some of the issues involved in trying to typeset Hebrew and non-Hebrew texts: problems of alignment, directionality and use of graphic conventions.



Then Haruna had a problem. "There's a tiger in my classroom," she said. "My teacher is sitting on top of the cupboard and he's too frightened to come down."

All the children in the playground knew what to do. They all said immediately...

"Send for Sohail!"

Now whenever Sohail was sent for, he always came, quick as a flash.

"A tiger," he remarked . "That's only a small problem. Didn't you know that tigers love milk?" and he went to the milkman and got thirty bottles of milk.

"Come on tiger," he shouted, as he poured all the milk into a dustbin lid. The tiger looked wary, but very slowly came out and had a big, big drink. Then before the tiger could blink, Sohail slipped a skipping-rope around his neck and took him back to the zoo.

4

پھر ہارونہ کو ایک مُشکل پیش آئی۔ وہ بولی۔ سکول کے
کمرے میں ایک شیر ہے اور اُستاد صاحب ڈر کے مارے
الماری کے اُوپر بیٹھے ہوئے ہیں اور نیچے نہیں آسکتے۔ جو بچے
سکول کے میدان میں تھے انکو پتہ تھا کہ کیا کرنا چاہیئے۔ وہ
جلدی بول اُٹھے

سہیل کو بلا دو!

سہیل جہاں کہیں بھی تھا وہ جلد از جلد آن موجود ہوا
ارے شیر! یہ تو معمولی سی بات ہے۔ کیا آپ یہ نہیں جانتے
کہ شیروں کو دودھ بہت پسند ہے؟ دودھ والے کے پاس
جا کر وہ تیس دودھ کی بوتلیں لے کر آیا۔ اِس دودھ
کو ڈسٹبین کے ڈھکنے میں ڈال کر اُس نے شیر کو آواز دی۔
آجاؤ دودھ پی لو۔ شیر بہت تھکا ہوا تھا لیکن پر بھی
آہستہ آہستہ آگے بڑھ کر اُس نے جی بھر کر دودھ پی لیا
شیر نگاہ اُٹھانے بھی نہ پایا کہ سہیل نے اُس کے گلے میں رسی
ڈالی اور اسے چڑیا گھر تک پہنچایا۔

Figure 4:
Two pages from *Send for Sohail!* by Grange Road First School, Bradford, illustrated by Sean Pike. Bradford: Partnership Publishing, 1993.

In this example, a dual text successfully addresses the issue of directionality. The book opens from the top: an unconventional approach for both languages.

Alignment problems can occur when insufficient attention is paid to the relative sizes and inter-baseline spacing of type. Typefaces of the same nominal size may not appear the same size, for example, so a 14 point Bengali typeface may look significantly smaller than a 14 point Latin font. Also, non-Latins for desktop publishing are likely to be available in a limited range of sizes only. When choosing type for dual texts therefore, it is better to choose the non-Latin font and size first so that the Latin font can be matched to it.

Directionality is a design issue in dual texts when right-left reading languages are combined with left-right reading ones. Most dual texts incorporating right-left reading languages tend to be produced within the book conventions of left-right reading languages. Readers of the Urdu part of a dual text, therefore, have to open the book from the 'wrong' end. Some arrangements of text, however, allow for successful incorporation of right-left reading languages. Some Urdu/English books which have been designed as dual texts from the outset, present innovative approaches to the problem. In *Send for Sohail!*, for example, a dual text produced by Partnership Publishing, a small community publisher in the UK, the book is designed in a landscape format opening from the top, with full-page illustrations on the top half of the spread and the text (English on the left and Urdu on the right) on the bottom half. The two languages have equal directional status and the illustrations relate equally to both texts (*see figure 4*).

When languages are placed alongside each other it is important that designers are aware that different scripts have different graphic conventions for articulating text. In figure 5 the Panjabi text has been set without any significant space between words. Such mistakes not only hinder children's reading development, but also send out negative status messages. They emphasize the importance of getting texts checked by people that are aware of the publishing conventions in the language concerned and that have some awareness of the typographic factors that may be important in helping children learn to read.

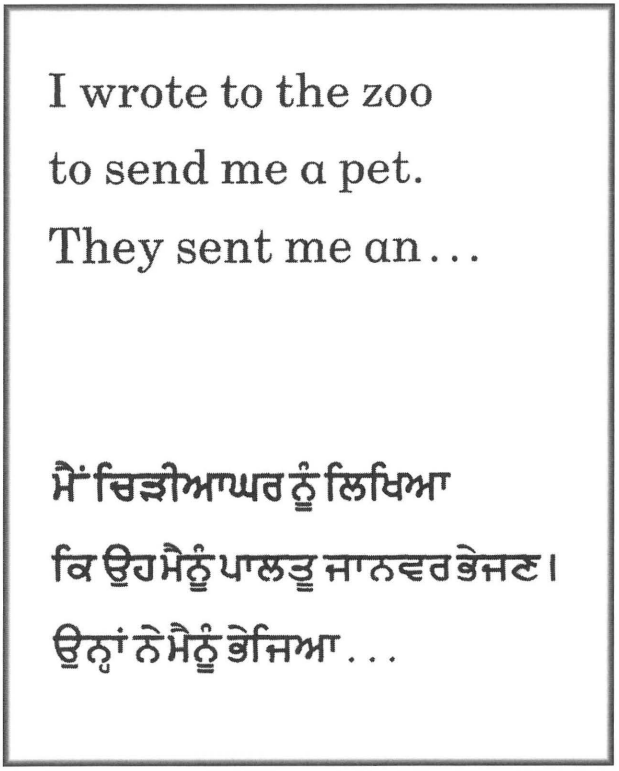


Figure 5:
Detail from *Dear Zoo* by Rod Cambell. Panjabi translation: Amarjit Chandan. London: Ingham Yates Associates, 1987.

In this example there is hardly any space between the words in the Panjabi text.

The way dual texts are produced can also have status implications. Many publishers of dual texts choose already popular books and add other languages to an existing English version. For such books to be cost-effective, the same plates are used for printing the illustrations; the other language is either fitted into available space alongside the English, or both languages are reset. Such solutions can lead to compromise: type is made to 'fit the space' rather than being redesigned for the new dual text edition. The position of the text in relation to the illustrations can also be significant because the English text can appear to take precedence if it, rather than the other language, relates to the action in the pictures.

Translation

The quality of translation is critical to the success of a book and in the course of the Project we presented native speakers with a wide selection of translated texts. The consensus was

that the quality was quite variable and many felt that poor translation lessened the effective educational use of dual texts. (This issue is discussed more fully in Edwards and Walker, 1996.) It was quite often the case, for example, that translations were grammatically correct, but stylistically flawed. This can occur when translators use standard literary language rather than the more colloquial language children are accustomed to.

Good practice in translation was shown in one of our Project case studies: Hounslow Language Service. Hounslow is a vibrant multilingual community to the west of London. The largest minority groups are Sikh and Moslem Panjabi speakers who first came to England either from the Panjab or via the east African countries of Kenya, Uganda and Tanzania. Hounslow Language Service provides support for bilingual learners both in English and their other languages. It consists of over forty teachers, forty per cent of whom are bilingual. Materials production is an important area of work for the Language Service and designated teachers are responsible for aspects such as Panjabi language support and bilingual word-processing. Bilingual materials in Hounslow are generally produced in response to varied requests from schools. Recent initiatives include materials which have grown out of a project offering advice to parents on reading; resources to support national curriculum assessment books; and vocabulary lists on different classroom topics.

Dialect variation is a particular concern for the Hounslow team. Their policy is to provide the standard form of a language but to acknowledge dialect differences and discuss them openly with children. Thus the standard Urdu word for white /səfed/ might be used, but provoke comment from children who would be more likely to use /ʧɪɽɑ/ in their own speech. Standardization across languages raises similar issues. Decisions need to be made, for instance, as to whether 'book' should be translated as /kətɑb/, the form used in both Urdu and everyday Panjabi, or /pʊstɑk/, the Panjabi alternative which is considered 'purer' and 'more educated.' Occasionally, when there is no consensus, assistants seek advice from outside ex-

perts. Transliteration is used as a matter of course in producing materials such as vocabulary lists. Although beginners in English may not know a term like 'energy,' they may well understand this concept in another language. Transliteration makes it possible for monolingual teachers to cue the meaning of a word for children who can't read the community language. It is also useful for bilingual children whose spoken skills in the community language outstrip their literacy skills. However, it isn't always easy to find an acceptable transliteration and attempts are usually tested on readers who don't know the language in question.

Hounslow Language Service, in their approach to the production of dual texts, liaison with user groups both to find out what their language needs are, and to get feedback during the writing and design process, help to emphasize that the design of effective dual texts depends on teamwork. Their work and that of other groups studied during The Multilingual Resources for Children project has clearly shown that there are significant links between the look of the book, the language used and the readers and users. The most effective dual texts are those designed with these three strands in mind.

Conclusion

Designing bilingual material is a challenging task for designers. Although the context of The Multilingual Resources for Children Project was very specific it has allowed us to identify some key issues. First, the most successful dual texts were those where potential readers of the texts were consulted during the writing/translation and design process so that their needs and the circumstances of use were taken into account. Secondly, because there has been very little research that looks at typography for children (see Walker, 1993) we would encourage investigative work in this area to find out (through trial and evaluation) what typographic solutions work best for children. Finally, on the question of status: without careful consideration of typographic and linguistic variables in designing there will be 'conflict'– the languages will not sit harmoniously together on the page.

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References

Edwards, V. and Walker, S. 1996, (in press) 'Language and design in multilingual classrooms', in M. Martin Jones and M. Saxena, editors, 1996. *Bilingual education in the UK.* Clevedon: Multilingual Matters.

Feuerverger, G. 1994. 'A multilingual literacy intervention for minority language students. *Language and Education*, 8, 3, 123-46.

Goldsmith, E. 1984. *Research into illustration: an approach and a review.* Cambridge: Cambridge University Press.

Hodgson, R. and Saronak, R. 1987. Graphic collisions: languages in conflict. *Visible Language*, 21: 1, 18-41.

Lubell, S. 1993. Bilingualism in the Hebrew text. *Visible Language*, 27: 1/2, 163-204.

Smith, J. and Watkins, H. 1972. *An investigation into some aspects of the illustration of primary school books.* Reading: Typography Unit, University of Reading.

Multilingual Resources for Children Project. 1995. *Building bridges: multilingual resources for children.* Clevedon, Avon: Multilingual Matters.

Szanto, T. 1972. Language and readability. *Icographic*, 3, 18-19.

Walker, S. 1992. *How it looks: a teacher's guide to typography in children's books.* Reading: Reading and Language Information Centre and Department of Typography & Graphic Communication.

Moti Nissani

The apprenticeship approach to *writing* instruction

"Now don't you see the difference? It wasn't anything but a wind reef. The wind does that."

"So I see. But it is exactly like a bluff reef. How am I ever going to tell them apart?"

"I can't tell you. It is an instinct. By and by you will just naturally know one from the other, but you never will be able to explain why or how you know them apart."

Mark Twain
(*Life on the Mississippi*, Chapter IX)

Introduction

This essay argues that the composition classroom should resemble a pottery workshop. The practitioner of the apprenticeship approach to writing instruction motivates her students and sets for them appropriate and engaging tasks. She fosters naturalness and places writing in a meaningful and supportive social system. She attempts to build up her students' self-confidence in themselves as human beings and as writers. She knows that practice makes perfect, and so her students learn by writing and editing. If she can, she sometimes converts her classroom into a computer-assisted writing workshop. Her students learn by editing their text on their own, and then through feedback from her and from fellow students. She teaches her students to revise texts by relying on common sense and intuition, not on an inaccessible and confusing multitude of explicit rules and strategies. She guides them towards improvements of their texts in the same way that a master-potter guides his apprentices. She employs conceptual change and guided discovery strategies. Her students learn by watching accomplished writers performing their crafts, and by reading well-written literature and prose. While her students are actually writing, she does not inundate them with corrections, abstractions and strategies, but fits her advice to the circumstances, to what she feels her students can assimilate at that particular point. She uses explicit instruction sparingly, appropriately and in context. She tries to avoid out-of-context excessive

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teaching of rules and strategies. She urges her students to focus their attention on the task at hand, not on themselves, the writing process or their audience.

This essay urges composition instructors to assign a lesser role to explication and self-consciousness, and a greater role to strategies which are consistent with, or follow from, the apprenticeship approach. In doing so, this essay largely draws upon confirmatory theoretical and experimental evidence. A more detailed discussion of seemingly contradictory theories, empirical findings and practices (e.g., Collins, Brown and Newman, 1987; Flower, 1989; Rosenshine and Meister, 1994; Williams and Colomb, 1993), would require a book-length manuscript and cannot be undertaken here.

The apprenticeship approach is directed at all audiences – natives and foreigners, kindergartners and sophomores, lawyers and plumbers. To be sure, while fourth-graders might be asked to retell the plot of E. B. White's *Charlotte's Web*, college freshmen might be asked to interpret *Once More to the Lake*. But in all such cases, the underlying educational philosophy remains unchanged.

The fundamental question of contemporary composition pedagogy

Composition instructors "do not have a unified theory to guide [their] work" (Lindemann, 1993, 316). As a result, there is little agreement in the professional literature, and in actual practice, about fundamental questions: Should we, for example, teach grammar (Hartwell, 1985)? Has literature a place in the composition classroom (Lindemann, 1993; Tate, 1993)? In modeling essays and fiction, should we try to explicitly distill the rhetorical devices which make writing powerful (Axelrod and Cooper, 1994; Hacker, 1994), or should we focus on content and let students tacitly imbibe the stylistic features of good writing (Smith, 1988)? Should we encourage writers to spend much time reflecting on the process of writing, or should we keep their attention riveted on the emerging text (Applebee, 1986)? Should we teach good writing in general, or should we teach students to write like lawyers, doctors or advertisers (Freedman, 1993)?

Many such controversies could be resolved by answering the question: Which instructional paradigm can best guide writing instruction? Before attempting to cast apprenticeship in that role, we need to be clear about the nature of apprenticeship in non-writing contexts.

Apprenticeship[1]

Many skills are only partially amenable to explicit instruction. According to Michael Polanyi (1962):

> *A skillful performance is achieved by the observance of a set of rules which are not known as such to the person following them. For example... the swimmer keeps himself afloat by... [regulating] his respiration; he keeps his buoyancy at an increased level by refraining from emptying his lungs when breathing out and by inflating them more than usual when breathing in: yet this is not generally known to swimmers... Again [does]... the rule observed by the cyclist... tell us exactly how to ride a bicycle? No. You obviously cannot adjust the curvature of your bicycle's path in proportion to the ratio of your unbalance over the square of your speed... Rules of art can be useful, but they do not determine the practice of an art...An art which cannot be specified in detail cannot be transmitted by prescription, since no prescription for it exists. It can be passed on only by example from master to apprentice... It follows that an art which has fallen into disuse for the period of a generation is altogether lost... It is pathetic to watch the endless efforts – equipped with microscopy and chemistry, with mathematics and electronics – to reproduce a single violin of the kind the half-literate Stradivarius turned out as a matter of routine more than 200 years ago. To learn by example is to submit to authority... By watching the master... the apprentice unconsciously picks up the rules of the art, including those which are not explicitly known to the master himself...*
>
> *In deciding a case today the [British] Courts will follow the example of other courts which have decided similar cases in the past, for in these actions they see embodied the rules of the law. This procedure recognizes the principle of all traditionalism that practical wisdom is more truly embodied in action than expressed in rules of action... The judge's action is considered more authentic than what he said he was doing.*
>
> *When we use a hammer to drive in a nail, we attend to both nail and hammer, but in a different way... I have a subsidiary awareness of the feeling in the palm of my hand which is merged into my focal awareness of my driving in the nail... Subsidiary awareness and focal awareness are mutually exclusive. If a pianist shifts his attention from the piece he is*

> *playing to the observation of what he is doing with his fingers while playing it, he gets confused and may have to stop... The kind of clumsiness which is due to the fact that focal attention is directed to the subsidiary elements of an action is commonly known as self-consciousness. A serious and sometimes incurable form of it is "stage-fright"... It is* ***interesting to recall that when we use words in speech or writing we are aware of them only in a subsidiary manner*** *(49-57; bold emphasis added).*

"And how easily and comfortably the [Mississippi River] pilot's memory does its work"; says Mark Twain, "how placidly effortless is its way; how unconsciously it lays up its vast stores, hour by hour, day by day, and never loses or mislays a single valuable package of them all!" (1883, Chapter XIII; see also Lave and Wenger, 1991). Despite popular conceptions of science as a realm of explicit rules and computer-like precision, many commentators feel that the tacit component is the distinguishing feature of actual scientific investigations. Speaking from first-hand experiences, Polanyi (1962) holds that scientific research is "an unspecifiable art"(53). Philosopher of science Paul Feyerabend (1993) goes farther. In his view, doing creative science in different settings does not involve one unspecifiable art, but many:

> *The events, procedures and results that constitute the sciences have no common structure; there are no elements that occur in every scientific investigation but are missing elsewhere. Concrete developments... have distinct features and we can often explain why and how these features led to success. But not every discovery can be accounted for in the same manner, and procedures that paid off in the past may create havoc when imposed on the future. Successful research does not obey general standards; it relies now on one trick, now on another; the moves that advance it and the standards that define what counts as an advance are not always known to the movers... A theory of science that devises standards and structural elements for all scientific activities... may impress outsiders – but it is much too crude an instrument for the people on the spot, that is, for scientists facing some concrete research problem... There is only one principle that can be defended under all circumstances and in all stages of human development. It is the principle: anything goes (1,18-19).*

As we have seen, mastery of an art presupposes naturalness. A good violin teacher tries to make his students as unself–conscious as he can; he avoids any advice that would put them at risk of permanently riveting their attention from the music they are playing to bystanders or to their audience, fingers, bow or shoulder. His advice is of the kind: "Wouldn't that gavotte sound better if played a bit faster?" Or "The F was a bit too flat, try it again!" It is rarely of the kind: "Play in front of a mirror!" Nor: "Write an essay about your fingering technique!" His students are told to listen to the masters, watch them and practice alone or in company. They are rarely given take-home assignments like this:

> *What happens when you replay or rethink a melody? This assignment will give you a new window on your own thinking and ask you to write a short analysis of your own process... Talk to the tape... At the end of playing have one final interview with yourself and try to describe the key points in your process as you remember it, the problems you encountered, and the playing strategies you used. These check-in interviews are very important because you will be surprised to discover how much players – absorbed in the act of playing forget about their own process even minutes later... In this assignment, we would like you to explore your own process and describe some of the thinking/playing strategies you used... There is a lot to discover about how you work as a violin player, and this evidence will help you.*[2]

In some cases, it is possible to master a complex art by intently watching a master, absent actual practice. "By watching the master... the apprentice unconsciously picks up the rules of the art, including those which are not explicitly known to the master himself" (Polanyi, 1962, 53). "Learners often need do nothing in order to learn" (Smith, 1988, 194; see also Lave and Wenger, 1991). Apprenticeship in a weaving factory in Guatemala consists in observing a skilled footloom weaver for a few weeks. Apprentices never weave, they do not ask questions and they receive little or no explicit instruction. Yet, simply by intently watching a craftsman at work, in a few weeks they master the craft (Nash, cited in Rogoff, 1990, 129). It is not surprising therefore that "one Japanese term for apprentice is *minarai*, literally one who learns by observation" (Singleton, 1989, 14).

