KNOW YOUR SHIT

A DESIGN READER

Volume One

(Legends)

What design means for me

As a typographic designer I think of myself as a designer of the printed word. Which isn't to say that the spoken word is in good hands with me.

Mankind has divided the branches. In the course of history a great number of occupations have come into being, from which each person can choose according to interests, disposition and opportunities. Each of these occupations finds its expression in form. In this sense we are all designers and makers of the forms in which things present themselves to us.
Form is the condition through which a common life becomes possible: through which a relationship between people comes about. Design determines the quality of our common life. It is extremely important to stress this.
In some cases, when knowledge and insight are missing from a particular field of expression, a collaboration is attempted with people who explicitly concern themselves with the design of given material: 'form givers'. I prefer to call them designers, because an essential process needs to go on prior to the form. Design should be able to be seen fittingly inserted into a desired social structure.
Graphic designers act as intermediaries. They maintain the relationship with the graphic industry, for which some specialist knowledge is necessary. There is always talk of a given message (the job) and of the one who is to be informed (the public). Between them stands the designer with a specific outlook and knowledge of things.
For good things to happen, there has to be a dialogue, with mutual respect, between the client and the designer.

Each one should understand and trust the other, and should above all have a social desire. Further, the designer should see the import of the job and be alert to those to whom it is directed, to come to the right choices. Because — like much in life — designing is making choices.
Choices from an often large number of possibilities and in the light of an analysis of the job and an idea of the audience. Yet even after this selection there are sufficient possibilities remaining to establish uncertainty. Each choice always shuts out other possibilities. This process of choices has to continue until there remain the essential ingredients, which for the designer at that moment, for that purpose, are essential in coming to the final form.
During this process both rational and emotional considerations are in play. Rational factors tend to be distilled out of the job itself and can also be determined through the constraints and possibilities that the techniques of production offer. Emotional aspects are a more delicate matter, because more subjective.
In good design, I suggest, the expression must exhibit a certain tension and\or harmony between functionality and the qualities of attraction. The content of the message has to come over, but the way in which this happens — the melody — is important, not least because in itself it carries communicative value. It is through form that content comes to us.

My thoughts about matters of this kind have their origin in the time when I trained, when there was a prevailing belief in the good of functionalism and in the beauty of the constructed, which the application of this idea led to. In reaction to the time that preceded, there was a sense of a social need in purification. Rational considerations had the

Wat vormgeving voor mij betekent

Als typografisch ontwerper beschouw ik mijzelf als vormgever van het gedrukte woord, waarmee nog niet gezegd is dat ook het gesproken woord bij mij in goede handen is.

De mensheid heeft de taken verdeeld. In de loop van de geschiedenis zijn daaruit een groot aantal bezigheden ontstaan, waaruit een ieder vanuit zijn belangstelling, geaardheid en mogelijkheden een keuze kan maken.
Elk van deze bezigheden drukt zich uit in vorm. In die zin zijn wij allen vormgevers en makers van de gedaante waarin de dingen zich aan ons voordoen.
Vorm is de voorwaarde waaronder een samenleving mogelijk wordt, waardoor een relatie ontstaat van mens tot mens. Vormgeving bepaalt de kwaliteit van onze samenleving. Het is wel degelijk van belang ons daar druk over te maken.
In sommige gevallen, wanneer kennis en inzicht op een speciaal uitdrukkingsgebied ontbreken, wordt er samenwerking gezocht met mensen die zich expliciet bezighouden met de vormgeving van een gegeven: de vormgevers. Liever noem ik ze ontwerpers, omdat aan de vorm een wezenlijk proces behoort vooraf te gaan.
Ontwerpen zou gezien kunnen worden als het op de juiste wijze inpassen in de gewenste maatschappelijke structuur. Grafisch ontwerpers treden op als intermediair. Zij onderhouden de relatie met de grafische industrie, waardoor kennis van zaken op dat gebied noodzakelijk is. Er is altijd sprake van een gegeven boodschap (de opdracht) en degene die geïnformeerd dient te worden (het publiek). Daartussenin staat de ontwerper met zijn specifieke opvatting en kennis van zaken.

Om tot een goed ontwerp te komen zal er, met wederzijds respect, een dialoog moeten ontstaan tussen opdrachtgever en ontwerper. Zij zullen elkaar moeten verstaan en vertrouwen, en vooral een gemeenschappelijk verlangen moeten hebben. Verder zal de ontwerper het belang van de boodschap moeten onderkennen en achting moeten hebben voor degene aan wie de boodschap gericht is, om tot de juiste keuze te komen. Want ontwerpen is, zoals veel in dit leven, kiezen.
Kiezen uit een vaak groot aantal mogelijkheden en dat aan de hand van een analyse van de opdracht en een voorstelling van de doelgroep. Echter na selectie blijven er voldoende mogelijkheden over om in onzekerheid te geraken. Iedere keuze immers sluit andere mogelijkheden uit. Dit proces van kiezen zal door moeten gaan tot dat de essentiële ingrediënten overblijven die voor de ontwerper op dat moment, voor dat doel, van belang zijn om tot de uiteindelijke vorm te komen. Tijdens dit proces zijn rationele en emotionele overwegingen aan de orde. Rationele faktoren zijn over het algemeen uit de opdracht te destilleren en kunnen ook door beperkingen en mogelijkheden die de techniek ons biedt worden bepaald. Bij gevoelsmatige aspecten ligt dat lastiger, want subjectiever. Bij een goed ontwerp, zo stel ik, moet er in de uitdrukking een zekere spanning en\of harmonie ontstaan tussen functionaliteit en bekoorlijkheid. De inhoud moet overkomen maar de manier waarop, de melodie, is minstens zo belangrijk omdat zij op zichzelf ook een communicatieve waarde in zich draagt. Via de vorm komt de inhoud tot ons.

In mijn opleidingstijd — mijn denken over dit soort zaken vindt daar zijn oorsprong — was er een algemeen heersend geloof in het heil van het functionalisme en de schoonheid

upper hand. Every redundancy served only to be eliminated. Designers had to let their personal vision come as little as possible to expression in the message, so as to safeguard the objectivity of the information.

Out of this concerted desire, which turned into a convinced dogma, there arose a formality and thus a uniform expression of different kinds of content. This overestimation of rationalism became monotonous, and a reaction was bound to occur.

And under the influence of the changing context, with its needs for difference, assumptions were overhauled. Uniformity gave way to diversity. The designer took another, more personal approach to the content. The content should come to expression in the form. And so, through the individualization of the person, a social style has to make way for a multiplicity of individual voices with expressions to match.

Among other things, this entails the strong upward estimation of the image at the expense of the word: text is often deformed so that the reader becomes a looker. Through the mutual influence of designers, in which the outer form gets imitated over and over again, a game with form is played, in which form is untied from content. And whenever form itself comes to be the starting point then a levelling happens. What was originally intended as support for content has come to be free and has decayed into ornament: form about form. A meta-language, deployed to amaze colleagues and to please the parvenu.

This phenomenon now threatens to overwhelm us.

This kind of levelling design is certainly a reflection of distinct tendencies in our social life. But I do not want to believe that these are the only values. To assert this, another kind of design is necessary. To work with this assumption is the thing that most fascinates me, and fills me with a desire to make a contribution that is answerable. And the fact that this involves the use of a printing press doesn't leave me unmoved.

Thus it seems good to me to formulate the premises freshly and clearly, so as to reach a form that values content and has respect for the receiver of the message. There is no recipe for this. It is a matter of mentality. It is a process of repeatedly weighing up aims, means and method. The criteria for this can be — just as Vitruvius, the Roman theorist of architecture, stipulated as the values of building — 'commodity, firmness and delight'.

Karel Martens, February 1990

van het construktieve die dat idee in zijn toepassing tot gevolg had. Als reactie op de er aan voorafgaande tijd leefde er een gemeenschappelijke behoefte aan zuivering. Rationele overwegingen hadden de overhand. Elke overbodigheid diende geëlimineerd te worden, de ontwerper behoorde zijn persoonlijke visie op de boodschap zo min mogelijk tot uitdrukking te laten komen om zodoende de objectiviteit van de berichtgeving te waarborgen.

Uit dit eensgezind verlangen, dat tot zekere dogmatiek leidde, ontstond een formaliteit en de daarbij behorende uniforme uitdrukking van inhouden van verschillende aard. Deze overmaat aan rationalisme werd monotoon, waardoor een reactie niet kon uitblijven.

Mede onder invloed van de veranderende tijd — met zijn behoefte aan onderscheid — zijn de uitgangspunten herzien. Uniformiteit maakte plaats voor diversiteit. De ontwerper gaat zich op een andere, persoonlijkere, wijze tot de inhoud verhouden. De inhoud behoort in de vorm tot uitdrukking te komen. Daarbij, door de individualisering van de mens, moet een gemeenschappelijke stijl plaatsmaken voor een veelheid aan individuele opvattingen met bijbehorende uitdrukkingen.

Onder andere hierdoor wordt het beeld sterk opgewaardeerd ten koste van het woord: tekst wordt vaak zodanig gedeformeerd dat de lezer een kijker wordt. Door onderlinge beïnvloeding van ontwerpers, waarbij de uiterlijke vorm over en weer wordt geïmiteerd, ontstaat er een vormspel dat los is komen te staan van de inhoud. En wanneer vorm zichzelf als oorzaak heeft ontstaat er nivellering. Dat wat oorspronkelijk was bedoeld als ondersteuning van de inhoud is daar los van komen te staan en verworden tot versiering: vorm om vorm. Een metataal, ingezet om collega-vormgevers te verbluffen en de parvenu te behagen. Dit verschijnsel dreigt in onze tijd te gaan overheersen.

Stellig is dit soort nivellerende vormgeving een weerspiegeling van bepaalde tendenzen in de samenleving. Maar dat er geen andere waarden zouden zijn wens ik te betwijfelen. Om die te doen gelden is een ander soort vormgeving noodzakelijk. Om daar aan mee te werken fascineert mij in hoge mate, en vervult mij met een verlangen op verantwoorde wijze een bijdrage te leveren. Waarbij het gegeven dat er een drukpers aan te pas komt me niet onberoerd laat.

Het lijkt me goed hiervoor de uitgangspunten opnieuw duidelijk te formuleren om tot een vormgeving te komen die waarde geeft aan inhoud en respect heeft voor de ontvanger van de boodschap. Een recept daarvoor is niet te geven. Het is een kwestie van mentaliteit. Het is een proces van keer op keer afwegen van doel, middel en methode. Criteria daarbij kunnen zijn, zoals de romeinse architectuurcriticus Vitruvius voor de waarde van gebouwen bepaalde: 'duurzaamheid, nuttigheid en bekoorlijkheid'.

Karel Martens, februari 1990

Research & Destroy
A Plea for Design as Research
Daniel van der Velden

Beursschouwburg, Brussels, 2005
Jan van Eyck Academie, Maastricht, 2006
Metropolis M|issue #2, 2006

'Since the production of services results in no material and durable good, we define the labor involved in this production immaterial labor – that is, labor that produces an immaterial good, such as a service, a cultural product, knowledge, or communication.'
(Toni Negri & Michael Hardt, Empire, 2000)

Does your desire for Dior shoes, Comme des Garçons clothes, an Apple iPod and a Nespresso machine come from need? Is design necessary? Is it credible when a designer starts talking about need, the moment he arrives home from a weekend of shopping in Paris? Can you survive without lifestyle magazines? Can you live without a fax machine that sends an 'sms' to the supplier whenever the toner needs replacing? Is it necessary to drive a car in which, for safety, nearly all the driver's bodily functions have been taken over by the computer – while the driver, at a cruising speed of 170 kilometres per hour, is lulled to sleep by the artificial atmosphere in his control cabin with tilting keyboard, gesture-driven navigation, television and internet service?
      We no longer have any desire for design that is driven by need. Something less prestigious than a 'designed' object can do the same thing for less money. The Porsche Cayenne brings you home, but any car will do the same thing, certainly less expensively and probably just as quickly. But who remembers the first book, the first table, the first house, the first airplane? All these inventions went through a prototype phase, to a more or less fully developed model, which subsequently became design. Invention and a design represent different stages of a technological development, but unfortunately, these concepts are being confused with one another. If the design is in fact the aesthetic refinement of an invention, then there is room for debate about what the 'design problem' is. Many designers still use the term 'problem-solving' as a non-defined description of their task. But what is in fact the problem? Is it scientific? Is it social? Is it aesthetic? Is the problem the list of prerequisites? Or is the problem the fact that there is no problem?
      Design is added value. En masse, designers throw themselves into desires instead of needs. There is nothing wrong with admitting as much. Konstantin Grcic, Rodolfo Dordoni and Philippe Starck are found in Wallpaper boutiques, not in Aldi supermarkets. Unvaryingly, the poorest families are still living with second-hand settees in grey, post war neighbourhoods, in a total absence of design. Orchestration of 'third-world' design assembled for the cameras cannot escape the image of the world in poverty having to make do without the luxury gadgets that are so typical of contemporary design. The hope that some designers still cherish, of being commissioned to work from the perspective of objective need, is in vain. Design only generates longing. The problem is the problem of luxury.

Graphic design – the end of the middleman
There is one discipline in which, less than ever before, the definition of the problem and the solution are bound to a scientific, technical, or even just a factual state of affairs. That discipline is graphic design – or visual communications. Even Paul Mijksenaar cannot deny the fact that passengers still manage to find their flights in airports where he did not design the airport signposting. Meanwhile, the letter type that he developed for Amsterdam's Schiphol Airport is also the airport's logo. In graphic design, every 'problem' is coloured by the desire for identity on the part of the client. They are the problems and the solutions of the game of

rhetoric, expectations and opinions. The graphic designer, therefore, has to be good at political manoeuvring.

The effect of this depends, among other things, on his position in regard to his client. What has historically come to be referred to as 'important graphic design' was often produced by designers whose clients considered them as equals. See, for example, Piet Zwart, Herbert Bayer, Paul Rand, Wim Crouwel and Massimo Vignelli, all designers who worked for cultural organisations as well as for commercial enterprises.

Today, an 'important graphic design' is one generated by the designer himself, a commentary in the margins of visual culture. Sometimes the design represents a generous client. More often, it is a completely isolated, individual act, for which the designer mobilized the facilities at his disposal, as Wim Crouwel once did with his studio. It always concerns designs that have removed themselves from the usual commission structure and its fixed role definitions. The designer does not solve the other person's problems, but becomes his own author.[1]

As a parallel to this, innovating designers pull away from the world of companies and corporations, logos and house styles. Their place is taken over by communications managers, marketing experts and, for some ten years now, design managers, engaged on behalf of the client to direct the design process. The design manager does what the designers also want to do – determine the overall line. In contrast to the 'total design' of the past is now the dispirited mandate of the 'look and feel' – a term that catches designers in the web of endless manipulating of the dimensions of form, colour and feeling.

It is not so strange that a branch of graphic design has evolved that no longer hangs around waiting for an assignment, but instead takes action on its own accord. It has polarized into the 'willing to work', who often have little or no control over their own positions, and the 'out of work', who, with little economic support beyond re-channelled subsidies or grants, work on innovation for the sake of innovation.

Designing as factory work
In the NRC Handelsblad newspaper, Annette Nijs, cultural spokesperson for the VVD (People's Party for Freedom and Democracy), wrote, 'We are making a turn, away from the assembly line to the laboratory and the design studios, from the working class to the creative class (estimates vary from 30% to 45% of the professional population)'.[2]

According to a study by the TNO, the Netherlands Organization for Applied Scientific Research, the major portion of economic worth derived from design (about 2.6 billion Euros in 2001) is from visual communications.[3] Can a designer, if he is in fact seen by the VVD politician as the successor to the factory worker, still encompass the strategic distinction that Alvin Lustig, Milton Glaser, Gert Dumbar, Peter Saville and Paula Scher made in the meeting rooms of their respective clients? Is a designer someone who thinks up ideas, designs, produces and sells, or someone who holds a mouse and drags objects across a computer screen?

If designers are labourers, then their labour can be purchased at the lowest possible price. The real designer then becomes his own client. Emancipation works two ways. Why should designers have the arrogance to call themselves author, editor in chief, client and initiator, if the client is not allowed to do the same? Only the price remains to be settled, and that happens wherever it is at its lowest. Parallel developments here find their logical end: the retreat of the innovative designer away from corporate culture and the client's increasing control over the design.

Design and negativity
In recent years, the graphic designer has shown himself as – what has he not shown himself to be? Artist, editor, author, initiator, skilful rhetorician, architect....[4] The designer is his own client, who, like Narcissus, admires himself in the mirror of the design books and magazines, but he is also the designer who does things besides designing, and consequently further advances

his profession.

The ambition of the designer always leads beyond his discipline and his official mandate, without this above-and-beyond having a diploma or even a name of its own. Still, it is remarkable that design, as an intrinsic activity, as an objective in itself, enjoys far less respect than the combination of design and one or more other specialisms. A pioneering designer does more than just design – and it is precisely this that gives design meaning. Willem Sandberg was a graphic designer, but he was also the director of the Amsterdam Stedelijk Museum (for which he did his most famous work, in the combined role of designer and his own client). Wim Crouwel was a graphic designer, but also a model, a politician, stylist and later, also a museum director.

Is the title of 'designer' so specific that every escape from it becomes world headlines? No, it is not that. The title is not even regulated: anyone can call himself a designer. It is something else. The title of 'designer' is not specifically defined, but negatively defined. The title of designer exists by way of what it excludes.

Designers have an enormous vocabulary at their disposal, all to describe what they are not, what they do not do and what they cannot do. Beatrice Warde, who worked in-house for the Monotype Corporation when she wrote her famous epistle, The Crystal Goblet, impressed on designers the fact that their work is not art, even though today it is exhibited in almost every museum.[5] Many a designer's tale for a client or the public begins with a description of what has not been made. In the Dutch design magazine, Items, critic Ewan Lentjes wrote that designers are not thinkers, even though their primary task is thorough reflection on the work they do.[6] Making art without making art, doing by not doing, contemplating without thinking: less is more in die Beschränkung zeigt sich der Meister; kill your darlings. Add to this, the long-term obsession with invisibility and absence. Sometimes it is self-censorship, sometimes disinterest, but it is always negative. The cause is undoubtedly deference or modesty. Designers often consider themselves very noble in their through-thick-and-thin work ethic, their noblesse oblige.

Graphic design is still not developing a vocabulary, and hence has not begun developing an itinerary to deepen a profession that has indeed now been around for a while. This became very clear in October of 2005, when the book presentation for Dutch Resource took place in Paris, at an evening devoted to Dutch design, organized by the Werkplaats Typografie in Arnhem, who published the book. The French designers who attended praised 'typography at this level', as though it were an exhibition of flower arrangements, whereas the entire textual content of the book had been compiled by the designers at Werkplaats Typografie, and there was more to speak about than just the beautiful letter type. At the presentation, it was this search for depth and substance for which there was no interest and most of all, no vocabulary. One attending master among the Parisian designers, who rose to fame in the 1970s and 1980s, did not have a good word to say about the design climate and the ever-increasing commercialization. He dismissed out of hand a suggestion that this could be referred to as a 'European' situation. Although commercialization is a worldwide phenomenon, for him, the fight against it was specifically French.

Design as knowledge

Despite the interesting depth in graphic design, its vocabulary is made up of negative terms. This frequently turns meetings of more than three practitioners of this noble profession into soporific testimonies of professional frustration. The dialectic between client and designer, the tension between giving and taking and negotiating is threatened with extinction, because both designer and client avoid the confrontation. The former becomes an autonomous genius and the latter an autocratic 'initiator' for freelancers offering their services. We have already talked about need. Instead of giving the wrong answers, design should instead begin asking interesting questions.

In the future, design might have to assume the role of 'developer' if it wants to be taken seriously. The Netherlands still enjoys a grants system. Internationally, things are not so rosy.

Denying this fact would be the same as saying, 'I have enough money, so poverty does not exist'. The market conditions that are beginning to seep into the Netherlands, France and the rest of Europe are already the norm for the rest of the world.

Consequently, the knowledge economy – the competitive advantage, according to Annette Nijs, the VVD politician – will quickly become a thing of the past, if holding a mouse proves cheaper in Beijing than in the west of Holland. The true investment is the investment in design itself, as a discipline that conducts research and generates knowledge – knowledge that makes it possible to seriously participate in discussions that are not about design. Let this be knowledge that no one has asked for, in which the designer is without the handhold of an assignment, a framework of conditions, his deference, without anyone to pat him on the shoulder or upbraid him. Let the designer take on the debate with the institutions, the brand names or the political parties, without it all being about getting the job or having the job fail. Let designers do some serious reading and writing of their own. Let designers offer the surplus value, the uselessness and the authorship of their profession to the world, to politics, to society.

But do not let designers just become walking encyclopaedias, adorned with such titles as 'master', 'doctor' or 'professor', their qualifications dependent on a framed certificate hanging on the wall. Let there be a design practice in which the hypothesis – the proposal – has higher esteem than need and justification.

In 1972, for the catalogue for the exhibition, Italy: The New Domestic Landscape, at the Museum of Modern Art in New York, Emilio Ambasz wrote about two contradictory directions in architecture: 'The first attitude involves a commitment to design as a problem-solving activity, capable of formulating, in physical terms, solutions to problems encountered in the natural and socio-cultural milieu. The opposite attitude, which we may call one of counter-design, chooses instead to emphasize the need for a renewal of philosophical discourse and for social and political involvement as a way of bringing about structural changes in our society.'[7]

With the removal of need and the commissioned assignment as an inseparable duo, the door is open to new paths. The designer must use this freedom, for once, not to design something else, but to redesign himself. •

Notes
1. See also Camiel van Winkel, Het primaat van de zichtbaarheid, NAi Publishers, 2005, p. 177.
2. NRC Handelsblad, 9 February, 2006
3. The TNO report, 'Vormgeving in de Creatieve Economie', January, 2005, can be found at www.premsela.org.
4. From the jury report for the 2003 Rotterdam Design Award: 'More or less all the positions that designers have taken in recent years have passed revue: the designer as artist, the designer as technocrat, the designer as editor, as director, as a servant for the public cause, as comedian, as critic and as theorist.'
5. Beatrice Warde, The Crystal Goblet or Printing Should be Invisible, 1955.
6. Ewan Lentjes, 'Ontwerpers zijn geen denkers', in Items 6, 2003.
7. Lang, Peter, 'Superstudio's Last Stand, 1972-1978', in Valentijn Byvanck, (ed.), Superstudio: The Middelburg Lectures, Zeeuws Museum, 2005, p. 46.

EXERCISES IN STYLE
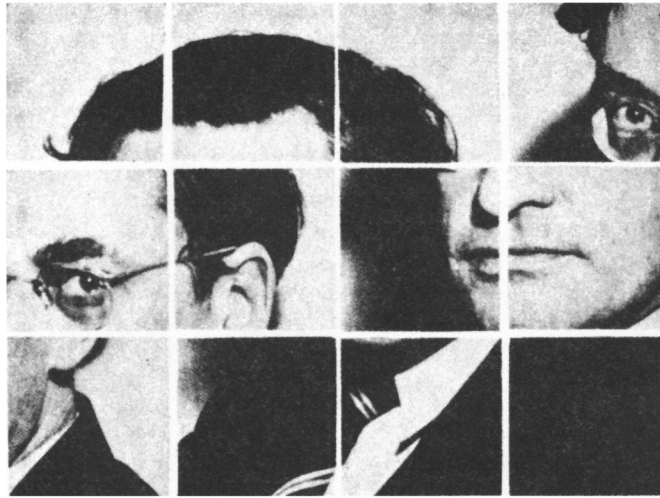
1231
2312
3123

see :   permutations. pages 129-133

NOTES FOR THE 1981 PAPERBACK EDITION

Asked whether, to herald this new edition of the *Exercises in Style*, I might have anything to add to my 1958 preface, I was a little surprised to discover that I did indeed have quite a bit to add. By now the book is very well known in many countries and has maybe even become a classic, but literati the whole world over still have a great deal to learn from the simple, mocking, amused linguistic lesson that Queneau here conceals beneath his characteristic humor. Prophets proverbially getting more of a raw deal in their own countries than elsewhere, it is perhaps the French who have learned the least. To take a few categories at random: would anyone like to assert that French art critics, sociologists, or philosophers, have been converted to Queneau's thesis that it is rather a good

idea to write a) unpretentiously, and b) so that we, the vulgar, can understand them?

Since 1947 there have been at least six new editions of this book in France, one of them a superb luxury affair, with each variation printed in a different typographical form invented by Massin, and the whole followed by "33 parallel exercises in style, drawn, painted and sculpted by Carelman." In the introduction to that (1963) edition, Queneau explains that the idea for the *Exercises* came to him in the 1930s, after he and his friend Michel Leiris had attended a concert at the Salle Pleyel where Bach's *The Art of Fugue* had been played. What particularly struck Queneau about this piece was that, although based on a rather slight theme, its variations "proliferated almost to infinity." It would be interesting, he thought, to create a similar work of literature.

By 1942 he had produced the first 12 variations on his "slight theme." These were refused by the puzzled editor of "an extremely distinguished literary review." Undismayed, Queneau kept adding exercises over the years until by 1946 he had composed 99. "I stopped there," he wrote, "judging this quantity to be sufficient; neither too many nor too few: the Greek ideal, you might say." All the later published editions stop at 99 too, though in the most recent (unornamented) edition (1973) there are some no doubt significant expulsions and substitutions, which I'll say more about later. In spite of this self-imposed restriction to 99 for the purposes of the ideal Greek volume, Queneau later published further exercises in various reviews, and in the luxury volume I have mentioned he gives us in an appendix a list of "possible exercises in style"—no less than 124 of them!—ranging from "The Seven Deadly Sins" to a further plethora of abstruse rhetorical terms such as anacoluthon, or anadiplosis. (The conscientious reader of the present volume may well consider, however, that he has already enlarged

ecstatic as possible. But this made some of the singers a little uneasy. Unless the phrases were of the order of: "Ah! if to do it he continues . . . .," they had the vague feeling that they weren't really poetic. I understood how this had come about when I studied some of the published—and much sung—opera translations of the time. So in *Opera English* I took great—and perhaps sneaky—satisfaction in appropriating whole phrases from these well-worn translations. To take just one example, I swear to you that "His words deep within my heart are sculptured" is stolen, *in toto*, from one of these poetic libretti.

A confession about the *Modern Style* exercise. In 1958, way before the recent revival of "art nouveau," I simply didn't know the strange fact that for this particular *genre* the French use English words—which are translated into English by French words. I refuse to take the entire responsibility for the discrepancy in style here, though, because I consulted Queneau and naively asked him what sort of English "modern style" he thought I should use. He replied that he wasn't qualified to advise me. With hindsight, I now tend to think that he was thus amusing himself hugely at my ignorance. However that may be, I solved (?) the problem by once again having fun, and shoving in all the (modern) journalistic clichés I could think of.

And now a word about Queneau's own substitutions (applications?). in his 1973 edition. *Reactionary* and *Feminine*, for example, have been expunged, and replaced respectively, and perhaps mysteriously, by *Ensembliste* (which I think has something to do with "set theory"), and *Lipogramme*. A lipogram, as of course you know (although your abovementioned Webster won't help you if you don't), is "a writing from which all words are omitted which contain a particular letter." Here, Queneau has performed the staggering feat of writing a whole exercise without using the letter E—the most boringly characterless of all

his rhetorical vocabulary quite sufficiently. Translating it did wonders for mine.)

The translation is based on the original 1947 French publication, and nothing has been changed from the first English edition. I was given the opportunity to make the odd discreet revision, but I decided that rather than mess about with a word here or there I would prefer to let the whole stand as it is. There are certainly a few words that I would write differently today, but I don't think they stand out too flagrantly. On a rereading, I was at first a little taken aback by, for instance, the expression "teddy boy," but I was quite reassured when I found it in your very own most recent Webster, where it is defined as : "A young British hoodlum who affects Edwardian dress." Maybe the study of what would automatically have been translated differently in 1981 would be an amusing exercise in style in itself.

A few remarks about some of the substitutions (approved by Queneau) in my version. It wouldn't have made any sense to try to reproduce *in English* the way French peasants (in the nineteenth century) spoke French. There wouldn't have been any point, either, in informing Anglo-Saxons about the way Italians tend to pronounce French. In the former case I substituted *West Indian*, and I had the greatest fun in lifting phrases and expressions wholesale from Samuel Selvon's marvelous book *The Lonely Londoners*. In substituting *Opera English* for *Italianismes* I had just as much fun, and it was also in a mild sort of way an act of revenge. I had translated three classical operas. With some reluctance, I might add, because, without *too* much exaggeration, it seemed to me that just about the whole of the libretti consisted in the protagonists declaiming—at great length—either: "Ah, how I suffer!," or: "Ah! I am in raptures!" However, I did them, and apart from superhuman efforts to make the texts singable, I also tried to make them as simple and as little

two remarks. Firstly: *Le Chiendent*, which I there called "one of the easiest to read of all Queneau's novels," was translated some years ago under the title *The Bark Tree* and, so far as I know, is still available. And lastly: The Paris metro no longer smells of garlic. It is the cleanest, best, and most efficient system of public transport in the whole of my limited experience of the public transport systems of the world.

BARBARA WRIGHT

letters, because the most common. For *Haiku* he has substituted *Tanka*: "An unrhymed Japanese verse form of five lines containing *5,7,5,7*, and 7 syllables respectively—compare HAIKU." In his *Haiku*, Queneau, with his oh so justifiable poetic license, omitted one of the obligatory classical elements—the reference to one of the four seasons. (Naturally I, in my pedantic way, restored it: "Summer S. . . .") Just in case you might feel cheated not to have his *Tanka*, I'll translate it for you here, for free:

> The S bus arrives
> A behatted dude gets in
> There follows a clash
> Later outside Saint-Lazare
> There is talk of a button

There's still a whole lot more I'd love to have room to say. Such as that, whereas in my 1958 preface I amateurishly analyzed Queneau's exercises into "roughly 7 different groups," the sumptuous 1963 illustrated edition includes, as a bonus, a real, proper, professional analysis by Dr. Claude Leroy, a psychiatrist, who compares Queneau's "deformation of language" with that obsessionally practised by some psychiatric patients, for reasons best known to their unconscious. This essay is called: "Study on the loss of information and the variation in meaning in Raymond Queneau's *Exercises in Style*." And though the doctor ends his study by describing it as "long and weighty, and, like all analyses, destructive . . ." it is actually of the greatest fascination, and one more pointer to the fact that, however funny we may find Queneau's exercises—and even after all this time, many of them still make even me laugh aloud—there is a great deal more to them than funniness.

Which brings me back to my original preface. Just

PREFACE

*Ladies and Gentlemen:**

From time to time people politely ask me what I am translating now.

So I say: a book by Raymond Queneau.

They usually react to that in one of 3 different ways.

Either they say: that must be difficult.

Or they say: Who's he?

Or they say: Ah.

Of those three reactions, let's take the third—as the fortune-tellers say.

People say: Ah.

By: Ah—they don't mean quite the same as the people who say: Who's he? They mean that they don't know who Queneau is, but that don't much care whether they know or not. However, since, as I said, this sort of conversation is usually polite, they often go on to enquire: What book of his are you translating?

So I say: *Exercices de Style.*

And then, all over again, they say: Ah.

At this point I usually feel it would be a good idea

* Based on a talk given in the Gaberbocchus Common Room on April 1st 1958.

9

to say something about this book, *Exercices de Style,* but as it's rather difficult to know where to begin, if I'm not careful I find that my would-be explanation goes rather like this:

"Oh yes, *you know,* it's the story of a chap who gets into a bus and starts a row with another chap who he thinks keeps treading on his toes on purpose, and Queneau repeats the same story 99 times in a different ways—it's terribly good . . . ."

So I've come to the conclusion that it is thus my own fault when these people I have been talking about finally stop saying "Ah" and tell me that it's a pity I always do such odd things. It's not that my wooffly description is inaccurate—there are in fact 99 exercises, they all do tell the same story about a minor brawl in a bus, and they are all written in a different style. But to say that much doesn't explain anything, and the *Exercices* and the idea behind them probably do need some explanation.

In essaying an explanation, or rather, perhaps, a proper description, I have an ally in this gramophone record, which has recently been made in France, of 22 of the 99 *exercices.* It is declaimed and sung by *les Frères Jacques*—who have been likened to the English Goons. You will hear that the record is very funny. I said it was an ally, yet on the other hand it may be an enemy, because it may lead you to think that the *exercices* are just funny and nothing else. I should like to return to this point later, but first I want to say something about the author of the *Exercices.*

Raymond Queneau has written all the books you see here on the table—and others which I haven't been able to get hold of. He is a poet—not just a writer of poetry, but a poet in the wider sense. He is also a scholar and mathematician. He is a member of the

10

Académie Goncourt (and they have only 10 members, in comparison with the 40 of the Académie Française), and he is one of the top boys of the publishing house of Gallimard. But he is a kind of writer who tends to puzzle people in this country because of his breadth and range—you can't classify him. He is one of the most influential and esteemed people in French literature—but he can write a poem like this:

Ce soir
si j'écrivais un poème
pour la postérité?

fichtre
la belle idée

je me sens sûr de moi
j'y vas
et

à
la
postérité
j'y dis merde et remerde
et reremerde

drôlement feintée
la postérité
qui attendait son poème

ah mais

Queneau, you see, is not limited, and he doesn't take himself over-seriously. He's too wise. He doesn't limit himself to being either serious or frivolous—or

11

even, I might say, to being either a scientist or an artist. He's both. He uses everything that he finds in life for his poetry—and even things that he doesn't find in life, such as a mathematically disappearing dog, or a proud trojan horse who sits in a French bar and drinks gin fizzes with silly humans.* And all this is, I think, the reason why you find people in England who don't know who Queneau is. Two of his novels were published here, by John Lehmann, in English translations, about 10 years ago. They were, I think, not very successful here. Even though the critics thought they were writing favourably about them. I was looking through the reviews of one of them—Pierrot—the other day, and this brings me back to what I was saying about Queneau's wit and lightness of touch being possibly misleading—the book's very brilliance seemed to blind the critics to the fact that it was about anything. The New Statesman wrote: "Pierrot is simply a light-hearted little fantasy ...", and Time & Tide came down to Parish Magazine style: "This novel is of the kind called 'so very french'. It is all very unassuming and amusing, and most of us enjoy this kind of fun." According to the current way of thinking (or not-thinking), it seems that if we are to enjoy anything then we must not have to think about it, and, conversely, if we are to think about anything, then we mustn't enjoy it. This is a calamitous and idiotic division of functions.

And this, I think, brings me to the Exercices de Style. Queneau is a linguist, and he also has a passionate interest in the French language. He has given a lot of thought to one aspect of it—the French language as actually spoken. In Bâtons, Chiffres et Lettres, he

* The Trojan Horse & At the Edge of the Forest. Gaberbocchus
12

writes: "I consider spoken French to be a different language, a very different language, from written French." And in the same book, he says: "I came to realise that modern written French must free itself from the conventions which still hem it in, (conventions of style, spelling and vocabulary) and then it will soar like a butterfly away from the silk cocoon spun by the grammarians of the 16th century and the poets of the 17th century. It also seemed to me that the first statement of this new language should be made not by describing some popular event in a novel (because people could mistake one's intentions), but, in the same way as the men of the 16th century used the modern languages instead of latin for writing their theological or philosophical treatises, to put some philosophical dissertation into spoken French."

Queneau did in fact "put some philosophical dissertation into spoken French"—Descartes' *Discours de la Méthode*. At least, he says that it was with this idea in mind that he started to write "something which later became a novel called *le Chiendent*." I won't say anything about the correspondence between it and *le Chiendent* now, but this novel, *le Chiendent*, is one of the easiest to read of all Queneau's novels, and also one of the most touching and thought-provoking. It is also almost farcically funny in parts.

This research into language is, of course, carried on in the *Exercices*. You get plenty of variations of the way different people actually speak—casual, noble, slang, feminine, etc. But you may have noticed that the exercise on p.129 starts like this:

JO UN VE UR MI RS SU DI AP RL TE
(that's in French, by the way. The English translation naturally looks quite different:
ED ON TO AY RD WA ID SM YO DA HE

13

Now please don't think that I'm going to try to persuade you that this is Queneau's idea of how anyone speaks French. You can't really discover 99 different ways of speaking one language. Well, perhaps you can, but you don't find them in the *Exercices*. I have analysed the 99 variations into roughly 7 different groups. The first—different types of speech. Next, different types of written prose. These include the style of a publisher's blurb, of an official letter, the "philosophic" style, and so on. Then there are 5 different poetry styles, and 8 exercises which are character sketches through language—reactionary, biased, abusive, etc. Fifthly there is a large group which experiments with different grammatical and rhetorical forms; sixthly, those which come more or less under the heading of *jargon*, and lastly, all sorts of odds and ends whose classification I'm still arguing about. This group includes the one quoted above, which is called: *permutations by groups of 2, 3, 4 and 5 letters*. Under *jargon* you get, for instance, one variation which tells the story in mathematical terms, one using as many botanical terms as possible, one using greek roots to make new words, and one in dog latin.

All this could be so clever that it could be quite ghastly and perfectly unreadable. But in fact I saw somewhere that *Exercices de Style* is Queneau's best seller among the French public. I have already intimated that however serious his purpose, Queneau is much more likely to write a farce than a pedantic treatise. His purpose here, in the *Exercices*, is, I think, a profound exploration into the possibilities of language. It is an experiment in the philosophy of language. He pushes language around in a multiplicity of directions to see what will happen. As he is a virtuoso of language and likes to amuse himself and

14

his readers, he pushes it a bit further than might appear necessary—he exaggerates the various styles into a reductio ad absurdum—ad lib., ad inf., and sometimes. —the final joke—ad nauseam.

I am saying a lot about what *I* think, but Queneau himself has had something to say about it. In a published conversation with Georges Ribemont-Dessaignes, he says: "In *les Exercices de Style*, I started from a real incident, and in the first place I told it 12 times in different ways. Then a year later I did another 12. And finally there were 99. People have tried to see it as an attempt to demolish literature—that was not at all my intention. In any case my intention was merely to produce some exercises; the finished product may possibly act as a kind of rust-remover to literature, help to rid it of some of its scabs. If I have been able to contribute a little to this, then I am very proud, especially if I have done it without boring the reader too much."

That Queneau *has* done this without boring the reader *at all*, is perhaps the most amazing thing about his book. Imagine how boring it might have been— 99 times the same story, and a story which has no point, anyway! I have spent more than a year, off and on, on the English version of the *Exercices*, but I haven't yet found any boredom attached to it. The more I go into each variation, the more I see in it. And the point about the original story having *no* point, is one of *the* points of the book. So much knowledge and comment on life is put into this pointless story. It's also important that it should be the same story all the time. Anybody can—and automatically does—describe different things in different ways. You don't speak poetically to the man in the ticket office at Victoria when you want to ask him for "two third

returns, Brighton." Nor, as Jesperson points out, do you say to him: "Would you please sell me two third-class tickets from London to Brighton and back again, and I will pay you the usual fare for such tickets." Queneau's tour-de-force lies in the fact that the simplicity and banality of the material he starts from gives birth to so much.

This brings me to the last thing I want to say, which is about the English version. Queneau told me that the *Exercices* was one of his books which he would like to be translated—(he didn't suggest by whom). At the time I thought he was crazy. I thought that the book was an experiment with the French language as such, and therefore as untranslatable as the smell of garlic in the Paris metro. But I was wrong. In the same way as the story *as such* doesn't matter, the particular language it is written in doesn't matter as such. Perhaps the book is an exercise in communication patterns, whatever their linguistic sounds. And it seems to me that Queneau's attitude of enquiry and examination can, and perhaps should?—be applied to every language, and that is what I have tried to achieve with the English version.

