



While You're Reading

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Contents

Questions	7
Practical Theories	19
Contrasts	33
Disappearing Types	47
Faces	55
The Process	63
Fragments	71
Convention	81
Reader's Eyes	91
Type Design	103
Dressage	115
Out of the Ordinary	125
Looking & Reading	133
Choice	141
Space	149
Illusions	155
Newspapers & Serifs	161
Repertoire	177
Symbiosis	185
Reading	193
Bibliography	205
Index	211





nue to write just as much as ever, and with just as much variety, about just as infinite a range of things and matters and questions, and however we read what they write – with all our attention or without it – read it we shall.

One of my favourite books

One of my favorite books, from the days when I used to do a bit of gliding, is *Cloud Reading for Pilots*,¹ a book with a title of subtle ambiguity: it is, after all, both a book for reading about clouds and a book about how to read clouds. For example, to glider pilots it is essential to be able to recognize cumulus clouds because they tell you where warm air is rising, enabling you to fly longer and higher and farther. But what actually is reading? Does its essence lie in the fact that written text yields its content, or that it enables us to find significance in all sorts of things? Since most thoughts are couched in language, the idea that you can read thoughts – or would like to – can reasonably be counted as reading. But is recognizing clouds or wild animal tracks also reading? That is a very free interpretation. There is something to be said for using the word “read” only for the assimilation of letters, words and sentences, of marks or characters which, through their recognition, give access to language. But language is often used loosely, and a word like “reading” is applied analogously and associatively to activities that can be compared with reading in the widest possible sense – just as long as the product is knowledge, such as the conclusion that a little while ago a wild boar passed this way.

What you have just read may have set you thinking, but you probably never saw any letters. But to be able to read you have to recognize the letters – so how can you read without seeing any? This is a common phenomenon: on their journey from home to the trainstation, school, office or shop,

millions of people every day forget where they are – or appear to. They think of other things and walk or ride or drive to their destination without accident. What is happening is that familiar knowledge is being used unconsciously. This is what allows us to do two things at once. Indeed, there are those who can knit a pullover, watch television and carry on a conversation all at the same time. So which activities are carried out consciously and which are automatic?

If you are sixteen, you'll probably have had ten years' experience of reading; if you're forty, thirty-four. Try writing down every day what you have read in newspapers, books, magazines, reports and manuals. Add what you have read in instructions for use, on cereal packets, on signposts, and on menus, bills and speeding tickets, not forgetting subtitles, e-mails and text messages – and whatever else has come your way during the day. Then calculate how much you read in a week and in a year, and multiply the result by your years of reading experience: the numbers will be colossal. We are not talking about what you have been reading – just how much. And we can disregard all that stuff that has only partially gone into your memory over all that time, day in, day out, in one eye and out the other. What we are talking about here is the form in which the text appears, and in particular the characters, punctuation marks, numerals and other symbols, and the spaces between the words.

Here's some more arithmetic: the average paperback has 50 characters to the line, 35 lines to the page and 250 pages of text. That's 437,500 characters. Pick up ten such books, and you're holding well over four million letters and other characters – and they're still only paperbacks. With books, of course, it is fairly easy to calculate the number of characters you have read, but in all those other forms of text it's a good deal more difficult. To take just one example, you don't read all the text in a newspaper. It's clear enough, however, that



Above:
n with serifs
Below:
sans serif n

we are talking about vast numbers of characters every year. And all the while, you're not just reading letters, but all sorts of letters: light and bold, large and small, standing-up-straight ones and ones that slope, normal-looking letters and letters of great eccentricity. And you're reading letters with serifs and letters without serifs.

Many readers have never heard of serifs. Is this the same kind of thing that happens when many of us visit a car mechanic? Millions of people every day listen with half an ear to the familiar humming of their car's engine, and any change or unusual noise attracts immediate attention. The mechanic talks of timing belts, which sounds convincing – but of what a timing belt is and what it does we have no idea. Looking under the hood produces very little apart from despair. Is it the same with letters? Few of us can give an exact description of what the type used for the headlines in our morning paper looks like, since our acquaintance with it is semi-conscious at best. Yet changing the typeface in a morning paper can unleash powerful emotions.