Feedback in context is often crucial to the acquisition of an art: masters serve not only as models but also as coaches. The most useful advice is often given explicitly in response to the learner's actual performance. The advice may appeal to such things as the apprentice's aesthetic judgment or instincts. At times, it invokes an explicit rule, especially when this rule can be validated and brought to life by the novice's experiences. This occasional usefulness of explicit rules could be illustrated by citing Mark Twain again, written recollections of other apprentices, or countless literary episodes, but let me instead relate two homelier childhood experiences of my own. By imitating others, I taught myself the crawl stroke, but I couldn't swim as far or as fast as some of my companions. The turning point came two summers later, and only when a knowledgeable observer told me; "blow bubbles when your face is in the water." Similarly, I played harmonica for months, picked many tunes by ear, but these merely made the neighborhood's crows sound like gifted musicians. Again, the eureka moment came shortly after a better player gave me a rule: "harmonica players use their tongues."

The grammar of apprenticeship

No doubt there are vast differences between learning to play harmonica, ride a bicycle or carry out a creative genetics experiment; nonetheless, such activities do have common, overlapping features. At this point, we need to tentatively distill a few features of apprenticeship:

1. As in most learning situations, motivation, perceived relevance, feelings, attitudes towards the learning environment, social context, self-confidence, prior learning experiences, aptitudes and learning style, affect the rate of progress and final mastery of the craft (Freedman, 1993, 247; Pintrich et al., 1993).
2. For the most part, decontextualized expositions about performance of a craft are of limited, if any, value. No one can learn to coordinate a car's clutch, gas pedal and gearshift from lectures. One masters a craft gradually, by observing and imitating others, by comparing one's performance to those of others, by learning from one's mistakes and by being coached.

3. One learns through performing a craft in a natural setting; a would-be driver must spend time behind the wheel.
4. Much learning can occur passively, by intently watching others perform.
5. Excessive self-consciousness must be avoided at all costs. We can only do one of three things: rivet our attention on the task at hand, on our actions or on our audience. Similarly, some people have an excellent sense of rhythm but are too concerned with their own movements, or with the impression they make on others, to dance well.
6. Explicit coaching – when doled out sparingly, in context, to meet the learner's developmental needs – often plays a crucial role in the acquisition of craft.
7. A good coach is a master-teacher. Through such things as intuition, experience and caring, a good violin teacher must have tacitly acquired not only the craft of playing the violin, but the craft of teaching. She motivates her students and places musical performances in a meaningful and supportive social context. She models expert performances and expert-solving strategies. She sets appropriate, engaging tasks. She builds up her students' self-confidence in themselves as human beings and musicians. She does not endlessly verbalize the techniques of the masters. Her students learn by performing, and by hearing, seeing and interacting with better performers. She fosters naturalness. When her students practice, she fits her feedback to the circumstances.

Decontextualized learning

Not everything can be taught through adherence to these seven, tentative features of apprenticeship. Some skills benefit from, or even require, abstract instruction which is separate in time or place from practical experience. Thus, although many children master tic-tac-toe by playing the game, almost everyone can become a tic-tac-toe grand master through explicit instruction and vigilant application of rules.

As another example, consider the knottier case of backgammon. Although backgammon mastery requires a long apprenticeship, certain features of this game can be best acquired through decontextualized instruction and metareflections. Let

us imagine a single game being played for one dollar. Under certain conditions, a player may propose doubling the stakes. Also, sometimes a player knows the exact odds of winning a game. Let us say that Black is permitted to double, knows that her odds of winning are seventy-two percent, and proceeds to double. White can decline the double, forfeit the game and one dollar, and hope for better luck next game. Or White can accept the double and proceed to play for two dollars, knowing that, by the rules of the game, Black cannot re-double the stakes. Obviously, White is caught between a rock and hard place. Should he decline and cut his losses, or should he keep hope alive by agreeing to double the stakes?

Neither common sense nor experience are reliable guides to such dilemmas. I have observed the behavior of over one hundred people under similar conditions, and found that, as in so many similar cases (see Edwards, 1968; Kahneman et al., 1982), our statistical intuition is a broken reed. A few people do eventually adopt the correct rule (always accepting a double when there is a seventy-two percent chance of losing the game) either through a priori reasoning or through watching, or playing with an expert. Many play a lifetime yet fail to consistently execute the correct move.

In backgammon, then, correct reactions to doubles can be best learned through out-of-context instruction (for example, from a book). So, in this game, apprenticeship is best supplemented with abstract study of a few statistical rules and their concrete application. Moreover, until these rules are assimilated, players must self-consciously monitor their performance. To sum up, human beings can learn limited skills like tic-tac-toe in an abstract fashion. Likewise, abstract instruction is essential when people must acquire counter-intuitive rules which are not readily refuted by experience. But there is no evidence that humans can learn complex tasks through decontextualized exposure to explicit rules and strategies, or through frequently stepping back and reflecting upon their performance. There is no substitute for apprenticeship, and no royal road to mastering a craft.

Contemporary approaches to composition pedagogy

Writing, according to the apprenticeship view, is a craft. A writer need not be conscious of rules embodied in well-written texts, nor of his strategies for generating and editing such texts. A writer should, according to this view, focus his attention on the task at hand, not on his audience or on his way of accomplishing this task. A liberal dose of abstractions and self-consciousness may be useful on the therapist's couch, but it is just as damaging to writers as it is to speakers, pianists, scientists, ante-bellum Mississippi River pilots or contemporary quartermasters. To be sure, good writers possess metacognitive skills, but these skills can be best acquired tacitly through apprenticeship, through reading and writing in context, and not through abstract instruction. In more general terms, good writing instructors abide by something like the seven features of apprenticeship mentioned earlier.

In contrast, most contemporary instruction "is based on the simple assumption that we can specify a curriculum by studying what experts do and teaching our students to do likewise"[3] (Applebee, 1986, 106). In other words, most composition theorists reject the apprenticeship model of writing. Some theorists advocate the teaching of grammar, not in context (see below), but as a set of abstract rules which writers are supposed to acquire and apply to their own writing and editing. Other theorists advocate analyzing at length the characteristics which supposedly contribute to the readability of well-written essays, then urge students to try to consciously emulate these characteristics in their own writings. Still other theorists may urge students to reflect on their own processes as a gateway to good writing.

Some of these practices are based on the notion that the rules that "you don't know won't help you" (Williams and Colomb, 1993). Likewise, another theorist is puzzled by the irony "that anyone in higher education would bother to question the usefulness of conscious, reflective thought" (Flower, 1989, 185). At the core of these approaches there is this highly persuasive argument: Well-written texts embody rules of grammar, style and syntax. Experts employ well-defined strategies when they produce such texts. Once these rules and

strategies have been unearthed by meticulous research, they can be gainfully passed on to novices. And, since such rules and strategies cannot be automatically assimilated, learners must now and then stand back and divert their attention from the writing task to their own writing strategies. By and by, this process becomes second nature and a novice is transformed into an expert.

The following quotes give the flavor of the explicative and self-conscious strategies of writing instruction. College freshmen are told: "Master the essentials of the sentence as an aid to clear thinking and effective writing." "Adjective clauses or phrases are nonrestrictive when they describe (rather than limit the meaning of) the noun or pronoun they modify; set off by commas, they are nonessential parenthetical elements that may be omitted (Hodges, 1990, 2, 134-5; see also Zuber and Reed, 1993, on the importance of handbooks in writing instruction). A typical freshman composition program combines "regular instruction with a parallel set of assignments that both 'invite' and help the student reflect upon his or her own thinking and learning." For instance, students are asked at one point: "How did you handle this process [of defining a problem]? What writing/thinking strategies do you use?" (Flower, 1989, 210, 208). "Methods to encourage reflection might consist of recording students as they think out loud and then replaying the tape for comparison with the thinking of experts and other students (Collins, Brown, and Newman, 1989, 483; see also Elbow, 1973, 144; Rose, 1984, 88-9).

A widely used handbook dedicates twenty-seven pages to the comma. This discussion begins by explaining why commas are needed. To satisfy these needs, ten rules have evolved. This handbook then describes, explains and illustrates these rules. It then clarifies and illustrates important exceptions to these rules, and provides exercises for the application of these newly-acquired rules.

The first of these rules states: "Use a comma before a coordinating conjunction joining independent clauses." This is followed by definitions of "independent clauses" and "coordinating conjunctions." Students are then advised that a comma

"tells readers that one independent clause has come to a close and that another is about to begin." This is followed by an exception, stated as a rule and then illustrated. Readers are then cautioned not to use a comma to "separate coordinate word groups that are not independent clauses." This last statement is then concretely exemplified.

After similar treatises on the remaining nine rules, readers are told that "many common misuses of the comma result from an incomplete understanding" of these self-same ten rules. "Writers often form misconceptions about" these rules, either extending them inappropriately or misinterpreting them. Such misconceptions can lead to errors. There are also other misuses of the comma. These errors and misuses require, in their turn, an extended discussion of fourteen points. The first in that new series is: "Do not use a comma between compound elements that are not independent clauses," a point which is then expounded and illustrated. Following a similar discussion of the next thirteen points, the discussion concludes with a touch of the process approach: readers are advised to look at themselves as writers and to consider some common causes and cures for any difficulty they may have with commas.

Apprenticeship advocates readily concede the verisimilitude of all these rules. They admire the painstaking research which has gone into explicating this astonishing variety of points and counterpoints. When faced with a concrete writing problem, or when they must send their manuscript to a particularly hard-nosed editor, they may even look up a couple of concrete illustrations in such handbooks.

In short, apprenticeship practitioners think such rules are admirable teaching tools – for classes in linguistics (supposing linguists have no better use for their time). As these practitioners see it, such fine rules are virtually useless for writers. It will never occur to these practitioners to tell their students that the use of comma is governed by rules, let alone to explicate these rules. In the first place, they may question the naive assumption that rules – either explicit or implicit – are involved in the writing process (cf. Bereiter, 1991). In the sec-

ond place, even if they concede this point, and even if they can explicate these rules, they do their best to forget them, or at least, as in the case of philosophically trained scientists, to compartmentalize this knowledge from their writing and teaching. They believe that such rules are no handier to a writer than the rule "that curvature of the path must be in proportion to the ratio of imbalance over the square of speed" is to a cyclist. Their students are innocent of such things as rules and exceptions on how to use and not to use commas. Their students learn to use commas from reading the works of master-writers, from reading aloud their own works, from intuitively correcting typical comma errors in their own papers or in exercise books, and from expert guidance in concrete writing situations (see below).

In sum, in sharp contrast to the apprenticeship approach to writing instruction, the explicative and self-conscious approaches agree that writing is fundamentally unlike playing piano. Writing, they imply, is simple enough, or counter-intuitive enough, to require: 1) abstract explication of rules and strategies, and/or 2) moving back and forth from creating a text to reflections on the writer, writing process and audience. Given their popularity, one might expect that these approaches are based upon something a bit more solid than common sense and unsubstantiated theories. We shall now see that they are not.

Evidence for the apprenticeship approach to writing instruction

A Weaker Theoretical Basis for the Teaching of Rules

The apprenticeship approach insists that the analogy between old-time apprenticeship and learning to write is not partial (Collins, Brown and Newman, 1989), but complete. It thus wholeheartedly joins the Rousseauistic "strain of educational thought opposed to the classical, rule-based view of learning and cognition,... a strain of thought [that] has given rise to many worthwhile developments in education." It dismisses, on admittedly utilitarian and intuitive grounds, "the family of instructional theories in which rules, definitions, logical operations, explicit procedures and the like are treated as central." In doing so, apprenticeship is in entire agreement

with the connectionist view that "this family of instructional theories has produced an abundance of technology on an illusory psychological foundation[4] (Bereiter, 1991, 15; emphasis added).

Rules and strategies of writing are too complex and imperfectly known to serve as guides to writers on the spot

> *Many scholars have noted that language is too complex to be deliberately and consciously learned one rule at a time. This argument has been made for the acquisition of grammar, spelling, phonics, writing style and vocabulary* (Krashen, 1993, 4).
>
> *Not only can we recognize 50,000 words on sight – and also, of course, by sound – we can usually make sense of all these words. Where have all the meanings come from? Fifty thousand trips to the dictionary? Fifty thousand lessons? We have learned all the conventions of language through using language, by speaking it, reading it and making sense of it. What we know about language is largely implicit, just like our knowledge of cats and dogs. So little of our knowledge of language is actually taught, we underestimate how much of language we have learned* (Smith, 1988, 182).

The speech of young children, and the untutored writing of people of all ages, clearly show that people know many rules implicitly (or not at all). Even competent grammarians help themselves to rules they don't fully know:

> *I have asked members of a number of different groups... to give me the rule for ordering adjectives of nationality, age and number in English. The response is always the same: 'We don't know the rule.' Yet when I ask these groups to perform an active language task, they show productive control over the rule they have denied knowing... So [the grammar in our heads] is eminently usable knowledge – the way we make our life through language – but it is not accessible knowledge; in a profound sense, we do not know that we have it* (Hartwell, 1985, 111; see also Ellis, 1990, 185; Smith, 1988, 182).
>
> *After decades of effort by linguists, later joined by all specialists working on language understanding systems, no one has yet succeeded in working out a complete and valid set of grammatical rules for any language. If the rules are actually in our mind and if we all know them, is this failure to uncover the rules not remarkable?* (Bereiter, 1991, 10)

Writing instruction is neither sufficient nor necessary for good writing. Some great writers have never taken a single composition course while some mediocre writers have taken many. Mark Lester believes that "there simply appears to be no correlation between a writer's study of language and his ability to write" (Lester, cited in Hartwell, 1985, 115). More recently, Krashen presented "abundant evidence that literacy development can occur without formal instruction" (Krashen, 1993, 15, additional evidence is given in Freedman, 1993, 226-7).

It goes without saying that this fact cannot be reconciled with the beliefs that decontextualized mastery of myriad rules and strategies, or that an acquired sense of self-consciousness, are needed for good writing. In contrast, those who see writing as a craft have no problems accounting for Plato's or Robert Burns' masterful writing, nor for the stale writing of some fifth-year composition students.

Writer's block

Writer's block lends additional evidence for the apprenticeship approach. In fact, the etiology of writer's block is reminiscent of stage fright. Blocked writers, like rule-bound, self-conscious dancers, are immobilized by rules: One of the most dramatic differences between... high- and low-blockers is... the presence or absence of rigid rules. The teaching... of writing has too often and too zealously been reduced by English professionals and the larger culture alike to the teaching and invoking of rules... And the problem occurs not simply with grammar and style. The composing process itself is often reduced and simplified in textbooks because it is too complex a process to be presented in its multifaceted richness (Rose, 1984, 89-90).

Freewriting

In a directive reminiscent of free association in psychoanalysis, freewriters are told: "Never stop to... think about what you are doing" (Elbow, 1973, 1). Some research supports the seemingly "surrealist position, that often enough a student's freewriting, compared to rehearsed writing, turns out more coherent, better organized, or more 'fluid' (Haswell, 1991).

The explanations offered for the effectiveness of freewriting and related approaches are again reminiscent of psychotherapy: Invisible writing "is intended as a way of reducing self-consciousness and relieving a writer of some of the constraints that might distract his thinking while he composes" (Blau, 1991, 291). "Freewriting does seem to... keep the generating activities clearly separated from the analytical or editorial... [through] what Elbow terms 'transparency,' of being able to escape the inhibiting self-consciousness that can interfere while material is being generated – or immediately afterward" (Mullin, 1991, 146). "Free and invisible writing... are precisely the sort of therapy that is called for to assist basic writers in overcoming their insistently premature and counterproductive focus on their readers and on the surface features of their discourse"(Blau, 1991, 296).

Thus, freewriting rightly expends much elbow grease against acquired inhibitions. It goes without saying, however, that lifelong apprentices – those lucky enough to have never been overburdened with rules, strategies and self-consciousness – can direct their energies to more productive and rewarding tasks.

Preoccupation with audience

As we have seen, apprentices focus on the task at hand, not on spectators. The available evidence supports this feature of apprenticeship. Thus, Perl (1983) found that preoccupation with audience tends to impair writing. Often, writers who "focus on what they think others want them to write... do not establish a living connection between themselves and their topic" (49).