B. W.
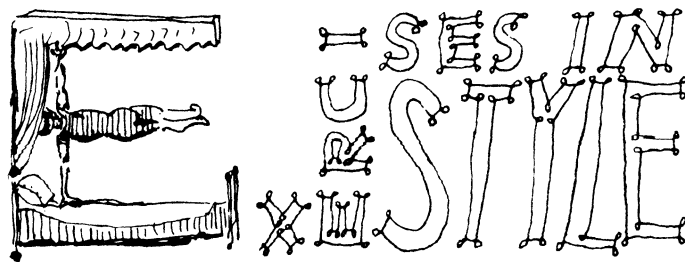
an extra button put on your overcoat." He shows him where (at the lapels) and why.

20

Notation
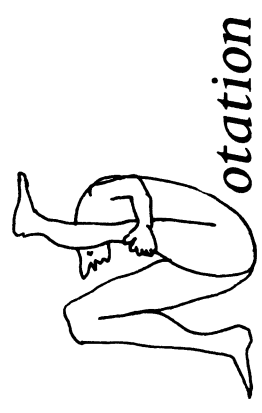
In the S bus, in the rush hour. A chap of about 26, felt hat with a cord instead of a ribbon, neck too long, as if someone's been having a tug-of-war with it. People getting off. The chap in question gets annoyed with one of the men standing next to him. He accuses him of jostling him every time anyone goes past. A snivelling tone which is meant to be aggressive. When he sees a vacant seat he throws himself on to it.

Two hours later, I meet him in the Cour de Rome, in front of the gare Saint-Lazare. He's with a friend who's saying: "You ought to get

himself on him every time anyone gets off and makes an exit. This having been declared and having spoken he rushes headlong and wends his way towards a vacant and a free place and seat.

Two hours after and a-hundred-and-twenty minutes later, I meet him and see him again in the Cour de Rome and in front of the gare Saint-Lazare. He is with and in the company of a friend and pal who is advising and urging him to have a button and vegetable ivory disc added and sewn on to his overcoat and mantle.

22

Double Entry
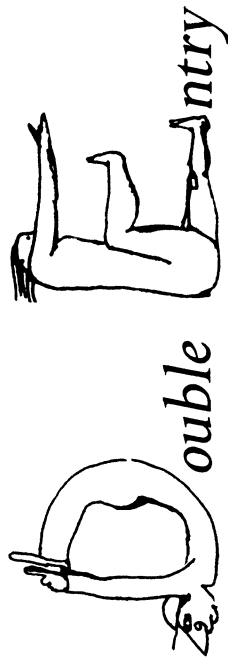
Towards the middle of the day and at midday I happened to be on and got on to the platform and the balcony at the back of an S-line and of a Contrescarpe-Champerret bus and passenger transport vehicle which was packed and to all intents and purposes full. I saw and noticed a young man and an old adolescent who was rather ridiculous and pretty grotesque; thin neck and skinny windpipe, string and cord round his hat and tile. After a scrimmage and scuffle he says and states in a lachrymose and snivelling voice and tone that his neighbour and fellow-traveller is deliberately trying and doing his utmost to push him and obtrude

21

Metaphorically

In the centre of the day, tossed among the shoal of travelling sardines in a coleopter with a big white carapace, a chicken with a long, feather-less neck suddenly harangued one, a peace-abiding one, of their number, and its parlance, moist with protest, was unfolded upon the airs. Then, attracted by a void, the fledgling precipitated itself thereunto.

In a bleak, urban desert, I saw it again that self-same day, drinking the cup of humiliation offered by a lowly button.

24

Litotes

Some of us were travelling together. A young man, who didn't look very intelligent, spoke to the man next to him for a few moments, then he went and sat down. Two hours later I met him again; he was with a friend and was talking about clothes.

23

Retrograde

You ought to put another button on your overcoat, his friend told him. I met him in the middle of the Cour de Rome, after having left him rushing avidly towards a seat. He had just protested against being pushed by another passenger who, he said, was jostling him every time anyone got off. This scraggy young man was the wearer of a ridiculous hat. This took place on the platform of an S bus which was full that particular midday.

25

Surprises

How tightly packed in we were on that bus platform! And how stupid and ridiculous that young man looked! And what was he doing? Well, if he wasn't actually trying to pick a quarrel with a chap who—so he claimed! the young fop! kept on pushing him! And then he didn't find anything better to do than to rush off and grab a seat which had become free! Instead of leaving it for a lady!

Two hours after, guess whom I met in front of the gare Saint-Lazare! The same fancy-pants! Being given some sartorial advice! By a friend!

You'd never believe it!

26

The Crystal Goblet, or Printing Should Be Invisible by Beatrice Warde (1900 -- 1969)

Imagine that you have before you a flagon of wine. You may choose your own favourite vintage for this imaginary demonstration, so that it be a deep shimmering crimson in colour. You have two goblets before you. One is of solid gold, wrought in the most exquisite patterns. The other is of crystal-clear glass, thin as a bubble, and as transparent. Pour and drink; and according to your choice of goblet, I shall know whether or not you are a connoisseur of wine. For if you have no feelings about wine one way or the other, you will want the sensation of drinking the stuff out of a vessel that may have cost thousands of pounds; but if you are a member of that vanishing tribe, the amateurs of fine vintages, you will choose the crystal, because everything about it is calculated to reveal rather than hide the beautiful thing which it was meant to contain.

Bear with me in this long-winded and fragrant metaphor; for you will find that almost all the virtues of the perfect wine-glass have a parallel in typography. There is the long, thin stem that obviates fingerprints on the bowl. Why? Because no cloud must come between your eyes and the fiery heart of the liquid. Are not the margins on book pages similarly meant to obviate the necessity of fingering the type-page? Again: the glass is colourless or at the most only faintly tinged in the bowl, because the connoisseur judges wine partly by its colour and is impatient of anything that alters it. There are a thousand mannerisms in typography that are as impudent and arbitrary as putting port in tumblers of red or green glass! When a goblet has a base that looks too small for security, it does not matter how cleverly it is weighted; you feel nervous lest it should tip over. There are ways of setting lines of type which may work well enough, and yet keep the reader subconsciously worried by the fear of 'doubling' lines, reading three words as one, and so forth.

Now the man who first chose glass instead of clay or metal to hold his wine was a 'modernist' in the sense in which I am going to use that term. That is, the first thing he asked of his particular object was not 'How should it look?' but 'What must it do?' and to that extent all good typography is modernist.

Wine is so strange and potent a thing that it has been used in the central ritual of religion in one place and time, and attacked by a virago with a hatchet in another. There is only one thing in the world that is capable of stirring and altering men's minds to the same extent, and that is the coherent expression of thought. That is man's chief miracle, unique to man. There is no 'explanation' whatever of the fact that I can make arbitrary sounds which will lead a total stranger to think my own thought. It is sheer magic that I should be able to hold a one-sided conversation by means of black marks on paper with an unknown

person half-way across the world. Talking, broadcasting, writing, and printing are all quite literally forms of thought transference, and it is the ability and eagerness to transfer and receive the contents of the mind that is almost alone responsible for human civilization.

If you agree with this, you will agree with my one main idea, i.e. that the most important thing about printing is that it conveys thought, ideas, images, from one mind to other minds. This statement is what you might call the front door of the science of typography. Within lie hundreds of rooms; but unless you start by assuming that printing is meant to convey specific and coherent ideas, it is very easy to find yourself in the wrong house altogether.

Before asking what this statement leads to, let us see what it does not necessarily lead to. If books are printed in order to be read, we must distinguish readability from what the optician would call legibility. A page set in 14-pt Bold Sans is, according to the laboratory tests, more 'legible' than one set in 11-pt Baskerville. A public speaker is more 'audible' in that sense when he bellows. But a good speaking voice is one which is inaudible as a voice. It is the transparent goblet again! I need not warn you that if you begin listening to the inflections and speaking rhythms of a voice from a platform, you are falling asleep. When you listen to a song in a language you do not understand, part of your mind actually does fall asleep, leaving your quite separate aesthetic sensibilities to enjoy themselves unimpeded by your reasoning faculties. The fine arts do that; but that is not the purpose of printing. Type well used is invisible as type, just as the perfect talking voice is the unnoticed vehicle for the transmission of words, ideas.

We may say, therefore, that printing may be delightful for many reasons, but that it is important, first and foremost, as a means of doing something. That is why it is mischievous to call any printed piece a work of art, especially fine art: because that would imply that its first purpose was to exist as an expression of beauty for its own sake and for the delectation of the senses. Calligraphy can almost be considered a fine art nowadays, because its primary economic and educational purpose has been taken away; but printing in English will not qualify as an art until the present English language no longer conveys ideas to future generations, and until printing itself hands its usefulness to some yet unimagined successor.

There is no end to the maze of practices in typography, and this idea of printing as a conveyor is, at least in the minds of all the great typographers with whom I have had the privilege of talking, the one clue that can guide you through the maze. Without this essential humility of mind, I have seen ardent designers go more hopelessly wrong, make more ludicrous mistakes out of an excessive enthusiasm, than I could have thought

possible. And with this clue, this purposiveness in the back of your mind, it is possible to do the most unheard-of things, and find that they justify you triumphantly. It is not a waste of time to go to the simple fundamentals and reason from them. In the flurry of your individual problems, I think you will not mind spending half an hour on one broad and simple set of ideas involving abstract principles.

I once was talking to a man who designed a very pleasing advertising type which undoubtedly all of you have used. I said something about what artists think about a certain problem, and he replied with a beautiful gesture: 'Ah, madam, we artists do not think---we feel!' That same day I quoted that remark to another designer of my acquaintance, and he, being less poetically inclined, murmured: 'I'm not feeling very well today, I think!' He was right, he did think; he was the thinking sort; and that is why he is not so good a painter, and to my mind ten times better as a typographer and type designer than the man who instinctively avoided anything as coherent as a reason. I always suspect the typographic enthusiast who takes a printed page from a book and frames it to hang on the wall, for I believe that in order to gratify a sensory delight he has mutilated something infinitely more important. I remember that T.M. Cleland, the famous American typographer, once showed me a very beautiful layout for a Cadillac booklet involving decorations in colour. He did not have the actual text to work with in drawing up his specimen pages, so he had set the lines in Latin. This was not only for the reason that you will all think of; if you have seen the old typefoundries' famous Quousque Tandem copy (i.e. that Latin has few descenders and thus gives a remarkably even line). No, he told me that originally he had set up the dullest 'wording' that he could find (I dare say it was from Hansard), and yet he discovered that the man to whom he submitted it would start reading and making comments on the text. I made some remark on the mentality of Boards of Directors, but Mr Cleland said, 'No: you're wrong; if the reader had not been practically forced to read---if he had not seen those words suddenly imbued with glamour and significance---then the layout would have been a failure. Setting it in Italian or Latin is only an easy way of saying "This is not the text as it will appear".'

Let me start my specific conclusions with book typography, because that contains all the fundamentals, and then go on to a few points about advertising. The book typographer has the job of erecting a window between the reader inside the room and that landscape which is the author's words. He may put up a stained-glass window of marvellous beauty, but a failure as a window; that is, he may use some rich superb type like text gothic that is something to be looked at, not through. Or he may work in what I call transparent or invisible typography. I have a book at home, of which I have no visual recollection whatever as far as its typography goes; when I think of it, all I see is the Three Musketeers

and their comrades swaggering up and down the streets of Paris. The third type of window is one in which the glass is broken into relatively small leaded panes; and this corresponds to what is called 'fine printing' today, in that you are at least conscious that there is a window there, and that someone has enjoyed building it. That is not objectionable, because of a very important fact which has to do with the psychology of the subconscious mind. That is that the mental eye focuses through type and not upon it. The type which, through any arbitrary warping of design or excess of 'colour', gets in the way of the mental picture to be conveyed, is a bad type. Our subconsciousness is always afraid of blunders (which illogical setting, tight spacing and too-wide unleaded lines can trick us into), of boredom, and of officiousness. The running headline that keeps shouting at us, the line that looks like one long word, the capitals jammed together without hair-spaces---these mean subconscious squinting and loss of mental focus.

And if what I have said is true of book printing, even of the most exquisite limited editions, it is fifty times more obvious in advertising, where the one and only justification for the purchase of space is that you are conveying a message---that you are implanting a desire, straight into the mind of the reader. It is tragically easy to throw away half the reader-interest of an advertisement by setting the simple and compelling argument in a face which is uncomfortably alien to the classic reasonableness of the book-face. Get attention as you will by your headline, and make any pretty type pictures you like if you are sure that the copy is useless as a means of selling goods; but if you are happy enough to have really good copy to work with, I beg you to remember that thousands of people pay hard-earned money for the privilege of reading quietly set book-pages, and that only your wildest ingenuity can stop people from reading a really interesting text.

Printing demands a humility of mind, for the lack of which many of the fine arts are even now floundering in self-conscious and maudlin experiments. There is nothing simple or dull in achieving the transparent page. Vulgar ostentation is twice as easy as discipline. When you realise that ugly typography never effaces itself; you will be able to capture beauty as the wise men capture happiness by aiming at something else. The 'stunt typographer' learns the fickleness of rich men who hate to read. Not for them are long breaths held over serif and kern, they will not appreciate your splitting of hair-spaces. Nobody (save the other craftsmen) will appreciate half your skill. But you may spend endless years of happy experiment in devising that crystalline goblet which is worthy to hold the vintage of the human mind. (Originally printed in London in 1932, under the pseudonym Paul Beaujon. This version printed in London 1955).

From http://gmunch.home.pipeline.com/typo-L/misc/ward.htm

2 × 4

Fuck Content

MICHAEL ROCK / 2009

In Designer as Author I argued that we are insecure about the value of our work. We are envious of the p
social position and cachet that artists and authors seem to command. By declaring ourselves
"designer/authors" we hope to garner similar respect. Our deep-seated anxiety has motivated a movemer
design that values origination of content over manipulation of content.

Designer as Author was an attempt to recuperate the act of design itself as essentially linguistic—a vibra
evocative language. However, it has often been read as a call for designers to generate content: in effect,
become designers and authors, not designers as authors. While I am all for more authors, that was not qu
the point I wanted to make.

The problem is one of content. The misconception is that without deep content, design is reduced to pure
a bag of dubious tricks. In graphic-design circles, form-follows-function is reconfigured as form-follows
content. If content is the source of form, always preceding it and imbuing it with meaning, form without
content (as if that were even possible) is some kind of empty shell.

The apotheosis of this notion, repeated ad nauseum (still!), is Beatrice Warde's famous Crystal Goblet
metaphor, which asserts that design (the glass) should be a transparent vessel for content (the wine). Any
who favored the ornate or the bejeweled was a knuckle-dragging oaf. Agitators on both sides of the
ideological spectrum took up the debate: minimalists embraced it as a manifesto; maximalists decried it
aesthetic fascism. Neither camp questioned the basic, implicit premise: it's all about the wine.

This false dichotomy has circulated for so long that we have started to believe it ourselves. It has become
a central tenet of design education and the benchmark against which all design is judged. We seem to
accept the fact that developing content is more essential than shaping it, that good content is the measure
of good design.

Back when Paul Rand wrote "There is no such thing as bad content, only bad form," I remember being
intensely annoyed. I took it as an abdication of a designer's responsibility to meaning. Over time, I have
to read it differently: he was not defending hate speech or schlock or banality; he meant that the designer
purview is to shape, not to write. But that shaping itself is a profoundly affecting form. (Perhaps this is t
reason that modern designers—Rand, Munari, Leoni—always seem to end their careers designing childr
books. The children's book is the purest venue of the designer/author because the content is negligible an
evocative potential of the form unlimited.)

So what else is new? This seems to be a rather mundane point, but for some reason we don't really belie
it. We don't believe shaping is enough. So to bring design out from under the thumb of content we must
one step further and observe that treatment is, in fact, a kind of text itself, as complex and referential as a
traditional understanding of content.

A director can be the esteemed auteur of a film he didn't write, score, edit or shoot. What makes a
Hitchcock film a Hitchcock film is not the story but a consistency of style, which winds intact through
different technologies, plots, actors, and time periods like a substance of its own. Every film is about
filmmaking. His great genius is that he is able to mold the form into his style in a genuinely unique and
entertaining way. The meaning of his work is not in the story but in the storytelling.

Designers also trade in storytelling. The elements we must master are not the content narratives but the
devices of the telling: typography, line, form, color, contrast, scale, weight. We speak through our
assignment, literally between the lines.

The span of graphic design is not a history of concepts but of forms. Form has evolved dramatically from
year to the next, and suggests a profession that continually revises and reshapes the world through the wa
rendered. Stellar examples of graphic design, design that changes the way we look at the world, are ofter
found in service of the most mundane content: an ad for ink, cigarettes, sparkplugs or machinery. Think
Zwart's catalogues for electrical cable; or the travel posters of Cassandre or Matter; or the New Wave wc
Weingart, Greiman and Freidman; or the punk incitations of Jamie Reid, in which the manipulation of fc
has an essential, even transformative, meaning.

At a 1962 conference at the Museum of Modern Art, conservative art critic Hilton Kramer denounced Pc
as "indistinguishable from advertising art" because "Pop Art does not tell us what it feels like to be livin
through the present moment of civilization. Its social effect is simply to reconcile us to a world of
commodities, banalities and vulgarities." But perhaps the content of graphic design is exactly that: an
evocation of "what it feels like to be living through the present moment of civilization," with all its
"commodities, banalities and vulgarities." How else can we discuss the content of a typeface or why the
typography of a surfing magazine suddenly becomes relevant? Or how a series of made-up or 'self-initia
posters—already a medium of dubious functionality— can end up on the wall of a major design museum
Work must be saying something, which is different than being about something.

Because the nature of the designed object is limited, individual objects are rarely substantial enough to
contain fully rendered ideas. Ideas develop over many projects, spanning years. Form itself is indexical.
are intimately, physically connected to the work we produce, and it is inevitable that our work bears our
stamp. The choice of projects in each designer's oeuvre lays out a map of interests and proclivities. (I us
the singular designer in the categorical sense, not the individual.) The way those projects are parsed out,
disassembled, reorganized and rendered reveals a philosophy, an aesthetic position, an argument and a
critique.

This deep connection to making also positions design in a modulating role between the user and the wor
By manipulating form, design reshapes that essential relationship. Form is replaced by exchange. The th
we make negotiate a relationship over which we have a profound control.

The trick is to find ways to speak through treatment, via a range of rhetorical devices— from the written
the visual to the operational—to make those proclamations as poignant as possible, and to return consist
to central ideas, to re-examine and re-express. In this way we build a body of work, and from that body
work emerges a singular message, maybe even what it feels like to be living now. As a popular film criti
once wrote, "A movie is not what it is about, it's how it is about it." Likewise, for us, our What is a How
content is, perpetually, Design itself.

Published in Multiple Signatures: On Designers, Authors, Readers and Users (New York: Rizzoli
International, 2013)

© Michael Rock

Next

IT IS WHAT IT IS (OR, ARE WE DONE YET?)
I, FEMBOT

July 15, 1980

Jeffrey L. Cruikshank
Editor, Plan
School of Architecture & Planning
MIT, 7-233

Visible Language Workshop
Room 5-411
Massachusetts Institute of
Technology
Cambridge, Massachusetts
02139

Dear Jeff:

When you asked me to prepare an article for Plan, I set myself the task of producing a "graphic" article which would represent the ideas and concerns of the Visible Language Workshop by virtue of its form as well as its content.

In a computer electronic age we see print communication as a model of changing user/maker relationships and the workshop as a place in which the content, quality and technology of communication inform each other in education, professional and research programs.
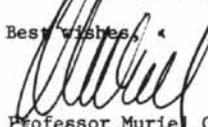
The article, "Words, Images, Tools and Ideas" would try to fulfill the following criteria:

1. It would make use of the tools, processes and technologies of graphic arts media as directly as possible and the tools would be integrated with concept and product. Many of these are in the workshop. In this case, they include a heavy use of all forms of photography and our computer graphics system for both images and typography.

2. The author would be the maker contrary to the specialization mode which makes the author of the content the author, the author of the form the designer, and the author of the craft the typographer/printer.

3. Visual and verbal representation of the ideas would be synthesized rather than separate.

4. Time would remain as fluid and immediate as possible, leaving room for feedback and change.

Much of the material was developed together with Professor Ron MacNeil and the VLW staff. It has been a fascinating opportunity which has elucidated many of the complexities of authorship into print. There is still no magic way - but we propose to keep working at it.

This stands as a sketch for the future.

Best wishes,

Professor Muriel Cooper
Director

26 JULY 2005
AN ACCIDENTAL ARCHIVE AT THE CENTER FOR
ADVANCED VISUAL STUDIES

We begin in a locked closet at the Center for Advanced Visual Studies housing a collection of posters, documents, videotapes and related printed ephemera which forms a de-facto archive. Embarking on a client-design relationship with the Center, I arrived in Cambridge to spend a few days going through the archive, examining its contents and making some photographs.

A collection of posters organized loosely on the floor at the Center

The Center for Advanced Visual Studies was established in 1967 by Gyorgy Kepes as a fellowship program for artists. Initiated with considerable institutional and financial support, the Center produced artworks, exhibitions and public programs often accompanied by a poster or publication. These posters in particular then provide an immediate condensed and visually legible accidental archive of its almost forty-year history.

While working my way through the contents of the closet, I was struck immediately by the surface qualities of this extraordinary set of posters. It was not simply the graphic design nor the typography that caught me — rather it was their mode of production. The design of the posters changed sporadically as new designers or administrators appeared, but what remains the same is the way in each self-consciously incorporates its production method into the design. For example, the poster at right revels in the extreme enlargement of a small sketch, photocopied large and produced on an offset press. The result is a tight and powerful synthesis of what is being said, how it is being said and how what is being said is produced. I assumed that many of these posters must have been

designed by Muriel Cooper. I was already familiar with her work in broad outlines — I knew that she was the first Design Director at MIT Press where she designed Bauhaus, Learning from Las Vegas (first edition), File Under Architecture and the MIT Press logo; she established the Visible Language Workshop at the MIT Media Lab; and that she died unexpectedly in 1994 just after presenting breakthrough work in new computer interface design.

As it turns out, I was mostly wrong about the posters' design — they were not designed by Muriel. Jacqueline Casey designed many of the early posters and later posters were made by Otto Peine and others. However, many or most of these posters were printed at the Visible Language Workshop, a teaching and production facility in the School of Architecture that Muriel cofounded with Ron MacNeil in 1975.

While poking around in the archive, I also learned that Muriel was briefly a fellow at the Center for Advanced Visual Studies. Her C.V. filed at the Center in 1974 lists Interests and Goals:

```
Concerned with use of mass production
and its constraints and with extending
experimental and educational experience
into work relationships, reducing
artificial human split. The significance
of participatory and non-authoritarian
communication forms in relation to
specialization and professionalism.
Structured/unstructured relationships
in learning. Direct, responsive means
of reproduction. [3]
```


A poster printed at the Visible Language Workshop, 1974

10 AUGUST 2006
A SUB-BASEMENT AT THE MEDIA LAB

We proceed by visiting the MIT Media Lab, where Muriel Cooper spent the last years of her working life, from 1985–1994, continuing the work of the Visible Language Workshop. I'm here to meet Amber Fried-Jimenez, a current graduate student in the Physical Language Workshop run by John Maeda. Amber has procured a laserdisc for me which includes some of the last work of the VLW. With laserdisc in hand, we spend the next hour or so trolling various sub-basements of the Media Lab building searching for an analog laserdisc player capable of playing the 20-year-old media format.
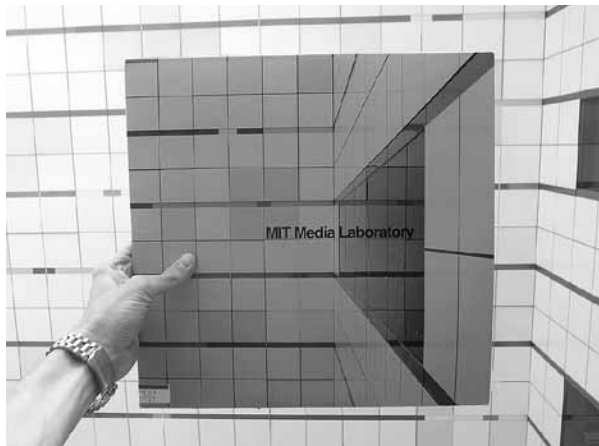
Holding the laserdisc and looking into the Media Lab atrium as pictured on its cover.

We enter more than one room containing stacks of outdated hardware, too difficult to repair, and rotting magnetic-tape formats whose chemical clocks are ticking. I am, of course, struck by the ways in which this recent past becomes so quickly inaccessible in a digital medium. In stark contrast to the piles of posters which provide a visceral record of the Center for Advanced Visual Studies, these dead media provide nothing tangible. As much of Muriel Cooper's most important work was in a digital medium, I become more convinced that accounting for her work is crucial — now.

We eventually score a working analog laserdisc player and monitor. I press play and after some fussing with an arcane remote control, the disc begins. Muriel Cooper appears on screen dressed in a graphic black and white polka-dot pattern offset by casually rumpled gray hair and reading glasses hung from her neck on a chain. Her voice is immediately enthusiastic and engaged.

I go next to meet Gloriana Davenport, a long-time friend and colleague of Muriel Cooper and currently the director of Media Fabrics group. She begins by giving me some initial background on Muriel's working life.

On graduation from Massachusetts College of Art with a BFA in 1955, Muriel Cooper soon became involved in helping MIT develop a consistent visual language throughout its range of printed materials. MIT was heavily involved in government contracting after WWII and the volume of materials produced was significant. Beginning on a freelance basis, Muriel established the Office of Design Services, which she directed from 1954–1957. In the first American university design program, Muriel developed a house style which helped to make the technical language of much of the research produced at MIT legible for a wider audience.

This work would be continued by her friend and former classmate Jacqueline Casey for thirty years. Describing their time together as students at Massachusetts College of Art provides some clues to what comes after:

```
I have always been frustrated and
intrigued by technology. Jackie Casey
and I both went to Mass College of Art
in the late 40s. We were cashiers in
the school store; we both eventually
became bookkeepers — first Jackie and
then me. We learned more in the store
than we did in the school. In a way,
I think of the school store as a model
for the VLW. When the store would
close in the afternoon, the students
who worked there — about a dozen of us
— had a studio to ourselves, our own
little bin of paints and papers and
materials. [11]
```

In 1958, Muriel left MIT for Milan on a Fulbright scholarship to study exhibition design. Milan was then a lively center of contemporary ideas around product design, architecture and new kinds of interactivity. Returning to Boston, she established Muriel Cooper Media Design in 1959. In her private practice Muriel returned again to work with MIT, a client sympathetic to her concerns and which provided a natural platform for her work. She also began to work with the MIT Press, designing book covers and by 1964, Muriel Cooper had designed the MIT Press logo — an abstracted set of seven vertical bars that is a high-water mark in twentieth century graphic design.

11 AUGUST 2006
A CLIMATE-CONTROLLED ROOM SURROUNDED
BY BOOKS ARRANGED IN CHRONOLOGICAL ORDER
AT MIT PRESS

We continue on to the MIT Press Archive, a small, clean and climate-controlled room at the offices of the Press. Beginning to the left of the door and arranged in shelves circling the room clockwise sits every book that MIT Press has published arranged in chronological order. The overall effect is sublime — a committed reader might trace trajectories of thought in biology, economic theory, computer science or mathematics by circumnavigating the small room. So much thought, so little space — I was here to continue tracking the work of Muriel Cooper.

MIT Press Archive with Bauhaus designed by Muriel Cooper in front

Muriel Cooper became the first Design Director of MIT Press in 1967 and remained through 1974. Here she presided over the mass production of a series of titles in architecture, economics, biology, computer science and sociology that formed a critical discourse around systems, feedback loops and control. (This was of course initiated a number of years prior to her arrival with the MIT Press publication in 1948 of Norbert Weiner's Cybernetics: or the Control and Communication in the Animal and the Machine.) Her position provided her a platform to investigate the conditions under which these books were produced.

At the Press, Muriel was able to directly engage the mechanics of mass production and this quickly became her primary concern. Because of the large number of titles published in one year and the relative slowness of their graphic production, she was not able to be meaningfully involved in the design of each book. Rather, she soon realized that efficient and responsive production systems had to be designed which would allow for the quantity of titles produced while maintaining a high level of design. She developed a rigorous classification and routing system for the design and production of books at MIT Press which identified and tracked projects along a streamlined process of design and production. By completely engaging the conditions of mass production and by designing systems to account for these, she produced a consistently high-standard of design across a very large number of titles produced at MIT Press during her tenure.

Often cited as the most successful design and production process of any university press, Muriel continually reevaluated how to make the conditions for making good design work possible. Her work was then equally engaged in the production schedules, budgets and conditions of production as it was in the typefaces, imagery, printing and binding.

As a consequence, Muriel Cooper was always searching for and implementing more responsive and iterative design and production processes at MIT Press. Frustrated by the delays that result from using specialized typesetting companies, Muriel invented an alternate production method. In the late 1960s, the standard method of preparing a typewritten manuscript for publication involved sending out the raw text to a typesetting bureau. Given precise specifications, the typesetter would return camera-ready type galleys a week or more later to be pasted down into a layout back at the Press. When there were corrections or copy edits, the type had to be returned to the typesetter to make adjustments and provide new galleys. Inevitably, the highly specialized labor of the typesetters was slow and therefore expensive. With the appearance of the IBM Selectric typewriter, Muriel imagined a more responsive design and production feedback loop.

For certain books in the late 1960s and early 1970s, MIT Press avoided typesetters entirely, bringing that role in-house using the new electric typewriters with which Muriel was already experimenting. When a type galley required a correction, it was now only a matter of retyping the corrected section and the change could be made in a few hours rather than a few days. The corresponding savings in time, labor and money changed the economics of publishing for books that could work in this alternate typesetting. A few of the better known examples of this work produced at the Press in this manner include

Herbert Muschamp's first book, File Under Architecture and Donis A. Dondis'
A Primer of Visual Literacy.

A Primer of Visual Literacy, first edition

These titles inevitably betray Muriel Cooper's deep investment in synthesizing design with an intimate knowledge of production. File Under Architecture was produced entirely with the IBM Selectric typewriter, where quick and immediate typeface changes were as simple as replacing the typographic ball. Margins were set in multiple typefaces as a running commentary on the text itself. The book was printed on butcher's paper and bound in corrugated cardboard. The result looks like the process that made it and reveals a deep engagement with and symbiotic relation between the design and production of the book.

A Primer of Visual Literacy was designed with Donis A. Dondis, a colleague and graphic design professor at Boston University. In Primer, all typesetting again was produced on an IBM Selectric Composer at the MIT Press. However, this time the result is not immediately recognizable as typewriting. The book was set in a crude proportionally-spaced version of Univers, a sans serif typeface designed by Adrian Friutiger (who had also designed the standard Courier letterforms.) The resulting book is a classic introductory graphic design textbook, produced today in its thirtieth printing. Many of its ideas mirror recurring concerns of Muriel Cooper in her work.

Perhaps the most visible mark that Muriel left at the MIT Press was the design of the publisher's logo in 1964. In an early sketch for the logo, a shelf of books is clearly legible, viewed from an idealized axonometric projection. A row of seven books sit neatly next to each other with (conveniently) the fourth pulled up and the fifth pulled down.
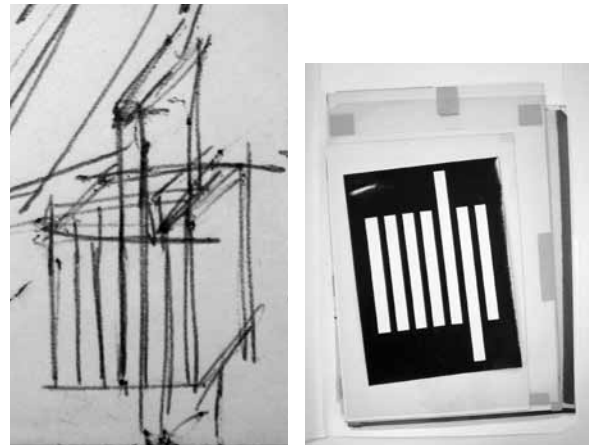
Detail from Muriel Cooper's MIT Press Logo sketches and final mechanical artwork

The result is an abstracted form of the abbreviation "MITP" or MITPress. Flattening the mark to form a series of positive bars of equal width results in a clear barcode — as the products of mass production sit together in an orderly row, dematerialized into the pure information of a machine-readable graphic. This important piece of graphic design contains in it already an indication of the concerns that Muriel would follow in the following 30 years probing the limits of mass production and exploring the impact of digital information.

As a publisher's mark, the MITPress logo is called a colophon. More generally, a colophon refers to the page of a book that details its production process — who typeset it, who printed it, when it was printed, what edition it is, library catalog references etc. It is a convenient coincidence that Muriel's legacy at the Press is most clearly lodged in both of these colophons — on the spine in a highly formalized graphic and on the last page, where production details are tallied.

At MIT Press, there were yet some books in which Muriel would be personally and comprehensively involved as the designer. One prime example is Bauhaus: Weimar, Dessau, Berlin, Chicago by Hans Wingler published in 1968. Supported in part by an NEA grant and additional

MIT Press funding, Muriel would spend most of two years designing and producing the book.

The "Bauhaus Bible", as it's widely known, contains the definitive collection of documents from the German art school through its multiple locations and bureaucratic arrangements. The book includes correspondence, descriptions of each workshop, budgets and photographs documenting the spaces of the school. Muriel described the subject matter of this book as a perfect fit, a coincidence of subject, designer and situation. The book design was given enough time to happen in a comprehensive manner and the stunning result reflects it. Muriel described the fortunate coincidence of subject matter and design brief:

```
My design approach always emphasized
process over product, and what better
place to express this than in a tome
on the Bauhaus, the seminal exploration
of art and design in an industrial
revolution. [9]
```

Throughout the book design, production constraints were treated as design opportunities. The color plates had to be salvaged from a previous German publication for economic reasons. This determined the unusually large format of the book.
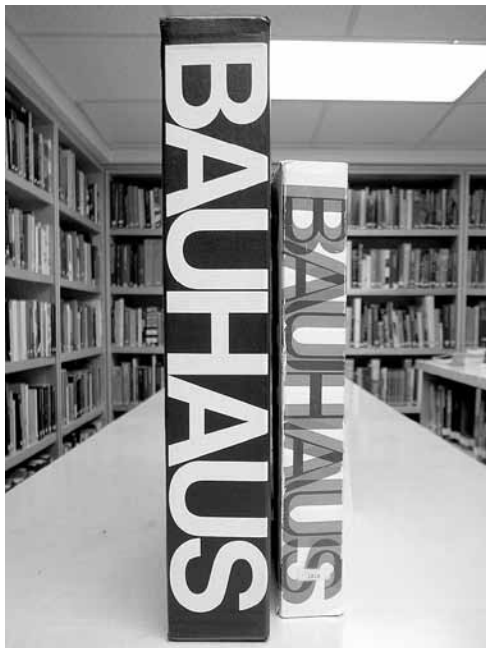
Bauhaus, hard and soft cover editions

When the original hardback and slip-cased edition was remade as a paperback, the spine transformed from a somber black and white all-caps Helvetica treatment to an explosion of offset-printed color as each printing plate (cyan, magenta, yellow) was shifted and printed one on top of each other. The overprinted spine is the product of thinking design through its production which is the hallmark of Muriel Cooper's work.

On completing the book, Muriel Cooper made a sixteen millimeter film flipping through its pages to create a stop-frame animation. The book's contents shift around the page, defining the grid that structures its design. The Bauhaus book film then became the after-image of her design process. It projected out from the hard physical form of the book to suggest a near-future when publishing would be as fluid as film, feedback immediate and users / makers would be all but indistinguishable. This constant interrogation of the near-future as a tangible present, as a practical lens for producing in the present powered a lot of Muriel's best work.

When she finished the book in 1968, she was left with the ethical residue of the Bauhaus and a clearer idea about teaching, production, practice and the mutually dependent relationships between them. At the MIT Press, she had begun a small research unit where the experiments in IBM Selectric typesetting, computerized layout and other modes of book production were explored by designers, students and computer programmers. This proto-workshop that mixed practice, research and production convinced her that a more ambitious workshop within MIT might be possible.

A few years later, Muriel Cooper began to explore the possibility of establishing a similar workshop situation in the Department of Architecture at MIT. In the margins of a draft memo from Muriel to the Department Head proposing a visual communications center, a set of handwritten notes flushes out some of her goals for the nascent workshop:

```
1. Media design and print design
@ conceptual stage

2. Educational pretext -- WORKSHOP

3. Publishing

4. Interdisciplinary? INSTITUTE /
RESOURCES [5]
```

19 OCTOBER 2006
A FLAT FILE CALLED "MURIEL" AT THE MIT MUSEUM

Flat files at the MIT Museum Archives

The next stop is the MIT Museum Archives. It is just one floor down from the Center for Advanced Visual Studies in Building N51 and adjacent to one of Muriel Cooper's former workspaces. Here I meet Gary Van Zante, Curator of Architecture and Design and Laura Knott, his assistant. Inside, just to the left of the door is a double-stacked flat file filled primarily with teaching documents simply labeled in sharpie and masking tape, "Muriel."

By 1974, Muriel had partnered with designer, artist and technician Ron MacNeil to teach a new graphic design class at MIT School of Architecture called Messages and Means. Ron had come to MIT in 1966 as Minor White's technical assistant while setting up the Creative Photography Program. He completed his degree in 1971 and apprenticed himself to the Architecture Machine Group established by Nicholas Negroponte to learn computer programming. In the next three years, Ron acquired and installed two single color sheet-fed offset printing presses at the School in an empty room with double-wide doors next to the photographic darkroom in Building 5 (Room 5-411). With overlapping interests and mutual friends, Muriel and Ron met and the idea to teach a design class together centering around these printing presses emerged.