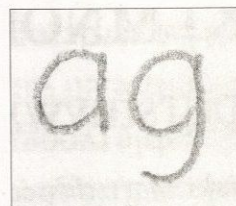
Go for a walk and we see quite a lot: the autumn sales have started, a cyclist goes through a red light and a car has to brake sharply, the chestnut trees lining the road are shedding their leaves. By the time we get home most of these things have already vanished from our memory – unless something unusual happens, in which case it will be engraved there. In fact, most such perceptions seem to be stored in short-term memory to be erased not long afterwards. Does something of the kind happen when we read? As we walk we don't constantly watch our feet: we take in our surroundings with just an occasional glance at the path ahead to make sure we avoid holes in the ground and other obstacles. We don't, in short, think about how our feet move; walking is a virtually automatic process, just like reading. The process of comparing the letters we have read

with characters we keep stored in our head, and with the words and sentences that make up our knowledge of language, appears to happen merely in passing, while we concentrate on the content. We just carry on turning the pages. Occasionally we will turn back to see if it really said what we think it said, or we notice there's something wrong with the printing. This is the kind of thing we usually forget. But the shapes of letters are firmly embedded in our minds – otherwise how could we recognize them? Letterforms appear to have been laid down as patterns in our brains so that we can trust them implicitly, just as we can our knowledge of the language we speak and the information we use for moving our feet. So what do these letter-like patterns in the brain look like, and what do we do with them in the course of reading?

Are the patterns in our brains baked into their very fabric, or can they easily be changed? There are typographers who believe that legibility leaves very little room to manoeuvre, and that in the interests of readers typography must follow laws and slowly evolve. On the other hand, there are designers who are convinced that readers can take a knock or two, and that legibility is flexible. These designers are keen to bring about a typographical reformation. What do you expect, when a book dating back to 1470, printed and published by Nicolas Jenson in Venice, uses types that appear little different from those used today? The text of a book like this may be difficult to fathom if we have no knowledge of Latin, but the letters and the typography are easy to follow. So what has happened over the past five centuries and more – what have type designers and typographers been doing all that time? You can also look at it this way: How wonderful it is that typography and letterforms seem to be so durable! But it isn't surprising that

alongside admiration there should also be resistance to customs that are so black and white, and which appear to have been carved in granite. The struggle against typographical tradition has flared up several times over the past century or so. Conventions and rules have been ignored and jettisoned by many designers; for others they have hardened into dogma.

When I was still learning how to be a designer I wanted to find out how people read, and what ways there might be to offer readers better type and typography. In the process I discovered the fascinating fact that most readers read without consciously recognizing the letters. One afternoon, I set myself up at a busy crossroads in Amsterdam, near the entrance to the zoo, to conduct a survey. I asked passersby what was the last piece of printed matter they had read, and if they



would draw for me the shapes of the letters *a* and *g* that they had encountered in the text. Most of them drew handwriting letters rather than printing letters, or else they would draw capitals or the simplest forms in which the *a* and *g* have only one counter. Only a few were able to reproduce the more complicated versions such as the *a* with two stories and the *g* with three. Such details as differences between thick and thin, whether the bottom bowl of the *g* was open or closed, and whether the *a* had a large or small belly, were nowhere to be seen.

Yet of all the things we use every day, letters must surely be the ones we most often use unconsciously. Most people use them both intensively and intimately, so it seems probable that readers possess a considerable hidden treasure chest of typographic knowledge. The vast majority of us have no conscious access to this, even though it is in fact accessed every time we read. If we haven't learned to consciously recognize and name types, fonts and parts of letters,

ementem audiamus
simus: qui plifstonic
ut etiam aduersus
at. Ptolemæum Me
tis ægyptiorū edidi
n urbem euertit: & I
o quidem Amofide
e cōfirmat. Res autē

Jenson's roman
Venice, 1470

tioned. This in no way impinges on the admiration I have for many unnamed fellow type designers and their work.