The teaching of grammar

Grammar instruction has been fashionable for ages. After all, doesn't it make sense to teach writing by drilling into learners the rules of language? However, the apprenticeship approach predicts the wastefulness of grammar instruction, and, as may be expected by now, the apprenticeship approach is right:

> *We need to attempt some massive dislocation of our traditional thinking, to shuck off our hyperliterate perception of the value of formal rules, and*

> *to regain the confidence in the tacit power of unconscious knowledge... Hoyt, in a 1906 experiment, found... no "relationship between a knowledge of technical grammar and the ability to use English and to interpret language."... In a 1959 article... John J. DeBoer noted [that] "the results have been consistently negative so far as the value of grammar in the improvement of language expression is concerned." In 1960 Ingrid M. Strom, reviewing more than fifty experimental studies, came to a similarly strong and unqualified conclusion... For me the grammar issue was settled with [the unqualified conclusion of a 1963 survey]: "the teaching of formal grammar has a negligible or... even a harmful effect on improvement in writing" (Hartwell, 1985, 121, 126, 105). A series of studies... confirm that grammar instruction has no impact on reading and writing (Krashen, 1993, 22).*

The effect of reading on writing

Practitioners of decontextualized and self-conscious instruction put themselves, and their students, through much dour work, forgetting all the while that there is a far more effective – and fun – way of understudying writing: reading. A survey of the literature led Stotsky (1983) to this remarkable conclusion:

> *Studies that sought to improve writing by providing reading experiences in place of grammar study or additional writing practice found that these experiences were as beneficial as, or more beneficial than, grammar study or extra writing practice (637).*

Others go even farther:

> *It is only through reading that anyone can learn to write. The only possible way to learn all the conventions of spelling, punctuation, capitalization, paragraphing, even grammar and style, is through reading. Authors teach readers about writing (Smith, 1988, 177). Reading is the only way... we become good readers, develop a good writing style, an adequate vocabulary, advanced grammar and the only way we become good spellers (Krashen, 1993, 23).*

According to this view, writing competence "is acquired subconsciously; readers are unaware they are acquiring writing competence while they are reading" (Krashen, cited in Freedman, 1993, 230). Moreover, besides modeling good writing, reading serves another vital function. Writers need

> *to project themselves into the role of the reader... to attempt to become readers and to imagine what someone other than themselves will need before the writer's particular piece of writing can become intelligible and compelling. To do so, writers must have the experience of being readers. They cannot call up a felt sense of a reader unless they themselves have experienced what it means to be lost in a piece of writing or to be excited by it* (Perl, 1983, 50).

It would appear then that reading for pleasure is a necessary, and almost-sufficient, condition for a good writing style (but see, e.g., Crowhurst, 1991). This fact forcefully argues for the apprenticeship approach to writing.

An Argument by Analogy: Learning to Read

Certain crafts closely resemble writing. Showing that such kindred crafts can be best acquired through apprenticeship would strengthen the case for apprenticeship in writing. To provide that additional support, we shall now direct our attention, in that order, to learning to read, learning to speak a first language, learning to speak foreign languages and learning artificial languages.

Many researchers and practitioners are convinced that reading can be best learned through apprenticeship:

> *[The learner is] an active and already partly competent sharer in the task of learning to read. Here the model is apprenticeship to a craftsman... the learner first undertakes the simplest parts of the job, then gradually more complex ones, increasing the share he can cope with and all the time working alongside, under the control of and with the help of, the craftsman. The apprentice does not sit passively with his mouth open; he works actively with the tools of his trade in his hand... After all, how do little children learn everything they do before school; to speak, to play, even to walk or eat? (Waterland, 1985, 6)... Children should be allowed to behave like apprentices – to be active partners in the task with the adult leading, not driving (9)... In many ways the acquisition of written language is comparable with that of spoken language... the perfect example of pure apprenticeship... Reading cannot be taught in a formal sequenced way any more than speech can be (10-11)... I began to... turn theory into practice... Within a term, so successful was the children's response that colleagues in the rest of the school began using the apprenticeship approach with their classes (17)... This response from*

> *children is the greatest success of the apprenticeship approach to reading and its greatest justification. Teachers who are now committed to what is still, in many eyes, a revolutionary idea have a responsibility to share experiences... I believe that the potential for this approach to learning has hardly begun to be explored... What about approaching writing like this?* (47-48; *see also Hyde and Bizar, 1989,* 59-60; Smith, 1988,198-9, 210, 303).

An argument by analogy: learning to speak a first language

No one, to my knowledge, disputes the fact that speaking is acquired tacitly and unselfconsciously. This bolsters the apprenticeship model of writing instruction. After all, historically, writing may have originated as a means of recording speech. Also, writing still closely resembles speaking, and some of the greatest masters of the written word (e.g., Bertrand Russell) often dictated their books.

An argument by analogy: learning a foreign language

Foreign writers (e.g., Conrad, Koestler, Nabokov, Polanyi, Popper, Rand in English; Iskander in Russian; Bialik in Hebrew) sometimes reach the pinnacle of their profession. They often fail to master the sounds of their adopted language, but their writing is accent-free. For the most part, their mastery of the written word is not achieved through explicit, self-conscious instruction. Thus, Freedman (1993) cites evidence that "nearly all second language learning entails... the subconscious inferring of the rules of language use on the basis of comprehensible examples of the target language during the process of authentic language tasks" (230).

As we have seen, although apprenticeship involves for the most part tacit learning, it does contain an explicit component: unlike decontextualized abstract rules, explicitness can be of immense value – when it is used sparingly, when it accompanies and echoes practical experiences, and when it is tailored to the developmental needs of the learner. Some research suggests that foreign language instruction at its best relies on a similar mix of authentic tacit and explicit components (Ellis, 1990).

An argument by analogy: artificial language

> *Psychologists have studied the ability of subjects to learn artificial languages, usually constructed of nonsense syllables or letter strings... mere exposure to grammatical sentences produced tacit learning... [but] subjects given the "rules of the language" do much less well in acquiring the features than do subjects not given the rules. Indeed, even telling subjects that they are to induce the rules of an artificial language degrades performance* (Hartwell, 1985, 117).

A sampler of instructional implications

There is, thus, overwhelming evidence in favor of the apprenticeship approach to writing instruction. I have already explicated a few tentative rules of apprenticeship, but these only provide a broad philosophical framework. Tacit mastery of this framework is essential to good teaching, but it does not yet tell us how this framework can be applied in settings as disparate as dancing, carrying out a scientific experiment and writing.

This framework, to begin with, points to the importance of motivational, social and affective factors – all too often set aside in the traditional classroom. It tells us that writing can be best mastered by students who feel that it is relevant to their own lives and concerns. It suggests that certain practices, despite their popularity, seeming reasonableness and many defenders, must be used only sparingly. These overused practices include out-of-context excessive teaching of rules and strategies and paralyzing novices with over-attention to themselves or to their audience. Explicit instruction and reflections must be used sparingly, appropriately and in context. Instead, writers should focus almost exclusively on generating and editing a text.

One can readily come up with many more concrete implications of apprenticeship to writing, implications which no doubt depend on such variables as imagination, language of instruction, location, age and culture.[5] Here, I should like to further illustrate this approach through a few practices which follow from, or are consistent with, the apprenticeship approach, and which worked well in our setting: teaching English composition to older-than-average college freshmen.

Practice makes perfect

In the apprenticeship classroom, grammar, abstract rules and strategies, and metareflections are kept at arm's length. Apprentices focus on what they want to say, not on how they are going to say it. They revise their texts by relying on common sense and intuition, not on an inaccessible and confusing multitude of explicit rules and strategies. When apprentices commit glaring errors, instructors or peers bring such errors to their attention, but again, the appeal in such cases is to common sense, to usage, to aesthetics or to parsimony, not to formal rules. Apprentices don't waste their time studying rules, and exceptions thereof, for the proper use of punctuation marks. They are neither taught, nor tested on, the spelling of such words as "concede" and "quibble." They are guided towards improvements of their texts, and the texts of others, in the same way that a sculpture apprentice is taught to chisel a statue. Whenever possible, they are coached in small groups and in one-on-one conferences.

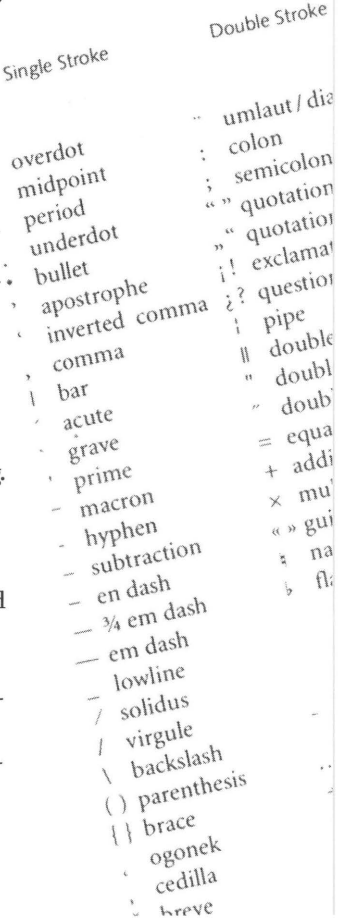
When computer labs are available, and classes are small (twenty students or less), the problem of delayed feedback can be readily overcome through computer-assisted writing workshops. These workshops mimic more closely apprenticeship in non-writing contexts, speed production and editing of texts, strengthen word-processing skills, and provide writers with immediate feedback from fellow writers and from a floating instructor, thereby allowing writers to rapidly produce successive drafts of their assignments.

Overcoming misconceptions

According to Mike Rose (1984), "many of our students have developed narrow or distorted conceptions of the writing process... our students' misconceptions profoundly affect their growth as writers" (87-8). This problem afflicts all writing classrooms, but it is particularly acute for practitioners of the apprenticeship approach. Before coming to our classroom, writers have often been urged to apply an unmanageable horde of abstract rules, to consciously employ expert strategies and to incessantly reflect on their own writing. They may feel uncomfortable in a writing class which spends much time

on the reading of contemporary short stories and little time on grammar. For the foreseeable future, then, practitioners of the apprenticeship model must clarify their educational philosophy to their students. They must also take the persistence of misconceptions into account, and rely on conceptual change strategies to overcome them (Posner et al., 1982).

As a more concrete illustration of the implications of apprenticeship and conceptual change instruction, let us direct our attention to that frequently strange animal – the comma-riddled text. We can edit it and request a revision; we can refer our students to handbooks which explicate the proper use of commas; or we can lecture on the subject, lucidly explaining and illustrating why a comma helps readers in some cases and distracts them in others. All these approaches may be valuable, but apprenticeship and conceptual change instruction both point to a better way. They tell us that students are unlikely to permanently relinquish any time-honored practice just because we are dissatisfied with it. Somehow, they must come around to being just as annoyed with unnecessary commas as we are. We can help them reach this unhappy state by asking them to read their text aloud and by insisting that, in so doing, they give every comma its due. This may bring about the desired malaise, because reading aloud is known to help writers detect redundant punctuation marks (Hartwell, 1985, 121). Next, we can guide such writers to a more nearly correct use of commas, again not through lectures but through a Socratic dialogue. We must take our time and make sure that they understand our alternative conception, for instance, by pointing out parallels between pauses in speaking and writing. We need to make sure that this conception makes sense to them, for instance, by reading aloud texts in which commas are not overused. Above all, the new conception must be shown to be fruitful; for instance, by reading aloud the revised text and perceiving that it reads better than its comatose predecessor. Finally, we need to apply a variety of conceptual change strategies, not just one. Knowing that people are disinclined to let go of discredited convictions, we need to revisit the subject of superfluous commas a few times until the alternative conception takes hold in the writer's mind. Instead of repeating ourselves on successive encounters, we can assault



comma-strewn papers from new angles; for instance, by giving students the written text of a speech from which all commas have been removed, playing that speech on a tape recorder, and asking students to insert commas in the text while listening to the tape.

Guided discovery

If writing is a craft, if misconceptions about writing are indeed resistant to change (Nissani, 1994; Rose, 1984), and if the essence of learning can be "best captured by the metaphor of embryological development, not by that of the stepwise construction of brick walls" (Nissani and Hoefler-Nissani, 1992, 110), then learners "should be told as little as possible, and induced to discover as much as possible" (Spencer, 1864). For instance, errors can be circled but not corrected (cf. Hartwell, 1985, 121). Or, as we have just seen, students can detect mispunctuations by reading aloud their texts (Hartwell, 1985, 121).

Situated learning

Old-time apprenticeship is successful, in part, because apprentices often wish to acquire a craft. Their economic future, standing in the community and professional pride may hinge on successful completion of their training. They need not be cajoled into acquiring the craft; in Japan, for instance, learning traditional arts is often described as "stealing the master's secrets" (Singleton, 1989).

Writing novices should likewise view writing, and writing instruction, as useful, relevant and empowering. The common practice of providing a real audience helps to achieve this goal. Here, students' writings are read aloud in class, shared in small groups or placed in class publications. Instruction can also make use of writing tasks students encounter in real life; students can write and edit letters to family and friends, papers for other classes or work-related writings. Another approach involves team-teaching arrangements between a writing instructor and an instructor in another discipline. For instance, in a combined biology/writing class, learners write about biology and receive, in this context of an actual writing task, instruction and feedback from both instructors.

Rule-free grammar instruction

Instead of learning an unmanageable plethora of abstract rules, apprentices often edit ungrammatical or inelegant sentences. Throughout the process, no appeal is made to explicit rules. Some of the sentences are verbose, and apprentices discover on their own, or recognize, the superiority of a more concise version. Dangling modifiers are explained by analogies to situations where such modifiers make no sense or by appealing to apprentices' linguistic intuition. Other key problems are similarly worked out on the intuitive level, without mentioning once such terms as "subjects" or "prepositions." In a portion of the final test, apprentices can be asked to edit a "short story" which is an amalgamation of most of the errors they have encountered throughout the term.

Instead of dry, abstract and largely irrelevant recitation of rules, this problem-solving activity is productive and enjoyable. This activity can, as well, be easily converted into a competitive game. Indeed, one of the best ways, in our experience, to gain converts to the apprenticeship approach of writing instruction is precisely through this engaging rule-free activity of learning to recognize stylistic errors.

Reading

As we have seen, "writing style is not consciously learned, but is largely absorbed, or subconsciously acquired, from reading" (Krashen, 1993, 73). The implications of this for composition apprenticeship are profound. A writing class ought to be, in part, a reading class. And the goal is not only to have students read for our class, but to foster a habit of lifelong reading. Needless to add, reading instruction at its best follows the apprenticeship approach (e.g., Smith, 1988; Waterland, 1985).

Besides providing invaluable models of good writing (Smith, 1988), and besides providing invaluable insights into readers' needs (Perl, 1983), the readings we choose can be used as springboards for the students' own writing. For example, students can summarize a reading or respond to it.

To develop a keener appetite for reading well-written essays and literary works, the readings accompanying a writing class must be captivating (see Pintrich et al., 1993). They must include pieces the instructor is excited about, for students will be more impressed by the instructor's genuine enthusiasm than by anything else she does or says. The ideal collection of readings must serve as an excellent prototype of written language. It must be flexible – allowing instructors to learn from experience and add or delete material from term to term.

These goals can be best served by one collection – the coursepack instructors put together on their own. The ideal collection might include appealing short stories, light poems, and essays. For instance, a coursepack for African-American women might include a couple of short stories from Gloria Naylor's *The Women of Brewster Place*. Perceptive love pieces always work well. Because students are interested in their immediate surroundings, the ideal collection features local, contemporary writers and journalists. A couple of short pieces by another local person of their acquaintance – their instructor – work particularly well (instructors more than make up for their shortcomings as writers by being on the spot).

To judge by current practices, many writing instructors share the view that the freshman composition class is "no place for literature" (Lindemann, 1993). Indeed, four out of five freshman composition programs in the United States include no novels, short stories, drama or poetry (Tate, 1993, 317). From the apprenticeship standpoint, this is lamentable. Because literature tends to be more emotionally gripping and engaging than essays, and because reading is essential to good writing, appropriate literature firmly belongs in every writing class. Gary Tate perceptively says: "The discipline of composition studies... has erred seriously... by elevating nonfiction prose and the discourses of the various disciplines to sacred heights, in the meantime ignoring enormously rich body of literature... [Only with] a vision that excludes no texts... can we end the self-imposed censorship that for more than two decades has denied us the use of literature in our writing classes" (321).

Modeling writing as a process

Besides exposure to well-crafted products and performances, an apprentice needs to know how these products and performances are generated and improved. Similarly, besides reading fine texts, writing students benefit from seeing accomplished writers at work, and from these writers' retrospective reflections. Students may benefit from examining successive revisions of short stories, essays or poems. They may benefit from autobiographical portraits in which writers describe critical turning points in the acquisition of their craft. They may benefit from seeing their instructor at work. For instance, by using a laptop computer and an overhead projector, a writing instructor can provide an immediate model of the process of writing and editing. As before, the goal here is neither to distill rules nor metareflections, but to provide a living model of a craftsman at work.

Role of explicitness and metareflections

As we have seen, the apprenticeship approach does not banish explicit teaching and metareflections from the composition classroom. Explicit rules are sometimes vital in an authentic context (Ellis, 1990; Freedman, 1993), or when they make writers aware of rules which they have failed to tacitly acquire. Advanced writers, in particular, may benefit from some explicit knowledge of rules and strategies of their craft and from a modicum of self-reflection.

For instance, the injunction to avoid the passive voice in one's writing is too abstract, too devoid of context, too plagued by exceptions "for the people on the spot, that is, for writers facing some concrete writing problem" (to paraphrase Feyerabend). But when given as editorial feedback on an actual text, and when the change can be readily implemented and shown to improve that text, this injunction is useful.

Conclusion

This essay has argued that controversies about such issues as explicitness, genres, grammar and metacognitions can be resolved by returning to apprenticeship as the overarching paradigm of writing instruction. One can imagine countless reasons for not embracing apprenticeship, including vested

interests, the difficulty of seeing time-honored practices in a new light, the apprenticeship models' counterintuitive emphasis on contextual learning and the effectiveness of alternative models. Nonetheless, the apprenticeship model offers a unified theory of writing instruction. It is consistent with much of what we know about both language and learning. It promises to make writing instruction more enjoyable and fruitful to both learners and teachers. It assimilates the best features of traditional and process instruction while avoiding most of their pitfalls. For these reasons, it may one day prevail.