Muriel had already been teaching at Massachusetts College of Art, but she was frustrated at how undergraduate design students froze when beginning an assignment. As soon as they were put into a situation of hands-on production such as using a photocopier or making monoprints, they became considerably more

free. Muriel was convinced that a workshop environment, where teaching happens in a feedback loop with hands-on production and design would work well. Ron's significant technical background in printing, photography and, increasingly, computer programming plus access to an offset printing press made this possible. Muriel described the goals of the Messages and Means course as:

```
... design and communications for print
that integrated the reproduction tools
as part of the thinking process and
reduced the gap between process and
product. [6]
```

Messages and Means students learned in a workshop environment how the printing press works by using it. Opening up access to this instrument, students were able to explore an intimate and immediate relationship to the means of production for their design work. The inevitable result was a merging of roles and blurring of specializations. In the workshop, students became editors, platemakers, printers, typesetters and designers all at one time, in overlapping and iterative configurations.

```
They used the offset printing press
as an artist's tool: they collaborated
on platemaking and they altered the
application of inks -- they rotated the
paper to make printing an interactive
medium. [9]
```
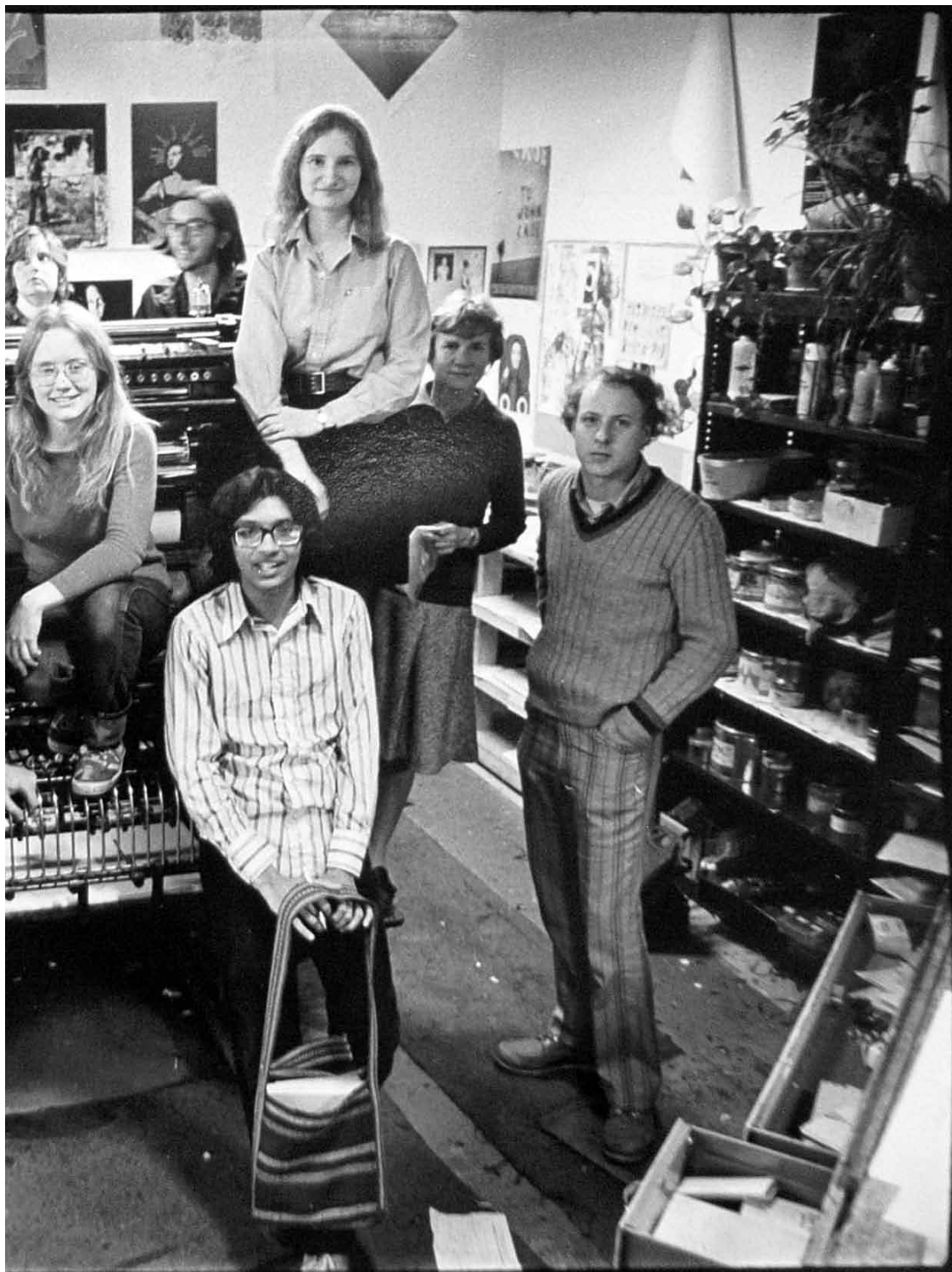

Detail from a Means and Messages class poster

In Messages and Means, Muriel and Ron introduced production-led assignments literally centered around the printing press that occupied most of the

Students in the Visible Language Workshop, around 1976

classroom. Students were asked not only to design their assignments, but also to work with the printer, darkroom and typesetting machines to produce their project. For example, students made "one-night prints", skipping the traditional stages of design, paste-up and pre-press by working with presstype and photostatic cameras or exposing the printing plate directly. Students were independent, motivated and empowered to realize their projects as they wished. As a result, the course was consistently over-enrolled.

A student in the Visible Language Workshop, 1981

Messages and Means students constantly circulated between the offset printing press room and the adjacent photographic pre-press room. The trip required leaving one room, walking twenty feet down the hallway and entering the other only to arrive on the other side of a shared wall, five feet away. During the Independent Activities Period of January 1976, a group of (perhaps) over-zealous students took matters into their own hands to re-model this unfortunate architecture, demolishing a wall that stood between the two rooms. Literally tearing an unsanctioned hole through the middle of the MIT School of Architecture and Planning, the students fused these two spaces into one. The combined workshop mixed the inks, noise, paper and mess of offset printing with photographic enlargers, typesetting machines, chemicals and increasingly elaborate electronics and computer systems. In this space, the activities of designing, teaching and producing became increasingly indistinct. This was the Visible Language Workshop.

```
The Visible Language Workshop, a unique
interdisciplinary graphics laboratory,
was founded to explore verbal and
visual communication as information
and as art on both personal and public
levels. The synthesis of concept and
production processes is informed by
tradition and technology. [6]
```

Ron MacNeil recalls that the Visible Language Workshop name came almost immediately on beginning the course. Together with Head of the Department of Photography, Jonathan Green and Head of the Department of Architecture, Donlyn Lyndon, the full name was set in 1974. The naming of the Visible Language Workshop was important — it connects explicitly to two trajectories, one past and one present through the terms "Visible Language" and "Workshop." These combined to outline a set of interests that would follow the VLW through its twenty year course and three physical spaces. Calling the facility a "workshop" made an immediate correspondence to the workshops of the Bauhaus with which Muriel was particularly well-versed. Further, its legacy was alive in Cambridge with Bauhaus founder Walter Gropius now leading the Harvard Graduate School of Design. At the Bauhaus, all studies were rooted in the workshop, where design and production were integrated. Students enrolled in the school became contributing members of one workshop or another.
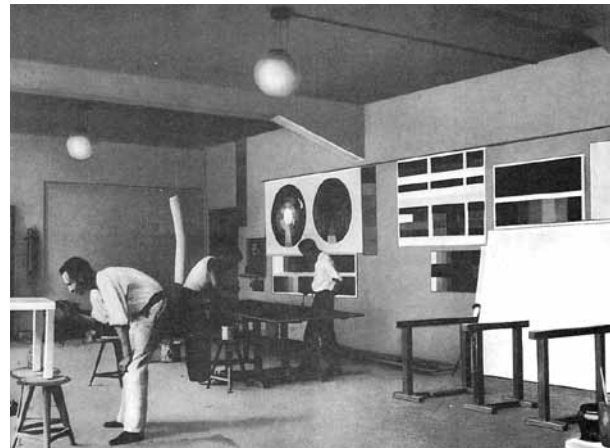
Wall-Painting Workshop at the Bauhaus, Dessau, 1927

For example, from 1925–1933 the Wall-Painting Workshop at the Bauhaus directed by Hinnerk Scheper produced experimental color schemes, paint techniques and environmental combinations. In the workshop, new technologies were developed, historical painting styles practiced, chemistries tested and new colors invented. Further, the students applied their learning directly to the school, painting the walls of the Bauhaus in any number

of experimental schemes developed in the workshop. The ceilings of some rooms of the master's houses were even painted black.

Fifty years later, the Visible Language Workshop continued this tradition in both name and spirit. The VLW pursued new forms of graphic communication by developing an intimate relationship to the tools of production in a workshop setting — offering an introduction to graphic design for graduate architecture students by providing direct access to printing presses, a darkroom, early computer typesetting and electronic paint programs. Like the Wall-Painting Workshop, the work of the VLW also practically permeated the School of Architecture — they designed, produced and printed the event and exhibition posters hanging on the School walls. "Workshop" described a space of production that was integral to the space of teaching and of design. By offering access to the tools of reproduction, students were able to understand the technical consequences of design decisions, immediately and the combined setting allowed for the creation of media in an increasingly direct, responsive, even interactive environment. If the Bauhaus workshops were an attempt to come to terms with the conditions of industrialized production, then the Visible Language Workshop was an attempt to confront informationalized production.

```
The shift from a mechanical to an
information society demands new
communication processes, new visual
and verbal languages, and new
relationships of education, practice
and production. [6]
```

Calling the new center a workshop also had implications on its physical layout. Each of the three homes of the VLW physically emphasized fluid spaces, where hierarchies and relationships were immediately eroded. In Building 5, two rooms were joined and oversized machines forced an intense overlapping of function and practice. In Building N51, the workshop exploited a larger space to expand its activities to include exhibition as well as production and teaching. And at the Media Lab the VLW's absence of cubicles and open plan reflected its teaching philosophy and provided a counter to the corporate-research-lab baroque of the rest of the building.

If "Workshop" connected the VLW to a rich heritage, then "Visible Language" connected it to a contemporary discourse. Visible Language was the name of a then-

new journal published by Rhode Island School of Design and committed to the principle that reading and writing together form a new, autonomous language system. Founded in 1967 as The Journal of Typographical Research, the journal changed its name to Visible Language in 1970. Self-described as "The Journal for Research on the Visual Media of Language Expression", Visible Language was at the center of an emerging discipline which mined all forms of visual writing.

Every issue of Visible Language was produced together with a guest editor. Visible Language XI 2 from Spring 1977 was guest-edited by Aaron Marcus and collected contributors across a range of disciplines. Contributions to this issue included graphic designer Dan Friedman's visual writing exercises; author Herbert W. Franke writing about practical visual languages; computer programmer Ken Knowlton of Bell Laboratories on computer-produced grey scales; artists Richard Kostelanetz with a series of numerical poems whose syntax and semantics are mathematic, visual and verbal; Ian Hamilton Finlay with a concise concrete poem; and critic R.C. Kennedy exploring the diagrammatic languages of Marcel Duchamp. The journal's broad scope and ambitious mission together with its specific engagement in technical and practical considerations made it close in spirit to what the Visible Language Workshop would become. In fact, the shelves in the last home of the Visible Language Workshop at the Media Lab are still filled with back issues.
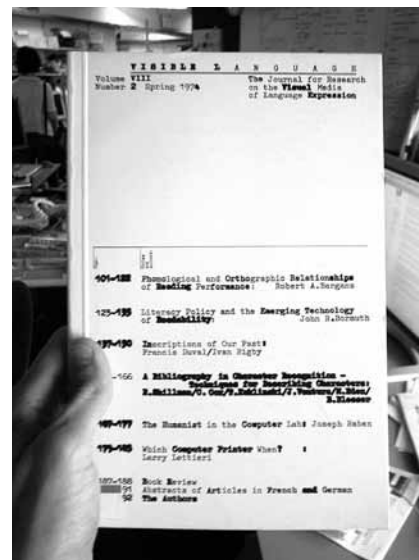
An issue of Visible Language photographed in the former VLW

As a name, the Visible Language Workshop was almost

perfect — joining the legacy of the Bauhaus with the contemporary concerns of a graphic design practice in the midst of substantial change.

Muriel Cooper was appointed Associate Professor in the School of Architecture in 1981 and after seven years in Building 5, the VLW was offered a bigger space Building N51 with the Center for Advanced Visual Studies and Nicholas Negroponte's Architecture Machine Group. Five years later, the VLW moved again into Building E15, the MIT Media Lab.

With the establishment of the MIT Media Lab in 1985, Nicholas Negroponte convinced Muriel to join as one of several principle research areas within the ambitious venture. Negroponte was insistent that the VLW take on a different name as the Media Lab was to be a place for developing new media, its new forms, new consequences and new possibilities. Muriel refused — the concerns of the VLW were precisely the same within the Media Lab as before, even as the context for their work was shifting from the printed page to the computer screen.

The final version of the VLW in the Media Lab was explicitly focused on developing new computer interfaces. Although from the beginning, computers and software were an integral part of the workshop.

A series of large-format Polaroid prints offers an immediate clue to the ways that computers were being used at the VLW throughout its history. With Polaroid Corporation literally around the corner from Building N51, the workshop had immediate access to a new way for making large and quick images. The VLW was given supplies of large-format Polaroid film (20 x 24") and a primitive large-scale digital color printer cobbled together from a CRT monitor and photographic enlarger.

The catalyst for much of the early computer work at the VLW was a large-format printer designed by Ron MacNeil. Called The Airbrush Plotter, this printer could produce billboard-sized prints from digital files. Ron secured $50,000 from Outdoor Advertising Association of America in 1979 to build a prototype and it was already working six months later. After four years, the total project funding was around $500,000. (Computers were much more expensive then — Ron recalls spending $125,000 on a Perkin Elmer 32bit super mini computer!) This funding buoyed other pursuits as the VLW moved into a much larger facility in Building N51.
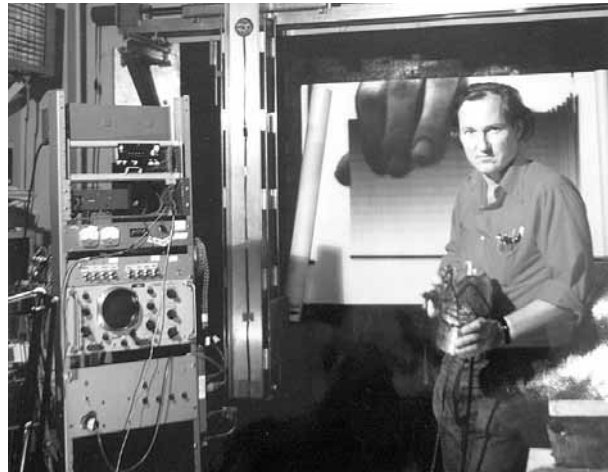
Ron MacNeil standing in front of The Airbrush Plotter at the VLW, 1981

Also by 1979, Ron MacNeil and graduate students Mark Abbate, Rob Faught, Mike Gerzso and Paul Trevithick were hard at work on a software platform for image and text manipulation. Called SYS, this proto-Photoshop program developed the functionality of large and expensive "Paintbox" programs in a more immediate manner. Workshop members began to use it, and the proximity of the users of SYS and the makers of SYS allowed for short cycles of refinement and development with powerful feedback loops.


A student producing a large-format Polaroid print in the VLW, 1981

Cobbled together with help from students in Electrical Engineering and the Architecture Machine Group, SYS was a hard disk and a computer memory management scheme that yielded an image workspace of 8,000 x 2,000 pixels. SYS also included a single line scanner built to capture the high-resolution images needed for

billboard-sized output on The Airbrush Plotter. Ron recalls, "it could take many minutes to scan an image and the subject had to stay completely still (sound like the early years of photography?)"

Building on previous digital printing experiments, the VLW developed a remote digital printing technique called SLOSCAN. However, it was more like an oscilloscope than a photograph — where the CRT printer instantly exposed an image on the screen to the paper, SLOSCAN slowly built up the image by scanning one line at time onto the photographic paper from an electronic file. The communication between machine and printer was necessarily slow, requiring a minimum of bandwidth. As a result, transmission of these images would be possible over long distances between a sending computer and receiving printer. SLOSCAN prints were transmitted from Boston to Sao Paolo, Vancouver, Tokyo and elsewhere.

What began as an experiment in digital printing had become a transmission medium, pointing the way forward to a very near future when digital images were no longer made for printing, but instead created for distribution through electronic networks.
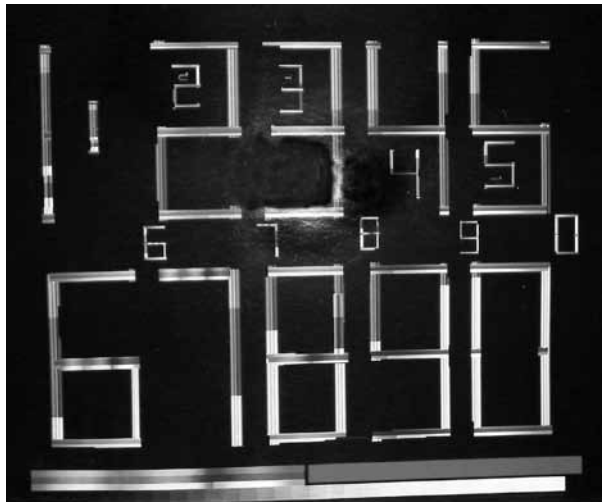
20 x 24" SLOSCAN transmission digital print

As an MIT undergraduate UROP student in 1985, David Small constructed the first version of the SLOSCAN printer. Small eventually received three degrees from MIT and was a critical member of the Visible Language Workshop for ten years. David now runs a successful design firm.

7 FEBRUARY 2007
THE STORAGE CLOSET OF A SMALL DESIGN FIRM
ON MASSACHUSETTS AVENUE

In a storefront on Massachusetts Avenue in Cambridge, halfway between the campuses of MIT and Harvard, is the office of Small Design Firm Inc. I have come to speak to David Small after hearing that he had a "closet full of Muriel Cooper things." As a student, researcher and collaborator in the Visible Language Workshop, David contributed extensively to many of its most important projects. He began as an undergraduate in 1985, joining the VLW in 1987 and completing his PhD in 1999.

Small Design Firm Inc., the office of David Small

By 1985, the Visible Language Workshop had become one unit in the ambitious new Media Laboratory chaired by Nicholas Negroponte. Negroponte described the goals of the Media Lab in Design Quarterly 142, guest-edited by Muriel Cooper in 1989:

```
The Media Laboratory is a pioneering
interdisciplinary center that is a
response to the information revolution,
much as the Bauhaus was a response to
the industrial revolution. [2]
```

Where there was once only a single Perkin Elmer computer, there were now several Hewlett Packard workstations and even access to a supercomputer, the massively parallel Connection Machine 2. Still, Muriel insisted that the new space remain a workshop.

On moving into Building E15 in 1985, Muriel and Ron found a space which was considerably more corporate

than their previous home in N51. E15, also known as The Jerome Wiesner building, was designed by I.M. Pei and looks much more like a suburban low-rise office (wrapped in a multi-colored ribbon by artist Kenneth Noland) than it does a university laboratory. Inside, relatively low drop-ceilngs, wall-to-wall carpeting, systems office furniture and an atrium lobby amplify the effect. Muriel insisted that the VLW would be organized differently. David Small remembers how the physical space mirrored Muriel's teaching style:

```
She was a different kind of teacher:
very reluctant to tell you what to do.
Once you've started with the assumption
that there's no right or wrong way
of doing anything, what becomes more
important is getting students to think
on their own. Muriel set up the right
kind of environment for that: the space
encourages interaction. [1]
```


Muriel Cooper in a self-portrait with Polaroid SX-70, video imaged and printed at the Visible Language Workshop, 1977

The Visible Language Workshop at the Media Lab would eschew the low-lighting and cubicles of the other units, opting instead for an open-plan to house the ad-hoc collection of computers, typesetters and offset presses that had accumulated in the previous 11 years. Large power drops even hung from the conference room ceiling waiting to power the offset printing presses which never arrived. Already the concerns of the workshop were moving increasingly into software and communication patterns that remained completely within the architecture of the computer. Ron MacNeil recalls:

```
In time, images stay on the screen.
And now they travel through networks.
I think what Muriel finally discovered
was the act of communication design
in the process of radical change away
from creating single artifacts to
creating design processes that need
to have a life of their own over these
networks. [15]
```

Previous projects had begun to make it clear that electronic communications moving fluidly through networks of readers, writers, users and makers offered the communication space that Muriel had been trying to find for years. The workshop continued to explore the relationships between what gets said and how it gets said, but in their new home, the VLW left behind the printed page for the fluid space of the computer screen.

```
You're not just talking about how the
information appears on the screen,
you're talking about how it's designed
into the architecture of the machine,
and of the language. You have different
capabilities, different constraints and
variables than you have in any other
medium, and nobody even knows what they
are yet." [14]
```

The Visible Language Workshop began to design interfaces which offered routes, pathways or even self-guided tours through this soft architecture.

```
In the early days of MIT Press,
designers had worked hard at
understanding how to direct the
viewer's eyes in two dimensions: X and
Y. The computer posed the challenge
-- and offered the opportunity -- for
the designer to create more complex
pathways through multi-dimensional
information. This had been the distant
gleam in the eye of past workshops and
it was realized here. [15]
```

The most successful of these interface experiments were the information landscapes presented in 1994 at the Technology Entertainment and Design (TED) conference organized by Richard Saul Wurman in Monterey, California. These information landscapes were immersive three-dimensional environments populated not by

buildings but by information. The user's mouse navigated through text organized in three dimensions, allowing complex, non-linear and multi-hierarchical spaces in which the user, rather than the designer controls the sequence and meaning of its contents.

```
I was convinced that the line between
reproduction tools and design would
blur when information became electronic
and that the lines between designer
and artist, author and designer,
professional and amateur would also
dissolve. [15]
```

In an information landscape, the user appears to fly effortlessly through the infinite zoom of a textual space, reading along the way, creating connections and making meaning. David Small recalls that the information landscapes were first imagined, appropriately enough, on an airplane with Muriel Cooper and Suguru Ishizaki returning from Tokyo. Nicholas Negroponte described this last and likely most radical interface design project of the Visible Language Workshop:

```
She has broken the flatland of over-
lapping opaque rectangles with the
idea of a galactic universe. [13]
```


Screen from Information Landscapes, 1994

For the next three months after the TED conference, 68-year-old Muriel excitedly showed this new interface to sponsors, programmers, software companies and other designers. The day after returning from a presentation in Cambridge, England, Muriel Cooper died unexpectedly.

3 JULY 2007
A COLLECTION OF BOXES STACKED TOO TALL TO REACH IN THE MURIEL COOPER ARCHIVE AT MASSACHUSETTS COLLEGE OF ART

File box number MA16-2 from The Muriel Cooper Archive

Finally, we arrive where I probably should have begun — The Muriel Cooper Archive at Massachusetts College of Art. The small room at her alma-mater is stacked with banker's boxes too tall to reach and a set of flat file drawers with oversized materials. Among the totally mixed contents of each box — file notes, sketches, slides, production schedules, mechanical artwork — I'm reminded that Muriel's greatest asset may have been her refusal to specialize. She recognized that the discrete roles which industrialized production of the assembly line had delegated to its workers were beginning to dissolve. Desktop publishing softwares had opened up professional-level graphic production to a much wider audience, and designers were left with room to expand their practice.

Among these boxes, I found an original copy of the piece that Muriel Cooper and the Visible Language Workshop produced in 1980 for PLAN, the journal of the MIT Department of Architecture. When asked to submit an article about the Visible Language Workshop, Muriel responded instead with a 12-page visual essay produced together with students in the workshop, using the tools of the workshop. The first page of the article reproduces a letter that Muriel wrote to the editor describing the VLW's submission. She lists a series of four numbered points that describe the goals of the visual article that follows, but she may as well be describing the forty years of her own practice:

```
July 15, 1980 [...]

1. It would make use of the tools,
processes and technologies of graphic
arts media as directly as possible
and the tools would be integrated with
concept and product. Many of these are
in the workshop. [...]

2. The author would be the maker
contrary to the specialization mode
which makes the author of the content
the author, the author of the form the
designer, and the author of the craft
the typographer / printer.

3. Visual and verbal representation of
ideas would be synthesized rather than
separate.

4. Time would remain as fluid and
immediate as possible, leaving room for
feedback and change. [7]
```

Muriel concludes the letter cordially, signing off with a promise:

```
This stands as a sketch for the future.
```

--

28 OCTOBER 2007

--

This stands as a sketch for the future.
MURIEL COOPER and the VISIBLE LANGUAGE
WORKSHOP

By David Reinfurt

This text is the result of a one-year Research Affiliate position at Massachusetts Institute of Technology Center for Advanced Visual Studies. It is a work-in-progress — a first draft, offered in public before it is finished.

Muriel Cooper always sought more responsive systems of design and production, emphasizing quicker feedback loops between thinking and making, often blurring the distinction between the two. As a result, she always left room for the reader. This text is an attempt to do the same.

The first edition of 50 copies was printed at the Center for Advanced Visual Studies on 9 October 2007. A second edition of 3000 copies was printed for DDD15, PRODUCED ON LOCATION at the Centre d'Art Contemporain Genève, Switzerland between 24 October and 7 November 2007. This third edition is produced as on-demand laserprints prepared for "The Future Archive," curated by Ute Meta Bauer at Neuer Berliner Kunstverein from June 3 to July 29, 2012.

--

SOURCES

1. Abrams, Janet. "Muriel Cooper's Visible Wisdom", ID Magazine, September–October, 1994.
2. Cooper, Muriel. "Computers and Design", Design Quarterly, Volume 142, 1989.
3. Cooper, Muriel. Curriculum Vitae, MIT Center for Advanced Visual Studies, and Design", 1974.
4. Cooper, Muriel. "Enter the 'New Graphics'", Frames: A Monthly Publication for the Sponsors of The Media Laboratory, Number 32, May 1994.
5. Cooper, Muriel. Miscellaneous correspondence, Muriel Cooper Archive at Massachusetts College of Art, various dates, 1951–1994.
6. Cooper, Muriel and MacNeil, Ron. Course materials from the Visible Language Workshop, various dates, 1974–1985.
7. Cooper, Muriel and the Visible Language Workshop. "Words, Images, Tools and Ideas". PLAN, MIT School of Architecture and Planning, 1980.
8. Glenewinkel, Elizabeth. "Muriel Cooper's Legacy to Design", ID 497-042, John Heskett, 1996.
9. Heller, Steven, Walker Art Center, Graphic Design in America, A Visual Language, Harry N. Abrams, New York, 1988.
10. Hoyne, Patrick. "Pioneers: Muriel Cooper", Communication Arts, March–April 1999.
11. Lupton, Ellen. "Conversation with Muriel Cooper, May 7, 1994", www.elupton.com/index.php?id=29, 1994.
12. Marcus, Aaron. "At the Edge of Meaning", Visible Language, Vol. XI, No. 2, 1977.
13. Negroponte, Nicholas. "Design Statement on Behalf of Muriel Cooper", Chrysler Award for Design Innovation, original documents, 1994.
14. Owen, William. "Design in the Age of Digital Reproduction", Eye Magazine, No. 14/94, 1994.
15. Wong, Tom. Muriel Cooper Memorial Exhibition, Pamphlet and exhibition materials, 1994.

Crouwelism
January 2003

Conversation with Wim Crouwel
Graphic Magazine, April 2003

In the beginning of 2003, we were approached by Sebastian Campos, art director of UK design magazine Graphic (not to be confused with Grafik, another UK design magazine). Sebastian wanted to set up a meeting between us and Mr. Wim Crouwel, in order to publish the resulting conversation in the first issue of Graphic. This meeting took place in January 2003, in our studio, and it turned out to be a very pleasant afternoon. It was the first time we met Wim Crouwel, and we were instantly taken with this personality; he's an enormously charming and erudite man.

Shown here is the resulting conversation. In retrospect, both the editing and the translation seem a bit awkward, but having said that, we do think the following text is a good representation of how the conversation went. It goes without saying that, in the three years that followed after this interview, some of our views might have changed slightly. But that seems only natural.

00.
Wim Crouwel in conversation with Experimental Jetset
Date: January 7th, 2003
Location: Experimental Jetset studio, Amsterdam
Background music: 'TNT' by Tortoise (repeat mode), interrupted, once in a while, by the sound of a telephone ringing

WC: Wim Crouwel
EJ: Experimental Jetset
01.
EJ: Our favourite teacher at the Rietveld Academy (Amsterdam) was Linda van Deursen. The most important thing she imparted to us was a certain mentality, a state of mind. She never romanticized graphic design or tried to create an aura of mystery around it. She has a totally no-nonsense attitude.

WC: And to think, that was at a time when self-expression became very important. That's something in my opinion that the academies were not in the least responsible for. It started in the 1970s, when the academies emancipated themselves from the Bauhaus model with its Vorkurs [first year at the academy, ed.] and its whole systematic teaching structure was jettisoned outright. At the Academy in Enschede, the Netherlands (AKI), the introductory year at the time was expanded to three preparatory years in which the students were let loose completely. There was a strong emphasis on individual development. The work was less important than the approach to the work. From that moment, there was a situation in which the individual attitude exceeded the critical point and became pure self-expression. I think that the work of someone like Irma Boom is a good example of this. I find her work fantastic and very spiritual, but take for example the biography of Otto Treumann she composed: that is in fact a book about her, not Otto Treumann.

EJ: Actually, we do not make a distinction between self-expressive and applied; every manifestation is a form of self-expression, however much applied. And, to be honest, we do not consider Irma Boom and Linda van Deursen to be complete opposites as designers.

WC: Oh, don't you? How interesting. I think they're so different from each other.

EJ: We envision the dividing line as running in a different direction. On the one side you have designers like Linda and Irma, whose designs contain strong inner logic, either conceptually or aesthetically. These are designs that have a healthy, dialectical relationship to society; designs that aren't just representations of assumed target audiences. On the other side of the dividing line you have those who create designs generally intended to address target audiences; affirmative designs, that totally dissolve into visual culture.

WC: Are you talking about advertising agencies?

EJ: As well. But increasingly more designers are preoccupied with these kinds of marketing concepts. And we find that a pity.

WC: For whom do you make your creations? Yourselves, or the public?

EJ: We don't really see that division. In our opinion, target-audience-based approaches do not automatically result in more functional designs. Designs that have a sort of built-in resistance, a certain stubbornness, could very well be the ones that function the best in a society, in the way that a grain of sand can produce a pearl in an oyster.

WC: Nevertheless, I think that the truth lies somewhere in the middle. The heart of the matter is to create intelligent and self-confident designs focused on a target group, without being outsmarted by that target group.

02.
WC: I really like what advertising agencies such as Kessels/Kramer are doing. Interesting things are happening in all sorts of areas, both on the commercial side and in the cultural sector. But in contrast to the commercial side, the cultural sector allows the designer carte blanche, obviously.

EJ: In our view, the exact opposite is currently the case. The role of the designer at ad agencies is actually quite free of restraints. This type of agency is usually divided into two camps: the creative section and the business section. The agency extends a relatively large chunk of autonomy to the designers. They have complete freedom to launch ideas; and then, as if drawing from a 'lucky dip', the business side pulls out a few ideas, which they may or may not use. At a small design agency like ours, however, this division does not exist. The business and creative aspects coalesce completely. As designers, we have very short lines of communication with our clients. That is another reason why we never work for advertising agencies: in advertising there are excess filters between the designer and the client. A superfluous layer of middlemen, which results in a great deal of interference.

WC: What you are specifically referring to are the large, old-style advertising agencies. To me, the modern, smaller agencies seem to be organized differently.

EJ: In fact, it's that old-style function of advertising that appeals to us much more: that the potential users of a product are informed from the point of the intrinsic characteristics of that product. Advertising now is heavily focused on projecting an image onto a product from outside the product itself. We really dislike that side of advertising.

WC: That is the old discussion that I have encountered a great many times. As a designer you want to be informative, yet in advertising they think far more in terms of atmosphere and mood. Take my experiences with Nutricia, for example, where I designed packaging and advertisements a long time ago. I was taken on a guided tour of the factory where evaporated coffee-milk was produced and was immediately fascinated by the hygienic working methods and the technology that was used: the gigantic stainless-steel kettles for heating milk to various temperatures. I wanted to show that process in my advertisements. But they would have no such thing! I was told that they might as well just shut down the factory if I did that. They wanted ads showing people enjoying coffee at special moments and ads about the rich colour that their product imparted to coffee. And, there is no changing that way of thinking. So perhaps it is true that designers ought not to get involved with that. It's probably better to leave those activities to others.

03.
WC: And yet I wonder to what extent you've gone too far in terms of self-expression with a project like 'Kelly 1:1'. There wasn't actually a brief in that case, or was there?

EJ: Lisette Smits, the curator of Casco Projects [an exhibition space in Utrecht, the Netherlands, ed.], approached us with a request to make an installation. In that sense, it was a pure design assignment for us. Because in these cases, there is always a context that you can respond to as a designer, whether that context is a space or a certain theme. We see all the installations that we've made in the last few years for numerous exhibition spaces as essentially nothing different from our graphic assignments: they're still solutions for problems based on specific points of departure and limitations.

WC: I still think that you are treading the shadowy zone between applied work and liberal arts. It's awfully close to self-expression. But if I were presented with a similar request then perhaps I would take the assignment on as well.

04.
EJ: The harshest and at the same time most unjustified criticism we have ever had to endure came during a lecture we gave last year at the Werkplaats Typografie [a post-graduate programme for graphic design in Arnhem, the Netherlands, ed.]. The teachers at the Werkplaats attacked us in a rather unexpectedly scathing manner. Our work was labelled anti-intellectual and anti-ideological. We were accused of doing nothing more than fussing around with a kind of modish styling.

WC: Then they must not have examined your work at all well. Or in any case they clearly didn't understand it. There is most definitely an idea behind your work.

EJ: Their intention was to project their cultural-pessimistic vision of the world onto our work at whatever cost. Their behavior was outright ill-mannered: the teachers walked in and out of the lecture as if they were completely uninterested. The general atmosphere was one of intense rancour towards anything that came out of Amsterdam. A kind of provincial inferiority complex. And this despite the fact that we arrived totally open and above board. It was an utter letdown.

WC: Yet unpleasant confrontations such as this can do us the world of good. You always finish stronger. I had a similar confrontation with Piet Schreuders: during a symposium at the Rietveld Academy he tore up a poster I had designed.

EJ: It's at moments like these that you realize how close cultural pessimism is to cultural barbarism. They are in essence the same. This couldn't have been clearer to us than in Arnhem.

05.
WC: Yet I can see where a lot of criticism of younger designers comes from. I despise nostalgia, but that doesn't stop me from thinking back to 1950s. We all had the feeling that we were working towards a goal: the postwar reconstruction. We wanted to make the world better. A kind of utopian idealism. It's hard not to get the feeling that today's generation of designers is chiefly occupied with themselves. And then when you talk to these designers, this appears rather often not to be the case at all, not at all.

EJ: What you're talking about now is postwar modernism. Perhaps the situation today resembles more prewar modernism. That was a totally divergent situation: marginal movements, splinter groups, manifestos, opposing utopias. In our opinion, we've reached a similar situation. Looking at the designers around us and at our students we notice that everyone is in fact quite idealistic, very ideologic, despite of what the critics say. But everyone has their own approach. We do agree there is certainly not a common movement.

WC: Exactly, there is no common movement. And maybe that's the problem that so many designers of my generation have with today's situation. What Piet Zwart, Jan Tschichold and Paul Schuitema did was so incredibly profound, and so seminal to the twentieth century. The postmodernism that followed was in contrast so loathsome. We really felt it to be morally reprehensible; it was a moral issue for us.

EJ: Postmodernism is something with which we have absolutely no affinity, no connection. What we have nevertheless drawn from postmodernism is the realization that there are no objective, neutral or universal values. But that does not discourage us from pursuing those values; that is our modernist inheritance. In the end, we've actually arrived at something of a synthesis of modernism and postmodernism; working with a utopia in mind, while being fully aware that we will never achieve that utopia. The ultimate idealism.

06.

WC: At the time, what we mainly tried to do was create timeless work. Years later, I realized that timeless designs simply do not exist. You are always a child of your time. You can date all the work I've done, sometimes right down to the year.

EJ: But the two things are not mutually exclusive! Some things can be dated so clearly that they are elevated to become icons of their time. In that capacity, they become timeless. Time capsules, in a way.

WC: That is yet another kind of timelessness.

EJ: Other designs remain timeless because they preserve their own context so well. It's possible to uncover both the original formulation of the problem and the ultimate solution from those designs. Like an answer in which the question is repeated.

WC: And signature. A signature is always right there in front of you, regardless of the context. If I can see who made a poster, for example, I find that fantastic!

NEXT

The Sign of the Next Generation of Computers *for Education.*

What should a logo for Next look like?

Choosing a typeface as the basis for the design of a logo is a convenient starting point. Here are two examples: Caslon and Bifur. Caslon is an alphabet designed as far back as 1725 by William Caslon. It appears to be a good choice because it is both elegant and bookish, qualities well suited for educational purposes.

NEXT

Bifur, a novelty face by A. M. Cassandre, was designed as recently as 1929. An unconventional but ingenious design, it has the advantage, to some, of visually implying advanced technology. *(Attributing certain magical qualities to particular typefaces is, however, largely a subjective matter.)*

NEXT

One reason for looking at a number of possible typefaces is to satisfy one's curiosity. Another, and perhaps more meaningful one, is to study the relationship of different letter combinations, to look for visual analogies, and to try to elicit ideas that the design of a letter or group of letters might inspire.

Here are some further choices, but no matter how one may look at these different examples: sans serifs, hairline and slab serifs, condensed, expanded, bold, light, outline…they still say *next*…like *next time, what's next?, next in line*, or even *next of kin*. The word is in such common usage that it is simply taken for granted.

Personal preferences, prejudices, and stereotypes often dictate what a logo looks like, but it is *needs*, not wants, *ideas*, not type styles which determine what its form should be. To defamiliarize it, to make it look different, to let it evoke more than the mere adjective or adverb it happens to be is, it seems, the nub of the problem.

Note the difference that the lower case e makes when compared with the capital E. By means of contrast both interest and readability are achieved. This is particularly noticeable in the illustration at the bottom.

These simple, geometric letters make it easier to exploit and manipulate possible visual ideas than do more complex serifed letters.

Set in all capitals, the word NEXT is sometimes confused with EXIT, possibly because the EXT grouping is so dominant. A combination of capitals and lower case letters alleviates this problem.

Here are some possibilities which explore the use of lower case letters. The e is differentiated so as to provide a focal point and visual contrast among the capital letters which, otherwise, consist only of straight lines.

Happily, the e also could stand for: education
excellence
expertise
exceptional
excitement
$e = mc^2$
etc.

NEXT

next

Next

NeXt

NeXT

NeXT

Note the difference that the lower case e makes when compared with the capital E. By means of contrast both interest and readability are achieved. This is particularly noticeable in the illustration at the bottom.

These simple, geometric letters make it easier to exploit and manipulate possible visual ideas than do more complex serifed letters.

9

NEXT
NeXT
NeXT

Ideally, a logo should explain or suggest the business it symbolizes, but this is rarely possible or even necessary. There is nothing about the IBM symbol, for example, that suggests computers, except what the viewer reads into it. Stripes are now associated with computers because the initials of a great computer company happen to be striped. This is equally true of the ABC symbol which does not suggest TV. The mnemonic factors in both logos are graphic devices: stripes and circles.

In this example the e is the mnemonic factor.

NEXT

NEXT

A logo takes on meaning, only if over a period of time it is linked to some product
or service of a particular organization. What is needed is finding a meaningful device,
some idea that reinforces the memorability of the company name. A black cube
can be such a device because it has visual impact, and is easy to remember. Unlike the
word Next, it is depictable, possesses the *promise of meaning*, and the *pleasure
of recognition*.

This idea in no way restricts its application to any one product or concept.
The three dimensional effect functions as an underscore to attract the viewer's attention.

13
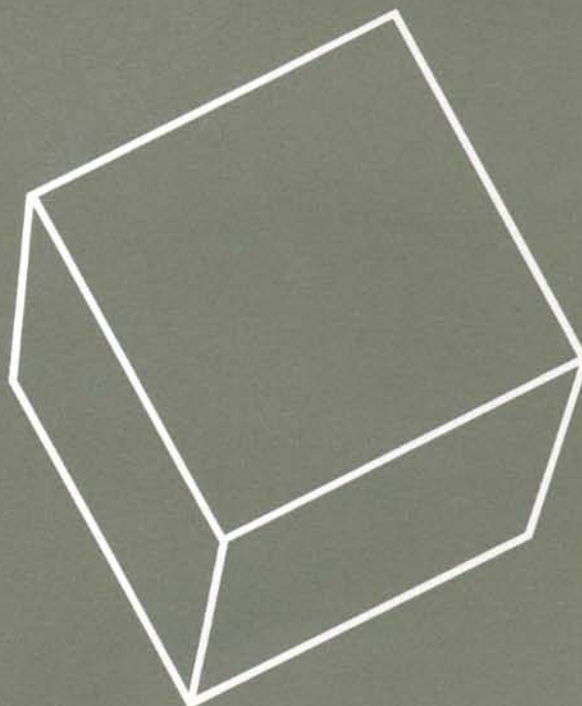
It is desirable to keep the letter style simple, unmannered, and untrendy so as not to distract from the cube concept. Furthermore, the use of a single identification device and a simple sans serif letter, designed to harmonize with almost any accompanying typeface, is essential for practical application. Whenever possible, double identification (name plus symbol) is best avoided. The brevity of the word NeXT and its containment within the framework of the cube obviates the need for such awkward devices.