It will doubtless come as a surprise to many readers how much is still unclear about reading, how many questions remain unanswered. For the plain fact is that our knowledge about a skill that almost everyone uses every day, and which appears to work of its own accord, is incomplete.

Even so, I hope you enjoy reading this book!

Practical Theories

as typographers and others can, that knowledge remains locked away. For example, the inability of most readers to talk about type and typography in any depth has led some scholars to conclude that readers do not share the typographer's enthusiasm for typefaces and the subtle differences between them. Few of us can remember the typeface in which a

1 Zachrisson 1965, p 88

2 Zachrisson 1965, p 92

recently read book was printed.¹ Yet asked what elements of a book they think are important, readers put the typeface at the top of the list, followed by the paper, page layout, binding, illustrations, cover and title page.² Research has so far failed to find a way of estimating readers' latent typographical knowledge, though that does not necessarily mean it will never succeed, or that this latent knowledge does not exist. On the contrary, most readers must have considerable typographical experience and knowledge, otherwise they would be unable to recognize so many different typefaces and typographical variations. If it were not so, a newspaper, as one example, would hold little meaning for them.

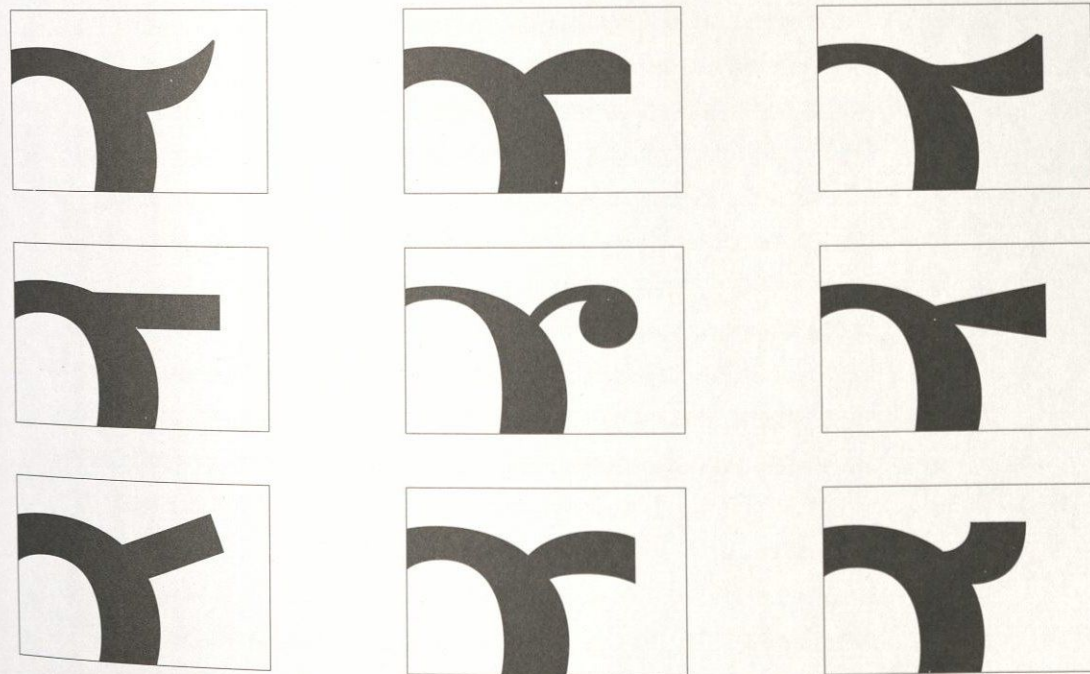
A newspaper is a complex product. To allow readers to select reports on the basis of importance, they employ various sizes, sorts and weights of type (bold, normal, italic etc.). These are also used to distinguish news from opinion and main texts from captions. Headings will often be set in a different typeface from that used in the columns. Then there are the advertisements, with their own vast range of typefaces and variants thereof, all designed to set them apart from all the others and all designed to catch the eye. And there are yet other typographic variables. Text can be set in various ways: either justified (with all the lines the same length) or "ragged right", or with some passages set wider or narrower. White space plays an important