Acknowledgments

I thank Prof. Shreedhar P. Lohani, two anonymous reviewers and Prof. Sharon Helmer Poggenpohl, for helping me clarify and sharpen my argument. I am grateful to Dr. Lohani for believing that apprenticeship can, and should, be applied on a large scale. The writing of this essay was supported, in part, by a Senior Fulbright Scholarship.

Notes

1. Throughout this paper, apprenticeship refers to traditional methods of learning crafts, and to modern methods of acquiring complex arts like playing piano or investigating a scientific problem. The meaning of apprenticeship in this paper is best captured by the text's extensive Polanyi's (1962) quote. Similar educational philosophies can be found in Feyerabend (1993), Smith (e.g., 1988), Krashen (e.g., 1993), and Waterland (1985, 1989). Apprenticeship is also akin to Rogoff's (1990) guided participation and to Lave and Wenger's (1991) legitimate peripheral participation. Apprenticeship, as it is understood in this paper, has very little in common with cognitive apprenticeship (Collins, Brown, and Newman, 1989), the central concept in an educational model which, despite its name, embodies too few features of apprenticeship and far too many features of 1980s cognitive psychology. In contrast to Collins, Brown, and Newman's (1987) emphasis on "how cognitive apprenticeship goes beyond the techniques of traditional apprenticeship," 2) this essay argues that apprenticeship – by itself – provides the best model of writing instruction. For Collins et al. apprenticeship is a mere metaphor for an elaborate cognitive approach; for me, it's the real thing.

2. This is a paraphrase of an actual assignment in a freshman composition program.

3. Besides common sense, this assumption is traceable to uncritical acceptance of fashionable trends in cognitive psychology: "A major direction in current cognitive research is to attempt to formulate explicitly the strategies and skills underlying expert practice, to make them a legitimate focus of teaching in schools and other learning environments (Collins, Brown and Newman, 1989, 480).

4. Bereiter valiantly sets out to save as much of his old paradigm as he can by insisting that rule-bound cognitive psychology and connectionism can be united. But such a reconciliation is as likely to bear fruit as was Tycho Brahe's attempt to unite geocentricism and heliocentricism.

5. For more concrete, ready-to-use examples, please consult my manual (available upon request).

References

Applebee, A. N. 1986. Problems in process approaches: toward a reconceptualization of process instruction. In A. Petrosky and D. Bartholomae, editors. *The teaching of writing.* (95-113). Chicago: National Society for the Study of Education.

Axelrod, R. B. and C.R. Cooper. 1994. *The St. Martin's guide to writing* (4th ed.). New York: St. Martin's.

Bereiter, C. 1991). Implications of connectionism for thinking about rules. *Educational Researcher*, 20:3, 10-16.

Beveridge, W. I. B. 1950. *The Art of Scientific Investigation.* New York: W.W. Norton.

Blau, S. 1991. Thinking and the liberation of attention: the uses of free and invisible writing. In P. Belanoff, P. Elbow and S. I. Fontaine, editors. *Nothing begins with N.* Carbondale: Southern Illinois University.

Collins, A., J.S. Brown and S.E. Newman. 1987. *Cognitive apprenticeship: teaching the crafts of reading, writing, and mathematics.* Center for the Study of Reading, Technical Report No. 403.

Collins, A., J.S. Brown and S.E. Newman. 1989. Cognitive apprenticeship: teaching the crafts of reading, writing, and mathematics. In L. B. Resnick, editor. *Knowing, Learning, and Instruction.* Hillsdale (New Jersey): Erlbaum.

Crowhurst, M. 1991. Interrelationships between reading and writing persuasive discourse. *Research in the Teaching of English*, 25, 314-338.

Edwards, W. 1968. Conservatism in human information processing. In B. Kleinmuntz, editor. *Formal Representation of Human Judgment.* New York: Wiley.

Elbow, P. 1973). *Writing Without Teachers.* Oxford: Oxford University.

Ellis, R. 1990. *Instructed Second Language Acquisition: Learning in the Classroom.* Oxford, United Kingdom: Blackwell.

Feyerabend, P. 1993. *Against Method.* (3rd. ed.). London: NLB.

Flower, L. 1989. Taking thought: the role of conscious processing in the making of meaning.In E. P. Maimon, B. F. Nodine and F. W. O'Connor, editors. *Thinking, Reasoning, and Writing.* New York: Longman.

Freedman, A. 1993. Show and tell? The role of explicit teaching in the learning of new genres. *Research in the Teaching of English*, 27, 222-251.

Hacker, D. 1991. *The Bedford Handbook for writers* (4th ed.). Boston: St. Martin's. W

Hartwell, P. 1985. Grammar, grammars, and the teaching of grammar. *College English*, 47, 105-127.

Haswell, R. H. 1991. Round Forms in freewriting: the issue of organization. In P. Belanoff, P. Elbow and S. I. Fontaine (editors). *Nothing begins with N.* Carbondale: Southern Illinois University.

Hodges, J. G. et al. 1990. *Harbrace College Handbook* (11th ed.). New York: Harcourt.

Hyde, A. A. and M. Bizar. 1989. *Thinking in Context.* New York: Longman.

Kahneman, D. et al. 1982. *Judgment Under Uncertainty: Heuristics and Biases.* Cambridge: Cambridge University.

Krashen, S. 1993. *The Power of Reading.* Englewood, Colorado: Libraries Unlimited.

Kuhn, T. S. 1970. *The Structure of Scientific revolutions* (rev. ed.). Chicago: University Rf Chicago.

Lave, J. and E. Wenger. 1991. *Situated Learning.* New York: Cambridge University.

Lindemann, E. 1993. Freshman composition: no place for English. *College English*, 55, 311-316.

Macrorie, K. 1991. The freewriting relationship. In P. Belanoff, P. Elbow and S. I. Fontaine, editors. *Nothing begins with N.* Carbondale: Southern Illinois University.

Hacker, D. 199). *The Bedford Handbook for Writers* (4th ed.). Boston: St. Martin's.

Hartwell, P. 1985. Grammar, grammars, and the teaching of grammar. *College English*, 47, 105-127.

Miller, J. E. 1972). *Word, Self, Reality.* New York: Dodd Mead.

Mullin, A. F. 1991. Freewriting in the classroom: good for what? In P. Belanoff, P. Elbow, and S. I. Fontaine, editors. *Nothing begins with N.* Carbondale: Southern Illinois University.

Nissani, M. 1994. Conceptual conservatism: an understated variable in human affairs? *Social Science Journal*, 31, 307-318.

Nissani, M. and D.M. Hoefler-Nissani. 1992. Experimental studies of belief-dependence of observations and of resistance to conceptual change. *Cognition and Instruction*, 9, 97-111.

Perl, S. 1983. Understanding composing. In J. N. Hays et al., editors. *The Writer's Mind.* Urbana, Illinois: National Council of Teachers of English.

Pintrich, P. R., R.W. Marx and R.A. Boyle. 1993. Beyond cold conceptual change: the role of motivational beliefs and classroom contextual factors in the process of conceptual change. *Review of Educational Research*, 63, 167-199.

Polanyi, M. 1962. *Personal Knowledge.* Chicago: University of Chicago.

Posner, G., K.A. Strike, P.W. Hewson and W.A. Gertzog. 1982. Accommodation of a scientific conception: toward a theory of conceptual change. *Science Education*, 66, 211-227.

Rogoff, B. 1990. *Apprenticeship in Thinking.* New York: Oxford University.

Rose, M. 1984. *Writer's Block: the Cognitive Dimension.* Carbondale: Southern Illinois University.

Rosenshine, B. and C. Meister. 1994. Reciprocal teaching: A review of research. *Review of Educational Research*, 64, 479-530.

Singleton, J. (1989). Japanese folkcraft pottery apprenticeship: cultural patterns of an educational institution. In M. W. Coy, editor. *Apprenticeship.* Albany: State University of New York Press.

Smith, F. 1988. *Understanding Reading* (4th ed.). Hillsdale, New Jersey: Lawrence Erlbaum.

Spencer, H. 1864. Quoted DeBoer, G. 1991. *A History of Ideas in Science Education,* 16. New York: Teachers College.

Stotsky, S. 1983. Research on reading/writing relationships: a synthesis and suggested directions. *Language Arts,* 60, 627-642.

Tate, G. 1993. A place for literature in freshman composition. *College English*, 55: 317-321.

Waterland, L. 1985. *Read with Me.* Lockwood, United Kingdom: Thimble.

Williams, J. M. and G.G. Colomb. 1993. The case for explicit teaching: Why what you don't know won't help you. *Research in the Teaching of English*, 27, 252-264.

Zuber, S. and A.M. Reed. 1993. The politics of grammar handbooks: generic he and singular they. *College English*, 55, 515-530.

PHOEBUS-PALAST
TSCHICHOLD

Jan Tschichold and the Language of Modernism

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Visible Language 30.3
Peter Storkerson, 314-339

Why Tschichold interests designers

It is often intuitively obvious that the visual aspects of communication have meaning. We know when these "designs" work and we can often come to consensus on what they do. But we have poor accounts of how they do what they do. We may know, for example, that decoration "does not fit here," but why is less clear. There are refuges: the difference between visual and verbal thought, the idea that the work is ineffable, or the view that the technique is practice like the way the pitcher knows when he is pitching well, or even self-evidence — knowing pornography when we see it. In sum, we lack good analytical tools to take us from visual communication to the meanings conveyed.

It can be difficult to come to useful theoretical understandings of practical endeavors. For example, it was only very recently that there were the understandings and technologies that made it possible to analyze body movements so that we could unravel and articulate the techniques of pitchers. Often, the work of research is not the collection of data, but its organization: the "discovery" or invention of systems of classification or ways of looking that disclose meaningful relationships.

Jan Tschichold, poster for *Casanova*, 1927. in Tschichold, Jan. *The New Typography*, 189.

Similarly, it is not a simple path from perceived form to meaning; that path involves the interaction of some piece of work under consideration with the communicative situation in which authors and readers interact, and with other cognitive, social and cultural mediators, many of which are themselves not well explored or understood. So when we discuss "things that communicate," we are entangled in genre, subject matter, the knowledge of the viewer or receiver, the intentions

of the author or sender, "style," the message and the social conventions of medium, — and we are entangled in them all at the same time. We increasingly find ourselves in need of tools that are adequate to analyze the complexity of communication as we experience it.

For whatever reason, in *Die Neue Typographie*, Tschichold made bold assertions, and in so doing, he gathered arguments that can help us construct analytical tools for communicative media. *Die Neue Typography* concerns form on the printed page, but first and foremost as that form is related to social and cultural goals. In short, Tschichold argues that formal decisions within communication design have definable meanings in the human world. From the vantage point of 1996, that may be one of *Die Neue Typographie's* greatest contributions.

Jan Tschichold, *Laster der Menscheit*, 1927.

Introduction

In 1928, in Berlin, one of this century's major typographers and book designers, Jan Tschichold wrote *Die Neue Typographie*. It was a manifesto and a handbook defining an ideology and a practice of typography. In 1995, *The New Typography* is appearing in English translation. The twenties and the nineties are both periods of transformation: in the social and economic structures of industrial societies, and in the forms and content of their communications. We now find ourselves looking back at modernism. The appearance of *The New Typography* is timely. It provides us with opportunities to both reassess modernist design in its social context and approach the still perplexing question of how we can actually relate form to meaning.

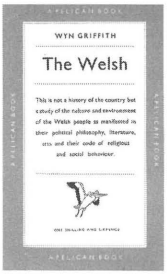
Writings are narratives; they are occasioned: written by individuals in particular places, at particular times and they are most wisely interpreted with reference to those occasions. Like other objects, writings can be misunderstood or obscured by time. Jan Tschichold wrote only seventy years ago, but industrial culture has changed dramatically in that time. In 1928, the horse was becoming obsolete only in the "advanced" countries. Radio was just beginning to develop as a social medium. Seeing Tschichold's work in 1996, we search through the industrial culture of his time for documents to

aid us in understanding the context of his writings and his typographic design.

Fortunately, Tschichold was both clear and unusually comprehensive, so *Die Neue Typographie* is not just a fragment, but a microcosm; it provides us with a clear statement of modernist philosophy and modernist practice when both were being formulated and promoted. This paper locates Tschichold with respect to traditional design, dada and de stijl, the bauhaus, the later Hochschule für Gestaltung at Ulm, "Swiss typography" and other modernist movements. By relating visible form to social agenda, it provides for the opportunity to track social goals and style across time to see how they change.

Biography

The facts of Tschichold's life history are given briefly by Robin Kinross in his introduction (they are more fully documented in Ruari McLean's biography *Jan Tschichold: Typographer*). This history is reflected in Tschichold's large typographic output, and in Tschichold's writings and the debates they sparked with Max Bill at Ulm and others who were struggling to understand and realize the modernist problematic. Tschichold set out his philosophy first in *Die Neue Typographie*. It was followed in 1935 by *Typographische Gestaltung*, also translated into English by Ruari McLean and titled *Asymmetric Typography*. That work presents his philosophy in a more subtle formulation.



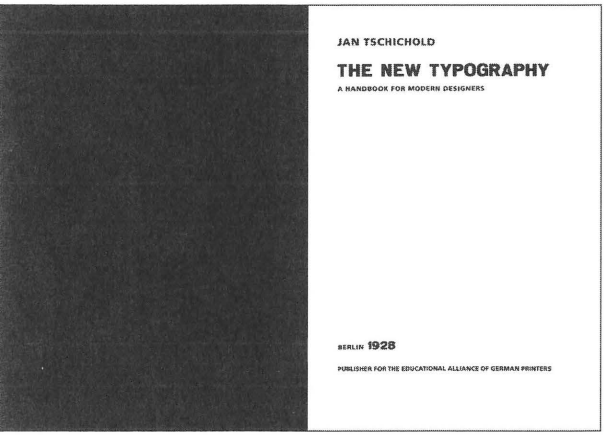
Penguin book cover design, circa 1947. in McLean, Ruari. *Jan Tschichold, Typographer*, p. 101. Reprinted by permission of David R. Godine, Publisher, Inc.

By 1935, Tschichold had already been forced to leave Germany for Switzerland. By the 1940s, he largely abandoned the typography he had advocated in *Die Neue Typographie*, adopting what Kinross calls a "neoclassical" style, which included ornamentation and centered type settings. Tschichold's later design was the reverse of the trend he had helped establish, and he became a critic of his earlier work and of that trend. After World War II, he was for a time the typographer of record at Penguin Books, where he designed books and authored house composition rules. He spent his last years in Basel, retiring to the Ticine Alps above Lake Maggiore, where he was in sporadic communication with modernist practitioners.

The later "neoclassic" Tschichold is outside of this review, but this much can be offered. What seems to have changed his position after *Asymmetric Typography* was not only his attitude toward the rules of typography but his attitude toward the social and political environment as well. As we will see, Tschichold's typography changed because the social environments in which he lived and worked changed. In 1935, his model of communication was based on information: non-linear or non-narrative, public, objective utterance or reportage. At Penguin, after World War II, he was publishing literature, for the private and personal enjoyment of individual readers. He recognized that the political shift entailed abandonment of his modernist aesthetic.[1]

Scholarship

Die Neue Typographie is a work that practices what it preaches, so preserving its original form and language of presentation is important. The new translation reproduces the original format of the book, its glossy paper and its typographic styles with special attention to typeface and set width. According to the publisher, many images were re-scanned and the images are generally of very high quality. In some cases, the original spot colors are reproduced as spot colors while in others, black and white line art or half tones are used with indications of the original colors.


JAN TSCHICHOLD

THE NEW TYPOGRAPHY

A HANDBOOK FOR MODERN DESIGNERS

BERLIN 1928

PUBLISHER FOR THE EDUCATIONAL ALLIANCE OF GERMAN PRINTERS

The New Typography: title page, reproducing the design of the original

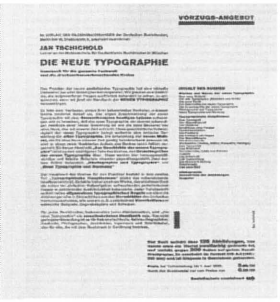
The translation adds not only the historical and analytical introduction by Robin Kinross which provides a sense of context, it also includes translator's notes by Ruari McLean. There are also revisions which Tschichold provided in 1967 when this translation project was beginning. They are included but in the introductory pages, outside of the book proper which renders the original text.

Tschichold's *Die Neue Typographie* has two major sections: "Growth and Nature of the New Typography," outlining Tschichold's social philosophy with its graphic implications, and "Principal Typographic Categories," which enumerates categories of typographic practice or subject matter and concrete applications of his approaches to them. The book includes many examples ranging from posters to letterhead and book formats, though the emphasis is on public, quasi-public and commercial communication settings like posters, advertisements, newspapers and magazine covers.

Sources of Tschichold's philosophy

By the beginning of the twentieth century, we can see that technology and industry (engineering) had built a new substrate on which the objects of everyday life were placed as varied expressions of a common culture of materials and processes. These objects were not created by persons alone, but through industrial processes. Like the many others who comprised the avant-garde, Tschichold organized his work around the notion of a clear cultural break with the past: a break which could be seen in all aspects of society, and one to which the material culture and communication must adjust.