Splitting the logo into two lines accomplishes several things: it startles the viewer and gives the word a new look, thus making it easier to separate from common usage. And even more importantly, it increases the letter size two-fold, within the framework of the cube. For small space use, a one line logo would have been too small to fit within this same framework.
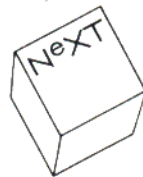
Readability is hardly affected because the word is too simple to be misread. Moreover, people have become accustomed to this format with such familiar four- letter word combinations as LO
VE
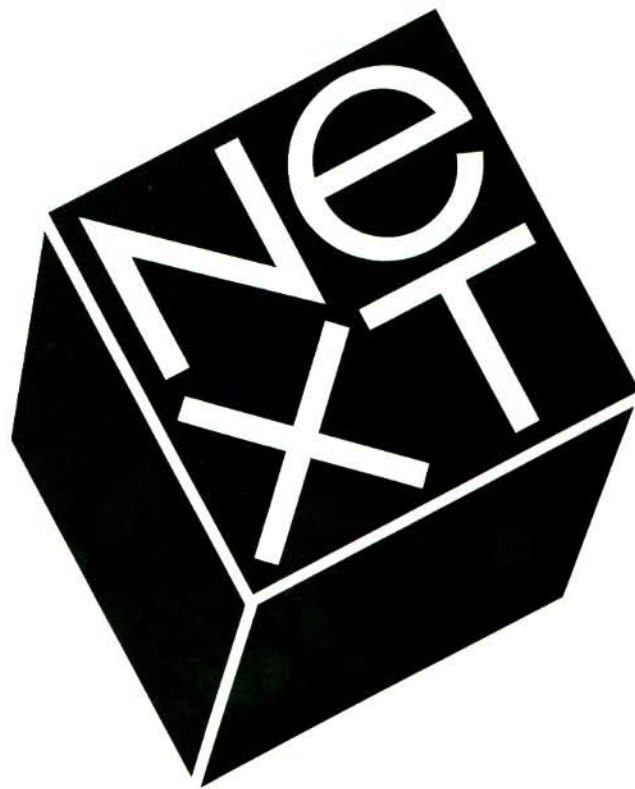
In its design, color arrangement, and orientation the logo is a study in contrasts. Tipped at a jaunty angle, it brims with the informality, friendliness, and spontaneity of a Christmas seal and the authority of a rubber stamp. Together with its lively, black silhouette it becomes a focal point difficult for the eyes to avoid.

The unconventional, yet dignified, array of colors: vermilion against cerise and green, and yellow against black (the most intense color contrast possible) is designed to appeal to a youthful audience and to add a sparkling, jewel-like touch to paper, package, or machine. It is the sparing use of brilliant colors on a predominantly black ground that produces this effect, like stars in the sky. In itself, a decorative and self contained device, the logo does not depend on extraneous embellishment or fancy backgrounds for its many varied applications.

Poised at an angle of twenty-eight degrees, the black cube—even without color— is equally effective for black and white use.

Here are some other choices.
Many different color combinations are possible.
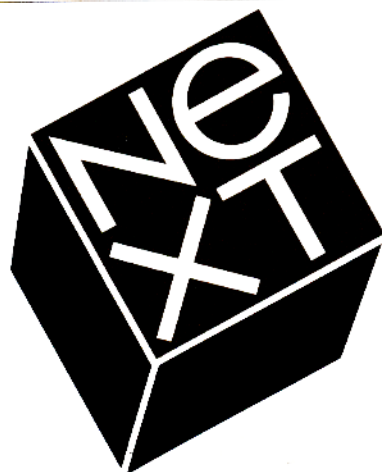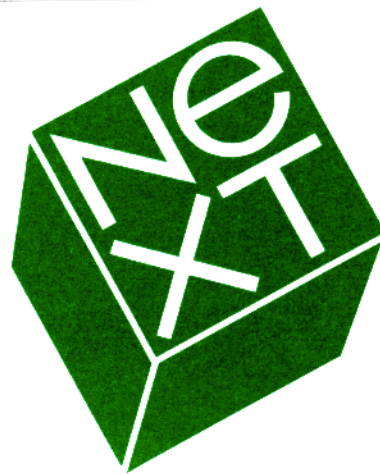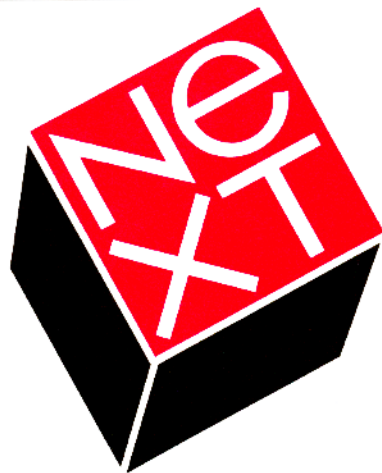
The application of this device to such items as paper weights, stickers, and other pro-
motional articles is endless. It lends itself as well to large scale interpretation:
signs, exhibits in the shape of cubes, in which the actual exhibit is housed, as well as
exhibit stands. For printed matter, its infinite adaptability and attention-com-
pelling power is self-evident.
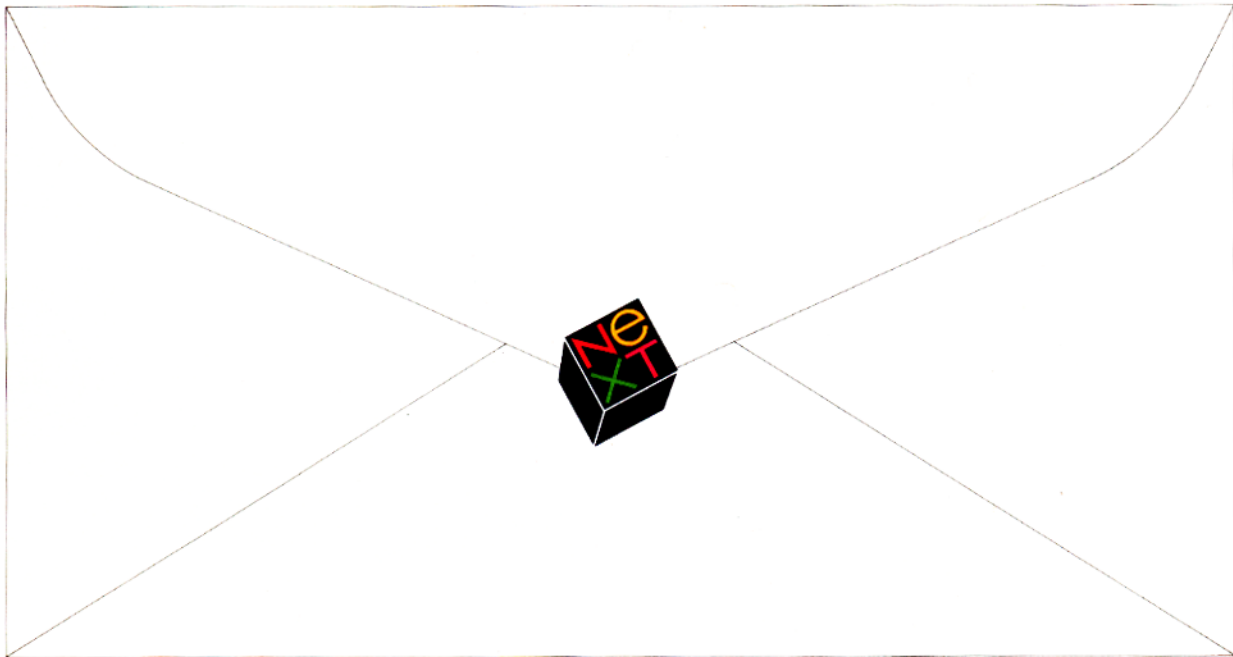
Paul Rand
Weston, Connecticut
Spring 1986

NEXT

MY TYPOGRAPHIES

MY

Through typography

T
01010100

Y
01111001

P we can attempt
01110000

O to explore the complicity
01101111

G between writing
01100111

R and the rest of the world
01110010

A
01100001

P
01110000

On slide viewer: weather chart issued by the Meteorological Office. Satellite weather reading from 850 miles above the Northern Hemisphere.
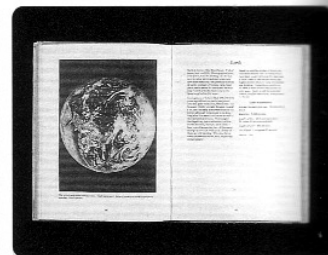
Spread from *The Night Sky Book* (Jamie Jobb, Little Brown & Co, 1977) showing the Earth seen from space.

H
01101000

I
01101001

E A personal view
01100101

S on the kinship of type and things
01110011

By Paul Elliman

The day was very hot and windy and there were scribbles of cirrus blowing across the sky. (Bruce Chatwin, *The Songlines*)

Typography may have entered the stratosphere of a new age, but the internal dynamic that propels it remains the same, a fusion of language and the alphabet. There is a linguistic impulse whereby the qualities we generally "ascribe" to one or the other – alphabetic writing and language – cross over. The unassuming line from Bruce Chatwin, in which he sees the locks of cirrus cloud as a kind of wild writing on the sky, as if he put it there (which in a sense he did), immediately conjures the thread connecting us to our physical environment via writing. Writing gives the impression of things. Conversely, things can give the impression of writing. This association between writing and things provides a crude basis from which to outline a reading/writing list of favourite "typographies".

For me the collection is characterised less by any traditional attributes of "typography" and more by a desire to inflect the idea of typography with a wider sense of what it is to read and to write. And neither are they "my typographies" in the sense that I constructed them: in this case I've replaced the idea of a typography – the impression of writing – of my own making with the impression of a typographical relationship to those
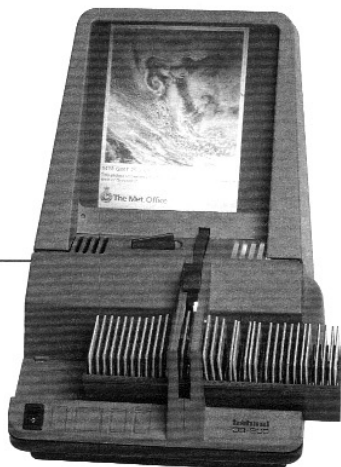
rather prosaic acts of reading and writing: a relationship based on a literacy no longer contained by the *litera scripta*, the written text, and which, at times, extends beyond the written word altogether. A poetics of typography operates in the space between language and the alphabet and along the invisible networks that connect writing to the world. It is characterised by a sense of literacy that allows us to see cirrus clouds as "scribbles" of writing. Its typography emerges in moments of horror, as points of light in the televisual relay of a laser-guided military assault, or in something as unexpectedly poignant, yet equally visceral, as the observation of Aleksei Leonov, the Russian astronaut, when he said: "I believe I never knew what the word 'round' meant until I saw Earth from space."

The *Shipping Forecast*, prepared by the Met. Office and broadcast by the BBC, is one of my favourite typographies. It describes – in a combination of code and windswept location – an outline of the British Isles by reporting the weather condition from sea area to sea area, in a clockwise direction around the coast.

The voice and theme of this reassuringly familiar British institution – that of a "blessed plot ... bound in with the triumphant sea" – carries the resonance of Gaunt's deathbed speech in *Richard II*:

Small show'rs last long, but sudden storms are short; this royal throne of Kings ... this scept'red isle ... This precious stone set in the silvered sea ... Whose rocky shores beat back the envious siege Of wat'ry Neptune ... this Low Fair Isle one thousand falling slowly ...
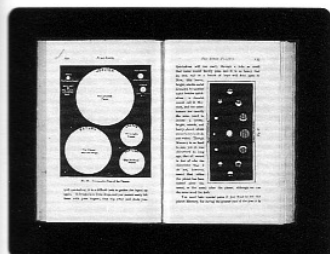
Spread showing "Comparative Sizes of the Planets" from *Starland, Being talks with young people about the wonders of the heavens*, Robert Stawell. Boston: Ball, Ginn & Company, 1893.
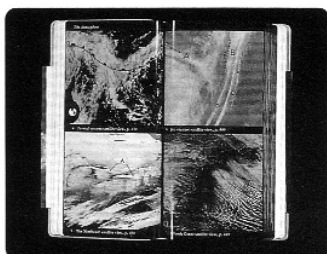
Mapping the atmosphere and cumulus clouds, from *National Audubon Society Field Guide to North American Weather*, Alfred A. Knopf, New York, 1991, 1996.

Pictographic message transmitted into space by the Arecibo radio telescope in Puerto Rico in 1974.

Low Fair Isle one thousand falling slowly ...

In his book *Strange Weather*, Andrew Ross explores the role technology plays in our relationship with the world. One of his intentions is to reconcile the cultural with the technical, to explore technology as a "fully cultural process". Weather mapping systems are one of his examples. Typography, whose social meaning resonates with every part of everyday life, is part of the same network of connections. As an advanced model for communications technology, meteorology employs a reading/writing system that responds to the unstable characteristics of the weather.

I once approached the Meteorological (Met.) Office about reading a weather bulletin on BBC Radio 4 as a "talking typographer".

And now the *Shipping Forecast* issued by the Met Office at 23.58 on Saturday the thirtieth of September. There are warnings of gales in Viking, North Utsire, South Utsire, Forties, Cromarty, Plymouth, Finisterre, Sole, Lundy, Fastnet, Irish Sea, Shannon, Rockall, Malin, Hebrides, Bailey, Fair Isle and Faeroes. The general synopsis at one-eight-double-o: Atlantic glow 974 moving steadily North, expected Iceland 971 by one-eight-double-o on Sunday. The area forecasts for the next 24 hours: Viking, North Utsire, South Utsire; South Easterly seven to severe gale nine, occasionally six in North Utsire and South Utsire, occasional rain, good becoming moderate or poor.

The names of the areas – Malin, Lundy, Fastnet etc. – and the names of the coastal observation stations, including Channel Light-Vessel Automatic, Tiree and Ronaldsway, are part of a precise format and vocabulary which is almost pictographic. For example: Rockall / north backing north-west / five increasing six later / showers / good ... lists in a diagrammatic order wind direction, wind change, wind force (the Beaufort scale, of which gale force is eight), general weather condition and visibility (either good, moderate, poor or fog).

And while the language of the *Shipping Forecast* broadcasts relies upon the fixedness of typography and the placedness of topography, it also continually reshapes as a permutational text dependent on one variable factor – the weather.

Arecibo

Recently, many of the coastal stations that use Morse code have given way to satellite navigation. Last year Le Conquet in western Brittany sent its final message: "Best wishes to all remaining on air ... silent key forever."

Silent key (dotdotdot dashdotdash), is code for "end of message", prompting the image of Earth's last typographer, tapping out the valedictory message of a spent planet. It reminded me of another favourite (and radio-transmitted) typography. In 1974, a message was

beamed into space from the Arecibo Observatory in Puerto Rico, aimed at the cluster of 300,000 stars known as M13 in the Hercules constellation. The signal, a sequence of radio pulses, contained 1,679 bits of information. It was hoped that this number, the product of two prime numbers – 73 and 23 – would suggest a grid structure – 73 x 23 – that reveals a pictographic version of the message.

It assumes, of course, that the communicative system of the receiving species is capable of responding to the same semiotic contrasts as are displayed in the pictogram (shape, length, etc.). If the entity receiving the signal happens to have a communication system based on, say, heat, the astronomers will have wasted their time! Although the message apparently

Thymine) These are arranged in words of three letters such as CGA or TGG. Most of the words code for different amino acids, the building blocks of the body. Although the DNA message is simple, it is very long. Each cell in our body contains about six feet of DNA. A useless but amusing fact is that if all the DNA in all the cells in a single body was stretched out it would reach to the moon and back 8,000 times.

(Steve Jones, *Reith Lecture*, Radio 4, 14 November, 1991.)

Within the matrices of the body, the chemical basis of life is fixed for reading through a kind of hypertext markup language – A, C, G and T. For meteorology, the history of the world is also a kind of literate organisation of its patterns. Meteorology and genetic science are able
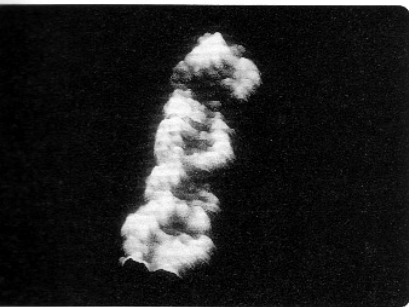
double helix of a strand of DNA magnified millions ime, generated by a scanning tunnelling microscope h a probe tapered to the thickness of an atom), at fornia Institute of Technology. Image first published *ature*, 1990.
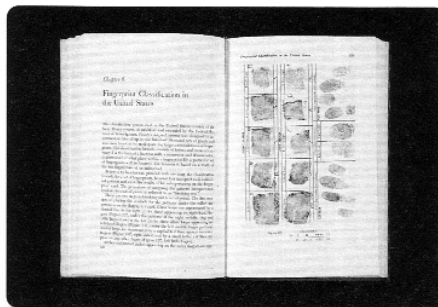
Fingerprint card shown in *Fingerprint Techniques* by Andre A. Moenssens. New York: Chilton, 1971.

Spread from *An A-Z of Bird Song* by John Bevis, Norfolk: Coracle & St. Paulinus, 1995.

raced past Pluto and sped out of our solar system within five hours and twenty minutes, the Hercules constellation is 24,000 light years away – which means that, if any one or thing is there to receive it, and chooses to reply, the response should arrive in about 50,000 years time.

(David Crystal, *Cambridge Encyclopedia of Language*.)

DNA

The Arecibo message represents an early and scientific manifestation of typography's new matrix, the networked intersections of the computer. Among the basic information about us, our planet and its solar system, the astronomers of Arecibo included a DNA helix. For genetic science, our genes are a signal transmitting messages from the past. On the radio again, I once listened to scientist Steve Jones giving an account of the language of genetics.

… a set of instructions passed from generation to generation. It has a vocabulary – the genes themselves; a grammar – the way in which the inherited information is arranged; and a literature – the thousands of instructions needed to make a human being. The language is based on the DNA molecule, the famous double helix; the icon of the twentieth century. It has a simple alphabet; not 26 letters, but just four, the four different DNA bases – A, C, G and T for short. (Adrenine, Cytosine, Guanine,

to produce typographies of the unseeable that enable us to read backwards into the past a history of the planet and of the body. The obituary, last year, of legendary climatologist Hubert Lamb described the exegetical approach of a methodical "reader".

Using all available archives, evidence of ancient forests, the movements of primitive peoples, the growth of civilisations and their agriculture, fossil pollen distribution and other information including some of the earliest radio-carbon dating, H. H. Lamb painstakingly unravelled and reconstructed the slowly moving patterns and timescales of past climatic changes. Change, he found, is the norm.

("H. H. Lamb, A change in the weather," Anthony Tucker, obituary in *The Guardian*, 30 June 1997.)

Strange sets in ranges of size

I could also imagine my favourite typographies laid out according to a chronology that moves forwards from a distant past towards what is in many ways an equally distant present. Any history of typography is conflated within the histories and pre-histories of writing. Historian Denise Schmandt-Besserat of the University of Texas has collected "tokens" in the Uruk region of Iran that complete some blank passages in the evolution of writing. This is a typography that precedes writing,

clay counters used in the accounting of agricultural goods, catalogued into various typological subsets such as cones and discs, further grouped by additional markings, perforations and pictograms. These tokens seem to suggest how even in a world without written words a kind of typography would emerge. Idiosyncratic typologies and topologies, strange sets in ranges of size, offered as language and/or currency: types of metals, shades of green, sources of energy, ice-cream, stones, butterflies, clouds, false moustaches, ways of walking. A typography that re-imagines the quality of our relationship to the things around us by being of those things. In Stanley Morison's book *Fra Luca de Pacioli*, the Renaissance scholar speaks of "*l'alphabetico*
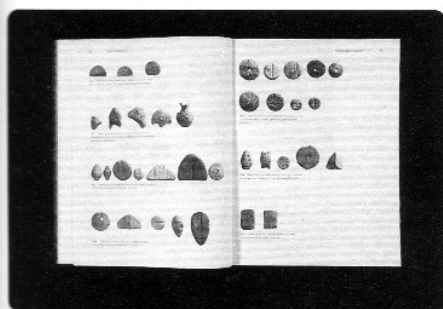
Spread showing clay tokens, from *Before Writing* by Denise Schmandt-Besserat, University of Texas, 1992.
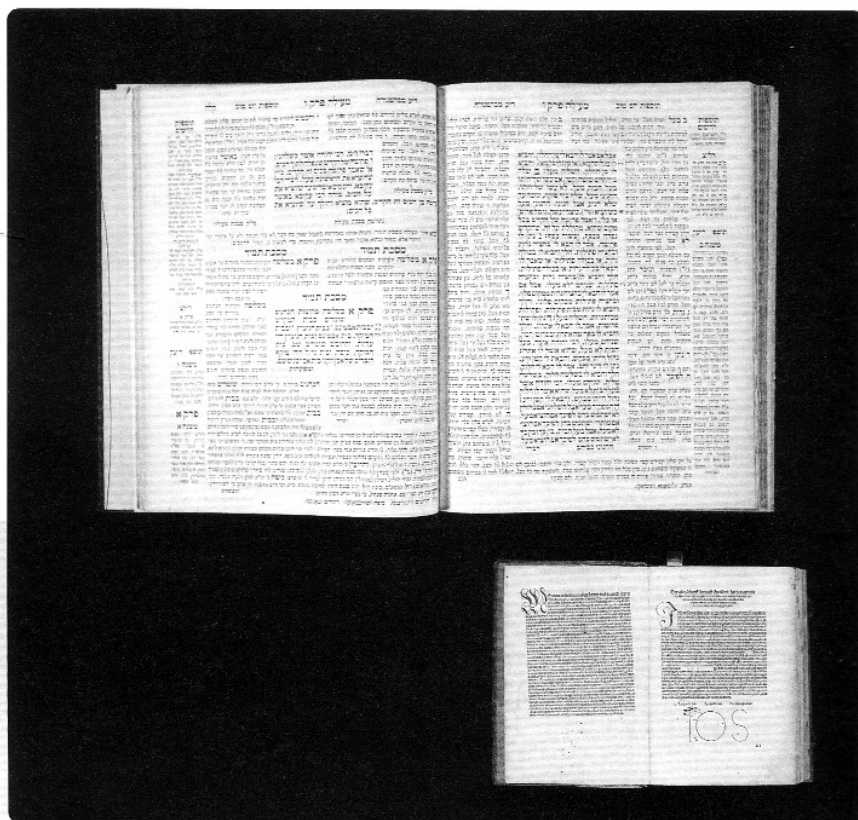
An edition of the Talmud from Sterling Memorial Library, Yale University.

Spread from *Underweysung der Messung* by Albrecht Dürer, Nurenberg, 1525 (Beinecke Library of Rare Books and Manuscripts, Yale University).

dignissimo antico" [the most excellent ancient alphabet] as if it might never have happened:

As a speculation Fra Luca de Pacioli – in *De Divina Proportione* [On the Divine Proportion] printed 1509 – ventures that letters were invented by chance . . . He proves his point by saying that the porphyry tomb opposite the Rotunda guarded by the two lions carries cyphers and signs of pens, knives, animals, shoe soles, birds and pots, all used as letters. By way of concluding the whole matter, the Friar announces that at last men "fixed upon those which at present they use". (Stanley Morison, *Fra Luca de Pacioli*. New York: The Grolier Club, 1933.)

The *En Sof* and the Talmud

In the tradition of the Kabbalah, the idea that the letters happened more or less by chance is impossible. The ancient Hebrew *Sefer Yetzirah*, or *Book of Creation*, ascribes a name to the spirit that began all things. The *En Sof*, the Infinite One, began them through a mystical arrangement of letters:

Twenty-two Foundation letters: He engraved them, He carved them, He permuted them, He weighed them, He transformed them, and with them, He depicted all that was formed and all that would be formed.

(Aryeh Kaplan, *Sefer Yetzirah*, Samuel Weiser, 1990, thanks to Janet Zweig, "Ars Combinatoria", *Art Journal*, Fall 1997.)

The theological idea of the world as a book, and of a universe created through a manipulation of letters, is central to the Scriptures, and is particularly acute to Talmudic scholarship. The typographical layout of the Talmud is surprising in the way that it articulates a relationship between reading and writing. The first version was produced by the eminent Venetian firm of Daniel Bomberg between 1520 and 1523. Its layout contains separate commentaries on both inner and outer margins, with other discussions inserted throughout. In other words, the text and its readings sit side by side on the printed page.

ASCII text

The reduction of language to the pulse-no pulse of zeroes and ones is a return to the *Sefer Yetzirah*'s theme of a world created by the Infinite One, the *En Sof*. Since computer memories are most often structured in eight-bit units, or bytes, it makes sense to represent an alphanumeric symbol within a single byte.

The American Standard Code for Information Interchange – ASCII – has become the predominant character set for encoding, always preferred by hackers to more complex alternatives such as EBCDIC. Hackers require an absolute precision when talking about
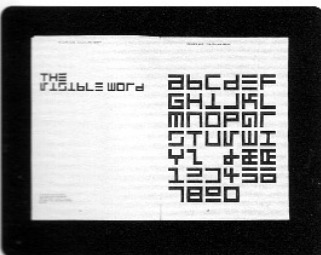
Not Van Doesberg, but "a typeface for machine recognition" developed by Epps and Evans, which avoids curves and diagonals. From *The Visible Word*, Herbert Spencer, 1968.
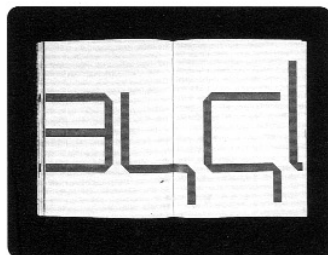
Spread from *Wim Crouwel – Mode en Module* by Frederike Huygen and Hugues C. Boekraad. Rotterdam: Uitgeverij 010, 1997.


Left: Pulsar digital watches, 1971. Right: the first Pulsar Hamilton digital watch, 1969.

Newspaper cuttings showing acts of protest that use writing. 1989. Top: graffiti by Susan Komisaruk. Below: handwriting by activist Mordechai Vanunu.

Television image (printed in newspaper under the headline "Battle sets sky alight") of points of light over Baghdad during the Gulf War, 1991.
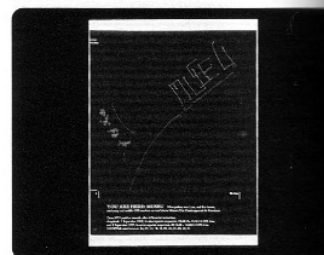
"You are here: Museu." Laura Kurgan strode letters on the roof of the Museum of Contemporary Art, Barcelona, 1995.

keyboard characters, so jargon names for ASCII characters have become another spoken typography: "bang" for !, for example, and "crunch" for #, "splat" for *, "twiddle" for ~ and so on.

In ASCII the word "Typography" can be rewritten in binary form as (T) 01010100 (y) 01111001 (p) 01110000 (o) 01101111 (g) 01100111 (r) 01110010 (a) 01100001 (p) 01110000 (h) 01101000 (y) 01111001

Wim Crouwel and the Hamilton Pulsar Digital Watch

In the 1960s Wim Crouwel investigated a computer-generated typography for which its form construction would be a set of units based on the assembly of organic cells. This typography would reflect both the technology and the kind of society that had shaped it, a typography that incorporated the ability of the computer to assume spatial and temporal calculations, and that would not, as he put it, "be anachronistic to the space craft in which the first men landed on the moon". In 1969, alluding to a four-dimensional typography that might be laser-generated, Crouwel asked "if we could then still maintain the term typography"?

Like all reworkings of the alphabet, Crouwel's typefaces display certain passages of their own history, both long term and immediate. Among others, Théo van Doesburg's 1919 geometric typeface, its characters formed from a square of 25 units, is clearly evident. As with much of the work of De Stijl, the geometry of the typeface's grid anticipated the prevalence today of the television and computer monitor. The kind of typography that Crouwel and his programmers were exploring emerged most visibly through the Hamilton

Pulsar digital watch. In 1969, Hamilton produced the first LED watch, a prototype for the Hamilton Pulsar which came out in 1971. For me, the pulsing liquid-crystal transmutation of a full character set through combinations of three horizontal and four vertical lines marked typography's finest hour.

Laura Kurgan

In 1995, for the opening of architect Richard Meier's Museum of Contemporary Art in Barcelona, the New York artist Laura Kurgan made a strange typography using a "global positioning system" (GPS) and any passing satellites. Recalling the typographical walks of a character in Paul Auster's *New York Trilogy*, who outlines the form of a letter each day by walking the orthogonal streets of Manhattan, Kurgan "inscribed" the word *museu* into the building by walking its alphabetic contours on the roof. "The structure of the word is built into the building, like the characters latent in the LED display of a digital clock ... Dot by dot, the GPS data points are transformed into the word that names the building and the institution." ("You are here: Museu" in Laura Kurgan and Xavier Costa, eds., *You Are Here: Architecture and Information Flows*, Barcelona: MACBA, 1995, pp 121-131.)

Kurgan's typography takes the idea of reading and writing at its most ordinary, and attaches it to the invisible writing of networks and dataflows, the connected world that we are still learning to see and orient (or even disorient) ourselves within. Today, typographic writing celebrates the lack of distinction between interaction and our sense of being acted upon.
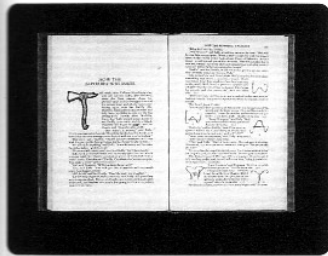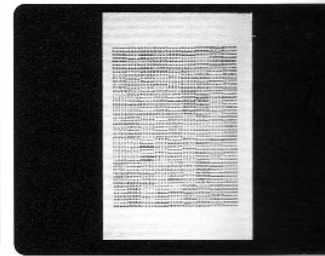
"How the Alphabet was made", a spread from *The Jungle Book* and *Just So Stories* by Rudyard Kipling.
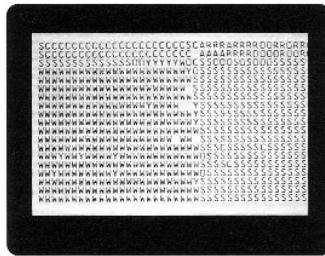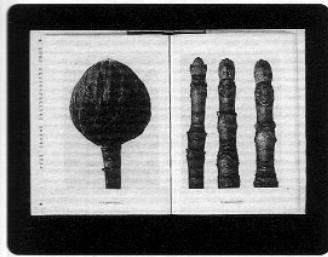

Detail from map produced by US Department of Agriculture. The "fields of letters" show crop distribution.

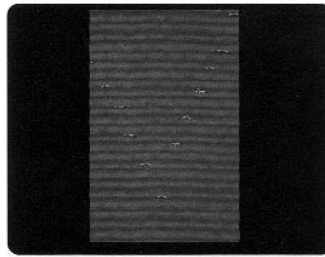Spread containing detail shown in T.

Typewritten text from Carl Andre's STILLANOVEL, a book of 98 poems published in 1972.
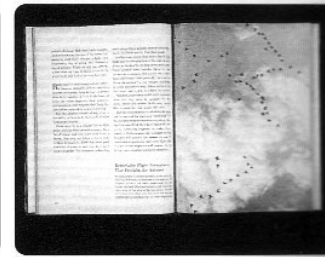

Left: Cynara scolymus L (Artichoke. Young flower head). Right: Aesculus parviflora (Buckeye with small flowers. Young shoots) from Karl Blossfeldt, *The Alphabet of Plants,* Schirmer, 1997.

"V" formation of migrating Canada Geese from the author's *M for Magnetic.*
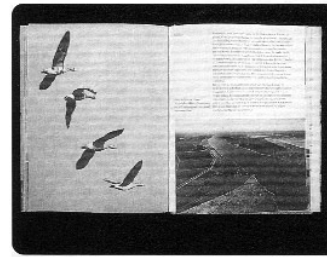
Spread from *Op de Grens van Zout en Zout* by Jan van de Kam and Wim Wolff. Amsterdam: Ploegsma 1972.

Spread from *The Birds,* Young Readers Edition. New York: Time-Life Books, 1967.

The sound of the body meets the voice of our electronic infrastructure in the uncanny vernacular of shopping: a friendly message on a supermarket receipt – "THANK YOU!" – or the synthesised voice of a Japanese vending machine: "… and remember, cigarettes make a wonderful gift …"

Quick brown fox …

As a child I knew the mysterious formation of the alphabet and its connection to the land, from Kipling's *Jungle Book* and *Just So Stories*. On the banks of the Wagai, Taffy and her Dad scratch the shapes of the alphabet into birch bark, based on drawings of carp, snakes and other sacred animals. In later reading I found more subtle foregrounding of the alphabet and its role within the construction of literary writing, a device that points to the organising principle of the system and its disruptions. At its most reductive, in a scenario that could come from Beckett but is in fact from *Sesame Street*, Bert finds Ernie at a typewriter having just completed what he calls "the greatest story ever told".

"Here goes," says Ernie, reading from the beginning: "A, b, c, d, e, f, g …" He then cries through the sad part, *"h, i, j, k, l, m, n …"*, shouts the letters of the action sequence, "O! P! Q! R! S! T! U! …" and collects himself for the solemn conclusion, "… v, w, x …" stopping at "… y …" for risk of spoiling the end.

The idea of bringing the primary text to the front, of a text that allows all the other texts to be possible or impossible, is demonstrated by pangrams, the texts that typographers use to "test" their letters. "Veldt jynx grimps waqf zho buck" is an example of a pangram with no characters repeated. Another way of accentuating the code forms the basis of a typographical work by sculptor Carl Andre, in which squares of typewritten letters suggest the "colours" of writing. The result is a "texture" that meteorologists knew already from maps produced in the 1960s by the US Department of Agriculture. In order to reveal precise crop distribution, recordings were taken of the "spectral" signature of plants. Depicting rows of C for corn, A for alfalfa, O for oats, R for red clover, Y for rye, W for wheat, S for soy beans, and so on, the resulting maps were fields of letters connected back to the land.

Walking is reading. Writing is walking …

What am I reading now? Iain Sinclair, a walker in and a reader of the City of London cuts a "V" shape across the metropolis, from Stoke Newington in the North to Greenwich in the southeast and back across the river to Chingford Mount. (The walk, in *Lights Out for the Territories*, is marred by a torrent of rain, or, as he at one point puts it: "Weather set to erase all codes.") The V, which he says has nothing to do with *V*, the novel by Thomas Pynchon, causes him to muse upon the idea of collecting an alphabet library.

"From *A* by Louis Zukofsky, through John Berger's *G* and *The Story of O*, to *Z*, the novelisation of the Costa Gavras' film.' … And Alberto Manguel, in his book *A History of Reading*, describes a grand vizier of tenth-century Persia who travels with a library of 117,000 volumes "carried by a caravan of 400 camels trained to walk in alphabetical order". A fantastic image of typography on the move. *e*

TYPOPHOTO

Neither curiosity nor economic considerations alone but a deep human interest in what happens in the world have brought about the enormous expansion of the news-service: typography, the film and the radio.

The creative work of the artist, the scientist's experiments, the calculations of the business-man or the present-day politician, all that moves, all that shapes, is bound up in the collectivity of interacting events. The individual's immediate action of the moment always has the effect of simultaneity in the long term. The technician has his machine at hand: satisfaction of the needs of the moment. But basically much more: he is the pioneer of the new social stratification, he paves the way for the future.

The printer's work, for example, to which we still pay too little attention has just such a long-term effect: international understanding and its consequences.

The printer's work is part of the foundation on which the *new world* will be built. Concentrated work of organisation is the spiritual result which brings all elements of human creativity into a synthesis: the play instinct, sympathy, inventions, economic necessities. One man invents printing with movable type, another photography, a third screen-printing and stereotype, the next electrotype, phototype, the celluloid plate hardened by light. Men still kill one another, they have not yet understood how they live, why they live; politicians fail to observe that the earth is an entity, yet television (Telehor) has been invented: the 'Far Seer' – tomorrow we shall be able to look into the heart of our fellow-man, be everywhere and yet be alone; illustrated books, newspapers, magazines are printed – in millions. The unambiguousness of the real, the truth in the everyday situation is there for all classes. **The hygiene of the optical, the health of the visible is slowly filtering through.**

38

● What is typophoto?
Typography is communication composed in type.
Photography is the visual presentation of what can be optically apprehended. **Typophoto is the visually most exact rendering of communication.**

● Every period has its own optical focus. Our age: that of the film; the electric sign, simultaneity of sensorily perceptible events. It has given us a new, progressively developing creative basis for typography too. Gutenberg's typography, which has endured almost to our own day, moves exclusively in the linear dimension. The intervention of the photographic process has extended it to a new dimensionality, recognised today as total. The preliminary work in this field was done by the illustrated papers, posters and by display printing.

Until recently type face and type setting rigidly preserved a technique which admittedly guaranteed the purity of the linear effect but ignored the new dimensions of life. Only quite recently has there been typographic work which uses the contrasts of typographic material (letters, signs, positive and negative values of the plane) in an attempt to establish a correspondence with modern life. These efforts have, however, done little to relax the inflexibility that has hitherto existed in typographic practice. An effective loosening-up can be achieved only by the most sweeping and all-embracing use of the techniques of photography, zincography, the electrotype, etc. The flexibility and elasticity of these techniques bring with them a new reciprocity between economy and beauty. With the development of **photo-telegraphy**, which enables reproductions and accurate illustrations to be made instantaneously, even philosophical works will presumably use the same means – though on a higher plane – as the present day American magazines. The form of these new typographic works will, of course, be quite different typographically, optically, and synoptically from the linear typography of today.

Linear typography communicating ideas is merely a mediating makeshift link between the content of the communication and the person receiving it:

COMMUNICATION   ⬌   TYPOGRAPHY   ⬆   PERSON

39

SIMULTANEOUS
OR POLY-CINEMA

Instead of using typography – as hitherto – merely as an objective means, the attempt is now being made to incorporate it and the potential effects of its subjective existence creatively into the contents.

The typographical materials themselves contain strongly optical tangibilities by means of which they can render the content of the communication in a directly visible – not only in an indirectly intellectual – fashion. Photography is highly effective when used as typographical material. It may appear as illustration beside the words, or in the form of **'phototext'** in place of words, as a precise form of representation so objective as to permit of no individual interpretation. The form, the rendering is constructed out of the optical and associative relationships: into a visual, associative, conceptual, synthetic continuity: into the typophoto as an unambiguous rendering in an *optically* valid form. (An experiment, p. 124).

The typophoto governs the new tempo of the new visual literature.

● In the future every printing press will possess its own block-making plant and it can be confidently stated that the future of typographic methods lies with the photo-mechanical processes. The invention of the photographic type-setting machine, the possibility of printing whole editions with X-ray radiography, the new cheap techniques of block making, etc., indicate the trend to which every typographer or typophotographer must adapt himself as soon as possible.

● This mode of modern synoptic communication may be broadly pursued on another plane by means of the kinetic process, the film.

A cinema should be built equipped for different experimental purposes in regard to apparatus and projection screen. One can, for example, visualise the normal projection plane being divided by a simple adapter into different obliquely positioned planes and cambers, like a landscape of mountains and valleys; it would be based upon the simplest possible principle of division so that the distorted effect of the projection could be controlled.
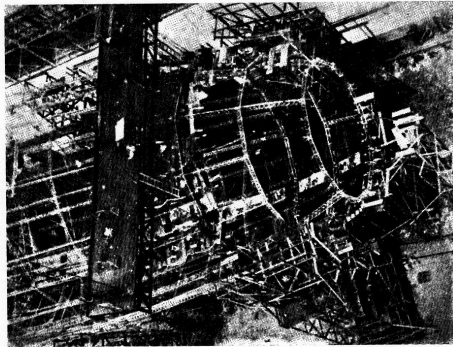
Another suggestion for changing the projection screens might be: one in the shape of a segment of a sphere instead of the present rectangular one. This projection screen should have a very large radius and therefore very little depth and should be placed at an angle of sight of about 45° for the viewer. More than one film (perhaps two in the first trials) would be played on this projection screen; and they would not, indeed, be projected on to a fixed spot but would range continually from left to right or from right to left, up and down, down and up, etc. This process will enable us to present two or more events which start independently of one another but will later by calculation combine and present parallel and coinciding episodes.