part, keeping texts apart and creating a restful impression, or, by its absence, heightening a sense of urgency. Rules and bars are also a help. Newspapers make heavy demands on readers' typographical experience. In comparison, many books, particularly novels, have interiors that are arranged much more simply.

The media on which text is presented all help to build up this internal database, even cardboard boxes and monitors. Formats and colours are added, along with different ways of folding and binding and much more. Most readers can find their way through this forest with ease. The typographical resolving power of the average reader must be high and detailed.

Those with a fondness for types and letters, including professional typographers and type designers, are prone to get hot under the collar about the "ear" at the top right of the



letter g. Some believe this should be rectangular in shape, though they are also prepared to tolerate a round ear or even a triangular one. Projections that are seen as excessively large, frivolous or conspicuous, on the other hand, may meet with resistance. And are they really called ears? The Dutch call them flags. The dot on the *i*, too, can take a range of forms,¹ and other parts of letters likewise have a tendency not to be uniform. Readers whose attention has been drawn to this usually react with surprise and sometimes incredulity: "You mean details like that really make a difference?"

¹ Van Harn 1993

Once someone finds out that you design type for a living, sooner or later you can be sure they will ask: "Haven't we already got enough typefaces? Is there still any point in designing a new one?" And when they see a new typeface for the first time, they often say: "What's new about it?" These, of course, are generally questions asked by laypeople. By contrast, graphic designers and typographers tend to hail me with the words: "Got anything new for me?"

Typefaces vary enormously, and while in the animal and plant kingdoms diversity is on the decline, in type catalogues it is increasing. Some people would say there are far too many. There are graphic designers who take pride in only needing four or five typefaces – indeed, there are even those who spend their entire working lives using only one type. In contrast, there are many for whom the range available is still too small. So who is right – or is this one of those cases where no one is right or wrong? What kind of purpose is there in variation, and what is it that drives type designers? Is it a matter of concepts like beauty, or being different, or modern, or is it all about pure utility, and ought type designers to concentrate solely on maintaining or improving legibility? And what kind of basis is there for a type designer's improvements? Although research has told us quite a

lot about reading, type designers still have very little concrete evidence to go on.

In the midst of all the questions, theories and counter-theories that we have already seen, there is one question that lies at the heart of this book: what happens when we read? The building blocks of text, letters (and in particular: types), will be given more attention than the wider domain of typography, about which much has already been written by others – many of whose texts, indeed, will be cited later on in this book.

How do readers react with their eyes and brains to the products of type designers and typographers? Much of what we know about this subject stems from research in psychology, with educators and linguists doing their bit, along with neurologists. But in all the treatises about legibility and reading little seems to have come from those who can make or break the legibility of a text: graphic designers, typographers, type designers. To some extent, this book is an investigation into their part in what we know about reading: a part that is above all pragmatic, proceeding from their intimate acquaintance with letterforms and the multifarious uses to which they are put.

The geographical and temporal scope of this book is limited: it is confined principally to that part of the world in which the Latin alphabet is used and to the ways in which people read today. And because it was written in Holland, first in 1995–6 and then again in 2004–5, it reflects the position of the country and the times in which I write. And, of course, my own perhaps idiosyncratic way of looking at things may also have helped to limit my range.

Although a lot of historical material has gone into this book, it is not a history of typography. The text is full of the names and type designs, but many more names go unmen-

Preference vs
use
of
typefaces