> The objects in use by the new generation suffer from the fatal compromise between a supposedly "artistic" intention and the dictates of technical manufacture: from a feeble turning back to historical parallels: from the conflict between essence and appearance. Instead of recognizing and designing for the laws of machine production, the previous generation contented itself with trying to follow a tradition that was in any case only imaginary. Before them stand the works of today, untainted by the past, primary shapes which identify the aspect of our time: Car, Aeroplane, Telephone, Wireless Factory, Neon-advertising New York! These objects, designed without reference to the aesthetics of the past, have been created by a new kind of man: the **engineer!**[2]

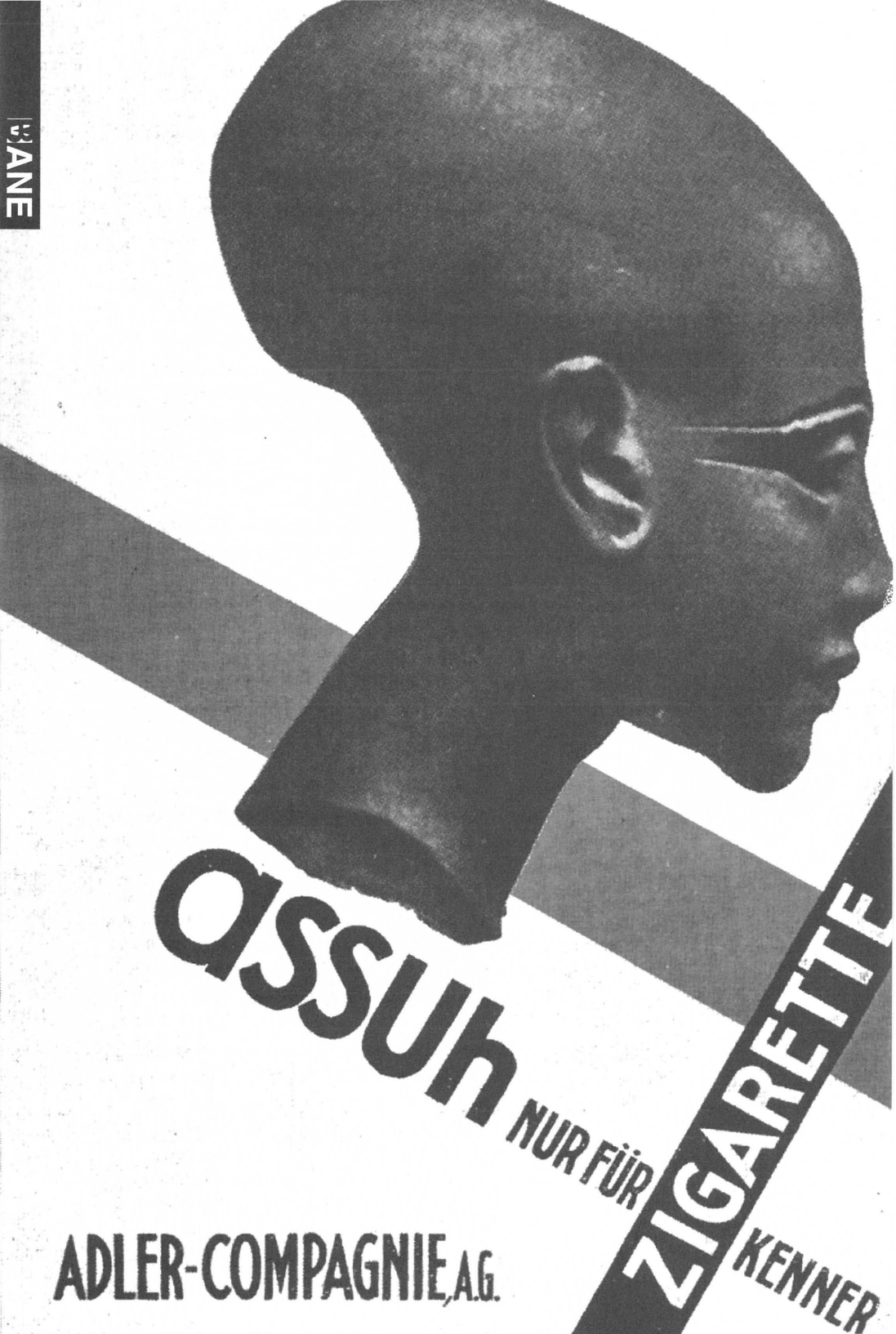

VORZUGS-ANGEBOT

JAN TSCHICHOLD

DIE NEUE TYPOGRAPHIE

Die Neue Typographie advertisement (original in black on yellow)

In the nineteenth century, the cultural reaction to industrialization had been escape into the arts and crafts. (In Germany, fraktur or black letter text was still in common use after World War I.) Tschichold participated in the related movements — futurism, dada, de stijl, constructivism, suprematism, etc. — which embraced modern industrial life and tried in various ways to chart a course to follow. This avant-garde, modern industrial culture with its creativity rooted in industry and technology confronted the degeneration of outmoded forms of production. "Type production has



Left:
Herbert Bayer,
Cigarette poster.
The New Typography, 184.

gone mad with its senseless outpouring of new types: worse and worse variations of historical or idiosyncratic themes are constantly being drawn, cut, and cast."[3]

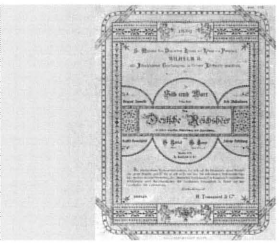
For Tschichold, this was not at root typographic degeneration per se, but a social degeneration: a stress in the coming of age of industrial culture, the first fully inclusive mass culture.

> We can only acquire a true general culture (for a culture of the few, as has existed up to now, is no culture but a kind of barbarism) if we remember the natural law of general relationship, the indissoluble oneness of all men and peoples, and of all fields of creativity. Only in degenerate times can "Personality" (opposed to the nameless masses) become the aim of human development. [4]

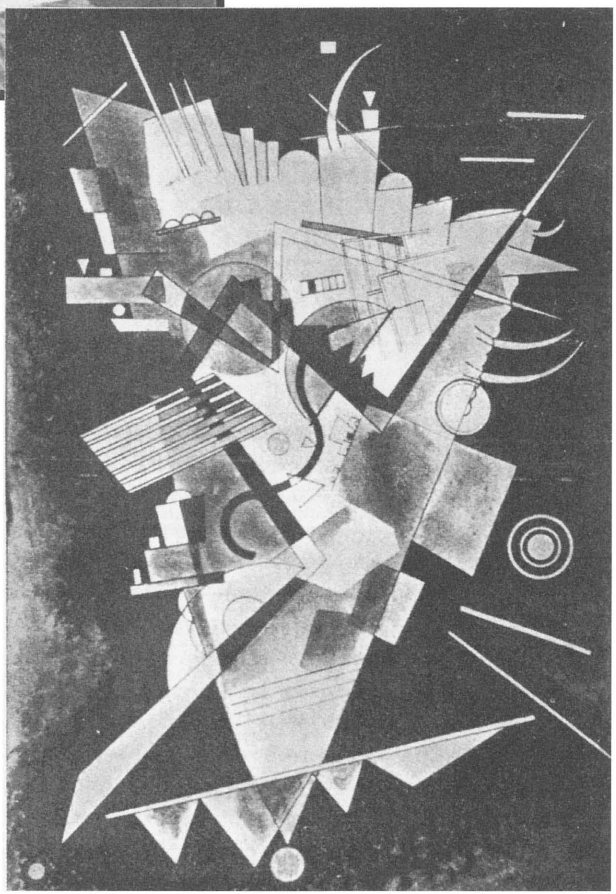
Within this framework, art did not stand apart from society as it does today, or escape from it as in the nineteenth century, but could work with other institutional forces of industry, polity and communication. Graphic communication had its roots in art, and art remained important to Tschichold, but he envisioned art integrated with industry and science. In this milieu, it was possible for an advertising poster like Bayer's cigarette advertisement to take its cues from painting, present a product and project a sense of its own integrity.

The constructivist answer to art, design and culture

To us, anonymous art is largely a contradiction in terms, at least after the middle ages. We expect works to be novel and unique, and in practical terms we price them according to their artist. In Tschichold's collectivist ideology, the purpose was to overcome all particularities: of maker, viewer and occasion or subject matter. Art increasingly overcame subject matter by turning from the representational (images of something) to the presentational (forms which are in and of themselves what they are), and by changing artistic products from decorations to integral parts of architecture: "We don't hang it on any available wall, but deliberately integrate it with the architecture of our living-rooms." Representational art creates between itself and the experiences it communicates. Presentational art collapsed that semantic axis and centered on cognitive interests in shapes and colors with arrangement or syntax playing a heightened role. The impersonality of art was in its abstract, objective and non-particular communication, its



Typography of the turn of the century. From the folder of the "International Graphic Design Exchange of the German Printing Association," 1889.



Above:
Image as representation: Manet, *In the Greenhouse. The New Typography*, 30.

Right:
Presentational form: Kandinsky, *In the Balance,* 1924.

indifference to subject matter and the relationship of that subject matter to the viewer.

Within this conceptual frame, art, commercial communication, architecture and commercial products tended to fuse into a unified form language for print, graphics, architecture and objects, with a communicative stance in all of these media which tended toward presentational as distinct from repre-

Above:
Architecture as representation:
Natick Massachusetts.

Right:
Architecture as presentation:
Detroit Michigan.

sentational form, and toward an expression which was public and impersonal as distinct from private and personal. The ideology links these attitudes together.

Information, industry and modernity

Tschichold was working to develop a new culture of communication — a culture of information. Tschichold saw that in industrial society, the modal subject matter of communication is information and information has its own special characteristics. Information is written by people, but it is not self-expression. It is directed to audiences, but it is not about them. The subject matters may be particular objects or experimental phenomena taking place at particular times, but the relevance of the information is what is discovered that transcends those particular circumstances. Within the world of

MARQUE
PKZ

The object as data: Otto Baumberger's poster for PKZ. *The New Typography*, 185.

information, authors and readers are catalytic: information comes through them and is received and held by them, but they do not concoct or control it; rather they discover it.

In Tschichold's posters, for example, information is not linear: it does not reflect the narrative line of speech or argument. It involves the reader as observer, making syntheses from disparate data and data types: day, place, name, shape, color, image. Information also involves a disjuncture between content and subject matter, a story which is not the data itself, but a story the data can be used to "tell" and which makes it information. Readers may be drawn to that story by visual arrangement or syntax, how the information is selected and arrayed. This arrangement can organize data into packets which can be visually related to each other. The interpretation of information often involves placing it in the frame of the reader or viewer. In narration, the author has to link the various informational units to create an intelligible stream or argument, but the informational style requires the opposite, to break the narrative stream apart, and present only components juxtaposed to each other so that a narrative or, as we will see, the possibility of a narrative can be constructed by viewers.

The verbal-visual hybrid of content and the visual style that was being perfected in the twenties and thirties is particularly suited to this conception of "information," by presenting packets of data which we can inspect and organize as our eyes rove the page. For example, Baumberger's PKZ poster does not "say" anything: there is no text addressing us to inform us of the wonders of PKZ clothing. Rather, we see part of the coat. We note its pattern, cut, color and we discover who is the maker. Since we are free to make our own observations, those observations appear at least on first viewing, not as received narrative, but as our conclusions. This poster is like the computer game in which we are apparently free (but within a highly structured environment), or like the well designed tool that fits into our hands in specific ways. Our observations most surely have been selectively made available, and the simplicity and high contrast and similarity make the process of interpretation highly directed, but there is no narrative caption speaking to us.[5] We might say that the sender and the receiver are both hidden. The result is cool and compelling.

In this environment we inspect, gather information and sell ourselves.

Art and information

It is not by accident that informational presentation and constructivist art are parallel in how they relate author, viewer or reader and subject matter.[6] As constructivist art overcomes the particularity of maker and viewer, information overcomes the particularities of author and reader. In this world the individual person is a ghost or a catalyst, bringing forth what is already there but not yet discovered or realized, and consuming what exists to be consumed.

Jan Tschichold, Personal postcard. *The New Typography*, 140.

The result of a bias toward the use of this approach is communications that tend toward impersonality in general. For example, we see one of Tschichold's post cards. We might call it formal, corporate or objective in its visual language.

The eighteenth-century funeral announcement that follows is certainly also formal. It has objectivities as well, communicated by the use of magiscules. But the funeral announcement also has its script and decoration, both references that point outside of the content to human agent and social forms. The decoration is perhaps irrelevant to the content and it is added perhaps for pleasure or appeal. We can read simulated handwriting as a personal gesture between the author and reader. There is a distinction between sign and text, and in the text, there is the linearity of narrative, which only humans create. Tschichold's postcard is more like a presentation. The forms are simple, and graphic. There is no narrative, only items that we inspect and make intelligible. The typewriting (which is the hand striving for type rather than type striving for a representation of the hand) of name and address provide the

Eighteenth century funeral announcement, and funeral announcement with frame removed. *The New Typography*, 20.

personal cue: the non-printed customization of the piece tied to the occasion of sending, written in an idiosyncratic though still mechanical "hand."

In Tschichold's modernism, we see a bias toward impersonality in communications. That bias derives from his theory of industrial society, expressed in so-called modernist conventions. Against a traditional bias toward the expression of as much as possible — even in impersonal communication — using narrative language, Tschichold displays the modernist bias toward an informational presentation of even personal communication.

The design language of information

Within *Die Neue Typography*, Tschichold elaborated a typographic system including sans serif typefaces, asymmetric setting and paper specifications:

- Sans-serif typefaces: Devoid of ornaments and the personality of the 'artist-designer,' sans serif faces are anonymous, and speak with the utmost clarity. Clarity is the highest purpose for a type.
- Typographic contrast: Economical and systematic use of contrasting size and weight provide emphasis and organization.
- Photography: Type may be used with halftone photographic reproduction, and the two can be merged into a new book as a carrier of integrated information.
- Typesetting: Symmetrical or centered setting forces a form for the sake of visual beauty alone. Asymmetric typesetting offers varied methods for organizing and relating various pieces of information into the whole. The liveliness of asymmetric setting also suits the energy of modern society.
- Paper standardization: According to DIN and based on paper with a width to height ratio of one to the square root of two, and with a comprehensive set of paper sizes designed for particular applications including envelopes, tickets, index cards, etc.

Tschichold's ideology produced a pragmatic approach to typographic production; a position in some ways opposed to what has been a dominant trend in modernist design: the

SA NE

TSCHICHOL

NAPOLEON

PHOEBU
PALAST

ANFANGSZEITEN
4⁰⁰ 6¹⁵ 8
SONNTAGS:

Jan Tschichold, poster for *Napoleon*, 1927. *The New Typography*, 189.

search for essential form. In terms of type, he wrote "Do typefaces express anything? Is it really a typeface's job to express spiritual matters?"[7] He favored sans serif faces because they lack personal characteristics. Asymmetric setting had an "affinity" with the culture, but more important, it allowed for the organization of complex information. Page sizes were to be fixed not by a spiritual system, but by a practical system of standardization that provided logical sizes for different purposes and which simplified paper manufacture and distribution.

Syntax and visual elements

In Tschichold's system, the job of design is to use visual arrangement or syntax to provide schemas by which the disparate data elements can be contrasted, juxtaposed and perceived without having to be translated into narrative.

> Every part of a text relates to every other part by a definite, logical relationship of emphasis and value, predetermined by content. It is up to the typographer to express this relationship clearly and visibly, through type sizes and weight, arrangement of lines, use of colour, photography, etc.[8]

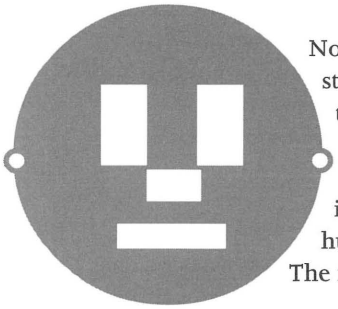
Tschichold's way of building meaning was not from the element up, from sacred, elemental forms with inherent meaning, but from outside in, using the larger, socially constructed, formal systems which function as conventions within which variation and contrast make it possible to create meaning. Using this system, one could: 1) create contrasts of size, light and dark, type, line, half tone, simple shapes against each other, and 2) diverge from the "background" of routine, general accepted practice. Thus, the various sizes of type, rules, colors and elementary shapes Tschichold used were tools for creating figures against ground.

Condensation and nominalization

Another tendency of modernist design that one sees in Tschichold's posters is the radical reduction in the number of words used to convey a message. Not only are there fewer words, but the choices of words and arrangements can be seen as a strategy consistent with Tschichold's view of the world. For example, let us say that I own the Phoebus Palast movie theater. We will be showing the film "Napoleon" for a few

weeks and we are showing it on a schedule. I want all of you to buy tickets and come and see it, so I want you all to know about it. So, I commission a poster. Tschichold created such a poster (and many others like it). Instead of a narrative, it contains three explicit pieces of data that you can make into information: the title of the movie, the name of the theater and some lines and boxes with days and times. Let us presume that we know that Napoleon is a film, Phoebus Palast is a theater, and we recognize a time schedule. The common presence of Napoleon, Phoebus Palast and days and times is the only information that is here divulged. From that information, you might intelligibly conclude "I can go see Napoleon at the Phoebus this week." Thus, from that information — name, name, time — you will be able to project a complex set of events and your role in them.

Note what has been removed — only nouns populate this poster. References to action are made by a visual syntax or arrangement, either by the way the text is set, or by graphical elements — arrows, lines, circles, etc. — functioning as operators. The narrative of my intentions has not merely been concentrated. It has been abbreviated, elided and eliminated — the author and the designer have both been concealed. We may try to reconstruct the author and the intentions or occasion, but we do not have enough information to reconstruct unequivocally.



Do we know the face from the forms of the eyes, ears, etc., or do we know the parts from the face as a syntax of arrangement?

Not only can those intentions not be adequately reconstructed, but the poster seems quite intelligible without them. "They're putting on Napoleon at the Phoebus all week." — "Who are they?" — "Does it matter?" — "Are we supposed to go?" — "Somebody will." What is left determinate is this object world apart from the human agents, and it seems to operate quite by itself. The more we think about this, the more weird it gets.

The universe of potent identities

And, there is another dimension to add. There are different sentences that might be made from these data, e.g., "The Phoebus moviehouse is putting on Napoleon this week," "Napoleon can be seen at the Phoebus," "Napoleon is coming to

Tschichold, poster for *Die Frau Ohne Namen*. *The New Typography*, 188.

the Phoebus this week."[9] These sentences are all warranted, but semantically distinct. If we were to ask "Who is doing what to whom?" — we would have three different answers. Whether by necessity or by intention, this poster is indeterminate with respect to the language structures that can be constructed from it. This kind of first order indeterminacy[10] is important. As, for example, Chomsky comments, the phrase "a device for constructing sentences can derive from either a) a device by means of which speakers produce sentences or b) a device which produces sentences."[11] The difference is fundamental. After all, who is doing the acting: speakers or devices, Phoebus or Napoleon or the poster. We are in a non-determinable world in which for all we know the objects themselves are potent identities, and on posters they are able to act by just being there: without even moving.[12]

Thus, while the visual syntax does not provide the specific ground or explication which the narrative would provide, it does give a semblance of one. We have no verbs; in their place we have these graphical operators. We might call them semblances of verbs because they stand in the places of verbs the way lines can be eyes, ears and mouth when they are properly arranged. (The most verb like object in the Napoleon poster is the arrow.)