The large projection screen has the further advantage of representing a process of movement – let us say that of a motor-car – from beginning to end with greater illusion (movement in the second dimension) than the present projection screen on which one image must always be fixed.
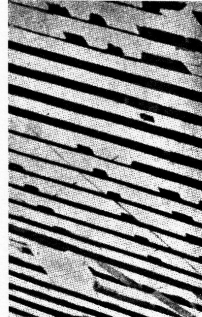
This passage as a brutal intro-
duction to the breathless race,
the hubbub of the city.

The rhythm, which is strong
now, gradually slackens during
the course of the film.
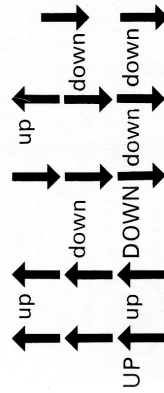
TEMPO
TEMPO
TEMPO
TEMPO

The tiger:
Contrast between the open
unimpeded rushing and the
oppression, constriction. So as
to accustom the public from
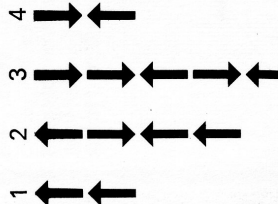the outset to surprises and lack
of logic.

Close-up.
The movement continues with a car dashing towards the left. A
house, always the same one, is seen opposite the car in the centre of
the picture (the house is continually being brought back to the
centre from the right; this produces a stiff jerky motion). Another
car appears. This one travels simultaneously in the opposite direc-
tion, towards the right.

Row of houses on
one side of the
street, translucent,
races right towards
the first house. Row
of houses runs off
right and reappears
from right to left.
Rows of houses
facing one another,
translucent, rushing
in opposite direc-
tions, and the cars
moving ever more
swiftly, soon giving
rise to FLICKERING
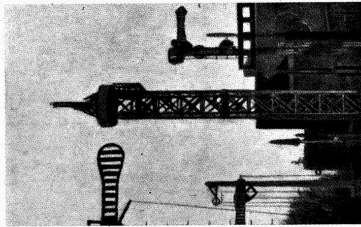
1 2 3 4 5
1 2 3 4 5
1 2 3 4 5

1 2 3 4 5
1 2 3 4 5
1 2 3 4 5

Shunting yard
Sidings

A tiger paces furiously round and
round its cage

TEMPO   TEMPO   TEMPO

Quite clear – up at the top – signals:

(Close-up.)

All automatic, au-to-ma-tic in move-
ment

up   up   down
up   down   down
UP up DOWN down down

L. MOHOLY-NAGY:
DYNAMIC OF THE METROPOLIS

**SKETCH OF A MANU-
SCRIPT FOR A FILM**
Written in the year 1921/22

A metal construc-
tion in the making

First, animated cartoon of mov-
ing dots, lines, which, seen as a
whole, change into the building
of a zeppelin (photograph from
life).

Crane in motion
during the
building of a
house
Photographs:
from below
from above

oblique

Hoisting bricks
Crane again; in
circular motion

AN ANGRY LYNX.

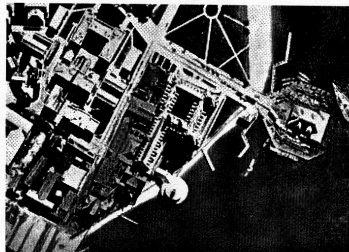The wheels. They turn to the point when the vibration fades.

up down up

The face of the man telephoning (close up) — smeared with phosphorescent material to avoid producing a silhouette – turns VERY CLOSE to the camera; above his head to the right (translucent) the aeroplane is seen approaching in a spiral from far off.
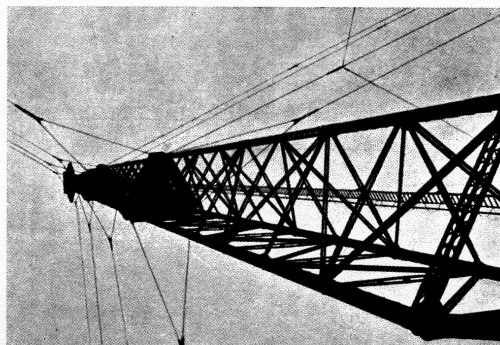
PO-O-PO-o-o TEM PO
TEM TEM
TEMPO-O TEMPO-O

Glass lift in a warehouse with a negro attendant. Oblique. Perspective distorted. Chiaroscuro. View out. Tumult. The dogs tethered at the entrance. Next to the glass lift a glass telephone box with a man telephoning.

View THROUGH. Shot of the ground-floor through the glass panes.

1 4 3
3 5 0

The appurtenances of civilisation heightened by making countless levels intersect and interpenetrate.
The train from below: something never experienced before.

Association for laborious telephoning. Dream-like (glass-glass-glass), a gradual turn simultaneously prepares the viewer for the movement of the approaching aeroplane.

Warehouses and cellars

Darkness

DARKNESS
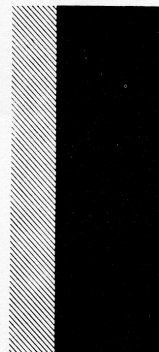
Becoming gradually lighter
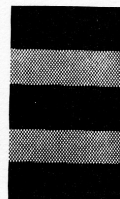
Railway.
Highway (with vehicles).
Bridges. Viaduct. Water below, boats in waves. Cable railway above.
Shot of a train taken from a bridge: from above; from below. (**The belly of the train,** as it passes; taken from a trench between the rails)
A watchman salutes. Glassy eyes.
Close-up: an eye.

ARC-LAMP, sparks playing. Street smooth as a mirror. Pools of light. From above and oblique

with cars whisking past.

Reflector of a car enlarged.

SCREEN BLACK FOR 5 SECONDS

Electric signs with luminous writing which vanishes and reappears.

Fireworks from the Lunapark. Speeding along WITH the scenic railway.

Low aerial photograph over a square with **8** streets opening into it.

TEMPO-o-

TEMPO-o-o

TEMPO

Underground railway. Cables. Canals.

(The camera is swiftly tilted over; there is a sense of plunging downwards.)

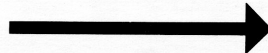Under the tramways the sewers being extended. Light reflected in the water.

The vehicles: electric trams, cars, lorries, cabs, bus, cyklonette, motor-cycles, bicycles, travel in quick time from the central point outwards, then all at once they change direction; they meet at the centre. The centre opens, they ALL sink deep, deep, deep—

a wireless mast

TEMPO TEMPO TEMPO TEMPO

Football match. Rough. Vigorous TEMPO.

Metal cones — empty inside, glittering — are hurled towards the lens, (meanwhile) 2 women draw back their heads in a flash. Close-up.
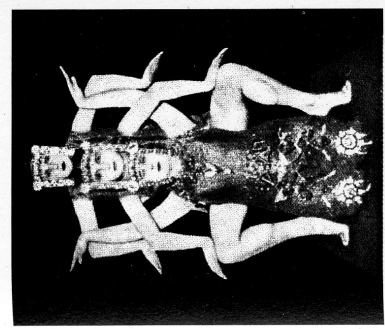
VaRIETé, feverish activity. Women wrestling. Kitsch.

Jazz-band instruments (Close-up).
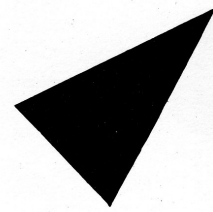
(In order to scare the public. A dynamic moment too.)

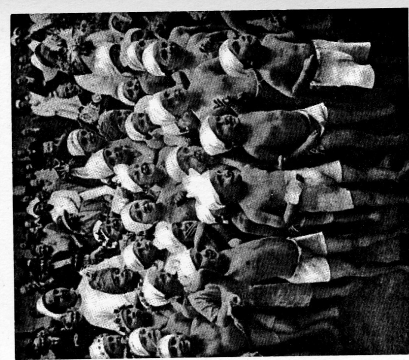Punch and Judy show. **CHILDREN**

A man can remain oblivious of many things in life. Sometimes because his organs do not work quickly enough, sometimes because moments of danger, etc., demand too much of him. Almost everyone on the switchback shuts his eyes when it comes to the great descent. But not the film camera. As a rule we cannot regard small babies, for example, or wild beasts completely objectively because while we are observing them we have to take into account a number of other things. It is different in the film. A new range of vision too.

Devil's wheel. Very fast. The people who have been slung down stand up unsteadily and climb into a train. A police car (translucent) races after it. In the station hall the camera is first turned in a **horizontal,** then in a **vertical** circle.
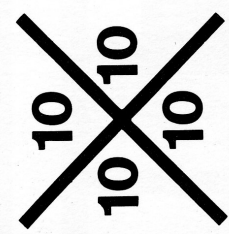
Telegraph wires on the roofs. Aerials. The TIGER. Large factory. A wheel rotating. A performer rotates (translucent). Salto mortale. High jump. High jump with pole. Jumper falls. Ten times one after the other.
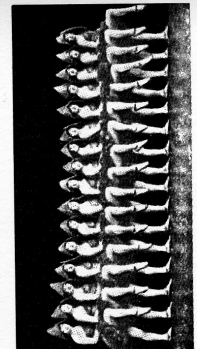
Our head cannot do this.

10 10 10 10

Public, like waves in the sea.

Girls. Legs.

Smoke puffing like a cauli-flower, photo-graphed over a bridge when a train is passing underneath.

THE DIVER

Slanting chimney smokes; a DIVER emerges from it; sinks head first into the water.
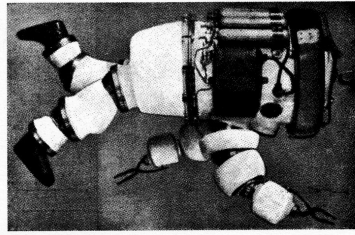
Propeller in the water in action. Mouths of the sewers under and above the surface of the water. By motor-boat through the canals to the garbage and refuse collection depot.

A glass of water (expanse of water with glass rim in close-up) in motion like a fountain, spurts up
Jazz-BAND with the
TALKING FILM
FortiSSimO
Wild dancing caricature. Street-girls.

THE TIGER

BOXING

Close-up.
ONLY
the HAnds with the boxing gloves.

Slow-motion. SLOW-MOTION.

Scrap is converted into factory work.
Mountains of rusty screws, tins, shoes etc.
PATERNOSTER lift with view to the end and back.
In the circle.

from **FORTISSIMO-o-o**
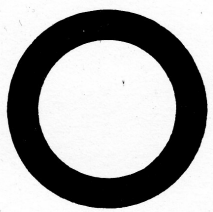
to **PIAnissimo**

From here the whole film (shortened) is run BACKWARDS as far as the JaZZ-BAND (this backwards too).
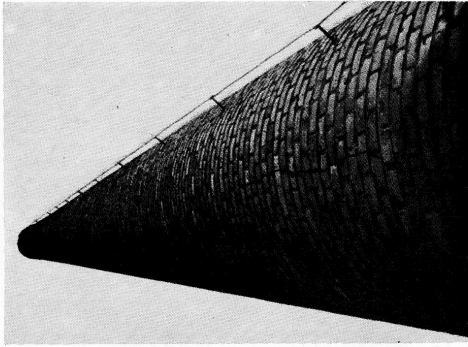
Glass of water
Identification of corpses (morgue) from above.

**RIGHT-RIGHT
RIGHT-RIGHT**

MARCH-MARCH-
MARCH-MARCH-RIGHT

LEFT-LEFT-LEFT

Military parade

WOMEN RIDERS—LEFT
The two shots printed one above the other, translucent.

Stockyards. Animals.
Oxen roaring.
The machines of the refrigerating room.
Lions.
Sausage-machine. Thousands of sausages.
Head of a lion showing its teeth (Close-up).
Theatre. Rigging-loft.
The lion's head. **TEMPO-o-o**
Police with rubber truncheons in the Potsdamer Platz.
The TRUNCHEON (close-up).
The theatre audience.
The lion's head gets bigger and bigger until at last the vast jaws fill the screen.

The frequent and unexpected appearance of the lion's head is meant to cause uneasiness and oppression (again and again and again). The theatre audience is cheerful – and STILL THE HEAD comes! etc.

Waterfall thunders. The TALKING FILM.
A cadaver swims in the water, very slowly.

Military. March-march.

Glass of water.

In motion.

SHORT-FAST

Spurts up –

**THE WHOLE THING
TO BE READ THROUGH AGAIN QUICKLY**

END

Dark for several seconds

DARK DARKNESS

Large circle

T E M P O - o - o - O

Circus from above, al-most a ground-plan.
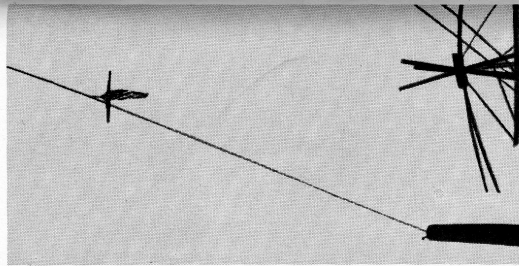
CIRCUS
Trapeze. Girls.
Legs.
Clowns.

LIONS.
LIONS!

CLOWNS.

DRESSAGE

Dressage.

Lions. Acrobat on skis.
Clowns.
CIRCUS

CLOWN

Dressage
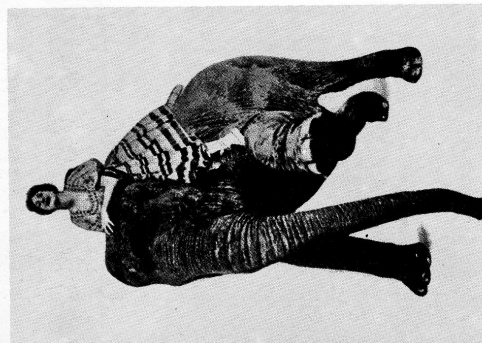
15. Taste and style

Just as chairs are recognisable as chairs, and as things distinct from tables, so Chippendale chairs are recognisable as distinct from Sheraton chairs, and Gothic buildings as distinct from classical ones. Styles or fashions of design are recognisable, and that is the important fact about them. They are known by the process of recognition described in the last chapter, recognised like everything else which we recognise, by means of a *few* characteristics only, which act as signs of an affinity between all the different objects which belong to the same style of design.

But the experience of beauty aroused by works of art is not, as we have seen, aroused merely by a few characteristics sufficient for the purposes of ordinary, cursory, recognition. On the contrary, it comes of looking at the thing and paying attention to all its features and all the visible relations between them. To recognise the style of a design and to appreciate the beauty of it are two quite different things and come of two quite different approaches to it. Thus it is possible, and perhaps not uncommon, for people to be discriminating about styles and fashions while being insensitive to beauty.

The word taste as used nowadays has two distinct meanings. It may mean the appreciation of beauty or it may mean merely the appreciation of style and fashion. In the first case, when we speak of a person's taste we are speaking of his personal preferences among works of art as determined by his individual sensitivity to their beauty. In the second we are speaking of his knowledgeable discrimination between different styles and fashions, that is to say between different kinds of work, and, more particularly, of his preference for one fashion rather than another, one kind rather than another. It is in the latter sense that the word will always be used in this book.

Now, no *kind* of shape, no *kind* of design or *kind* of picture or other work of art can be beautiful. When works of any or every known kind are looked at some will be found beautiful and some not. The fact that all are of the kind known as Romanesque, say, does nothing to guarantee that all of them have merit as works of art. Some do and some do not. Some have more than others.

To be knowledgeable and alert: to be knowing

THE NATURE AND AESTHETICS OF DESIGN
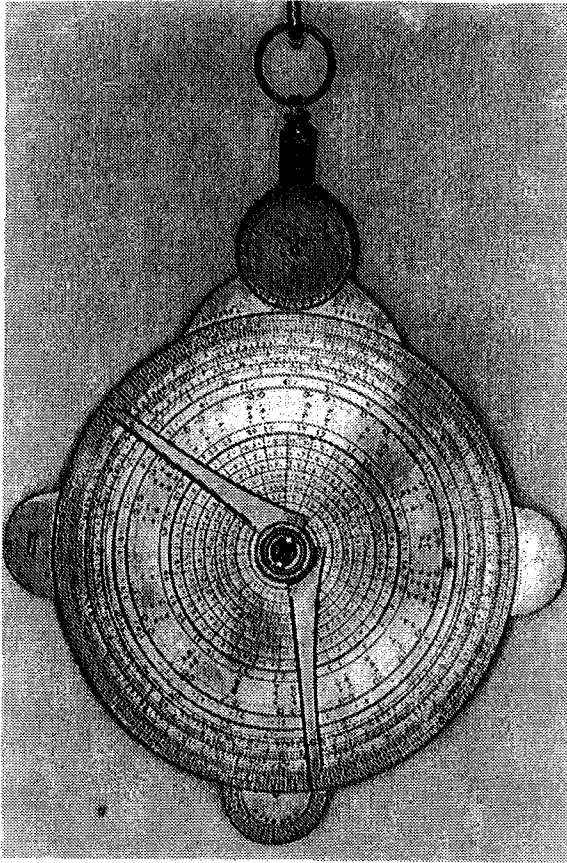
Astrolabe: back. By Anthony Sneewins 1650
Crown copyright Science Museum, London

'The style prevailing at a given time may be of no
interest to certain good artists who are working
then'

17. e.g. 'Even during the eighteenth century, when every
    kind of taste was at the lowest possible ebb . . .'
    J. H. Parker: *An Introduction to the study of Gothic
    Architecture* (15th ed. 1906).

indeed: about fashion and style is an important branch of one-upmanship, which depends largely on being up-to-date and showing that one's taste is only for what is 'in', for what is newest and therefore smartest. To be sensitive to the beauty of things on the other hand avails little if at all in this way, for an appreciation of beauty cuts across all fashions and will often lead the person who has it to cherish things which are out of fashion while ignoring many of the things which are 'in', though worthless as art.

One-upmanship is common enough now and has always been so, but not everyone is afflicted with it. Yet everyone's appreciation of beauty is to some extent influenced by the fashion of his time even though he may regard one-upmanship with all the contempt it deserves. Moreover fashion and taste are not without their value.

No one can be taught what beauty is: everyone finds that out for himself: but he can be taught what are promising places in which to look for it; and taste, as often as not, is what teaches him that. But if taste is sick or degenerate he will be looking in the wrong direction and the chances of his seeing something will be poor: whereas if taste is in health the chances will be good, a tradition will be kept in being, and art will constantly develop and evolve instead of having to make fresh starts first in one direction and then another, as tends to happen at present.

The style prevailing at a given date may be of no interest to certain good artists who are working then. Consequently although there is good art in all times and places, often enough the taste of its own time ignores or underrates it, and later generations are left to discover it, as happened for example to the early work of the painter, John Sell Cotman. The taste, of any group, is conformity, and there is a degree of caution and mediocrity inherent in it. Its effect is the establishment of a canon of works which are 'in' for the group and period in question, and also of works which are 'out': for taste is invariably also distaste. The taste of a given group and period is simply the set of opinions about art which are generally received at the time.[17]

Experimental Psychology as applied to art is, according to the terminology of this book, concerned almost entirely with taste and not with beauty. Such statements

TASTE AND STYLE
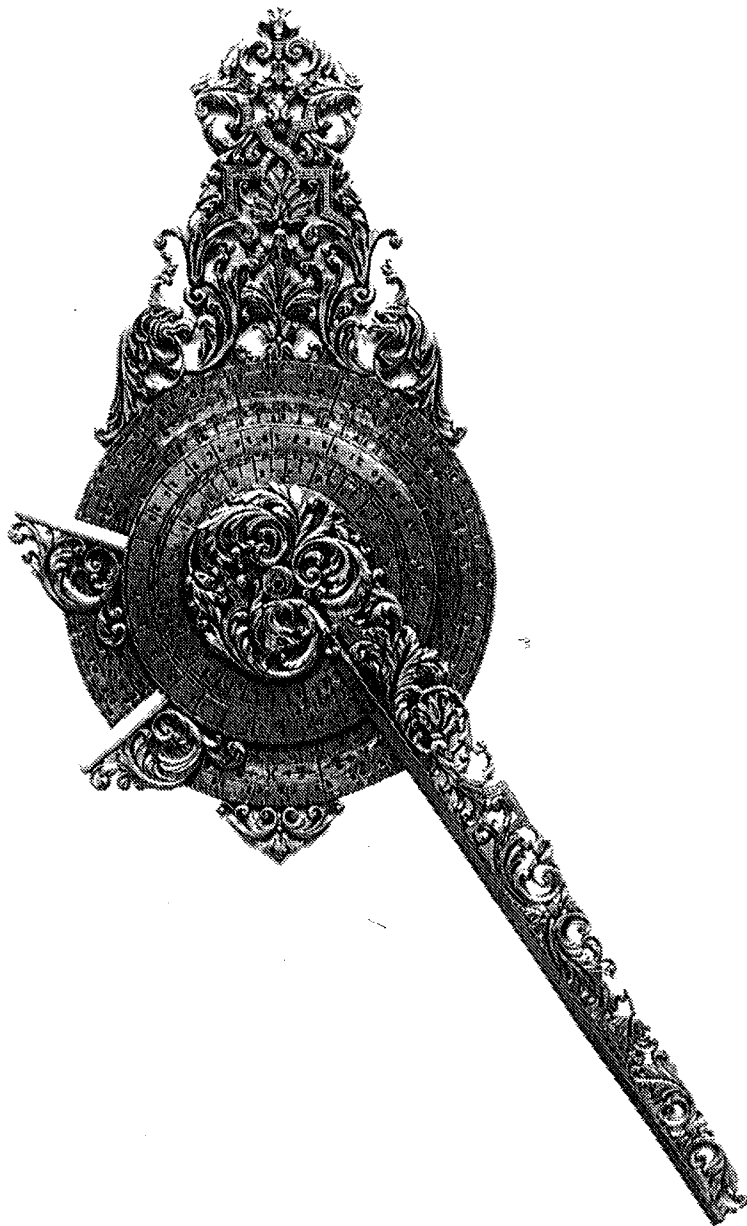
Nocturnal. Gilt metal. French late 17th century
Crown copyright Science Museum, London

as those given below, for example, are about the taste
of a particular group, which might be an ethnic or a
cultural or an age group: or a group by education or
profession: and at a particular date. The date of any
experiment in this field is one of the most important
facts about it. Modern experimental evidence is not the
only kind of evidence. Taste *does* change with the
passage of time, in any group! Experiments really are
not required to prove that.

THE NATURE AND AESTHETICS OF DESIGN

Most of the following statements are of types found in reports on experiments on the psychology of 'aesthetics'. All of them, however are statements about the taste of some particular group at some particular period.
'This sort of colour was considered more beautiful than that'
'This sort of colour was preferred to that'
'Such and such a colour looks best against such and such a background'
'A lighter (or darker) colour looks best above (or below) something or other'
'Ellipses were preferred to circles' (or vice versa)
'This kind of line is ugly'
 No *kind of* colour – 'a colour': or 'red' – nor any *kind of* picture nor *kind of* anything else is beautiful. Beauty comes always from the singularity of things. Two things which happen to be closely similar in size, colour, insurance value, smell, weight or shape, may both seem equally beautiful. It is not therefore to be deduced that, say, a smell of turpentine is a necessary prerequisite of beauty; and nor is the fact that the two things' shapes are measurably within a millimetre of each other. They might still be as different as chalk and cheese: they might differ hugely in surface quality so that one lived and the other was dead. One judges a man by what he *is*, by his individuality, his idiosyncrasy; not by his measurable properties or measurable behaviour or by the shape of his nose or the description in his passport. So with a work of art.
 The argument in this chapter is that the real value, the beauty of any particular work of art, depends always on its 'form', its individuality, singularity, and never on what little it visibly has in common with other works, namely the style it happens to share with them. Taste is concerned with judging works by their style, that is to say by superficial characteristics, and not by their intrinsic qualities by virtue of which alone true works of art continue to have value long after the style they happen to exhibit has ceased to be in vogue and has become a matter of history. Taste, in other words, depends on perception only. You can exercise taste without really looking at anything.
 The meaning and importance – a limited importance, as it seems to me – of taste, style and fashion in art
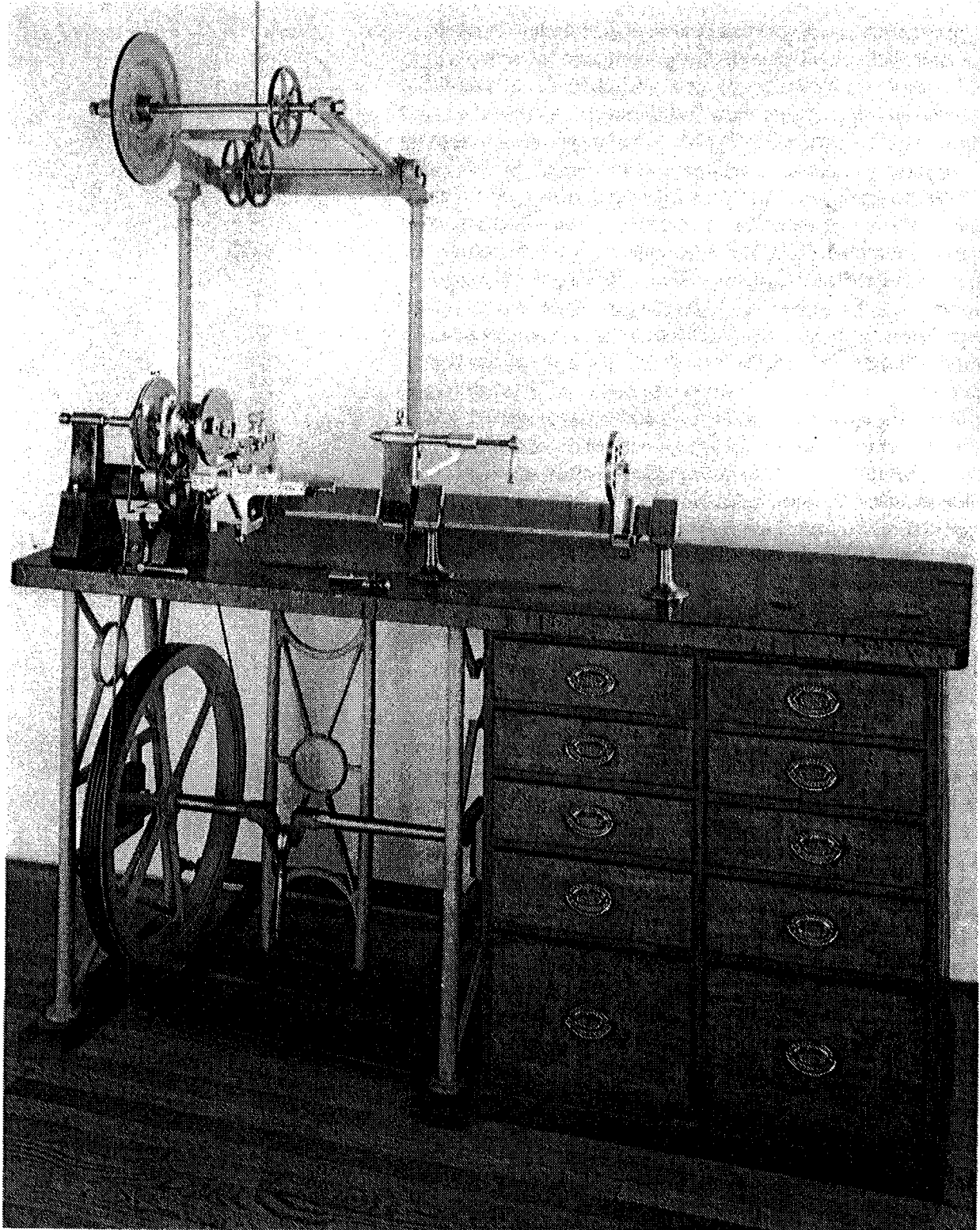
TASTE AND STYLE

particularly need attention at present, for the misconcep-
tion that they are of primary importance is quite widely
held and the art of design seems seldom to be discussed
in terms of anything else. Thus it comes about that
originality is thought of only in terms of stylistic
originality; a question discussed later on.

That an artist should work in the general style of his
time is all but inevitable, except in the rare cases of
men of exceptional powers who make a fresh departure.
The work of the leading users of a still evolving style
shows the others in what fields experiment is likely to
be productive, and shows them what artifices have been
found expressive and may still be capable of further
development. This is as much as to say that these works
influence the work of other contemporary artists: and
indeed there is no work by however exceptional an
artist which has not been influenced by the work of his
predecessors in some respect or other, however complete
the break which he may apparently have made from
everything before him. This is eminently true of the arts
of design.

It will be argued later on that design without style
is an impossibility, and that is a fortunate fact for
designers for they would be hard put to it to manage
without the restraining influence of a style. The style to
which a work belongs is quite irrelevant to its merit,
but any style, while it is alive, has a positive value to
practitioners none the less, for it puts limits on designers'
freedom of choice about the appearance of what they
are designing. Adherence to a style as the designer
experiences it is simply a predisposition to choose
shapes of a certain character and to avoid, particularly
to avoid, shapes associated with now demoded styles.
If he worked with no such predisposition his freedom
of choice would often be limitless and all design would
in Lethaby's phrase be 'only one man deep'. But the
style gives the designer a point of departure and self-
imposed boundaries – ill defined, of course – to the
ground he may explore as he makes the series of choices
about appearance which, as we have seen, will be forced
on him willy-nilly in the process of design. What will
concern him, if he is a good artist, will not be merely to
'work in' certain recognisable features and clichés which
constitute the style, but to handle such features and to
modify them in such a way that while still recognisably

131

'After the style they exhibit has ceased to be in
vogue' Maudslay's bench lathe and cabinet
Crown copyright Science Museum, London

TASTE AND STYLE
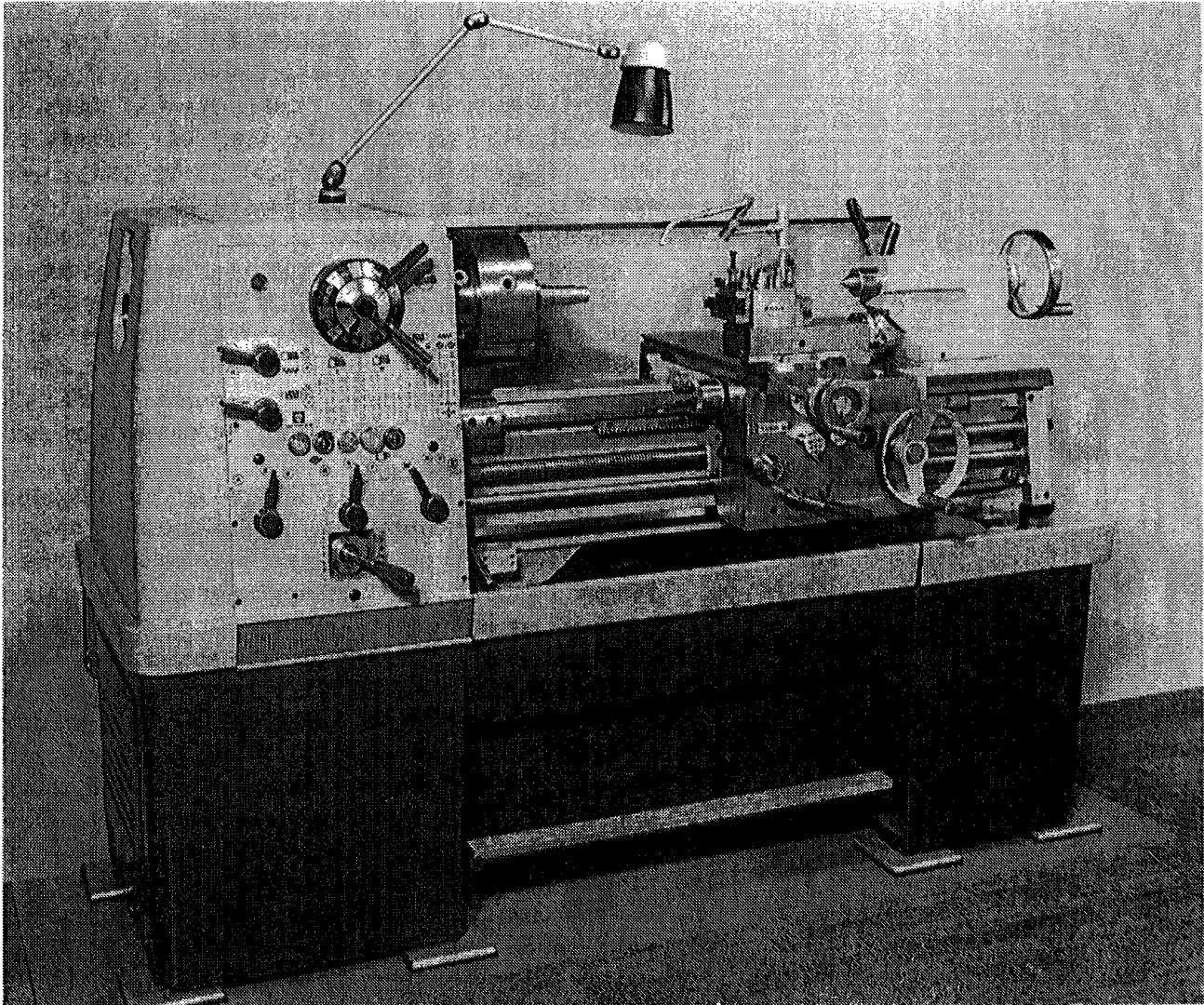
Colchester lathe, 1968
Crown copyright Science Museum, London

prompted by the style they take on a new individuality of their own, and become elements of a work of art instead of a pastiche of the work of the most successful designers of the time; such as anyone can achieve by thumbing through a few magazines.

The making of art is largely a joint contributive enterprise just as the furthering of science is. Each practitioner by his work contributes something to the common stock. In the case of art the common stock is, or ought to be, a tradition which will focus the choices of artists for that time on one comparatively restricted

THE NATURE AND AESTHETICS OF DESIGN

field. Where all designers are working according to one tradition or style a great expertise will develop in making the style variously expressive: in producing an infinity of music out of a limited scale of notes. But this will only happen if the tradition changes continuously and steadily, little by little, and if idiosyncrasies develop here and there within it.

Change is of the essence of tradition. Our declining civilisation has largely lost the conception of tradition as continuous change by small variations – as evolution, in other words – and can produce only fashions which, one after another, appear, live for a little while, and die without issue. At each death another deliberately different fashion is launched and promoted, as sterile as the one before.

The importance of styles is that so long as evolutionary changes in them continue, good design flourishes.

The connection between taste, style and association is interesting. Whenever someone exlaims that a putative work of art is 'horrible' or 'revolting' or flings some such epithet at it, what he usually means even though he may not realise it, is that the work is in a *style* which for him has horrible or revolting associations, and is for him a private symbol. It is this fact which explains a phenomenon that recurs in each generation and by which each generation in its turn seems to be utterly astounded as though it had never happened before. The process is this: The young generation grows up chafing under restraints, or imagined restraints, imposed by the older generation which fathered it, and grows up, of course, in an environment largely made by the older generation. That environment, the whole recognisable style of the older generation, comes inevitably to be associated by the younger generation with the restraints and mental aches of growing up. So, because of that association, once the second generation comes to maturity it turns against the style of the first which symbolises the bondage of its youth. But, by now, the second generation has fathered a third, and when that comes to maturity it rejects the work of the second generation for the same reasons, and also looks back with lively interest to the work of the first generation which its own parents so much detested.

This description is of course over-simplified. Not every member of a rising generation feels repressed,

TASTE AND STYLE

and the work of one generation is never so homogeneous in style; nor is it ever uniformly rejected by the generation after. The work of a real artist will never quite lose all the allegiance it has won, even while the critics are howling it down. The case of Kipling comes to mind. But every artist of our time must be prepared in middle age to face two facts: that the younger generation reject his work, and that the work he himself rejected as a young man is just what the younger generation like. There *is* justice in the world! But 'middle-age' is an over-statement here, for grandmothers of thirty-odd years of age are quite common already. There is comfort in that. We may live to see our work appreciated by our grandchildren.

If a thing bears evident signs of its general style, then once the prevailing taste of the time turns against that style it will become more difficult (though not impossible) for anyone to appreciate the thing's beauty. There was a time not long ago when most people apparently found it all but impossible to believe that anyone could genuinely appreciate Victorian design. At the time of writing the style which was known as "contemporary design" is still out of fashion, but many things of that style too will live; although, as always, most will become no more than "period pieces", the stock-in-trade of future junk shops.

The value of a work of art can only be judged by a generation for whom its style no longer has strong associations. Once that time comes nothing is any longer passionately decried as 'hideous' or 'frightful'. Some things will be seen as funny and many as simply negative, having at best a period charm; while some reputations established earlier will increase and others decrease. But the whole process of reassessment nowadays is liable to be vitiated because new associations of smart fashionableness get slapped on to old styles – a thing we have recently seen in the case of Art Nouveau. Almost any work in that style seemed to get uncritical acceptance in the early 1970's.

Taste influences: slants, indeed: our attitude to everything we look at. As often as it induces us to see geese as swans it makes us see swans as geese. In painting and sculpture the lapse of time is a reliable corrective of these aberrations, though retrospective fashions can reintroduce them in a milder form. But with design,

THE NATURE AND AESTHETICS OF DESIGN

lately, the fact that a thing is old has been taken to be a recommendation in itself, and its merits apart from this verdict of taste are the less likely to be considered.

I do not believe that anything there is, if looked at, and looked at dispassionately, is intrinsically ugly. It may be empty and devoid of beauty, but that is another matter. If we call a thing ugly we do so either because it is in a style against which we are prejudiced (and all of us are so prejudiced in one way or another) or because the thing has unpleasant associations. If we say that a garden slug is ugly we do so because we cannot look at one without thinking of the sensation of touching soft, clammy, slimy things. If we say that a pig or a bulldog is ugly we do so because its facial expression, if we saw it in a man, would disgust and frighten us: we could never find anything good or likeable in the character of a man with that expression; and in addition pigs have always, unjustly, been associated with dirt. If we say that an old boot is ugly we do so because we associate it with what is decripit and sordid: but it is by now a commonplace that when we look at Van Gogh's picture of old boots those associations are transmuted by the beauty of the picture to a sentiment which words cannot express.

The experiences of beauty and ugliness do not necessarily exclude each other. It is possible, as too many people know who have seen explosions in wartime, to experience simultaneously and yet independently, a sense of extreme beauty and stupefying horror. For that matter there are plenty of religious pictures to demonstrate the same thing.

In retrospect the style or fashion in which a thing has been designed is always seen to be irrelevant to its beauty, for in every style we find some designs which are works of art and some which are art manqué. Moreover some things which in retrospect we judge to be well designed appear not to have been influenced at all by the style which was prevailing when they were designed. When they were new they must have seemed to be oddities, and unfashionable.