It is possible for visual elements to function in explicit and language-like ways, most notably in formal graphs, and in the graphical transformations used for manipulating mathematical formulae. Many of Tschichold's business forms and letterheads come very close to this sort of language-like explicitness. Layout is making the posters intelligible, but that intelligibility remains implicit so we cannot put our fingers on quite what it is.

Syntax, mystification and trust

So, the extreme elision in these posters removes the information that gives statements their determinate ground. It leaves them enigmatic. We do not know who is putting on this show, or why, or whether we are to go. In this impersonal world, these questions really do not matter. What matters is that the film is here.

Marxists call this invocation of an unspecified base mystification. When we determine that base, we often find that it has been fabricated or inflated to legitimate authority. Anthony Giddens[13] uses the term "trust." When we push the elevator button we probably do not know how the elevator actually works, but we trust the notion of an elevator: that somebody figured out how to make it, and that if this one is in proper working order we will get "there." We cannot see the logical ground, in this case the mechanism,[14] but we believe it is there. In a complex environment we have no choice but to function in this overdetermined way, and we do so routinely. Grounds not only support statements but limit them. But if we do not know the grounds, we do not know the limitations. If the elevator is not working, you could fall. The Napoleon poster gives us a reality without enough information to reconstruct the narrative grounds that support and limit it.

Indeterminacy and size

Now that we have mystification and trust, there is one final salient aspect that I wish to mention here. To put it most simply, the indeterminate is bigger than the determinate. If "something awful might happen," it might be anything we could imagine, and we can imagine all sorts of awful possibilities. If I am taking a trip: the plane could crash; the taxi could have a flat tire; the train could derail. This becomes an amazing scenario because in real life, only one of these things could happen. If the taxi has a flat, I miss the plane or the train, since I won't be taking both. But in my imagination, I experience all the possibilities, even the mutually exclusive ones. By leaving the communication indeterminate, Tschichold allows us the greatest freedom to amplify the possible messages, and where the communication is most indeterminate, e.g., on the postcard, we work the hardest to find some sense to make. Yes, less is more. To summarize, we see six aspects working together in this communication system:

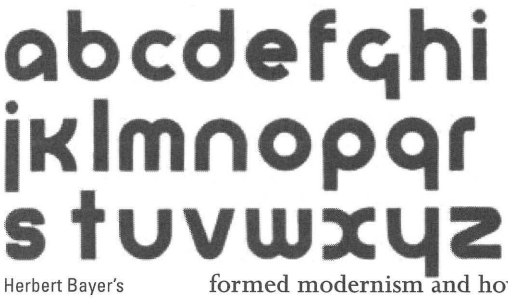
1. Impersonality as the dominant mode of address
2. Elision, or the reduction of information to a level below that which is necessary for grammatical completeness
3. Potent (nouns) identities that can effect action (verbs) merely by their presence

4. Potential meanings made available by visual syntax
5. Semantic ambiguity arising from indeterminacy in the syntactic system
6. Mystification/trust

Natural history of modernism

One of the most interesting aspects of *Die Neue Typographie* is what perspective it can give us on the developments within modernist design and communication as they would develop in the decades after it was written. George Kubler, who has studied the issues of period and change, has offered the following general observations:

> *Early solutions (promorphic) are technically simple, energetically inexpensive, expressively clear. Late solutions (neomorphic) are costly, difficult, intricate, recondite, and animated. Early solutions are integral in relation to the problem they resolve. Late ones are partial in being addressed more to the details of function or expression than to the totality of the problem.* [15]



Herbert Bayer's *Universal* typeface

By these standards, Tschichold fits near the beginning. His work is clear, simple and striking. One theory of modernism might apply this model to see later work in terms of a natural life cycle of elaboration and degeneration. There are also other issues having to do with the ideas that informed modernism and how they interacted with the larger social and economic structures that transformed modernism into something of its opposite. This transformation can be seen in modernism's progress through Ulm and into American and world economies and the information of the digital age.

Tschichold, Bauhaus and Ulm

As noted earlier, Tschichold's functionalist modernism contrasted with the idealist Bauhaus emphasis on the search for inherently meaningful form. Kandinsky, by contrast, had developed theories of the spirituality of elementary forms and processes.[16] Tschichold was a highly skilled draftsman, but he had little inclination, at least after the twenties to create new

futura g
stencil

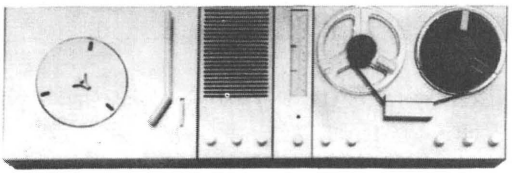
A 1928 version of Renner's *Futura*, Albers' *Stencil*

typefaces. Within the Bauhaus, there were many experiments with typeface design created from the compass and T-square, and the results were geometrically ideal, but often non-functional. Joseph Albers, for example, built the typeface "Stencil" out of three forms: square, triangle and one quarter circle. Herbert Bayer developed a Freudian analysis of his Universal typeface.[17] For the most part, these are hard typefaces to read.

Ulm, America and the market

After World War II, both idealist and materialist tendencies found their way to the Hochschuld für Gestaltung at Ulm. There, they were joined by the post-war German politics of anti-communism. Here, Tschichold's views can be seen in terms of one side of Ulm's struggles.

> *And so the battle lines were drawn. Is design an applied art, in which case it is to be found in the elements of the square, the triangle, and the circle: or is it a discipline that draws its criteria from the tasks it has to perform, from use, from making, and from technology? Is the world the particular and the concrete, or is it the universal and the abstract? The Bauhaus never resolved this conflict, nor could it, so long as the word art had not been rid of its sacred aura....We all had our reasons to have reservations about the Bauhaus.*[18]



Braun A.G. audio equipment

At Ulm, the result was a technocratic approach based on technology and industrial production and a more empirical sense of usefulness and practicality.

Adventures of the functional

Neither the idealist, nor the materialist, nor the technocratic approaches integrated theories of the marketplace and that failure proved important. Among the best known end products from Ulm were Braun electronics and appliances. These products were among the first to fully communicate a schematic of their meaningful function rather than a reflection of their internal mechanical structure. Their surfaces and con-

trols organized their operation and reflected ideas of their function as much as their mechanism. They were intended to be seen as neutral, objective and functional, at least when introduced into the land of streamlining and fins they stood out.

At first, they were alien and unaccountable, but customer experience and their individuality provided them with a distinctive semantic identity. Not only did they acquire this socially constructed identity; it became essential to product differentiation that these products be recognized and sold at premium prices. These designs were transformed by the marketplace. Not only did (and does) it behoove manufacturers to create products with unique and identifiable characteristics; it behooves designers, whether freelance or employees to encode themselves into the products of their work in such a way that their clients (or the other departments in the company) are aware of their presence. So, we can count among the forces at work a tendency toward individuation which pushes the functional toward the artistic, and at a premium, "designer" price. In communication we can see the detachment of the formal interest from the content, which came often to be characteristic of high modern style and, for example, obsessive interest in logotypes and visual identity symbols in situations where they had little practical value.

The transformation of information

Tschichold's approach to communication was built out of a model of information as narrative: events, facts, data that appear as objects in the world. In Tschichold's world it was possible for these data to make sense by themselves. We can now see how qualitatively different information is from what it was in the twenties.

By the 1960s, design methodologists like Christopher Alexander were developing systems planning to tackle the problems of knowledge synthesis in a culture in which information was being both extended and balkanized into specialties and subspecialties with incompatible languages. Increasingly, we have found that just as the forms of information are growing horizontally, they are growing vertically —

layers of information, information about information and information embedded in other information. In the electronic age, information in the form of symbolic communication comes across our desks so rapidly and in such a form that it becomes independent of the outside world. By virtue of its sheer volume, information has become an autonomous self-referential stream or field of operations within which we function.

In Tschichold's day, we could see the operation of mechanical objects; we could vicariously feel the crumbling of brick buildings under the stress of earthquakes and by contrast the bending of steel frames, and the cracking and tension within reinforced concrete. The engineering knowledge had physical analogies that made objects understandable extensions of our bodies as McLuhan said. But within electronic media, for example, those analogies break down. The images produced by cat scans, are synthetic representations of data, programmed to have familiar, photograph-like appearance. The computer is programmed in multiple layers of chip architecture, ROM BIOS, operating system, interpreter/assembler and user programs. These layers are available only as mediated by more programs — information is embedded — in short, the information of today is often not the sort of information that Tschichold and his contemporaries envisioned.

Information and culture

Tschichold's *Die Neue Typographie* reflects the period of utopian modernism in which it was written. Starting with the Enlightenment, the future was a place of fulfillment, and while many tried to escape from industrialism, many others saw in the acceleration of progress the possibility of "retrieving an indefinitely open future and putting it into lifetime proportions."[19] (Tschichold saw the realization of a "true general culture" in the offing.) The growth of communication and information have made that acceleration possible, but within the world of continuous information flow, the horizon moves away from us at the pace with which we run toward it. "Thus it is not just that 'the future is no longer what it used to be,' as a piece of graffiti announces from the wall of a house in Ber-

lin. It is increasingly overshadowed by the problems which are opening up in the present."[20]

The future realized is less than we have imagined it to be. Thus, it seems appropriate that the disenchantment with the future at least as it was idealized would have as a corollary, the sort of shift we see in current multi-media and computer games with their return to representation, layering of multiple, often conflicting, levels of information. From this standpoint, these changes should perhaps be taken seriously not within the craft of communication design, but as indicative and constitutive of a major cultural shift in our social understanding of information and communication.

Conclusion

Writing about communication within the graphic arts has generally centered on the craft aspects of the work, presenting rules for "good" design or presenting a series of images with more or less related text. *The New Typography* includes a comprehensive set of useful explicated examples of design strategies, and clear discussions of paper and typographic standards that can clarify these for students and give them a sense of how systematic and powerful visual literacy can be. More important, Tschichold saw the purpose of design to be communication. He built a theory and practice that corresponded to that theory. In so doing he provided us with valuable tools for understanding design history and important theoretical issues in the actual relationship between form, meaning and communication. Any reprint of *The New Typography* would be important, if only because of its historic importance as a document. It is especially valuable to have it in English, presented in an appropriate format, with graphics and a timely introduction. It is extraordinary as a clear, succinct and integral statement of an important modernist position that helps to relate form to essential social and cultural beliefs.

Notes

1. In his later philosophy, Tschichold argues for the need to decorate and humanize. It would remain for Robert Venturi to define the impulse to break from simple form in structural ways. Venturi is not invoked here, but his notions, particularly concerning inflection, superadjacency, and complexity within rigid containers could be applied to Tschichold's work. Is it 'Miesian' and regular, or is it a language of considerable complexity and inflection?

2. Tschichold, Jan. *The New Typography*, Ruari McLean, tr. Berkley, Ca; University of California Press, 1995, p. 9.

3. *The New Typography*, 26.

4. *The New Typography*, 25.

5. At least not in 1930. We may have become more jaded or aware of the manipulation involved.

6. Though, as I will discuss, it would be several decades before information would overcome and detach itself from its subject matter — the outside world — to become what it now is: information about information.

7. *The New Typography*, 74.

8. *The New Typography*, 67.

9. The Sentence "I can go see Napoleon at the Phoebus this week," is one of the sentences you can create by interpreting the data as information. You can guess that it is the likely intended reading because it is reasonable motivation for making the poster. But you could just as easily make many other sentences, like "They really do put on lousy films at the Phoebus." and still be responding to the information. If, however, you said " What is that weird circle about?" you would be operating from a point of view outside of the language culture of the poster or at least the one that I have been pointing out.

10. Sentences themselves are often indeterminate in their interpretation, e.g., "The aging control system is causing delays." Is this a system for controlling aging of a control system that is itself aging? In the modernist design under discussion, we are with this sort of interpretive problem before we can even construct the sentence.

11. Hodge, Robert and Guntherr Kress. 1933. *Language as ideology*. London; Routledge and Keegan Paul, 33.

12. We might consider the fact that motion can only be indicated. This may heighten the ability to imply it.

13. See Anthony Giddens. *Consequences of Modernity.*

14. Consider the matter of electronic devices, where there is no mechanism to see, and we have only accounts like descriptions of the programs!

15. Kubler, George. 1962. *The Shape of Time*. New Haven; Yale University, 55-56.

16. Kandinsky, Wassily. *Point, Line, and Plane.*

17. For a brief description see Mills, Mike. Appendix: The Gender of the Universal. in Lupton, Ellen, and J. Abbott Miller, editors. *The ABC's of Bauhaus Design.* Princeton; Princeton Architectural Press, Inc. undated, 46-47.

18. Aicher, Otl. in Lindinger, Herbert editor. *Ulm Design: the Morality of Objects.* Cambridge; MIT Press, 126-127.

19. Nowotny, Helga. 1995. *Time.* Cambridge: Polity Press, 46.

20. Nowotny, 50.

HOME

Book Review

Ken Garland
Mr. Beck's Underground Map: A History
Middlesex: Capital Transport Publishing: 1995
illustrated, limited edition, £10.95

Reviewed by Colin Banks

Colin Banks is a principal in the London design studio Banks & Miles. His folio book *London's Handwriting* surveys the history of twentieth century sans serif typefaces and places Edward Johnston's 1916 design for London Transport within the development. It was published in fall of 1995 in a limited edition of 200 copies by the London Transport Museum.

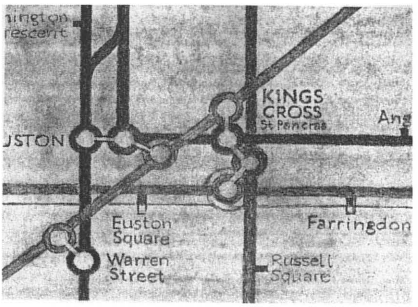
This story could be an important rallying point for designers. It chronicles the struggles that Harry Beck had, to hold on to the integrity of the design of his famous diagram of the London underground and the way in which he ultimately lost it.

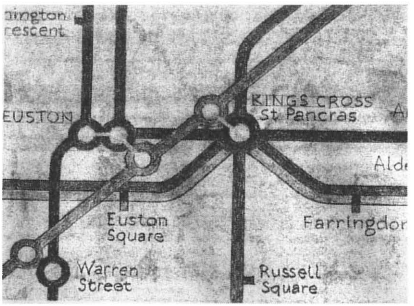
Beck was a rare man of original talent who had to grovel for an idea. In many ways it is an inspiring story sympathetically told, for the idea remained central to Beck and to this book; in other ways it is a depressing one. Something has to be done, for the arm twisting still goes on in the United Kingdom. The boot is quiet on the wrong foot, a designer's copyright for adaptation or further use, should never be assignable. The designer should never be left in a position where he or she has to take up the defensive and beg to retain it, that should be the purpose of law and the client should come to the designer for any extension of the original contract; but it happens all the time.

A national patron of design recently forced me to sign away rights in design by withholding the payment for other, completely different work. I hope I have a biographer as well qualified as Garland to write it up with the same light touch.

Beck had been made redundant by London Underground and was on the dole when he did all the original core work on his map in 1931. Subsequently he was reinstated to his draftsmans' job, but had his map proposal turned down by the London Transit publicity chiefs. It was not to be ultimately taken up until 1933 in which year the LT printed 850,000 copies of the pocket version for which he was paid £5.25 for the visuals, £5.25 for the artwork.

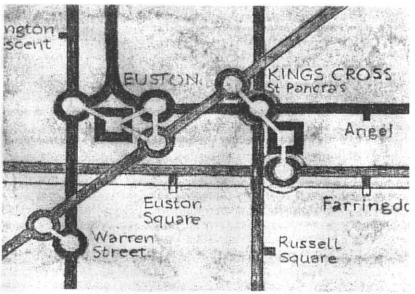
After that one thinks of the map as a history of continuous refinement; it was not so. I was not aware of the horrors that Beck was then directed to accomodate: station names inside boxes, tube line names within thickened routes. But then Beck also set himself parameters which did little to improve the appearance of the diagram, such as a minimal use of diagonals, from 1940 until his last adapatation in 1959. Beck was, as we would hope, a man driven by intellectual challenge, but this led him to set up as nearly as many hurdles in his path as his employers.





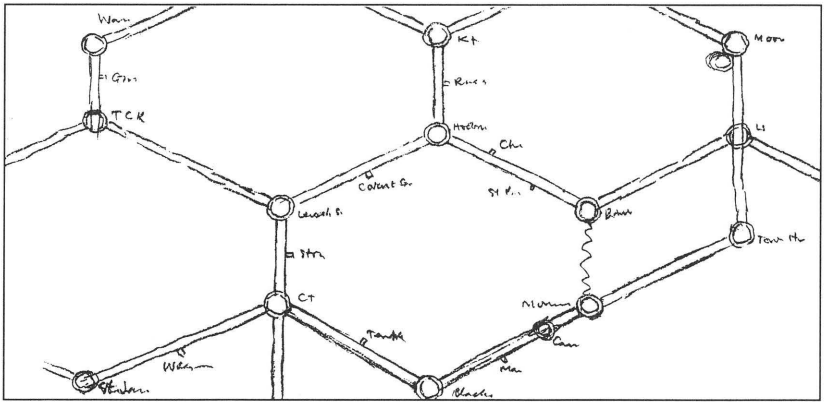
Above and right:
Pencil sketches by Beck of Euston and King's Cross interchanges.

Made in 1961, after the publication of the Hutchinson version of the Diagram, they all employ Beck's favorite device of 'white–line connectors' but there is one drawing (right) which incorporates a device he had not used hitherto: an open square at Euston and at King's Cross St. Pancras to represent a connection with the main line termini.