Because design is so often falsely represented to be a matter only of style and fashion, many designers of the present age have probably dreamt at one time or another of achieving 'Design without style': design where
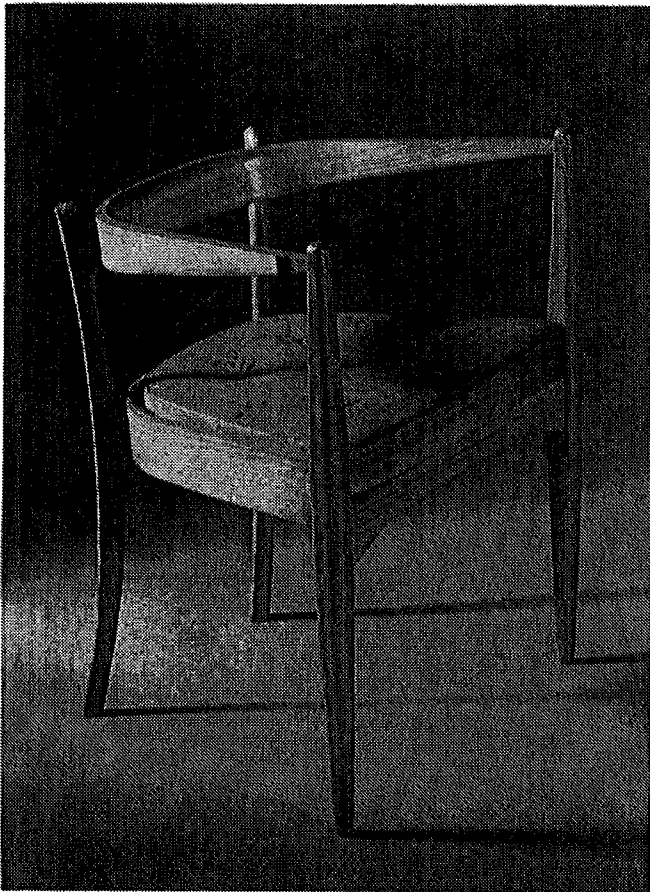
'Contemporary' chair. David Pye 1950
Wainwright Photo

Chair designed by David Pye 1961
Kellow Pye Photo
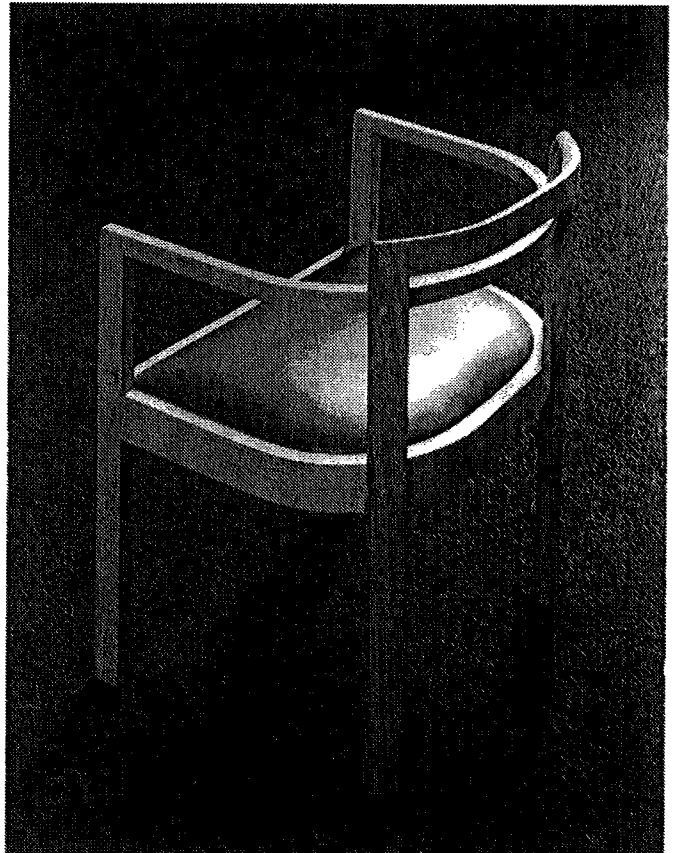
'Art Nouveau' Cabinet, veneered, wrought iron
hinges and ornaments
Victoria and Albert Museum. Crown Copyright
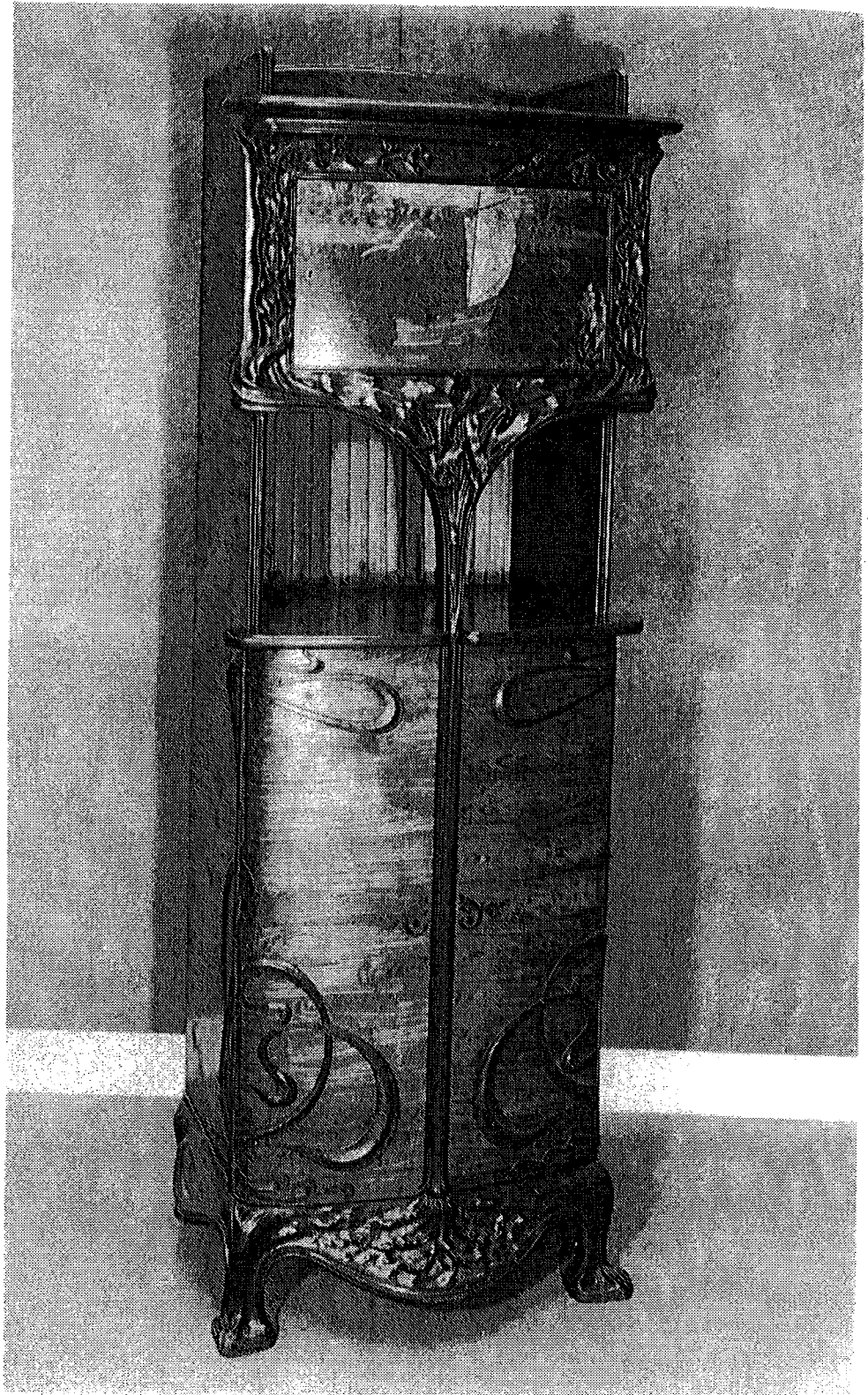
TASTE AND STYLE
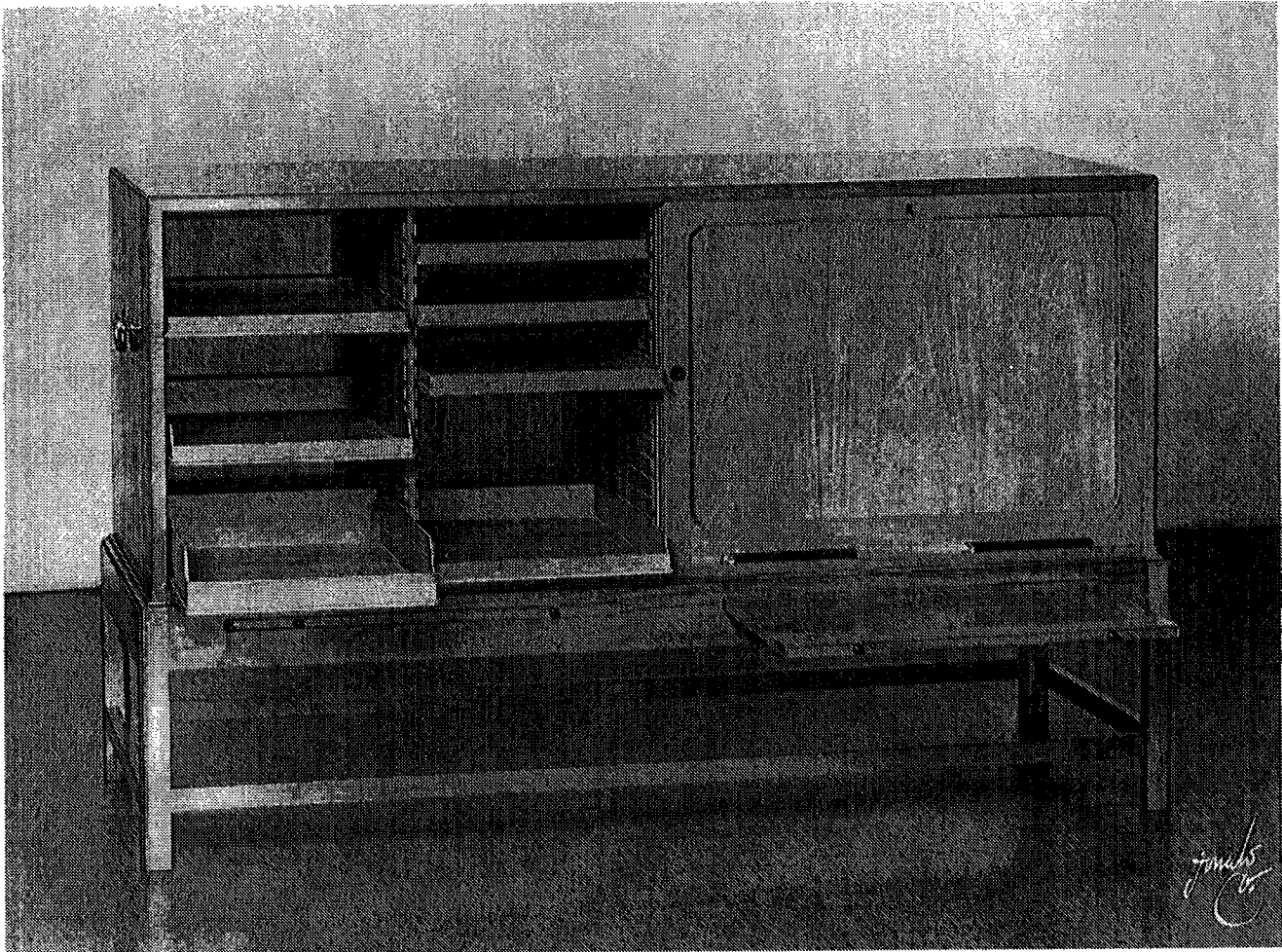
'All the quality of appearance that decent workmanship produces'. Sideboard designed by Kaare Klint
By courtesy of Rud. Rasmussens Snedkerier, Copenhagen.

'Aesthetic styling has been completely abandoned': what has been called 'Timeless design': and sometimes (wrongly) 'Anonymous design'.

Anyone who hopes to achieve design without style will, obviously, shun purely stylistic motifs and ornaments and will confine himself to what appears to him the most economically effective form of the device which he is designing. But in vain! Style will emerge.

At any time in history the available technology and the range of inventions already made are capable of yielding far more than they are actually made to give.

'Style emerging where none was intended'. Croft, Barra
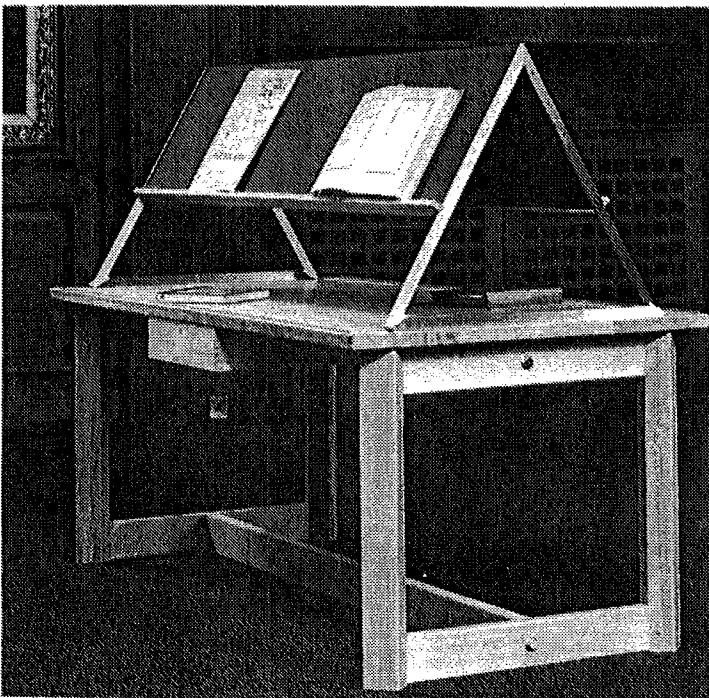
Book display table
Kellow Pye Photos.

Bows of fishing boat
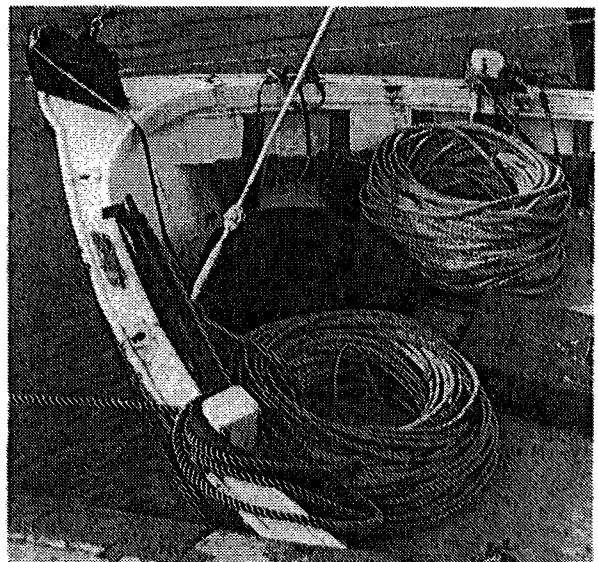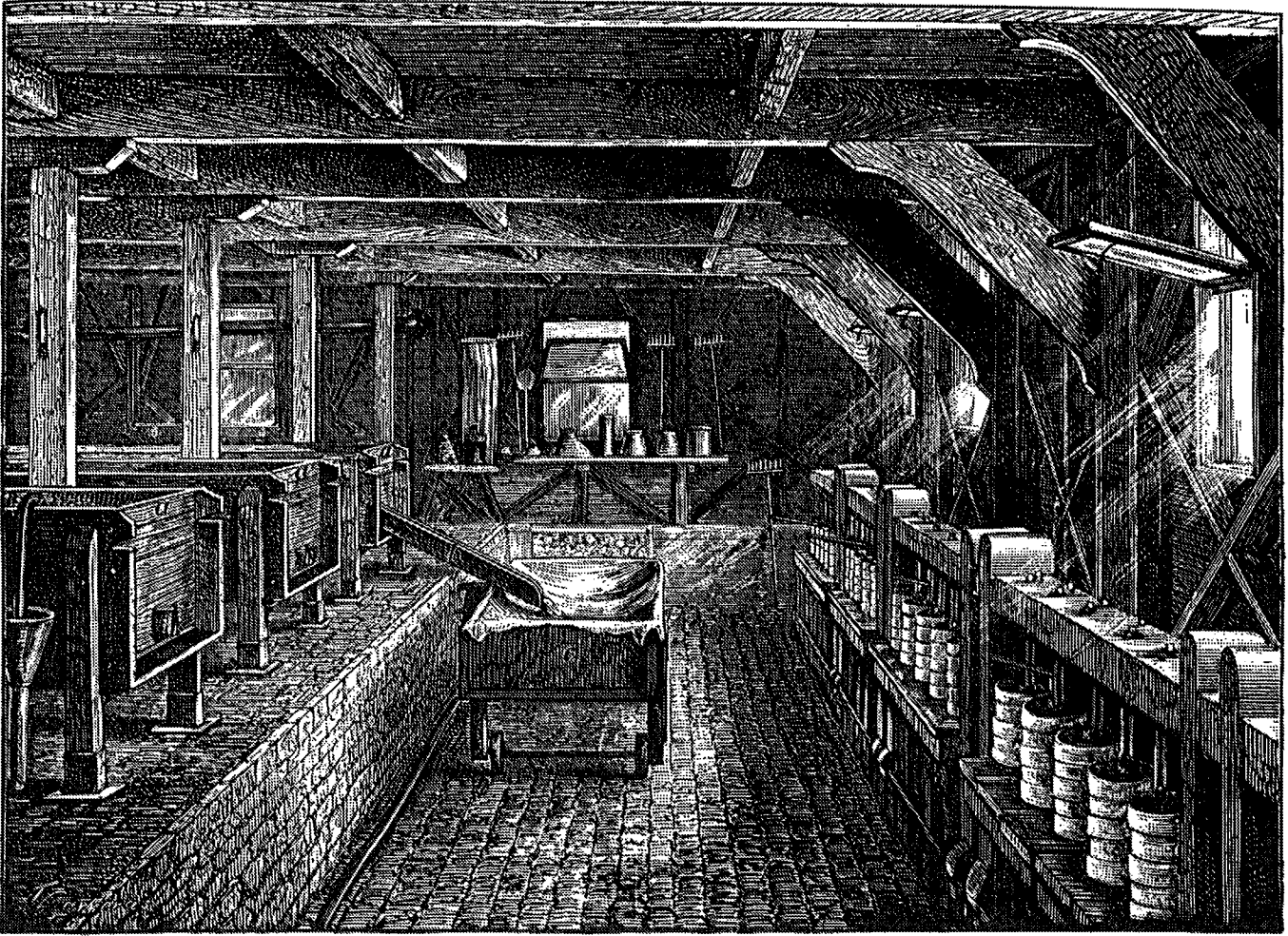
Longford cheese factory
Photo: Science Museum, London

Underside of a Surrey waggon
Crown copyright Science Museum, London
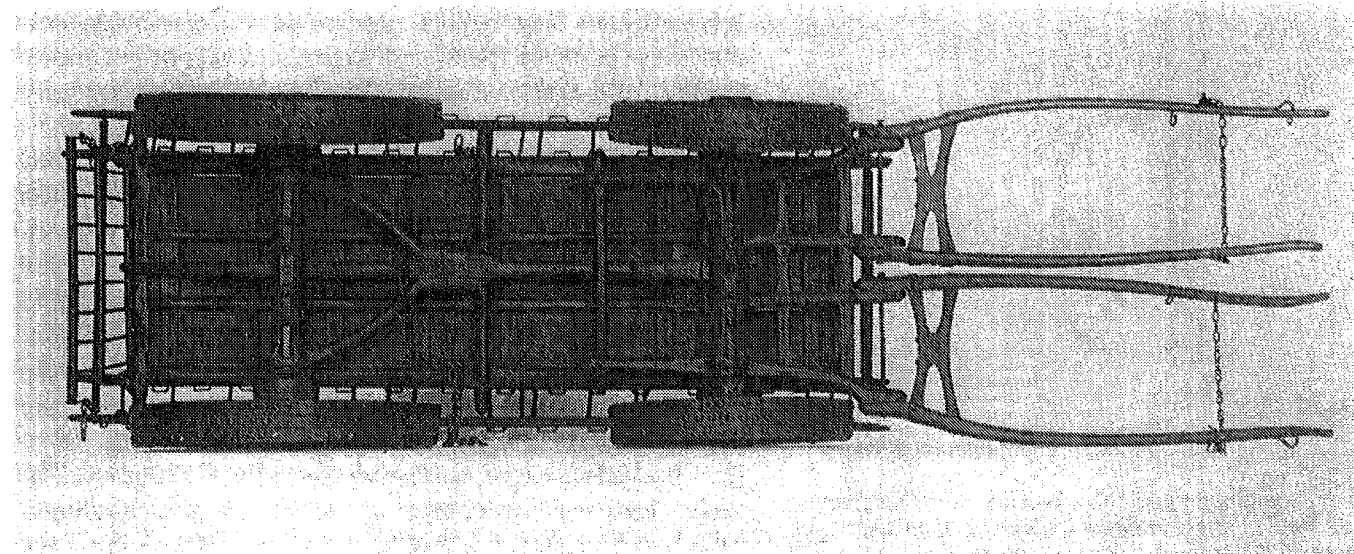
THE NATURE AND AESTHETICS OF DESIGN
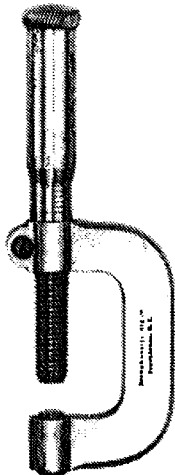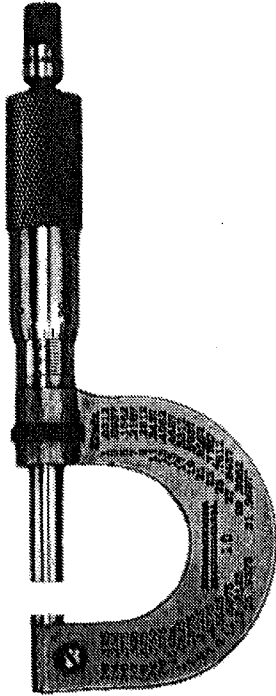
There are always innumerable things one could do or make, but which would cost too much. Economy in one or another of its forms governs or influences whatever is done; and in any given technique and time those features of things which are found to be the most economically effective become standardised, or nearly so, and thus come to be regarded as characteristic of things belonging to this particular phase of technology. Because they are seen to be characteristic and standard they act as convenient and obvious signs of affinity between all those things: and because there are signs of an affinity between them we say all those things are of the same style. The affinity we are talking about is a stylistic one. A style gets 'seen into' them, as it were against their will.

When hexagon nuts and hexagon heads superseded the old square ones on bolts, it must have been greater convenience in use which argued for the change: to turn a square nut in an awkward place one may need two different spanners. Convenience here boils down to economy of time and plant. From that time on for many years hexagon bolts were one of the normal features of 'modern engineering'. By means of them alone if by nothing else, any layman of the early nineteenth century could distinguish between one of the new engines and the old ones of Watt's time.

Nearly always when a new feature appears it has earned its place by defeating an older one. Thus wrought iron and cast iron beams superseded timber ones, and later steel beams superseded them; and recently welded compound beams have superseded rivetted ones and rows of rivets begin to be seen no more.

Such innovations of technology were at first seized upon by designers for their economical effectiveness alone, with no thought of style. But soon, very soon, any designer who wished to assert that he was in the forefront of the new movement found it essential to introduce such features in season and out of season, aggressively, and sometimes arrogantly. All too soon they became the symbols of the new movement, the new style. The new-found ability to make a wall all of glass had advantages, undoubtedly, in certain particular cases, but not in nearly so many as the Bauhaus-stylists pretended. It is not forgotten by those who have to work in buildings with these glass walls that their

'A style gets seen into them as it were against their will' First 1 in Micrometer Calliper, Brown and Sharpe 1877 (*below*) and by the same firm 1928 (*top*). *Crown copyright Science Museum, London*

142

propagators must have known quite well what a greenhouse was for and what it did. That knowledge counted for nothing beside the imperative necessity of showing how new the 'new architecture' was, by doing something obviously different from the fenestrated walls of the styles which had preceded it.

The earnest seeker after design without style wished for none of this. But he might have expected it. He did not reflect that anything newly invented will in our age at once be used as a symbol of newness: for newness is our obsession. No sooner are space vehicles and space suits invented and designed than a 'space style' based on their economically effective structure and its features appears in the childrens' comics. In the twenties and thirties one still thought of motor cars as having design without style, and of the 'styling' introduced from America as the imposition of a style where none had been before. But as we now see clearly, there *was* style before. Few things have a more powerful period flavour – in other words a more distinct style – than early motor cars and flying machines. The examples of these which Le Corbusier chose to illustrate as 'functional designs' in *Vers Une Architecture* now look delightfully cute.

There has never been any design without style. There has of course been design without obviously stylistic motifs: that is another matter: but never any that could not be unerringly placed by means of signs of style, and could not be imitated stylistically. It is only when a new departure in design is encountered for the first time and unexpectedly that we see design in which we are as yet unable to discern any signs which will enable us to place it. But as soon as we have seen a few more things in the same vein we shall recognise the signs of affinity between them: we shall discern a style.

And in design without stylistic motifs the style can sometimes be extremely unobtrusive. Much Shaker furniture reduced to a minimum the number of features in which a designer's free choice would be bound to declare itself. Yet the character of that furniture is very strong. It could be imitated without making a facsimile and that fact necessarily implies that there is a style to be imitated.

JAN VAN TOORN REVEALS THE DESIGNER BEHIND THE DESIGN, THE IDEOLOGY BEHIND THE AESTHETICS. Since the 1960s, he has used his design work to unveil the social and cultural implications of mass media. Using physical acts of cut-and-paste, he often combines media imagery into new statements. Through his theoretical books and his commercial work he emphasizes to us that visual communication is never neutral, the designer never simply an objective conveyer of information. Van Toorn is critical, political, and, in some cases, polarizing. As an educator at universities and academies in the Netherlands and abroad, including the Rhode Island School of Design, van Toorn urges his students to take responsibility for their own role within the ideology of our culture. Born in 1932, this influential Dutch graphic and exhibition designer warns us that design has "become imprisoned in a fiction that does not respond to factual reality." The essay below urges designers to engage and expose the established symbolic order.

DESIGN AND REFLEXIVITY

JAN VAN TOORN | 1994

LE PAIN ET LA LIBERTÉ

Every professional practice operates in a state of schizophrenia, in a situation full of inescapable contradictions. So too communicative design, which traditionally views its own action as serving the public interest, but which is engaged at the same time in the private interests of clients and media. To secure its existence, design, like other practical intellectual professions, must constantly strive to neutralize these inherent conflicts of interest by developing a mediating concept aimed at consensus. This always comes down to a reconciliation with the present state of social relations; in other words, to accepting the world image of the established order as the context for its own action.

By continually smoothing over the conflicts in the production relationships, design, in cooperation with other disciplines, has developed a practical and conceptual coherence that has afforded it representational and institutional power in the mass media. In this manner it legitimizes itself in the eyes of the established social order, which, in turn, is confirmed and legitimized by the contributions that design makes to symbolic production. It is this image of reality, in particular of the social world that, pressured by the market economy, no longer has room for emancipatory engagement as a foundation for critical practice.

Design has thus become imprisoned in a fiction that does not respond to factual reality beyond the representations of the culture industry and its communicative monopoly. In principle, this intellectual impotence is still expressed in dualistic, product-oriented action and thought: on the one hand there is the individual's attempt to renew the vocabulary—out of resistance to the social integration of the profession; on the other there is the intention to arrive at universal and utilitarian soberness of expression—within the existing symbolic and institutional order. Although the lines separating these two extremes are becoming blurred (as a consequence of postmodern-ist thinking and ongoing market differentiation), official design continues to be characterized by aesthetic compulsiveness and/or by a patriarchal fixation on reproductive ordering.

The social orientation of our action as designers is no longer as simple as that. We seem happy enough to earn our living in blind freedom, leading to vulgarization and simplification of our reflective and critical traditions. That is why it is time to apply our imaginative power once again to how we deal with communicative reality.

The intermediary lays down the law. Mediation determines the nature of the message, there is a primacy of the relation over being. In other words, it is the bodies that think, not the minds. The constraint of incorporation produces corporations, which are these intermediary bodies and these institutions of knowledge, abided by norms and formulating norms, known as schools, churches, parties, associations, debating societies, etc.
Régis Debray | *Media Manifestos: On the Technological Transmission of Cultural Forms* | 1996

The given facts that appear … as the positive index of truth are in fact the negation of truth.…Truth can only be established by their destruction.
Herbert Marcuse | *Reason and Revolution: Hegel and the Rise of Social Theory* | 1941

Valid critical judgment is the fruit not of spiritual dissociation but of an energetic collusion with everyday life.
Terry Eagleton | *The Function of Criticism: From the Spectator to Post-Structuralism* | 1985

Criticism is not an innocent discipline, and has never been.…The moment when a material or intellectual practice begins to "think itself," to take itself as an object of intellectual inquiry, is clearly of dominant significance in the development of that practice; it will certainly never be the same again. What thrusts such a practice into self-reflexiveness is not merely an internal pressure, but the complex unity it forms with adjacent discourses.
Terry Eagleton | *Criticism and Ideology: A Study in Marxist Literary Theory* | 1976

SYMBOLIC FORMS ARE SOCIAL FORMS

Symbolic productions represent the social position and mentality of the elites that create and disseminate them. As ideological instruments, they serve private interests that are preferably presented as universal ones. The dominant culture does not serve to integrate the ruling classes only, how-ever; "It also contributes," as Pierre Bourdieu describes it, "to the fictitious integration of society as a whole, and thus to the apathy (false consciousness) of the dominated classes; and finally, it contributes to the legitimation of the established order by establishing distinctions (hierarchies) and legiti-mating these distinctions."[1] Consequently, the dominant culture forces all

1 Pierre Bourdieu, *Language and Symbolic Power* (Cambridge, MA: Harvard University Press, 1991), 167.

other cultures to define themselves in its symbolism, this being the instrument of knowledge and communication. This communicative dependency is particularly evident in the "solutions" that the dominant culture proposes for the social, economic, and political problems of what is defined as the "periphery"—of those who do not (yet) belong.

By definition, the confrontation between reality and symbolic representation is uncertain. This uncertainty has now become undoubtedly painful, since, as Jean Baudrillard puts it, the experience of reality has disappeared "behind the mediating hyperreality of the simulacrum." A progressive staging of everyday life that gives rise to great tension between ethics and symbolism, because of the dissonance between the moral intentions related to reality and the generalizations and distinctions of established cultural production.

For an independent and oppositional cultural production, another conceptual space must be created that lies beyond the destruction of direct experience by the simulacrum of institutional culture. The point is not to create a specific alternative in the form of a new dogma as opposed to the spiritual space of the institutions. On the contrary, the point is to arrive at a "mental ecology"[2] that makes it possible for mediating intellectuals, like designers, to leave the beaten path, to organize their opposition, and to articulate that in the mediated display. This is only possible by adopting a radically different position with respect to the production relationships—by exposing the variety of interests and disciplinary edifices in the message, commented on and held together by the mediator's "plane of consistency."[3]

2 Félix Guattari, "Postmodernism and Ethical Abdications," *Profile* 39 (1993): 11–13.

3 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus* (Minneapolis: University of Minnesota Press, 1987), 506–508.

Symbolic power does not reside in "symbolic systems" in the form of an "illocutionary force" but…is defined in and through a given relation between those who exercise power and those who submit to it, i.e., in the very structure of the field in which belief is produced and reproduced.
Pierre Bourdieu | *Social Theory for a Changing Society* | 1991

Designers must come to reflect upon the functions they serve, and on the potentially hazardous implications of those functions. In the 1930s, Walter Benjamin wrote that humankind's "self-alienation has reached such a degree that it can experience its own destruction as an aesthetic pleasure of the first order."
Stuart Ewen | "Notes for the New Millennium" | *ID* 31, no. 2 | March–April 1990

AND MEDIOCRITY

Opportunities for renewed engagement must be sought in initiatives creating new public polarities, according to Félix Guattari, in "untying the bonds of language" and "[opening] up new social, analytical, and aesthetic practices."[4] This will only come about within the context of a political approach that, unlike the dominant neoliberal form of capitalism, is directed at real social problems. If we are to break through the existing communicative order, this "outside thought"[5] should also reverberate in the way in which designers interpret the theme and program of the client. In

4 Guattari, "Postmodernism."

5 Michel Foucault, "Maurice Blanchot: The Thought from Outside," in *Foucault/Blanchot,* trans. Jeffrey Mehiman and Brian Massumi (New York: Zone Books, 1987).

other words, the designer must take on an oppositional stance, implying a departure from the circle of common-sense cultural representation. This is an important notion, because the point is no longer to question whether the message is true, but whether it works as an argument—one that manifests itself more or less explicitly in the message, in relation to the conditions under which it was produced and under which it is disseminated.

Such activity is based on a multidimensional, complementary way of thinking with an essentially different attitude to viewers and readers. It imposes a complementary structure on the work as well, an assemblage that is expressed both in content and in form. The essence of this approach, however, is that, through the critical orientation of its products, the reflexive mentality raises questions among the public that stimulate a more active way of dealing with reality. In this manner it may contribute to a process that allows us to formulate our own needs, interest, and desires and resist the fascination with the endless fragmented and aestheticized varieties created by the corporate culture of commerce, state, media, and "attendant" disciplines.

The arts of imitation need something wild, primitive, striking.… First of all move me, surprise me…make me tremble, weep, shudder, outrage me; delight my eyes afterwards if you can.
Denis Diderot | "Essai sur la peinture" | 1766

The more it becomes clear that architecture is a total impossibility today, the more exciting I find it. I have a great aversion to architecture in the classical sense, but now that this kind of architecture has become entirely impossible, I am excited to involve myself in it again.…It is indeed schizo-phrenic. Our work is a battle against architecture in the form of architecture.
Rem Koolhaas | De Architect 25 | 1994.

For the situation, Brecht says, is complicated by the fact that less than ever does a simple reproduction of reality express something about reality. A photograph of the Krupp works or the A.E.G. reveals almost nothing about these institutions. The real reality has shifted over to the functional. The reification of human relations, for instance in industry, makes the latter no longer revealing. Thus in fact it is to build something up, some-thing artistic, created.
Walter Benjamin | "A Short History of Photography" | 1880

Not surprisingly, institutions and galleries are often resistant to products that question generally held opinions and tastes.…But the peculiar dialectics of consciousness,…and given the relative lack of uniformity of interests within the culture industry and among its consumers, nevertheless promote the surfacing of such critical works.…With this modicum of openness, wherever suitable, the [galleries'] promotional resources should be used without hesitation for a critique of the dominant system of beliefs while employing the very mechanisms of that system.
Hans Haacke | Radical Attitudes to the Gallery | 1977

There are two positions in the mass media. The first says that if something works, it is correct.…This idea is the enemy of our concept. On the other hand, you have a principle of authenticity. Enlightened narration accepts authenticity. I do not continually try to make general concepts that control the individual; rather I let something retain its own genuineness.…There follows from this a number of organizational principles.…In the structuring of a particular work, that is, inaesthetic method.
Alexander Kluge | "On New German Cinema, Art, Enlightenment, and the Public Sphere: An Interview with Alexander Kluge" | 1988

SUBVERSIVE PLEASURES

Despite the symbolically indeterminable nature of culture, communicative design, as reflexive practice, must be realistic in its social ambitions. In the midst of a multiplicity of factors too numerous to take stock of, all of which influence the product, the aim is to arrive at a working method that produces commentaries rather than confirms self-referential fictions. Design will have to get used to viewing substance, program, and style as ideological constructions, as expressions of restricted choices that only show

a small sliver of reality in mediation. The inevitable consequence is that the formulation of messages continues to refer to the fundamental uneasiness between symbolic infinity and the real world.

This mentality demands a major investment in practical discourse in those fields and situations where experience and insight can be acquired through work. This is important not only because it is necessary to struggle against design in the form of design, echoing Rem Koolhaas's statement about architecture, but also because partners are required with the same operational options.[6] It is furthermore of public interest to acquaint a wider audience with forms of communication contributing to more independent and radical democratic shaping of opinion.

Moving from a reproductive order to a commentating one, operative criticism can make use of a long reflexive practice. All cultures have communicative forms of fiction that refer to their own fictitiousness in resistance to the established symbolic order. "To this end," Robert Stam writes, "they deploy myriad strategies—narrative discontinuities, authorial intrusions, essayistic digressions, stylistic virtuosities. They share a playful, parodic, and disruptive relation to established norms and conventions. They demystify fictions, and our naive faith in fictions, and make of this demystification a source for new fictions!"[7] This behavior alone constitutes a continuous "ecological" process for qualitative survival in social and natural reality.

6 Rem Koolhaas, "De ontplooiing van de architectuur," *De Architect* 25 (The Hague: ten Hagen en Stam, 1994): 16–25.

7 Robert Stam, *Reflexivity in Film and Literature: From Don Quixote to Jean-Luc Godard* (New York: Columbia University Press, 1992), xi.

The control of representation and definition remains concentrated in the products and services of media-cultural combines. That control can be challenged and lessened only by political means.... Theories that ignore the structure and locus of representational and definitional power and emphasize instead the individual's message of transformational capability present little threat to the maintenance of the established order.
Herbert Schiller | *Culture Inc: The Corporate Takeover of Public Expression* | 1989

Survival in fact is about the connections between things; in Eliot's phrase, reality cannot be deprived of the "other echoes [that] inhabit the garden." It is more rewarding—and more difficult—to think concretely and sympathetically, contrapuntally, about others than only about "us."
Edward Said | *Culture and Imperialism* | 1993

My goal is to raise a critical attitude, raise questions about reality, curiosity.
Gérard Paris-Clavel | in a conversation with van Toorn | Paris, 1994

The challenge for anti-illusionist fictions is how to respect the fabulating impulse, how to revel in the joys of storytelling and the delights of artifice, while maintaining a certain intellectual distance from the story. The subversive pleasure generated by a Cervantes, a Brecht, or a Godard consists in telling stories while comically undermining their authority. The enemy to do away with, after all, is not fiction but socially generated illusion; not stories but alienated dreams.
Robert Stam | *Reflexivity in Film and Literature: From Don Quixote to Jean-Luc Godard* | 1992

TWO TRANSLATIONS

DAN MICHAELSON
TAMARA MALETIC

How to describe the difference between content and form? *What and how? Idea and voice? Words and grammar? Band and producer?* Each is too simple. The difference between form and content is unstable, a shiftable thermocline contingent on circumstance. That dynamic differential should itself be an object of design and a predicate to form.

We've been described, sometimes approvingly, as being uninterested in form. But we're actually not that interested in content either, except in the broadest sense. We want users to articulate their own content. More than content, we're interested in tactics, game-play, relationships, duration, and the qualities we can give those moments of exchange.

All economies are focused on relationships. Graphic design is no different, always obsessed with its own duration and use, and with the network effects of its distribution schemes. To borrow a definition from politics, design is concerned with strategizing the art of the possible. The designer creates the rules of the game and tries to plan how the field of play will look and feel in use. One of the greatest and most surprising privileges is to watch the game unfold thereafter, and to react.

The gallerist Julien Levy remembered being taught to play chess by Marcel Duchamp like this: "I was a real amateur at it but I learned what his feeling for chess was … He said it wasn't a war game, it's an aesthetic game, and you feel the shape of the board as it begins to shift its pattern and you make it become beautiful, even if you lose."

The following two projects suggest the ways in which the role of form in graphic design focuses on such relationships. Both were projects Linked by Air undertook in collaboration with 2x4. At Prada's New York Epicenter, eleven plasma screens hanging among the clothes racks had recently been upgraded with onboard computers. By mounting video cameras above each screen and installing a different computer program in each one, we transformed the displays into eleven kinds of mirrors.

The mirrors had several precedents, 2x4's recent work for Prada and others had focused on surveillance and narcissism, and the ways mosaics may serve to redact. Many artists have experimented with video mirrors; Nam June Paik is a favorite of ours. We weren't trying to invent a new structure. Rather we were curious about what qualities we could create through such a structure: a little punk, a little glam, beautiful, quick, and light. Each mirror ran a different program; visitors experienced them in sequence simply by moving from one screen to the next. The code we used to create each screen was trivial, no more complex than dozens of similar examples that could be found on the Internet at the time. The screens were fun and fast to code, and we rejected as many sketches as we used.

Perhaps in contrast to John Maeda's *Mirror Mirror* from that same year—part of his Reactive Book series—the Prada digital mirrors weren't so much about algorithm or even interaction, obvious conditions of the modern world, but about creating lived qualities through the disposition of algorithm and interaction. None of the eleven programs contained images; rather, they were algorithmic procedures for processing video streams. The engineering of those procedures, and the way they intersected with the movement of visitors throughout the space, created both form and qualitative experience. So the design object was neither the input (the visitor) nor the output (the constructed image). The object of design was the platform on which the exchange took place.

We later employed the same conceit, with starkly different effects, on a project for a European urban campus comprised of offices, workspaces, labs and public meeting places. Answering a brief for a signing and public-information system, we proposed an invisible wayfinding capability available through mobile-phone text messaging.

Precedents at the time included the new geo-messaging services Socialight and Google SMS; the five-digit SMS micropayment systems common in Europe; telephone interactive voice response (IVR) systems; audio guides, and interactive text adventures like Zork. Other inspirations included the voice (or voices) of *The Hitchhiker's Guide to the Galaxy*, and Salvatore from Paul Elliman's *Sirens of Venice*.

We named our voice Johan (56426), relating both to the name of the campus neighborhood (Saint John in English) and suggesting the ethereality of the service. Johan was conceived as a guide. Creating a natural-language conversation system is difficult, but Johan's sphere of expertise was limited.

Users could only ask Johan about the campus, and only particular kinds of questions. Like the Prada mirrors that manipulated input in eleven different ways, Johan supported several specific genres of conversation: greet; locate, describe, direct, inform, identify, and elaborate. While the mirrors translated pixels, Johan processed street names and building numbers, personnel directories, listings, and site-specific markers placed for the project.

Visitors could employ these different conversation modes as needed by texting a question to 56426. A typical query was comprised of a noun (name, building number, marker) and a verb. Punctuation could constitute a verb. "199–88" signified "directions from marker 199 to building 88."

Context was a vital asset that helped minimize difficult user input and maximize the value of Johan's responses.

Johan did not rely on GPS or any other locative technology. Instead, he built on each person's previous query, so the exchange was necessarily dialogic, conversational. He knew, for example, that no markers had the same numbers as buildings. There was

TWO TRANSLATIONS —DAN MICHAELSON & TAMARA MALETIC
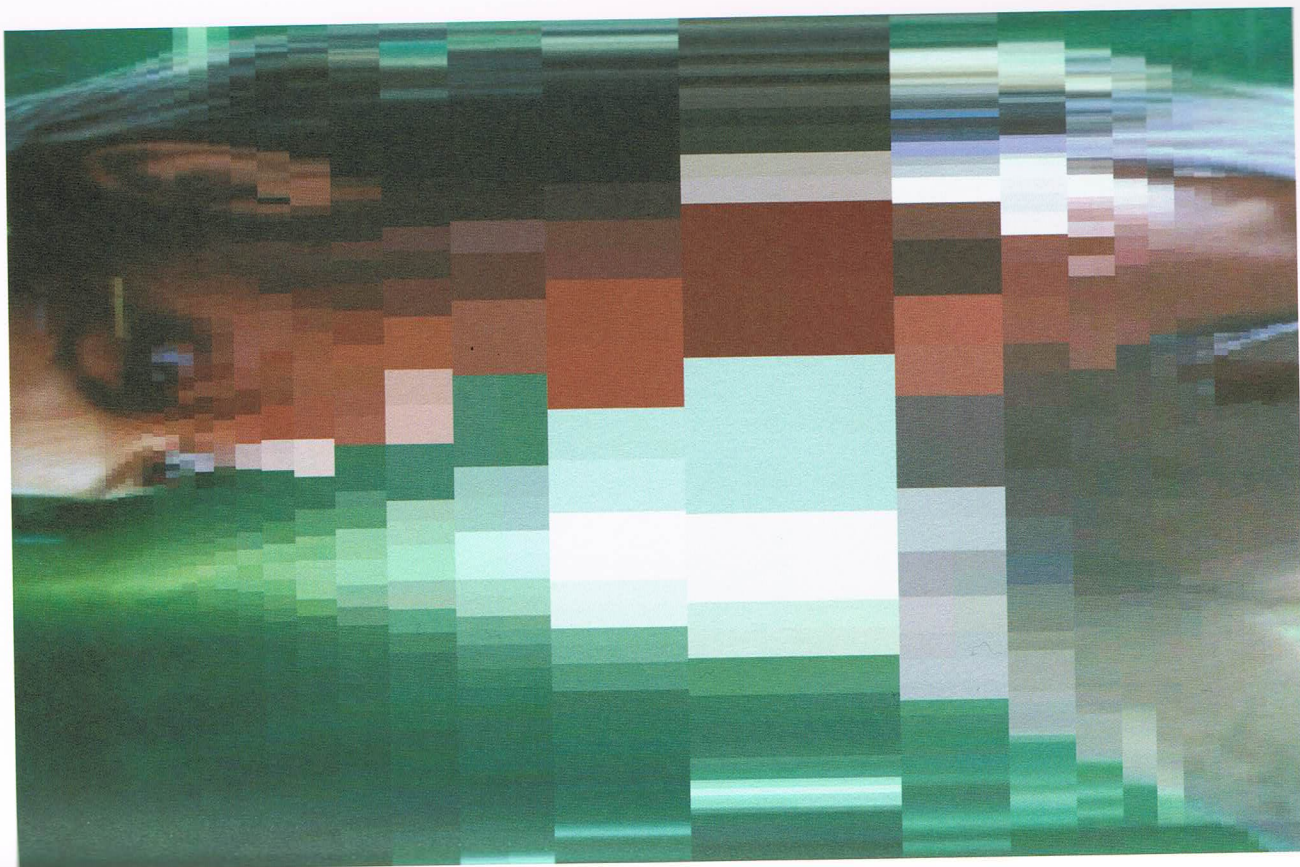
357
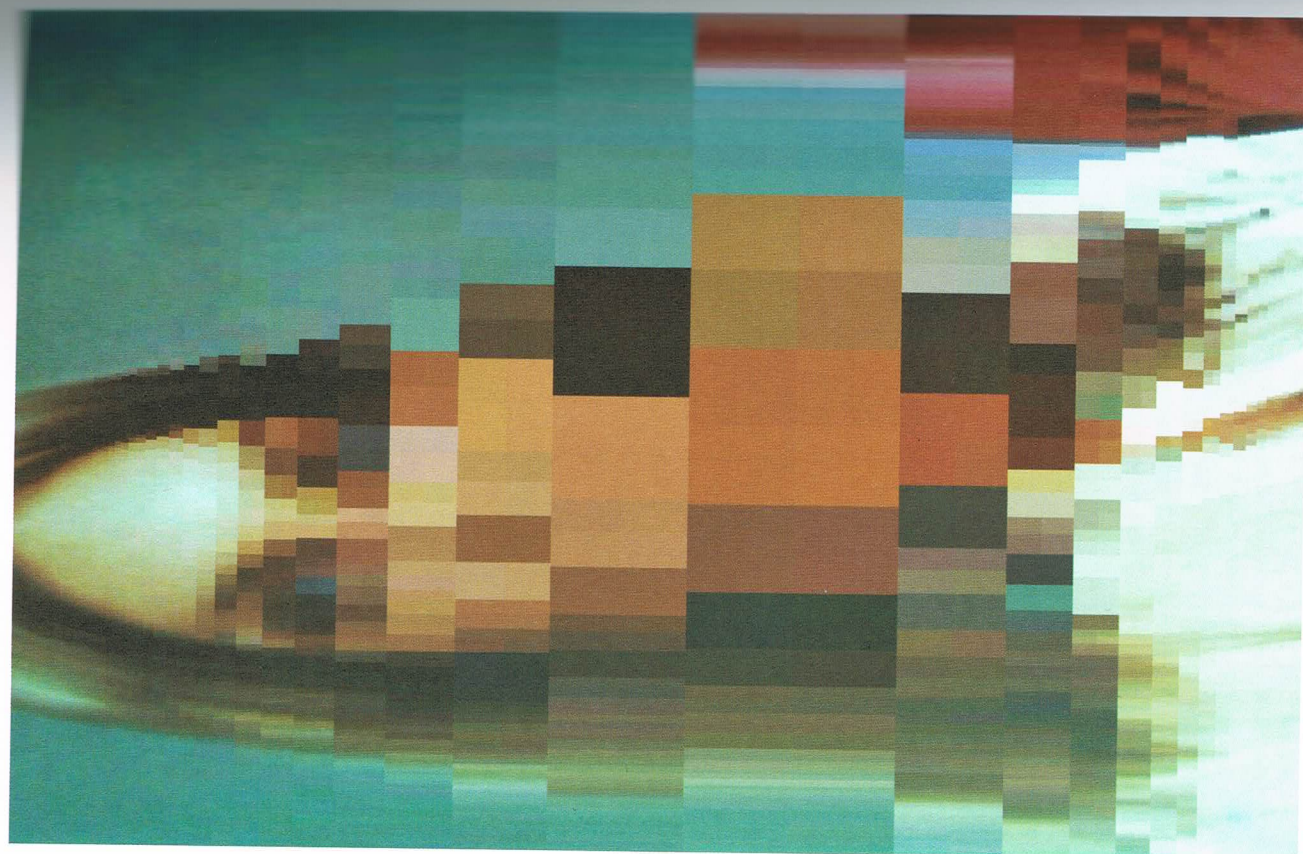
356

MAGIC MIRRORS
— 2 × 4 & LINKED BY AIR
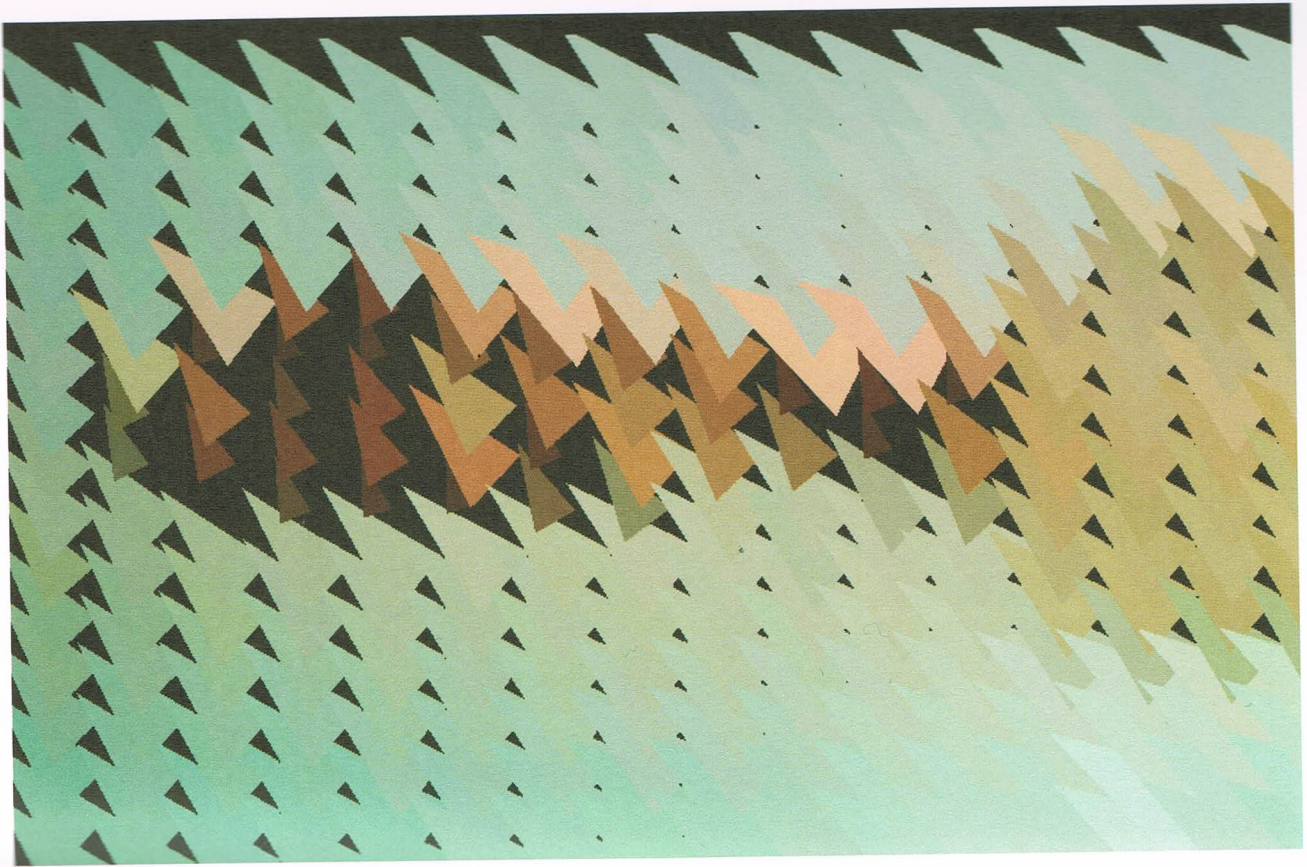
359
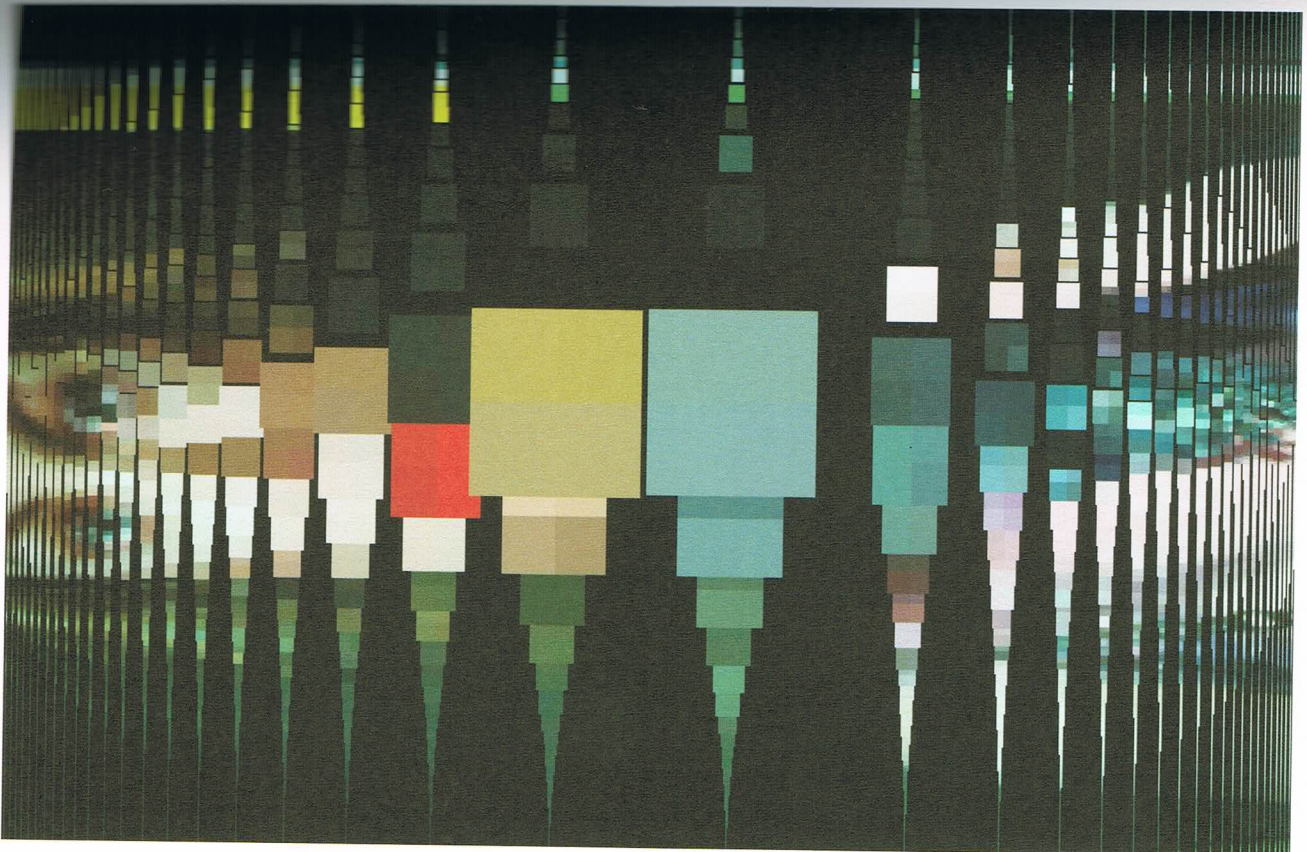
358

MAGIC MIRRORS
— 2 × 4 & LINKED BY AIR

361
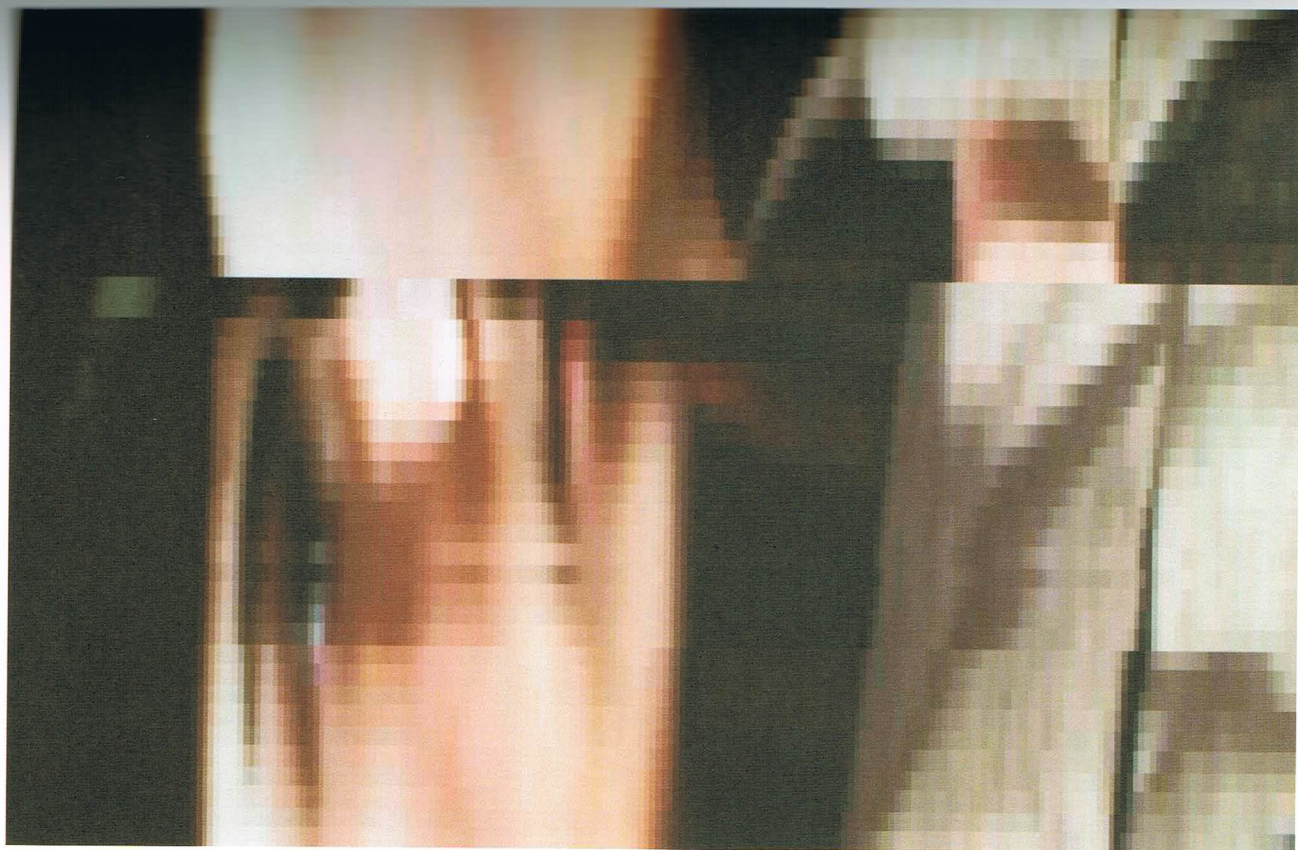
360

MAGIC MIRRORS
— 2×4 & LINKED BY AIR
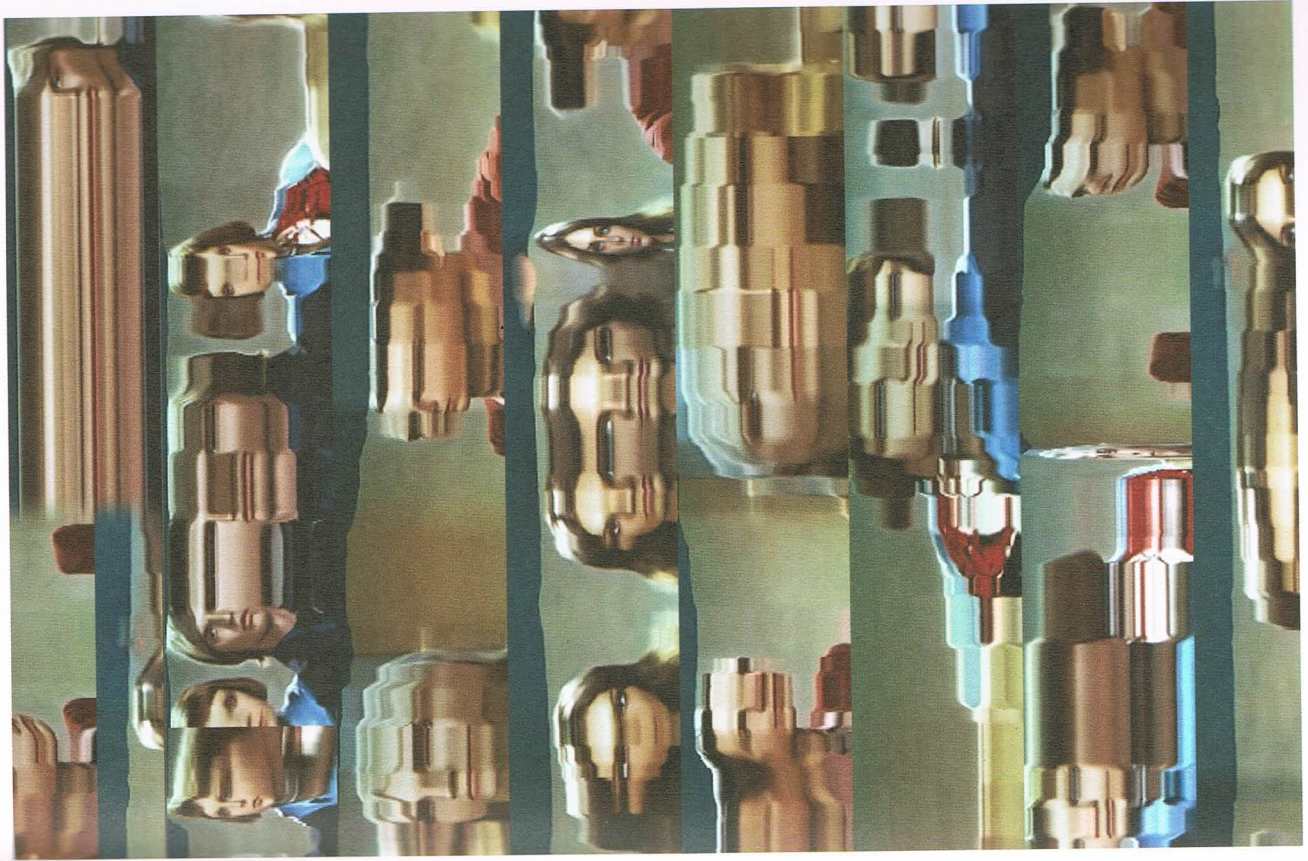
363

362

MAGIC MIRRORS
— 2 × 4 & LINKED BY AIR

ON MUSEUMS

WITH SUSAN SELLERS

little ambiguity in his database. He wasn't artificially intelligent; he was just a set of filters.

With the nouns and verbs determined, the focus of our work became Johan's typographic language and syntax—his voice. Johan worked through simple SMS messaging, an intimate technology available on every phone. He had to seem comfortable in German, French, and English. We thought about the alternation between male and female voices on the New York City subway, and about the sound effects that are used in some telephone IVR systems announcing a new menu.

We made his voice terse but not brusque, fitting for a concierge, a professional transaction, and an SMS message. At the same time, we used an idiosyncratic punctuation scheme to structure his responses visually within the limitations of SMS, and to give him a certain approachability. As with the mirrors, the establishment of Johan's database and algorithmic structure was only a predicate for our real interest: the exploration of the constricted typographic structures of the SMS system and their relationship to the movement of the user. Johan was realized as a prototype but never implemented.

One of the most relevant futures of graphic design is the interfaces of people with, and through, the overwhelming transactions and movements of contemporary social and information economies. We have no interest in simplifying, smoothing, or reducing those movements. We are also aware of the pitfalls and potential ethical issues of engaging with design as a set of modern network effects; there are many networks and relationships that we wouldn't touch. In the end, we are not so interested in visualizing or mapping these translations; we want to make them speak.

TWO TRANSLATIONS
—DAN MICHAELSON & TAMARA MALETIC

364

the abc's of ▲■● the bauhaus and design theory

Ellen Lupton and J. Abbott Miller, editors

The ABCs of ▲■●:
The Bauhaus and Design Theory

Edited by Ellen Lupton and J. Abbott Miller

Thames and Hudson

Contents

Herbert Bayer's Universal Type in its Historical Contexts

Mike Mills

"today we do not build in gothic, but in our contemporary way"
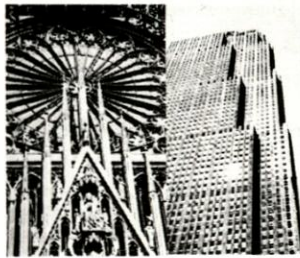
"no longer do we travel on horseback, but in cars, trains and planes"

"we do not dress in crinolines nowadays, but in a more rational manner"
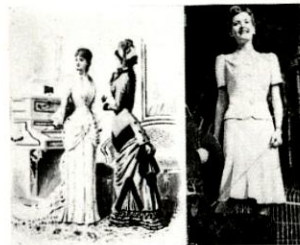
Quoted from Bayer's 1938 essay "towards a universal type"[1]

With the defeat of the German empire in the First World War, the legitimacy of nineteenth-century culture appeared bankrupt. Many Germans felt they had to start fresh again. Progressive designers, such as those associated with the Bauhaus, promoted a new way of thinking about vision and the function of the visual environment.

"What if the idea of progress were not an idea but rather a symptom of something else?" **Frederic Jameson**[2]

They argued that design should no longer be used to reflect and reinforce a hierarchical society. Sibyl Moholy-Nagy, spokesperson of the Bauhaus approach, stated that "a new code of visual values" had to be created, that would "spit in the face of the harmonious image which had hidden decay, deceit, and exploitation."[3] Many members of the Bauhaus believed the future rested in "universal" laws of reason, which were detached from the confines of traditional culture.

Herbert Bayer was a student at the Bauhaus from 1921 to 1923; in 1925 Walter Gropius invited him to head the typography and printing workshop. Bayer played a major role in developing a "new typography," which used sans-serif type, heavy rules, and systematizing grids to create clean and logical compositions. Bayer hoped to transcend the transient whims of culture by basing his designs on timeless, objective laws. Considerations of style and self-expression were subordinated to the "purity" of geometry and the demands of function. This method culminated in Bayer's attempt to design a typeface with letterforms so "essential" they would be understood as universal.

The typeface "universal," designed by Bayer in 1925, represents a reduction of Roman letterforms to simple geometric shapes. To Bayer, the Roman characters were the basic typographic forms from which all subsequent styles were developed. Bayer's preference of Roman type over the more "German" Gothic style indicates his attempt to create a legible, international typeface. Yet Bayer felt that geometric reduction would "refine" the Roman letterforms.

This essay uses the grid to break up the self-contained body of text, allowing different voices and figures to penetrate and interrupt the linear progression of meaning.

Left: *Universal was not merely a typeface but a complete writing system designed for print, typewriter, and hand use.*

1 Herbert Bayer, "towards a universal type," *PM* 6.2 (Dec. 1939 - Jan. 1940): 1-32.
2 Frederic Jameson, "Progress Versus Utopia; or, Can We Imagine the Future?" ed. Brian Wallis, *Art After Modernism* (New York: The New Museum of Contemporary Art, 1989) 239.
3 Sibyl Moholy-Nagy, *Experiment in Totality* (New York: Harper and Brothers, 1950) 2.

a a A a a a a a a
1 2 3 4 5 6 7 8

Since most type was produced by machines, Bayer argued that it was unnecessary to imitate the incised line of the chisel or thin up-stroke and thick down-stroke of the pen. Universal's letterforms are composed of geometrically defined lines of uniform width; the o is a perfect circle, the b , d , and q consist of a circle and a vertical staff, and the x is created by connecting half-circles. Bayer replaced the gesture of the hand with the control and regularity of this "rationalized" typeface.

To better understand how these formal qualities were defined as "universal," it is necessary to acknowledge the historical context in which they were created. Stuart Ewen, a cultural historian, describes how the nineteenth century saw an increasing separation between the treatment of the *surface* and the *structure* of designed objects.[1]

"By the 1830s, the term *design* was assuming a modern definition, describing the superficial application of decoration to the form and surface of a product. The notion of decoration was becoming more and more distinct from the overall plan of production" (Ewen 33).

Mass production and a mobile market economy encouraged the production of heavily ornamented yet cheaply fabricated products. Affordable manufacture allowed the burgeoning middle class to acquire "luxury" goods fashioned after objects formerly reserved for an elite.

The separation between surface and structure is reflected in design which dresses up in historical references and aristocratic styles. Technical advances in lithography and wood type enabled extravagantly ornamented letter design.

MELONS

Fonts such as Melons, Marbleized, and Delighting, used in the 1880s, demonstrate how the structure of letterforms could be covered with

DELIGHTING

ornamentation, fulfilling the demand for more eye-catching advertising. The nineteenth-century fascination with illusion and artificiality is reflected in letters which masquerade as marble, fruit, wood, or other materials.

MARBLEIZED

Towards the end of the century, typefaces appeared which reacted against the superficiality and "poor" craftsmanship of such decorated typography. The typeface Chaucer, designed by William Morris in 1891, reflects the desire to return to the skilled hand of the individual craftsman. Its calligraphic forms were derived from Gothic lettering, indicating the symbolic

Chaucer

ECKMANN

value of Gothic artifacts to Morris's Arts and Crafts Movement. Otto Eckmann's 1901 face Eckmann-Schmuck shows the influence of Art Nouveau and Jugendstil. These typefaces appealed to an abstract "organicism" which did not mimic natural objects, as with the ornamental face Melons, but attempted to embody the spontaneous, fluid qualities of natural processes. The sensuous and idiosyncratic contours of Eckmann-Schmuck symbolize a rejection of the increasingly mechanized and urban world.

1 Stuart Ewen, *All Consuming Images: The Politics of Style in Contemporary Culture* (New York: Harper and Brothers, 1988).

While Bayer rejected the pretentious ornamentation of nineteenth century design, he was not satisfied with returning to an "outmoded" crafts tradition or a "romantic" conception of nature. Universal type embraced industry and technology; it adopted the techniques of mass production and the rationalized methods of the engineer. Universal type is part of the larger Bauhaus project of uniting the artist with industry. Gropius, founder of the Bauhaus, claimed that only such unification would yield affordable and "essential" products.[1]

This faith in technology reflects the influence of "Americanism," a movement which swept across Europe after the First World War, motivating modernist designers such as Bayer, Gropius, and Le Corbusier. Americanism, as represented in the production techniques of Henry Ford and the "scientific management" theories of Frederick Taylor, promised a new way of living and producing characterized by "rationalization" and the lack of "enslaving" traditions.

Gropius and many other European designers were heavily influenced by the visual language of American industry. Gropius collected photographs of American grain silos and other structures, which he believed were free of the influence of the past. Gropius wanted to be the "Ford of Housing";[2] his aestheticized and idealized understanding of American industry focussed selectively on those qualities which echoed his own ideas on the aesthetics of the future.

*While many Europeans in the early twentieth century believed that America was "traditionless" and separate from their own culture, **Antonio Gramsci** has argued, in contrast, that the culture of the United States was "an organic extension and an intensification of European civilization, which has simply acquired a new coating in the American climate."[3]*

The imaginations of progressive Europeans were excited by such books as *Der Tunnel* (1913), which described the construction of a tunnel under the Atlantic Ocean, connecting the new and old worlds via the wonders of American engineering. *Der Tunnel* embodies the modernist belief that progress was synonymous with an increasingly homogenous and universal culture shaped by the efficiency of the engineer. America represented a living example of the future to many Europeans.

The visual and theoretical grammar of Universal type developed in this cultural and historical context. Like the automobiles produced on Henry Ford's factory line, Universal's letterforms were designed on a "rationalized" plan.

*"The engineer, inspired by the law of economy and governed by mathematical calculation, puts us in accord with universal law." **Le Corbusier**[4]*

Each character was engineered on an "armature" consisting of a few circles and arcs, three angles, and horizontal and vertical lines. These formal features reflect Bayer's theoretical position: technology was held to be,

Bayer's clean geometric armature aimed to rationalize the design of letterforms.

as Sibyl Moholy-Nagy stated, "unadulterated by man and his perverted symbolism" (3). The scientific foundation of mechanization would cleanse typography of superfluous cultural styles. Bayer avoided all suggestions of calligraphy by constructing lines with the compass, T-square, and angle. In Bayer's words, the freedom traditionally enjoyed by the type designer was "responsible for so many mistakes" (Bayer, "towards a universal type," 29).

1 Walter Gropius, "Program for the Funding of a General Housing-Construction Company Following Artistically Uniform Principles, 1910," ed. Hans M. Wingler, *The Bauhaus* (Cambridge: MIT Press, 1978) 20.
2 Wilfred Nerdinger, "Walter Gropius—From Americanism to the New World," *Walter Gropius* (Berlin: Gebr. Mann Verlag, 1985) 16.
3 Antonio Gramsci, "Americanism and Fordism," *Prison Notebook* (New York: International, 1971) 318.
4 Le Corbusier, *Towards a New Architecture*, trans. Frederick Etchells (New York: Dover, 1986) 1.

stencil

Contemporary designers such as Joseph Albers and Paul Renner shared Bayer's advocacy of "rationalized" typographic construction. Albers's "stencil typeface" (1925) is "built-up" from a few forms, giving the typeface a regularity and simplicity which Albers thought to be the "essential" core of the letterform, purified of subjective intentions. The original design for Renner's typeface Futura (1928) is based on the forms created by the compass, T-square, and triangle. The *G* exemplifies the translation of a conventional letterform into a geometric language. Futura's schematic characters rejected the nuances of traditional type design methods in favor of the rigidity of mechanical construction.

futura

Futura

$A + a = a$

The influence of Americanism is also reflected in Bayer's attempt to create a more efficient typeface. universal type was designed only in the lowercase alphabet. bayer argued that since speech does not recognize capital letters, they are no longer needed in typography. a single-case alphabet would be easier for children to learn, and more efficient to write. the lack of uppercase letters would reduce the printer's storage space, set-up time, and overall costs. bayer's concern for the efficiency of his design reflects the concerns of the "scientific management" movement, also known as "taylorism." frederick taylor, an american managerial theorist known as the "efficiency engineer," timed workers' movements and analyzed their relation to tools in order to establish a universally efficient order of operations. taylor's project was, like universal type, based on the belief in an objective and universal law, which rests at the foundation of any problem.

While other designers shared Bayer's attempt to rationalize typography with a single-case alphabet, they often came to contradictory results, revealing the subjectivity within these "objective" rules. Jan Tschichold's Universal type

universal

of 1926-29 echoes Bayer's typeface, but combines elements of both the upper- and lowercase to create a single-case alphabet.

Tschichold also experimented with replacing sound groups with typographic symbols and standardizing spelling to match consistently the sounds of speech. A. M. Cassandre's typeface Peignot (1937) and Bifur (1929) directly contradict Bayer's experiment by creating a single-case alphabet in capital letters. Peignot's original type specimen stated that lowercase letterforms "will soon come to seem as archaic as the shapes of Gothic characters."

a B C D e
F G H I J K
L m n O P
Q R S T U
V W X Y Z

Bradbury Thompson continued Bayer's experiment with his monoalphabet (1940), which uses only lowercase letters, increasing their size to indicate the beginning of sentences and proper nouns. Thompson's Alphabet 26 (1950) attempted to create a single-case alphabet by combining the seven letters which have the same symbol in both cases (illustrated at right in blue letters) with four lowercase letters (in red) and fifteen uppercase letters (in black).

Bayer stated that the "typographic revolution was not an isolated event but went hand in hand with a new social and political consciousness and consequently, with the building of new cultural foundations."[1] Many modernist designers saw industry as a potential leveler of the inequalities of Europe's feudal heritage.

Laszlo Moholy-Nagy stated, "everyone is equal before the machine... there is no tradition in technology, no class consciousness" (S. Moholy-Nagy 19). Bayer's faith in technology is based on the belief that culture is "artificial," while reason and science are "pure." He considered the simple, geometric letterforms to be socially liberating, because they did not hide behind illusionistic or aristocratic styling. Universal type was thought to be, like the machine, "naked" of embellishment and empty of cultural ideology.

While technology was understood as an agent of progress to Moholy-Nagy and other Bauhaus masters, many of their contemporaries saw the machine as a monstrous threat to society and the individual.
To the Expressionists, for example, memory of the First World War's military technologies inspired only fear of the industrialized society.
This still from **Fritz Lang**'s *Metropolis* (1928) represents the machine as a devouring, dehumanizing, and undemocratic means of production. These opposing views of technology are integral to the Weimar era, and both were represented at the Bauhaus. Gropius's famous statement, "Art and technology, a new unity" received much criticism from voices within the school. For an analysis of the connotations of the machine in the Weimar era, and their expression in *Metropolis*, see **Andreas Huyssen**'s "The Vamp and the Machine."[2]

Yet while Bayer developed this "naked" visual language, he was also capable of working in a more stylized method. In 1933 the Berthold Type Foundry commissioned Bayer to design a typeface for commercial use. The result, Bayer Type, is like Universal in that it is constructed with geometric shapes, but it is adorned with serifs and made fashionable by the strong contrasts in the thicks and thins of the letterforms. This design was overtly styled, while the "rational" experiment—Universal type—was supposedly free of such "superficial" decoration. The contrast in these typefaces reveals that Bayer's definition of the essential letterform was also a repudiation of "style" and the influence of culture.

Initially, "modern" design found few clients who were willing to put its experiments into practice. The commercial success of the Bauhaus design style in the late twenties and thirties marks the dulling—rather than the acceptance—of its politically radical edge. While World War II made New York the new home of modernism, the often more pragmatic concerns of the Americans transformed the social and political implications of the original movement.
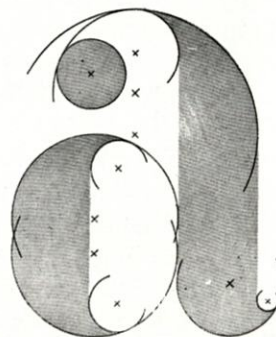
While both Universal and Bayer Type are geometrically composed, Universal is thought to be "naked" while Bayer Type is "dressed up."

1 Herbert Bayer, "On Typography," ed. Arthur Cohen, *Herbert Bayer* (Cambridge: MIT Press, 1984) 350.
2 Andreas Huyssen, "The Vamp and the Machine: Fritz Lang's *Metropolis*," *After the Great Divide: Modernism, Mass Culture, Postmodernism* (Indianapolis: University of Indiana Press, 1986) 65-81.