Opposite page:
Pencil Sketch by Beck of an experiment with hexagonal modules.

Apart from these arbitrary demands, the map needed modification as the London underground network grew; there are nearly thirty examples in this book. How does one choose a

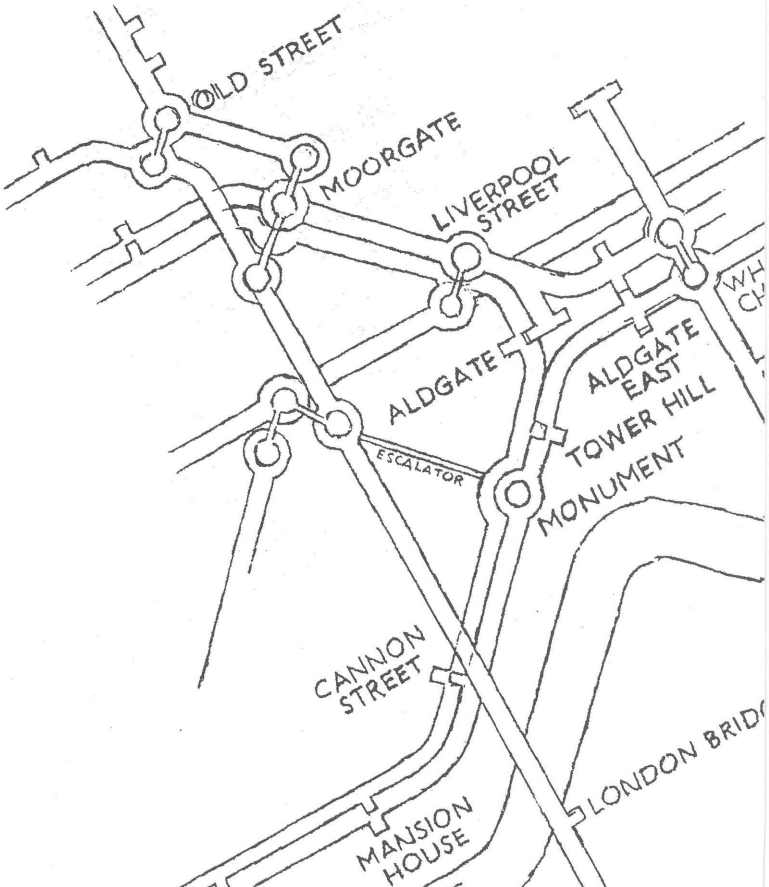


favorite? Well subtract the redundant information, tot up economies of production, acknowledge the new problems and the elegance of the answers and surprisingly, what is left is an aesthetic choice.

I think for me it must be the earliest poster of 1933, in spite of diamond shaped interchange points and some awkward corners. Mostly where it fails is not in giving the metropolis a concentrated and identifiable center, but then the main idea had been to even out the geographical bunching. So why do I like it: the answer is only partly objective and rests with the very revolutionary nature of the concept; the rest is subjective. I like the fine route lines that lend emphasis to the station names, and the balance of tension between the horizontals and equal number of verticals; not the sort of criteria to settle the question but as Beck was very aware, good style cannot be kept out of the equation. As Beck refined the style though, he set out to reduce the number of diagonals and the design got duller. The introduction of a station finding grid came to stay for a few years in 1951; it surprises me that it was not also used logarithmically to show how the suburbs had been condensed, but I cannot be sure it would work unless it were tried. The last Beck map was in 1959 and included a misplaced apostrophe in 'St. JAME's.' I was told very firmly when

once I proposed 'St. James' Park' that it was "not LT's mission to encourage illiteracies."

Beck's involvement ended very sadly. In 1960 he was confident, on the basis of verbal agreements, that LT would turn to him again with the introduction of the then forthcoming Victoria Line. I remember the furor with which the signature of H.L. Hutchison, the LT publicity manager of that time, was received when it appeared on the very bad 1962 map together with sweeping press statements about its improvement.



A Pencil sketch by Beck of the eastern end of the Circle Line.The earliest extant working drawing for a quad royal edition of the Diagram, this dates from 1949-50. With the promotion of the Inner Circle to the status of a separate line with its own color – yellow – Beck was presented with the challenging task of inserting this extra line into the more congested parts of the Circle.

I met Hutchinson first socially then in his office when I was a young lad taking my first steps in London. He asked me what I wanted to do and I said I was interested in typography, that was dismissed with "We leave that sort of thing to our printers."

He did not give me any work nor would I have wanted it from him. Christian Barman had been Frank Pick's assistant and Hutchinson's predecessor at LT and had moved on to work for The British Railways Board; where I never received anything but generosity; and as this book illustrates, that story just about mirrors Beck's treatment at that time.

Garland has used his considerable talents to a worthy end in this book about an enduring artifact, that is socially beneficial, rather than the street graffiti of which he sometimes speaks fondly. The book is as we would expect well designed and produced, but also very good value. It uses original London Transit Block Letter for the headings and it is interesting to see how this type makes poor letter combinations and has quickly come to look anachronistic. It would have been a bonus to see more of the other city maps which have sought their inspiration in Beck's work, but at the very least it should answer the question "What is Information Design"; examples will never come better than this.

COME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Book Review

Johanna Drucker
The Alphabetic Labyrinth:
The Letters in History and Imagination.
New York: Thames & Hudson: 1995.
322 pages, illustrated, $45.00

Reviewed by: Adam Blatner, M.D.

Adam Blatner is a psychiatrist working with both children and adults, a psychodramatist, a cartoonist and among other things has an interest in the lore of writing systems. He lives, teaches, writes and plays in Austin, Texas.

This book goes beyond a mere history of the alphabet to address a deeper level of abstraction: How have people interpreted the phenomenon of the alphabet itself? What is to be made of a system of writing that can capture language in a limited number of symbols? There are a number of books that have addressed the impact of literacy on law, politics, military strategy, literature, etc., but *The Alphabetic Labyrinth* is unique in its consideration of the symbolic impact—that is, the power of these symbols to evoke rich complexes of intuitions and associations regarding the possible way writing was invented, the spiritual essence of each letter and many other aspects of writing itself.

Any subject has a range of levels of abstraction and subtlety associated with it, from electronics or chemistry to philosophy or the study of writing systems. The most superficial or outwardly obvious level is called the "exoteric," while the "deepest" level, requiring the most extensive study and contemplation, is called the "esoteric." Whether it's in mathematics or subatomic physics, the greatest thinkers add a degree of intuition and inspiration to their ordinary modes of information processing—and the cultivation of such modes represents the esoteric approach to that subject.

For many years and many cultures, writing itself was the advanced technology, and the letters of the alphabet functioned not only as pragmatic tools for communication – their exoteric aspect – but also became the objects of contemplation. (A relatively contemporary analogy is the "esoteric" study of communications itself as a subject, an example being the work of Marshall McLuhan, with his effort to penetrate the obvious,

Quadrate Greek Letters
from a stele at Athens
Lewis F Davis,
Alphabets Old and New

opposite page:
Line of text from
the Gutenberg Bible

the "message," and appreciate the semantic and semiotic impact of the "medium.")

During the pre-modern era, when philosophy, spirituality, and science had not become compartmentalized, the phenomena of nature were fit objects of contemplation as to their cosmic significance. Mineral and organic substances were studied by alchemists, and numbers and letters were studied by pythagoreans, hermeticists and kabbalists. The rich variety of meanings found in the alphabet reflects the power of the imagination, perhaps the power to find pattern and significance in what to the exoteric mind would seem to be a relatively neutral or random set of signs. The author reviews this hermeneutic approach to the alphabet, the stories of the people and the way they've interpreted the alphabet; and thus this book may be appreciated as an historiography as well as a kind of history.

Technically, a letter is an arbitrary shape, a sign. It becomes a symbol when it takes on a host of associations. A symbol, then, is more than simply a definition; rather, it carries connotations, it evokes feelings and thoughts, and in short it serves as a stimulus to a complex of meanings. One of the lessons of this book is that it reveals the power of mind to make meaning out of patterns which may or may not have been formed with that or any meaning in mind! Given enough psychological sensitization, motivation or orientation, the imagination can, and often with surprising rapidity will, "discover" significance. The growth of a paranoid delusional system, the complex set of prophecies and doctrines in a cult, the baroque convolutions of interpretations in certain theories of psychology, the way dreams work, these phenomena as well as many psychology experiments separately and in their aggregate support this thesis.

In India and other cultures, drawings, sometimes of abstract or geometrical forms, function as symbols whose forms evoke subtle associations and projections of inner fantasies. These "yantras" (as they are called in Yoga) thus serve as objects of contemplation. They are more abstract than the pictures or statues of gods and saints, but because of that, they can receive

a wider range of intuitions. In a similar fashion, yet on a smaller, more "portable" scale, the alphabet served as a set of symbols which could be shuffled, arranged and contemplated – at times, with mystical intensity and magical systematization. Drucker documents some of these practices, situating them within the historical and philosophical context.

Without explicitly noting the analytical psychology of Carl G. Jung and his theory of "archetypes," this book illustrates some of his theories in a new way. Jung notes the way people from many different cultures relate to art, symbols, ritual and other social constructions, and that people naturally project the themes of life onto ambiguous phenomena; they then experience patterns thus perceived as meaningful symbols which then are re-incorporated in the psyche. This psychocultural perspective adds another dimension to an appreciation of this book.

Considering the goodly number of histories of writing presently available, it must be noted that *The Alphabetic Labryinth* is for the most part not redundant, but rather presents a great deal of new material, organized in a new way! The author has done an excellent, scholarly review of the work of scores of scholars, from classical times through the middle ages and the last few centuries, who have speculated on the origins of the alphabet, the esoteric significance of the different letters, their correspondences to numbers, constellations and other symbols or elements in nature, and their magical powers. The author's approach is unique in its breadth and depth, and thus her book can expand our appreciation of this dimension of writing.

The extensive history of writing is nicely condensed in the first few chapters, and then the impact of this system is noted, in philosophy, calligraphy, alchemy, medieval occultism, eighteenth- and nineteenth century speculation, etc. We must note that the way writing was able to "capture" in two dimensions much of the fullness of language seemed almost (or actually) magical to those who were unfamiliar with the technology of writing and this applies to the great majority of humanity through most of history. (And writing, after all, is chiefly what

allows history to be distinguished from prehistory.) However, those who have been raised in a culture saturated with literacy come to take it for granted.

In turn, our modern culture has lost the feel of magic, or perhaps it has become so commonplace and demythologized that we don't recognize how much we treat modern technology as if it were both magic and yet at the same time, ordinary. Nevertheless, I find a small but distinct percentage of people tend to be fascinated by writing, curious about the making of symbols. I suspect these individuals have a particular intellectual bent which allows them to intuitively penetrate the demythologization of writing – I suspect I'm referring to the types of people who would read this journal – and to sense the implications of letters and writing systems. And perhaps also they represent the kinds of scholars described throughout the book, those who study, question and create new solutions to the mysteries of the process of writing.

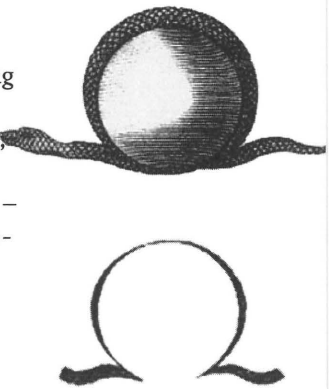
One way to look at history is as the story of the evolution of consciousness. And within the big picture, there are numerous sub-histories, which in turn serve as more comprehensible mirrors of the faltering steps and fascinating byways of exploration in the emergence and continuing exploration of, say, medicine, or a given religion, or, as in this case, one of the simplest (yet unendingly complex) technologies – the continuing story of writing.

For those who enjoy contemplating the evolution of the technology of writing on both its exoteric and esoteric levels, *The Alphabetic Labryinth* is a connoissieur's delight! It overflows with jewels of information, yet it is written with surprising clarity and succinctness – remarkable, considering the breadth and complexity of the subject matter being covered. The book is well illustrated, with lots of fascinating examples – pictures, diagrams, photographs, a good variety of stimuli to satisfy the reader's attention. Indeed, the overall design is strikingly effective enough to remind the reader that book design itself is part of the overall enterprise!

Background:: Shin–A letterform from the Kabbalah.

The field of study of writing systems is surprising in its interdisciplinary character, yet it has no identity which can be characterized with a name. I have proposed the term "scriptology" in this regard, the word functioning to gather together the lore of writing systems which includes so many different facets, including such diverse elements as typography, linguistics, history, various language studies, anthropology, art, etc. This book addresses more facets of "scriptology" than any other single text I've encountered; the author's discussions range from the proper postures for handwriting or early forms of shorthand to the emergence of an international phonetic alphabet and efforts at creating new, universal writing systems. She further touches on or addresses such topics as typography, paleography, cryptography (codes and ciphers), numerology, pedagogy, art and even the way the history of the alphabet might support or challenge certain established socio-religious beliefs in a cogent and interesting style.

I don't expect a book to be perfect, and this volume has a few minor problems. There are a number of aspects of writing which have been neglected, such as the recent attempt at a hieroglyphic writing called "semantography" by Charles Bliss, or the way certain Yogic schools in India treat the Sanskrit alphabet similar to the esoteric view of the Hebrew alphabet – that every letter has cosmological significance; and every phoneme vibrates with a different kind of spiritual resonance.



Derivation of the letter pi.
Literary Antiquities of Greece, London, 1799.

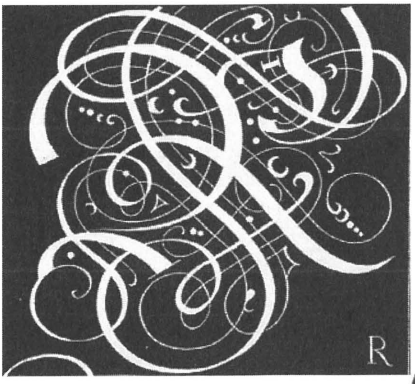
Since one of my minor avocational interests is the Jewish mystical tradition called Kabbalah, and because that was one topic which the author addressed as an example of how the alphabet has been interpreted, I paid close attention to her treatment of that field. Her review was for the most part clear, somewhat scholarly and, considering the breadth of the subject matter, surprisingly complete and succinct. There were a few minor errors – technical terms in Hebrew misspelled, some confusion as to which elements should be viewed as being on the "right" or "left" on the "Tree of Life" diagram, etc. And although it was noted later as an element in nineteenth century occultism, I would have been more explicit about the way the letters, the Tree and related Kabbalistic

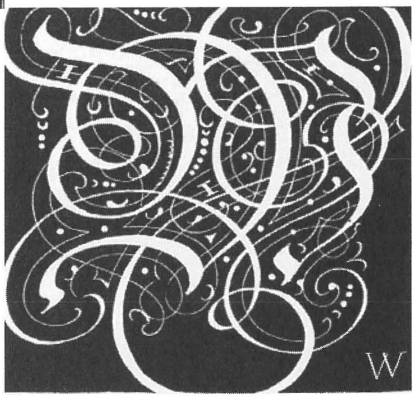
symbolism has continued to be popular as elements in the occult renewal in Western culture – as a minor fashion in the earlier twentieth century, and as a much more prominent fashion in contemporary "new age" circles! This fact makes this book even more relevant to a wider range of cultural studies.

Yet considering the overall enterprise, I have been delighted and impressed with the scope of her survey. *The Alphabetic Labryinth* has been the only careful review I've seen of the secondary commentators, the people who have contemplated the phonological or symbological significance of the letters. There have been many scholars, some more loosely speculative than others, who have sought some rational explanation for the shape and order of these signs. The main focus of *The Alphabetic Labryinth* deals with how the the letters, their forms, order and speculative origins, have themselves become symbols of contemplation. This approach is relatively unique in the general literature of scriptology, but it brings out an important dimension of the lore of letterforms.

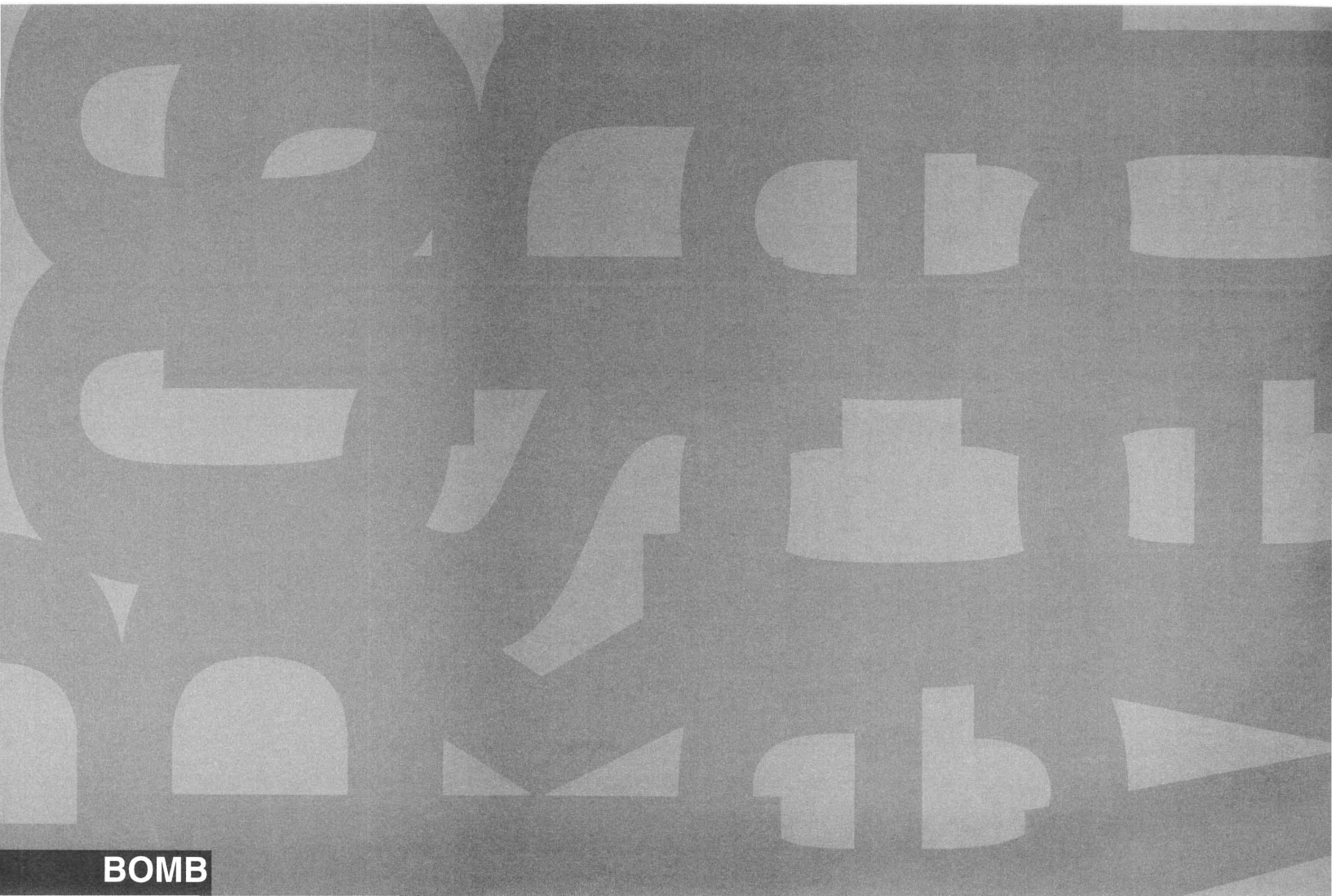
Background:
Enlarged bit-mapped letterform for use in computer-typesetting.

My final evaluation is in deeds, not just words. I generally do my reading in books borrowed from the library. Occasionally I'll buy a book used. I found this book in my local university library, read it, and even though I'd read it, I went out and bought it new! And on re-reading it – and this is one of those books that can be enjoyed with new discoveries on re-reading – I'm pleased to recommend it heartily to others.





Virtuoso penmanship: examples from the early 1700s.


BOMB

Books Received

Colin Baker,
Series Editor
Building Bridges: Multilingual Resources for Children
Clevedon: Multilingual Matters, Ltd., 1995
111 pages, illustrated, paper
ISBN 1-85359-290-0

Multiculturalism brings many practical problems which need to be carefully examined and resolved. One of these has to do with literacy acquisition in more than one language. This is the issue addressed in *Building Bridges*. Social and cultural messages in the classroom from displays to labels and nameplates create the context for languages in contact. Parallel production values, i.e., fine typography for English and Bengali, create parity between languages and prevent the subordination of one by another.

The largest section of the book deals with resources for reading in which the characteristics of language presentation from one language to another may alter the design for the structure of the book. Many visual examples are shown. The quality of translation, character and arrangement of illustrations together with the typography all require careful coordination in a dual language book.

Typography for exotic languages needs consideration in terms of the designer having a good grasp of specific language conventions, the state of technical development and access via word processing or computer mediated type generation. This book is essential reading for teachers, translators, designers and publishers of multilingual resources for children.

Elizabeth Hill Boone and Walter D. Mignolo, Editors
Writing Without Words, Alternative Literacies in Mesoamerica & the Andes
Durham, North Carolina: Duke University Press322 pages, illustrated, paper, $18.95
ISBN 0-8223-1388-X

Graphic systems of record keeping in the New World was the subject of a roundtable discussion at Dumbarton Oaks in 1991. This discussion evolved into this series of essays which go beyond alphabetic writing to visual and tactile systems of recording information and even to a broader definition of writing. In the introductory essay, Elizabeth Hill Boone takes issue with the typical definition of writing as speech representation and the classification of writing systems as pre-writing (not alphabetic) and true writing (alphabetic). She also argues with those who espouse "progress" in language presentation in their view of an evolution from picture writing to alphabetic writing. The evidence from early ancient languages indicates that writing has developed from a highly abstracted form to a more pictographic one as easily as it has evolved in the more conventionally acknowledged direction — from pictographic to abstract.

Boone suggests that notation systems such as those designed for dance, chemistry or mathematics are language systems albeit ones that cannot be easily spoken. She also presents diverse evidence regarding both cultural and scholarly movement toward two dimensional representations — maps, icons and diagrams, this definition of writing is opened to debate, thus the stage for the following New World essays.

Richard Eckersley, Richard Angstadt et al
Glossary of Typesetting Terms
Chicago: University of Chicago Press,
ISBN 0-226-18371-8

Muttons, mollies and nuts share space with tracking and postscript — what is often mysterious or arcane is made plain in this book. Of particular note are the occasional contributor comments on best practice or history that follow some entries. The appendices contain: descriptions of the parts of a letter, parts of a book, type styles, how to code a manuscript and write specifications, elements of a house style, table construction, a listing of accents, diacritics and special characters, proofreaders' marks and a bibliography.

Contributors to the book include a designer, two principals of typesetting firms and three university press colleagues. Together they represent several points of view: editor-in-chief, design director, production manager, compositor and book designer. Anyone engaged in visible language production

whether from a textual or visual standpoint can benefit from this reference.

Theodore L. Harris and Richard E. Hodges, Editors
The Literacy Dictionary, The Vocabulary of Reading and Writing
Newark, Delaware: International Reading Association, 1995
318 pages, paper, $35.00
ISBN 0-87207-138-3

The International Reading Association has just issued a new dictionary directed to professionals in the teaching and study of literacy. It is a carefully constructed reference tool with criteria for definition clearly spelled out. A notable new feature is the presentation of clusters of related words. Brief essays on such topics as censorship, evaluation in education, literacy, readability and problems in translation, among others, are presented. Charts show the various contributions of various disciplines and their interrelationships.

This volume replaces the 1981 dictionary. The introduction notes changes in the inclusion of terminology from various fields from the previous IRA dictionary to this one. The greatest increase in terms is from literacy, language, sociology and supporting technology; there is a slight decline in psychological terms and a reduction of more than half of previously included physiological terms. New fields such as writing, literary criticism, student assessment, print and graphic design and semiotics are included. Flagging these changes makes the reader aware of the evolution of the field.

Richard Hollis
Graphic Design A Concise History
New York: Thames and Hudson, 1994
224 pages, illustrated, some in color, paper, $14.95
ISBN 0-500-20270-2

Small (5.75 x 8 inches), perfect bound and copiously illustrated, this pocketbook covers about one hundred years of western graphic design from a trade journal point of view. People, ideas and events are recounted with little analysis. The book is a chronology from 1890 to about 1990 with sub-sections devoted to developments in particular countries. The author does pursue links between countries as created by designer imigration or student migration but no serious comparison between countries or across cultures is attempted.

The small images of significant design used to illustrate ideas or events can serve only as icons for the things themselves. The book could be a useful reference for design students, but one would hope that somewhere the student would access larger examples of the design under consideration. In a way,

the book is like that venerable tome *Key Monuments of Art History* (which was poorly printed but bound to last), which serves as a handy memory guide to the slides examined in art history lectures.

Leonard Mann
A Bird in the Hand
New York:
Prentice Hall, 1994
262 pages, paper,
$12.00
ISBN 0-671-88994-X

Part of the publisher's Armchair Philologist series, *A Bird in the Hand* decodes more than 250 frequently used phrases. Sources from mythology, the Bible, ancient history, folk tales, political events and poetry reveal the reference and deeper meaning of these phrases. Very few of the entries are from the twentieth century. Language, as well as communication technology, in this century has been volatile. One suspects that another book could revealingly encompass descriptive phrases from this century and feed back to us the political, technological, ethical and social context of this time.

Robert B. Ray
The Avant-Garde Finds Andy Hardy
Cambridge,
Massachusetts:
Harvard University
Press. 1995
246 pages, illustrated, paper,
$18.95
ISBN 0-674-05537-3

Robert Ray presents eight essays whose project is to reinvent criticism. "The extraordinary contagiousness of contemporary theory lies precisely in its generalizing power: the old model of scholarship, which relied on a specialized, scrupulous coverage of a field of study, insisted that the right to speak about for example, fiction or narrative accrued only to those who had read all the major novels in a given literature." He goes on to discuss the hold positivism has had on not only the sciences but also the arts and humanities. Even such counter moves as deconstruction, ideological criticism or Lacanian psychoanalytic approaches, now, having lost their critical force, seem ordinary. The author asks what, given this situation, will be critically productive. His answer is to ask improper questions.

The asking of improper questions, as the author goes on to demonstrate, depends on adopting an experimental or more pure research point of view supported by the avant-garde arts. Surrealist tradition with its use of chance, fragments, anecdotes, collage and games, becomes a rich resource for critical strategy. The changing scope of communication technology requires a deeper look at methods of representation, interpretive techniques and common stereotypes. Broad historical knowledge and unexpected insights legitimize the author's critical strategy.

The essays, many of which focus on film criticism, are accessible and focused. The book should have a larger audience than students of film — virtually anyone interested in media, communication and criticism should read it.

Andrew Robinson
The Story of Writing, Alphabets, Hieroglyphs and Pictograms
New York: Thames and Hudson, 1995
224 pages, illustrated, some in color, cloth, $29.95
ISBN 0-500-01665-8

Writing — its origins, the diversity of appearance and system — is endlessly fascinating. This book presents its material in three sections: first, how writing works; second, extinct writing; and third, living writing. While many similar books over the years have, like this one, presented a survey of writing directed to an intelligent lay audience, a close look reveals new approaches to analysis or comparison or even material not previously well known. In this case the surprises are Rongorongo, an undeciphered script from Easter Island and the use of Mayan glyphs to name-t:g a drinking mug. Details of specific writing evolution, maps and photographs of key artifacts along with readable, not too technical prose, present an inviting account of this important topic. The structure of various scripts are presented step-by-step so that even a novice will have gained a basic understanding of the world's major scripts by the conclusion of the book. Further resources are listed for readers who want to pursue further study.

Henry Steiner and Ken Haas
Cross-Cultural Design, Communicating in the Global Marketplace
New York: Thames and Hudson, 1995
228 pages, Illustrated in color, cloth, $40.00
ISBN 0-500-97423-3

Henry Steiner provides the intellectual framework for this book in his introduction. "There are three stages in the cross-cultural design process: 1) Quotation. Here one uses, without comment, foreign images for their quaintly exotic flavor, as decoration. This stage is precariously close to plagiarism, employing icons without necessarily understanding them. 2) Mimicry. Working in the style or manner of an artist or school, here one attempts to understand to some degree how and why the style developed. The thrust is more towards re-creation than reproduction. An operative adjective is influence. 3) Transformation. In this stage, influence has been assimilated and the once foreign becomes personal and natural."

The book consists of beautifully reproduced examples of the work of famous designers for "foreign" clients. The problem is that beyond the ego-satisfaction or design marketing utility of this book, there is little analysis of the problems of cross-

cultural design. For the most part, the client and the imagined end user is an ideal type: world traveller, sophisticated, educated and fairly well off. Two sections of the book actually deliver the goods: Maxim Zhukov's careful analysis of the constraints imposed on design for the United Nations and the discussion of the development of a bilingual wordmark for Canadian Pacific Airlines. This is essentially a picture book, but its title suggests it will deliver more. Cross-cultural design is not as easy and automatic as this book makes it seem.

Teal Triggs, Editor
Communicating Design, Essays in Visual Communication
London: BT Batsford, Ltd., 1995.
128 pages, illustrated, paper, £12.99
ISBN 0-7134-7548-X

The editor, Teal Triggs, states in the introduction that "the intent of the book is to provide a variety of ideas and methodologies which may be applied to understanding visual communication." She maintains that the typical historical chronology, inherited from art history practice, is too limited a means for exploring communication design — a broader context of social, political and cultural change is needed. And that is exactly what this collection of essays is attempting to achieve.

The essays are remarkably different in their approach. One essay deals with a classic example, the London Underground Map. First differences and similarities between maps and diagrams are clearly established. Then it is examined within the broader ideas of network analysis and the philosophical ideas of utilitarianism. It is compared visually with previous and subsequent London Underground Maps. The visual ideas that construct the "map" framework are understood to be innovative in their time, yet subject to revision.

Another essay compares the military interpretation of the problem of venereal disease and its communication strategy to inform the troops about this during World War II. British and American strategies are compared through the evidence of posters dealing with this topic. Underlying social values and behavioral attitudes are exposed through careful comparison and analysis. Yet another essay explores post-photography or what is more commonly called digital photography in the United States. Attitudes about technology, its usefulness and the value of appropriation and manipulation are questioned. The ideas are put into the context of the 1920 and

1930 work of Hannah Höch and John Heartfield thereby undercutting the hyperbole of current technological "wonders" in photography.

The diversity of these brief essays is welcome — they substantiate the need for a more carefully constructed cultural context in which to critically examine communication design.

Wucius Wong and Benjamin Wong
Visual Design on the Computer
New York:
Design Books, 1994
272 pages, illustrated, paper, $24.95
ISBN 1-55821-298-1

In 1972 Wucius Wong presented his book Principles of Two-Dimensional Design. This book logically and sequentially examined basic aspects of visual control as related to principles of visual perception. The new book, created in collaboration with his son, extends ideas of basic visual control to the computer generation of images. Because of the ease of making and range of experimentation possible with the computer, more ideas are demonstrated. The manipulations relate to well known software programs which are discussed in the early pages of the book.

Visual descriptions and text segments are drawn together by alphabetic reference. The examples use consistent elements so that the manipulation itself can be followed and compared to other visual operations. In this manner the book is explicitly didactic. Problems are posed for individual exploration of visual control relating to: straight lines, rectangles and ellipses, points and paths, type and fonts, painted images, scanned images, shapes and aggregates, formal organization, structures, anomaly and deconstruction, composition and communication and visibility and illusion. The book is useful for those interested in teaching or learning basic visual manipulation.

Notes on the Preparation of Manuscripts

Visible Language is concerned with research and ideas that help define the unique roles and properties of written language. A basic premise of the journal is that writing and reading form a distinct system of language expression which must be defined and developed on its own terms.

Submission
Authors should submit the original manuscript on good bond paper along with three xerox copies. The copies are used in the review process. Since the journal is created in a Macintosh environment, authors who work with Microsoft Word or MacWrite may instead send a copy disk plus one printed copy of their manuscript. Text files, not page layout files, are the preferred form for receipt of work.

Submission of an article is taken to imply that it has not previously been published and is not being considered for publication elsewhere.

Audience
Visible Language is an international journal that reaches across a range of disciplines, including linguistics, typography, literature, design and communications. Authors should define terminology that is specific to their disciplines. Foreign language passages must be translated into English. When more appropriate, the English translation can accompany the text or can be included in endnotes.

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Visible Language lends itself to visual treatment: authors are encouraged to make every effort to incorporate examples, photographs, sketches, diagrams, etc. Experimental graphic design and subject matter are encouraged.

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Books, first reference:

1 Rosenthal, Peggy. 1984. *Words and Values: Some Leading Words and Where They Lead Us.* New York: Oxford University Press, 110.

Subsequent reference:

4 Rosenthal. *Words and Values*, 187.

Articles, first reference:

2 Kinross, Robin. 1985. "The Rhetoric of Neutrality." *Design Issues* 2:2, 18.

Subsequent reference:

11 Kinross. "Rhetoric of Neutrality," 21.

Additional References

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The editors welcome proposals for special issues of the journal devoted entirely to a single, critical visible language topic.

Index to Volume 30

Volume 30 number 1 contains pages 1-96. **Volume 30 number 2**, a special issue, New Media Poetry: Poetic Innovation andNew Technologies, contains pages 97-240.**Volume 30 number 3** contains pages 241-368.

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Letters to the Editor

I've recently received the Money! issue of *Visible Language*, which I'm enjoying immensely. I did, however, notice that you state in the introduction that the stamps and currency Dwiggins used as the sounding board for his critique of American currency design were examples he received from a friend. I think the case is actually that he designed these items himself.

I've been studying the Electra and Caledonia types as part of a design project I've been working on in recent months, and tripped over the resemblance of the numerals on the two- and three-cent stamps on page 276 to the figures he drew for his types. The same is true of the "5" and the serial number on the five crown note on the facing page. These illustrations are also included among the sample of his graphic work in "Postscripts on Dwiggins" (*Typophiles* XXXV, v.1., 1960), and seem quite at home in the company of his designs for signs and book plates.

Mr. Dwiggins was a notorious fabricator — of artifacts, of organizations and even "people"; witness both the Society of Calligraphers and its president, Dr. Putterschein. That he'd go to the effort of crafting his own fictional references to illustrate an argument doesn't surprise me at all. In the end, it seems he used "Antipodes" to refer less to a geographic reality than to different ways of thinking about design.

This issue of VL makes much of how money must look "money-ish" and must derive from a source of authority in order to gain acceptance. What strikes me most particularly, then, is that while clearly recognizing the artist's hand, I also find myself half-believing these illustrations' claims to authenticity — claims reinforced by their matter-of-fact reproduction as the "real thing."
Charles Gibbons / Publications / University of Minnesota

Just a note to emphasize that the Antipodes in Reform of Paper Currency (*Visible Language* 29:3/4) is a fictitious country, yet another figment of Dwiggins' overactive imagination. This does not come across clearly in the Money! issue of the journal.
Paul Shaw / Letter Design / New York City

It is curious how context alters interpretation. During the time I was writing for and editing the Money! issue, I attended a numismatic convention where I saw and fingered the most amazing variety of old and new currency from every country imaginable. The new eastern European currencies in particular caught my eye. This plus the fact that I knew that there really are Antipodes Islands — located southeast of New Zealand and just over the international dateline — made Dwiggins' Antipodes currency and stamps seem quite plausible to me. The idea of the "antipodes" — persons dwelling on the opposite side of the globe is poetic and compelling. This idea, together with the fact that they are just over the dateline, was crucial to Umberto Eco in his latest novel *The Island of the Day Before*. Nevertheless, Dwiggins put one over on me, but not these two VL readers.
The Editor