M. F. Agha, the art director of *Vogue* and a frequent contributor to design periodicals, stated in a 1931 article that the Europeans were accepted into the "temple of American graphic arts" because they were "such Attention Getters." Agha paints a pessimistic picture of the acceptance of European designers, stating that they were used because they could produce "Attention Value, Snap, and Wallop; while in their spare time they were allowed to indulge in innocent discussions about the machine age, fitness to function, and objectivity in art."[1]

After leaving the Bauhaus in 1928, Bayer was hired by M. F. Agha as art director for German *Vogue*. Through this work, Bayer became art director for the prestigious Dorland Studios in Berlin. In 1938 Bayer emigrated to New York, where he was consultant to J. Walter Thompson in 1944, and art director of Dorland International, 1944-6. Through his commercial success at these firms, Bayer became a consultant designer to the Container Corporation of America, and in 1956 he became chairman of the department of design for the CCA.[3]

While the subject of this essay, Universal type, represents a rationalized and disciplined methodology, Bayer was a pragmatic designer, who experimented in a variety of styles and mediums. This advertisement, designed by Bayer at the Dorland Studios, reveals that he did not confine himself to a single dogmatic approach to design, but worked in a variety of styles such as this surrealistic photomontage (1935). This contradiction was not an issue to Bayer; he stated, "any method which best solves a specific problem is acceptable"[4]

Bayer's work for the CCA exemplifies the successful integration of the "Universal" approach with corporate ideology. The CCA was a pioneer in the creation of cohesive corporate identity. As Universal's characters were made regular by the armature on which they were constructed, the corporate identity followed a centralized plan.

The architecture and the office furniture, the paint on the walls and the trucks, the typography on the checks, letterheads, annual reports, invoices, and advertisements, were planned as a cohesive body. Bayer's 1952 essay "Design as an Expression of Industry" describes the CCA identity as a "function of management" used to control the opinion of employees, customers, and the public.[5]

The CCA logo program (**right**) was developed by Egbert Jacobson in 1931. Its standardized visual language homogenized the many cultures encountered in multi-national corporate expansion.

In 1966 Bayer took on his largest corporate assignment as art director for the Atlantic Richfield Corporation (ARCO). Bayer designed or selected the architecture, carpet designs and tile patterns, murals and signage, public sculptures, typography and advertising, as well as collecting art for the corporation. As with the CCA, Bayer used his rationalized, "total design" approach to endow ARCO with the aura of transcendent regularity: a quality which visually expressed the authority of a multinational corporation.

1 M. F. Agha, "Graphic Arts in Advertising," *American Union of Decorative Artists and Craftsmen*, ed. R. L. Leonard et. al. (New York: Ives Washburn, 1931) 139.
2 Herbert Bayer, "Typography and Commercial Art Forms," originally published in *Bauhaus Journal* Vol. 2, No. 1 (1928). Reprinted in Wingler, 135.
3 See Gwen F. Chanzit, *Herbert Bayer: The Collection and Archive at the Denver Art Museum* (Seattle: University of Washington Press, 1988).
4 Bayer, "an acceptance speech (1969)," in Cohen, 359.
5 Bayer, "Design as an Expression of Industry," *Gebrauchsgraphik* 9 (1952): 57-60.

While Bayer's "Bauhaus style" design once represented a critical alternative to established values, it has become, in its corporate use, an official bureaucratic language. Bayer's ARCO and CCA work reveals the inherent contradictions in the politics of Bayer's design theory. Bayer aspired to dispel the class distinctions and social inequities in traditional European culture by homogenizing visual language. Bayer did not recognize that the homogenization of language also homogenizes experience and culture. The broad levelling of class difference which

While never realized, Bayer's roadside beautification installations for ARCO illustrate how Bayer was responsible for managing the visual impression of the corporation. Ironically, this project also reveals that while modernism was inspired by an aestheticized image of American industry (see Gropius's photograph of a grain silo), modern design would later be used to "beautify" the actual, unromanticized reality of American industry.[1]

Bayer hoped to achieve through rationalized design encourages the elimination of indigenous and individual voices in favor of a centralized visual vocabulary.

Bayer's typeface has been employed in what Roland Barthes would call the "mythologies" of the corporation: its meaning has become a "tamed richness" which the corporation "holds at its disposal." While designers in the 20s focussed on the politically liberating potential of the new visual language, corporate designers shifted the focus to foreground the formal regularity and stability in order to visually substantiate their authority. This "shift" in focus does not, as Barthes would say, "obliterate" the former meanings assigned to the design, but rather "distorts" them so that they work for the ideology of the corporation.[2] What once symbolized change now symbolizes permanence.

ʌn ʌlfʌbet ko-ordinætn fonetiks ʌnd visin wil be æ mor efektiv tul uf kumunikætin

During his tenure as chairman for the design department of CCA, Bayer resumed his experimentation with language, this time in the form of the Basic Alphabet. While Universal type was a revision of established letterforms, the Basic Alphabet attempted to reorganize writing itself. Bayer created phonetic symbols to take the place of double-letter sounds such as ch, th, and sh, and to replace "sound groups" such as -ed, -en, -ion, -ng, and -ory. Basic Alphabet omits letters with hidden sounds— "certainly" becomes "sertnly"—and created letterforms to express the variety of sounds conventionally assigned to a single letter. Basic Alphabet reflects the intentions behind the design of Universal type: the reduction and simplification of writing will create a more efficient, progressive, and democratic language.[3]

Paul Rand's 1962 logo for the American Broadcast Corporation exemplifies the use of modernist design by a large corporation. Rand used a variation of Universal type to create a logo distinguished by geometric refinement and the repetition of the circle. The clean, regular shapes of the letterforms translate into the regular, unified, stable authority of the corporation. While geometric design was once allied with a reevaluation of society, it is used in the ABC logo to reaffirm the stability of the organization.

1 See Arthur Cohen, *Herbert Bayer* (Cambridge: MIT Press, 1984).
2 Roland Barthes, "Myth Today," *A Barthes Reader*, ed. Susan Sontag (New York: Noonday Press, 1982) 73-150.
3 Herbert Bayer, "Basic Alphabet," *Print* (May/June 1964): 16-20.

Contrary to the claims of the original modernist designers, the meaning of a typeface changes with each historical, cultural context it appears in. A variation of the once radical typeface Futura was smartly used by Chermayeff and Geismar Associates in their logo for the Mobil Corporation. Here, Futura's distinctive o, highlighted in red, represents Mobil's product—oil—with geometric perfection. The Mobil logo symbolizes a shift in the meaning of Futura: the progressive rationality which once symbolized a challenge to authority comes to symbolize the authority of the corporation.

Mobil

The meanings of Bayer's Universal type do not merely fluctuate between "radical" and "corporate" connotations. A version of Universal appears in Vignelli Associates' logo for Bloomingdale's, where the letterforms take on an opulence and extravagance that contradicts the formerly puritanical intentions of the design. The thin line weight and interlacing O's help to shift the focus onto the more decorative aspects of the typeface. These "stylized" features complement the connotations of shopping, fancy consumer goods, and the facade of prestige which the department store projects.

bloomingdale's

In 1974 the International Typeface Corporation redesigned Universal and renamed it Bauhaus. While this version is widely used, it does not embody the geometric rigor or simplicity of the original drawing.

ITC **Bauhaus**

When used in the context of popular culture, such as the credits for the hit TV show *Roseanne*, the typeface takes on other meanings even more remote from Bayer's original intentions. The geometry and heaviness of the letterforms become entwined with the bold, frank humor of this large, funny woman.

Bayer did not recognize his conception of universality to be the product of his culture and history. He believed the design resulted from natural rather than culturally constructed laws. This obscures the actual influence of social, economic, and political factors which surrounded and shaped Bayer's understanding of a "universal" typeface. Is the design a manifestation of universal laws of visual language, or rather the visualization of *an idea of universality* specific to Weimar Germany? The history of Universal type reveals that the typeface was a "symptom" of a historical fissure—reflecting the collapse of nineteenth-century cultural values and the birth of a new and more "rationalized" world. History also reveals that the meaning of the typeface is not intrinsic to its form, but is continually recreated. Post-WWII corporations, for instance, have used variations of Universal type and Bayer's rationalized design method to make the corporation's *culturally* constructed authority appear *natural*, "a matter of fact." The meaning of Universal type is mediated by the people and institutions that use it.

Designed by Ellen Lupton,
J. Abbott Miller and Mike Mills
Photography by Joanne Savio

The type used for the titling on the cover of
this book is 'Universal', a font designed by
Herbert Bayer in 1925 and redrawn in
Fontographer by Matthew Carter in 1991.
Bayer's font was never produced: prior to
Carter's reconstruction, the letters were
drawn by hand for each use.

The showing of Jan Tschichold's typeface
on page 40 was also redrawn by
Matthew Carter in Fontographer in 1991.

7.3.6 Digital Typography

It is much too soon to summarize the history of digital typography, but the evolution of computerized bitmapping, hinting and scaling techniques has proceeded very quickly since the development of the microchip at the beginning of the 1970s. At the same time, the old technologies, freed from commercial duties, have by no means died. Foundry type, the Monotype, the Linotype and letterpress remain important artistic instruments, alongside brush and chisel, pencil, graver and pen.

Typographic style is founded not on any one technology of typesetting or printing, but on the primitive yet subtle craft of writing. Letters derive their form from the motions of the human hand, restrained and amplified by a tool. That tool may be as complex as a digitizing tablet or a specially programmed keyboard, or as simple as a sharpened stick. Meaning resides, in either case, in the firmness and grace of the gesture itself, not in the tool with which it is made.

7.4 THE PLURALITY OF TYPOGRAPHIC HISTORY

Every alphabet is a culture. Every culture has its own version of history and its own accumulation of tradition – and this chapter has dwelt on the recent history of one alphabet only. The Arabic, Armenian, Burmese, Cherokee, Cree, Cyrillic, Devanagari, Georgian, Greek, Gujarati, Hebrew, Japanese, Korean, Malayalam, Tamil and Telugu alphabets and syllabaries – to name only a few – have other histories of their own, in some cases every bit as intricate and long as – or longer than – the history of Latin letterforms. So, of course, has the logographic script of Chinese. These histories have touched at certain points; at other points, they diverge. Here at the beginning of the twenty-first century, an unusual degree of convergence can be seen. But the challenge and excitement of multilingual typography still lies largely in the fact that different typographic histories momentarily share the page. Typographers working with multiple alphabets are multiply blessed: with a chance to learn the cultural history as well as the typographic technicalities of every script concerned.

The histories of Greek and Cyrillic types are taken up more briefly in chapter 10, and the legacies of individual typefoundries are summarized briefly in appendix D, page 309.

Mechanical Typesetting

SHAPING THE PAGE

A book is a flexible mirror of the mind and the body. Its overall size and proportions, the color and texture of the paper, the sound it makes as the pages turn, and the smell of the paper, adhesive and ink, all blend with the size and form and placement of the type to reveal a little about the world in which it was made. If the book appears to be only a paper machine, produced at their own convenience by other machines, only machines will want to read it.

8.1 ORGANIC, MECHANICAL & MUSICAL PROPORTION

A page, like a building or a room, can be of any size and proportion, but some are distinctly more pleasing than others, and some have quite specific connotations. A brochure that unfolds and refolds in the hand is intrinsically different from a formal letter that lies motionless and flat, or a handwritten note that folds into quarters and comes in an envelope of a different shape and size. All of these are different again from a book, in which the pages flow sequentially in pairs.

Much typography is based, for the sake of convenience, on standard industrial paper sizes, from 35×45 inch press sheets to $3\frac{1}{2} \times 2$ inch conventional business cards. Some formats, such as the booklets that accompany compact discs, are condemned to especially rigid restrictions of size. But many typographic projects begin with the opportunity and necessity of selecting the dimensions of the page.

There is rarely a free choice. A page size of 12×19 inches, for example, is likely to be both inconvenient and expensive because it is just in excess of 11×17, which is a standard industrial unit. And a brochure that is 5×9 inches, no matter how handsome, might be unacceptable because it is too wide to fit into a standard business envelope ($4 \times 9\frac{1}{2}$). But when the realm of practicality has been established, and it is known that the page must fall within certain limits, how is one to choose? By taking whatever is easiest, or biggest, or whatever is the most convenient standard size? By trusting to blind instinct?

Instinct, in matters such as these, is largely memory in disguise. It works quite well when it is trained, and poorly other-

Sizing and spacing type, like composing and performing music or applying paint to canvas, is largely concerned with intervals and differences. As the texture builds, precise relationships and very small discrepancies are easily perceived. Establishing the overall dimensions of the page is more a matter of limits and sums. In this realm, it is usually sufficient, and often it is better, if structural harmony is not so much enforced as implied. That is one of the reasons typographers tend to fall in love with books. The pages flex and turn; their proportions ebb and flow against the underlying form. But the harmony of that underlying form is no less important, and no less easy to perceive, than the harmony of the letterforms themselves.

The page is a piece of paper. It is also a visible and tangible proportion, silently sounding the thoroughbass of the book. On it lies the textblock, which must answer to the page. The two together – page and textblock – produce an antiphonal geometry. That geometry alone can bond the reader to the book. Or conversely, it can put the reader to sleep, or put the reader's nerves on edge, or drive the reader away.

Arithmetic and mathematics also drive away some readers, and this is a chapter peppered with both. Readers may well ask whether all this is necessary, merely in order to choose where some letters should sit on a piece of paper and where the paper itself should be trimmed. The answer, naturally, is no. It is not in the least necessary to understand the mathematics in order to perform the actions that the math describes. People walk and ride bicycles without mathematical analyses of these complex operations. The chambered nautilus and the snail construct perfect logarithmic spirals without any need of logarithmic tables, sliderules or the theory of infinite series. The typographer likewise can construct beautiful pages without knowing the meaning of symbols like π or φ, and indeed without ever learning to add and subtract, if he has a well-educated eye and knows which buttons to push on the calculator and keyboard.

The mathematics are not here to impose drudgery upon anyone. On the contrary, they are here entirely for pleasure. They are here for the pleasure of those who like to examine what they are doing, or what they might do or have already done, perhaps in the hope of doing it still better. Those who prefer to act directly at all times, and to leave the analysis to others, may be content in this chapter to study the pictures and skim the text.

Two useful works on organic form and structure are: D'Arcy Thompson, *On Growth and Form* (rev. ed., Cambridge, 1942) and Peter S. Stevens, *Patterns in Nature* (Boston, 1974). An equally important book on structures made by humans is Dorothy Washburn & Donald Crowe, *Symmetries of Culture: Theory and Practice of Plane Pattern Analysis* (Seattle, 1988).

wise. But in a craft like typography, no matter how perfectly honed one's instincts are, it is useful to be able to calculate answers exactly. History, natural science, geometry and mathematics are all relevant to typography in this regard – and can all be counted on for aid.

Scribes and typographers, like architects, have been shaping visual spaces for thousands of years. Certain proportions keep recurring in their work because they please the eye and the mind, just as certain sizes keep recurring because they are comfortable to the hand. Many of these proportions are inherent in simple geometric figures – equilateral triangle, square, regular pentagon, hexagon and octagon. And these proportions not only seem to please human beings in many different centuries and countries, they are also prominent in nature far beyond the human realm. They occur in the structures of molecules, mineral crystals, soap bubbles, flowers, as well as books and temples, manuscripts and mosques.

The tables on pages 148–149 list a number of page proportions derivable from simple geometric figures. These proportions occur repeatedly in nature, and pages that embody them recur in manuscripts and books from Renaissance Europe, Táng and Sòng dynasty China, early Egypt, precolumbian Mexico and ancient Rome. It seems that the beauty of these proportions is more than a matter of regional taste or immediate fashion. They are therefore useful for two purposes. Working and playing with them is a way of developing good typographic instincts, and they serve as useful references in analyzing old designs and calculating new ones.

For comparison, several other proportions are included in the tables. There are several simple numerical ratios, several standard industrial sizes, and several proportions involving four irrational numbers important in the analysis of natural structures and processes. These numbers are $\pi = 3.14159\ldots$, which is the circumference of a circle whose diameter is one; $\sqrt{2} = 1.41421\ldots$, which is the diagonal of a unit square; $e = 2.71828\ldots$, a number the base of the natural logarithms; and $\varphi = 1.61803\ldots$, a number discussed in greater detail on page 155. Certain of these proportions reappear in the structure of the human body; others appear in musical scales. Indeed, one of the simplest of all systems of page proportions is based on the familiar intervals of the diatonic scale. Pages that embody these basic musical proportions have been in common use in Europe for more than a thousand years.

PAGE PROPORTIONS AS MUSICAL INTERVALS

octave	1:2	1:2	C – C'	*double square*
major 7th	8:15	1:1.875	C – B	
minor 7th	9:16	1:1.778	C – Bb	*narrow books*
major 6th	3:5	1:1.667	C – A	
minor 6th	5:8	1:1.6	C – Ab	~ 1 : φ
fifth	2:3	1:1.5	C – G	
dim. 5th / *aug. 4th*	1:√2	1:1.414	C – Gb / C – F♯	*self-replicating page*
fourth	3:4	1:1.333	C – F	
major 3rd	4:5	1:1.25	C – E	
minor 3rd	5:6	1:1.2	C – Eb	*wide books*
major 2nd	8:9	1:1.125	C – D	
minor 2nd	15:16	1:1.067	C – Db	~ φ : 2
unison	1:1	1:1	C – C	*square page*

The value for the diminished 5th/augmented 4th is calculated here according to the system of equal temperament. All other intervals are calculated according to the system of just intonation.

Page shapes derived from the chromatic scale. Two-page spreads that embody these proportions are shown on the facing page.

The perfect intervals (fifth and fourth) coincide exactly with the favorite page shapes of the European Middle Ages, which are still in use today: the page proportions 2:3 and 3:4. Renaissance typographers made extensive use of narrower pages, corresponding to the larger impure intervals (major and minor sixth, major and minor seventh).

Each page shape has a counterpart with which it alternates. If a sheet whose proportions are 5:8 is folded in half, it produces a sheet whose proportions are 4:5. If this is folded once again, it produces another sheet whose proportions are 5:8. In the same way, the proportion 1:2 alternates with the proportion 1:1. The proportion 1:√2, corresponding to the diminished fifth and augmented fourth of equal temperament, is the only one that alternates with itself.

In musical terms, these alternating proportions form *harmonic inversions*. (The harmonic inversion of a fifth, for example, is a fourth, and the harmonic inversion of a minor sixth is a major third.) The total of each such pair of intervals is always *one octave*.

Chromatic Scale of Page Proportions

octave, 1 : 2

major 7th, 8 : 15   minor 7th, 9 : 16

fifth, 2 : 3

major 6th, 3 : 5   minor 6th, 5 : 8

dim. 5th/aug. 4th, 1 : √2

fourth, 3 : 4

major 3rd, 4 : 5   minor 3rd, 5 : 6

major 2nd, 8 : 9   minor 2nd, 15 : 16
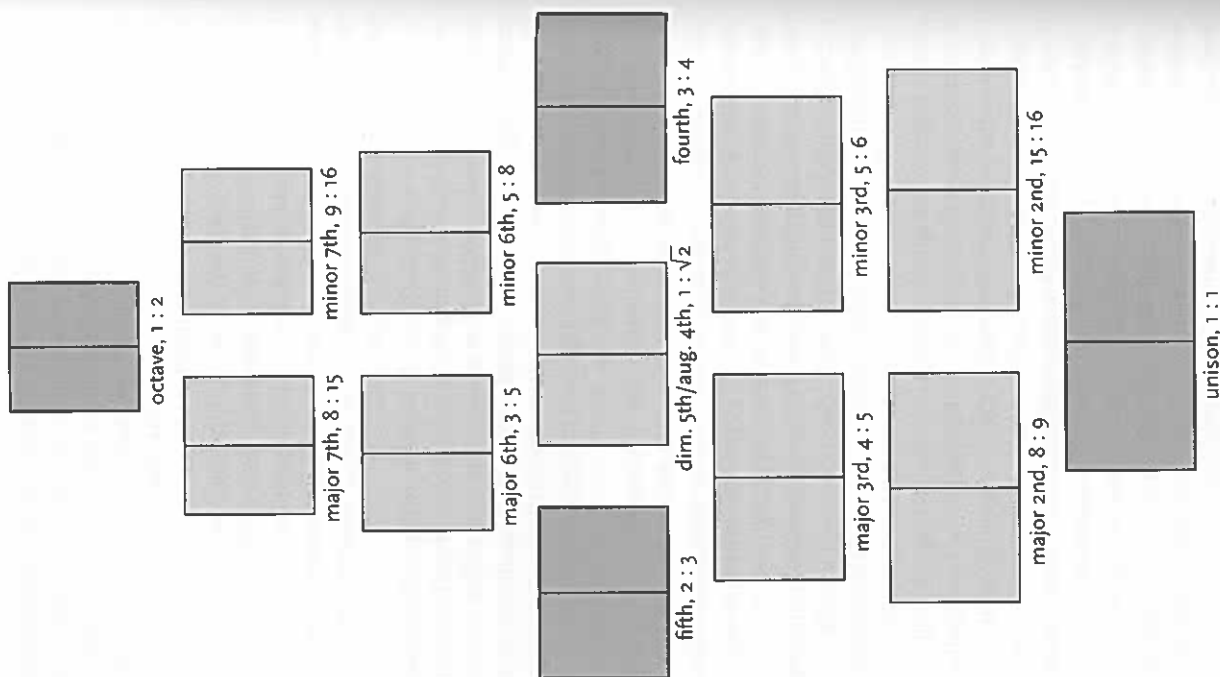
unison, 1 : 1

Page proportions corresponding to the chromatic scale, from unison (at the bottom) to octave (at the top). The musical correlations are shown in detail on the facing page.

Page & Textblock Proportions — Sample sizes in inches

Interval		Page & Textblock Proportions	Proportion	Sample sizes in inches		
octave	A	Double Square	1:2	4.5 × 9	5 × 10	5.5 × 11
	B	Tall Octagon	1:1.924	4.7 × 9	5.2 × 10	5.7 × 11
major 7th		8:15	1:1.875	4.8 × 9		
	C	Tall Hexagon	1:1.866	4.9 × 9	5.4 × 10	5.9 × 11
	D	Octagon	1:1.848			6 × 11
		5:9	1:1.8	5 × 9		
minor 7th		9:16	1:1.778	5.1 × 9		
	E	Hexagon = $1:\sqrt{3}$	1:1.732	4.9 × 8.5	5.2 × 9	6.4 × 11
	F	Tall Pentagon	1:1.701	5 × 8.5	5.3 × 9	6.5 × 11
major 6th		3:5	1:1.667	5.1 × 8.5		
		Legal Sheet	1:1.647			8.5 × 14
	G	Golden Section	1:1.618	5.3 × 8.5	5.6 × 9	6.8 × 11
minor 6th		5:8	1:1.6	5 × 8		
			1:1.539	5.5 × 8.5	5.9 × 9	7.2 × 11
fifth	H	Pentagon	1:1.5		6 × 9	7.3 × 11
		2:3				7.8 × 11
	Z	ISO = $1:\sqrt{2}$	1:1.414	6.4 × 9	7.1 × 10	
		5:7	1:1.4			
	J	Short Pentagon	1:1.376	6.5 × 9	7.3 × 10	8 × 11
fourth		3:4	1:1.333	6.8 × 9	7.5 × 10	9 × 12
			1:1.307	6.9 × 9	7.7 × 10	8.4 × 11
	K	Tall Half Octagon	1:1.294			8.5 × 11
		Letter Sheet	1:1.25	7.2 × 9	8 × 10	8.8 × 11
major 3rd		4:5	1:1.207		8.3 × 10	9.1 × 11
	L	Half Octagon	1:1.2	7.5 × 9	8.5 × 10	9.4 × 11
minor 3rd		5:6	1:1.176			
	M	Truncated Pentagon	1:1.167	7.7 × 9		
		6:7	1:1.156			
		e:π	1:1.155	7.8 × 9	8.7 × 10	9.5 × 11
major 2nd	N	Turned Hexagon	1:1.125	8 × 9	8.9 × 10	9.8 × 11
		8:9	1:1.082	8.3 × 9	9.2 × 10	10.2 × 11
	O	Tall Cross Octagon	1:1.067	8.4 × 9	9.4 × 10	10.3 × 11
minor 2nd		15:16	1:1.051	8.6 × 9	9.5 × 10	10.5 × 11
	P	Turned Pentagon	1:1	9 × 9	10 × 10	11 × 11
unison	Q	SQUARE	1:0.951	8.9 × 8.5	10 × 9.5	11 × 10.5
	R	Broad Pentagon	1:0.924	9.2 × 8.5	10 × 9.2	11 × 10.1
	S	Broad Cross Octagon	1:0.889	9.6 × 8.5		11 × 9.8
major 2nd	T	Broad Hexagon	1:0.866	9.8 × 8.5	10 × 8.7	11 × 9.5
	U	Full Cross Octagon	1:0.829	10.3 × 8.5	10 × 8.3	11 × 9.1
		5:4	1:0.8	10.6 × 8.5		11 × 8.8
major 3rd		*Landscape Letter*	1:0.773	11 × 8.5	10 × 7.7	

Column Proportions — Sample sizes in picas

	Column Proportions	Proportion	Sample sizes in picas			Interval
a	Quadruple Square	1:4	10 × 40	11 × 44	12 × 48	double octave
	$1:\sqrt{15}$		10 × 39			
	4:15	1:3.873		12 × 45		major 14th
	5:18	1:3.75	10 × 36	12 × 43		
	9:32	1:3.6	11 × 39			minor 14th
	$1:\sqrt{12}$	1:3.556	11 × 38			
		1:3.464			15 × 52	
b	Octagon Wing	1:3.414		12 × 41		
	3:10	1:3.333		12 × 40	15 × 50	major 13th
	1:2φ	1:3.236				
	5:16	1:3.2			15 × 48	minor 13th
	$1:\sqrt{10}$	1:3.162	12 × 38	14 × 44		
	1:π	1:3.142				
c	Double Pentagon	1:3.078	12 × 37	14 × 43	16 × 49	
d	Triple Square	1:3	12 × 36	14 × 42	16 × 48	twelfth
e	Wide Octagon Wing	1:2.993				
Z	$1:2\sqrt{2} = 1:\sqrt{8}$	1:2.828		16 × 44		
f	Pentagon Wing	1:2.753				
	1:e	1:2.718	14 × 38		18 × 49	eleventh
	3:8	1:2.667		15 × 40	18 × 48	
	$1:\sqrt{7}$	1:2.646				
g	Extended Section	1:2.618				
h	Tall Octagon Column	1:2.613			18 × 47	
i	Mid Octagon Column	1:2.514				
	2:5	1:2.5	16 × 40	18 × 45	20 × 50	major 10th
j	Short Octagon Column	1:2.414				
	5:12	1:2.4			20 × 48	minor 10th
k	Hexagon Wing	1:2.309	16 × 37	20 × 46		
m	Double Truncated Pentagon	1:2.252				
	4:9	1:2.25		20 × 45		major 9th
	$1:\sqrt{5}$	1:2.236	17 × 38		21 × 47	
	5:11	1:2.2		20 × 44	24 × 53	minor 9th
	15:32	1:2.133			24 × 52	
A	Double Square	1:2	18 × 36	21 × 42	24 × 48	octave

[The musical intervals listed in the right hand column are the *compound intervals* of the chromatic scale. Octave + minor 2nd = minor 9th; octave + major 3rd = major 10th; octave + fifth = twelfth, etc.]

Shaping the Page

E, N₂, N₁, T₂, T₁, C, k

Pages derived from the hexagon: **C** the Tall Hexagon page, 1:1.866; **E** Hexagon page, $1:\sqrt{3} = 1:1.732$; **N** Turned Hexagon page, 1:1.155; **T** Broad Hexagon page, 1:0.866; **k** Hexagon Wing, 1:2.309. The hexagon consists of six equilateral triangles, and each of these page shapes can be derived directly from the triangle instead. The hexagon merely clarifies their existence as mirror images, like the pages of a book. Hexagonal structures are present in both the organic and the inorganic world – in lilies and wasps' nests, for example, and in snowflakes, silica crystals and sunbaked mudflats. The proportions of the broad hexagon page are within one per cent of the natural ratio π/e, while the turned hexagon page (which is the broad hexagon rotated 90°) approximates the ratio e/π. (The hexagon page used in this book is analyzed on page 6.)

All formats on this page are shown as two-page spreads.

151

Organic, Mechanical and Musical Proportion

F, P, R and f are shown here as two-page spreads. H, J, M and m are shown as single pages.

H, M, R, m, F, J, P, f

Pages derived from the pentagon: **F** the Tall Pentagon page, 1:1.701; **H** Pentagon page, 1:1.539; **J** Short Pentagon page, 1:1.376; **M** the Truncated Pentagon page, 1:1.176; **P** Turned Pentagon page, 1:1.05; **R** the Broad Pentagon page, 1:0.951; **f** Pentagon Wing, 1:2.753; **m** the Double Truncated Pentagon, 1:2.252. The pentagon page differs by 2% from the North American standard small trade book size, which is half the size of a letter sheet: 5½ × 8½ inches. A more eminent page proportion, the golden section, is also present in the pentagon (see page 156). In nature, pentagonal symmetry is rare in inanimate forms. Packed soap bubbles seem to strive for it but never quite succeed, and there are no mineral crystals with true pentagonal structures. But pentagonal geometry is basic to many living things, from roses and forget-me-nots to sea urchins and starfish.

150

Shaping the Page

Pages derived from the circle and square: **A** Double Square page, 1:2; **Z** the Broad Square page, which is the ISO standard, $1:\sqrt{2} = 1:1.414$; **Q** the Perfect Square; **z** Double ISO, $1:2\sqrt{2} = 1:2.828$. The proportion $1:\sqrt{2}$ is that of side to diagonal in a square. A rectangle of these proportions (and no others) can be halved or doubled indefinitely to produce new rectangles of the same proportion. The proportion was chosen for that reason as the basis for ISO (International Organization for Standardization) paper sizes. The A4 sheet, for example, is standard European letter size, 210 × 297 mm = 8¼″ × 11⅝″. An 8½″ × 12″ book page also embodies this proportion.

The ISO or broad square page is latent not only in the square but in the octagon.

Except for Z_3, all formats on this page are shown as two-page spreads.

Organic, Mechanical and Musical Proportion

B, D, O, S and U are shown as two-page spreads.

Pages derived from the octagon: **B** the Tall Octagon page, 1:1.924; **D** Octagon page, 1:1.848; **K** Tall Half Octagon page, 1:1.307; **L** Half Octagon page, 1:1.207; **O** Tall Cross Octagon, 1:1.082; **S** Broad Cross Octagon page, 1:0.924; **U** the Full Cross Octagon page, 1:0.829; **b** Octagon Wing, 1:3.414; **e** Wide Octagon Wing, 1:2.993; **h, i, j** Tall, Middle and Short Octagon Columns, 1:2.613, 1:2.514 and 1:2.414. The tall half octagon page (K), used in Roman times, differs by a margin of 1% from the standard North American letter size. Are proportions derived from the hexagon and pentagon livelier and more pleasing than those derived from the octagon? Forms based on the hexagon and pentagon are, at any rate, far more frequent than octagonal forms in the structure of flowering plants and elsewhere in the living world.

8.2 THE GOLDEN SECTION

The golden section is a symmetrical relation built from asymmetrical parts. Two numbers, shapes or elements embody the golden section when the smaller is to the larger as the larger is to the sum. That is, $a:b = b:(a+b)$. In the language of algebra, this ratio is $1:\varphi = 1:(1+\sqrt{5})/2$, and in the language of trigonometry, it is $1:(2\sin 54°)$. Its approximate value in decimal terms is $1:1.61803$.

The second term of this ratio, φ (the Greek letter *phi*), is a number with several unusual properties. If you *add* one to φ, you get its square ($\varphi \times \varphi$). If you *subtract* one from φ, you get its reciprocal ($1/\varphi$). And if you multiply φ endlessly by itself, you get an infinite series embodying a single proportion. That proportion is $1:\varphi$. If we rewrite these facts in the typographic form mathematicians like to use, they look like this:

$$\varphi + 1 = \varphi^2$$

$$\varphi - 1 = 1/\varphi$$

$$\varphi^{-1}:1 = 1:\varphi = \varphi:\varphi^2 = \varphi^2:\varphi^3 = \varphi^3:\varphi^4 = \varphi^4:\varphi^5 \ldots$$

If we look for a numerical approximation to this ratio, $1:\varphi$, we will find it in something called the Fibonacci series, named for the thirteenth-century mathematician Leonardo Fibonacci. Though he died two centuries before Gutenberg, Fibonacci is important in the history of European typography as well as mathematics. He was born in Pisa but studied in North Africa. On his return, he introduced arabic numerals to the North Italian scribes.

As a mathematician, Fibonacci took an interest in many problems, including the problem of unchecked propagation. What happens, he asked, if everything breeds and nothing dies? The answer is a logarithmic spiral of increase. Expressed as a series of integers, such a spiral takes the following form:

$0 \cdot 1 \cdot 1 \cdot 2 \cdot 3 \cdot 5 \cdot 8 \cdot 13 \cdot 21 \cdot 34 \cdot 55 \cdot 89 \cdot 144 \cdot 233 \cdot 377 \cdot 610 \cdot 987 \cdot 1597 \cdot 2584 \cdot 4181 \cdot 6765 \cdot 10,946 \cdot 17,711 \cdot 28,657 \ldots$

Here each term after the first two is *the sum of the two preceding*. And the farther we proceed along this series, the closer
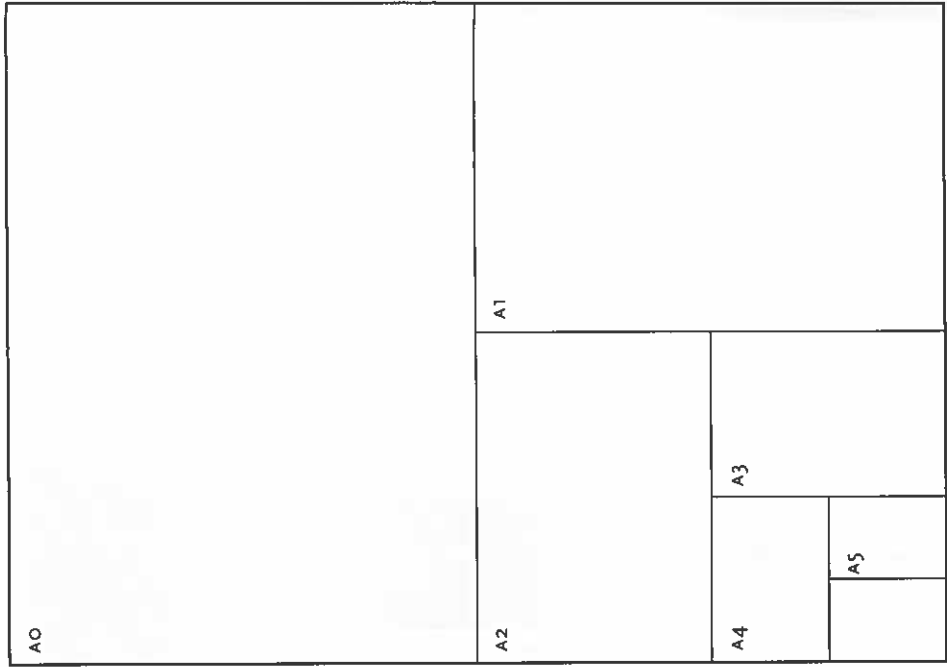
---

ISO sheet sizes:

A0 = 841 × 1189 mm	A3 = 297 × 420 mm
A1 = 594 × 841 mm	A4 = 210 × 297 mm
A2 = 420 × 594 mm	A5 = 148 × 210 mm

When a sheet whose proportions are $1:\sqrt{2}$ is folded in half, the result is a sheet half as large but with *the same proportions*. Standard paper sizes based on this principle have been in use in Germany since the early 1920s. The basis of the system is the A0 sheet, which has an area of 1 m². Yet precisely because it is *reciprocal with nothing but itself*, the ISO page is, in isolation, the least musical of all the major page shapes. It needs a textblock of another shape for contrast.

we come to an accurate approximation of the number φ. Thus $5 : 8 = 1 : 1.6$; $8 : 13 = 1 : 1.625$; $13 : 21 = 1 : 1.615$; $21 : 34 = 1 : 1.619$, and so on.

In the world of pure mathematics, this spiral of increase, the Fibonacci series, proceeds without end. In the world of mortal living things, of course, the spiral soon breaks off. It is repeatedly interrupted by death and other practical considerations – but it is visible nevertheless in the short term. Abbreviated versions of the Fibonacci series, and the proportion $1 : φ$, can be seen in the structure of pineapples, pinecones, sunflowers, sea urchins, snails, the chambered nautilus, and in the proportions of the human body as well.

If we convert the ratio $1 : φ$ or $1 : 1.61803$ to percentages, the smaller part is roughly 38.2% and the larger 61.8% of the whole. But we will find the exact proportions of the golden section in several simple geometric figures. These include the pentagon, where they are relatively obvious, and the square, where they are somewhat more deeply concealed.

The golden section was much admired by classical Greek geometers and architects, and by Renaissance mathematicians, architects and scribes, who often used it in their work. It has also been much admired by artists and craftsmen, including typographers, in the modern age. Paperback books in the Penguin Classics series have been manufactured for more than half a century to the standard size of 111×180 mm, which embodies the golden section. The Modulor system of the Swiss architect Le Corbusier is based on the golden section as well.

If type sizes are chosen according to the golden section, the result is again a Fibonacci series:

(a) $5 \cdot 8 \cdot 13 \cdot 21 \cdot 34 \cdot 55 \cdot 89$ …

These sizes alone are adequate for many typographic tasks. But to create a more versatile scale of sizes, a second or third interlocking series can be added. The possibilities include:

(b) $6 \cdot 10 \cdot 16 \cdot 26 \cdot 42 \cdot 68 \cdot 110$ …
(c) $4 \cdot 7 \cdot 11 \cdot 18 \cdot 29 \cdot 47 \cdot 76$ …

All three of these series – a, b and c – obey the Fibonacci rule (each term is the sum of the two terms preceding). Series b is also related to series a by simple doubling. The combination

Shaping the Page

The golden section, $1 : φ$, differs by roughly one per cent from the interval of the minor sixth in the chromatic scale. The proportion $5 : 8$, which is the arithmetic value of the minor sixth in music, is often used in typography as a rough approximation to the golden section.

The Golden Section

The screened area represents a two-page spread in which each page embodies the golden section. The root of the spiral, which is the navel of the page, lies at the intersection of the diagonals. This is a Renaissance structure: precisely measured and formed, yet open-ended, unconfined. Like Thoreau's vision of the mind (page 66), it is *hypethral*. (Compare the equally elegant but closed, medieval structure on page 173 and the resolutely linear structure on page 154.)

G Golden Section, $1 : φ = 1 : 1.618....$ In the pentagon, the side s and the chord c embody the golden section. The smaller is to the larger as the larger is to the whole, or $s : c = c : (s + c)$. When two chords intersect, they divide each other in the same proportion: $a : b = b : c$, where $c = a + b$. Moreover, $b = s$. Thus, $a : s = s : c = c : (s + c) = 1 : φ$.

An evolving sequence of figures that embody the golden section also defines the path of a logarithmic spiral. And if the lengths of the sides of the figures are rounded off to the nearest whole numbers, the result is a Fibonacci series of integers.

Shaping the Page

of a and b is therefore a two-stranded Fibonacci series with in-cremental symmetry, forming a very versatile scale of type sizes:

(d) 6 · 8 · 10 · 13 · 16 · 21 · 26 · 34 · 42 · 55 · 68 …

The double-stranded Fibonacci series used by Le Corbusier (with other units of measurement) in his architectural work is similarly useful in typography:

The Golden Section

(e) 4   6½   10½   17   27½   44½   72   89 …
    5   8   13   21   34   55
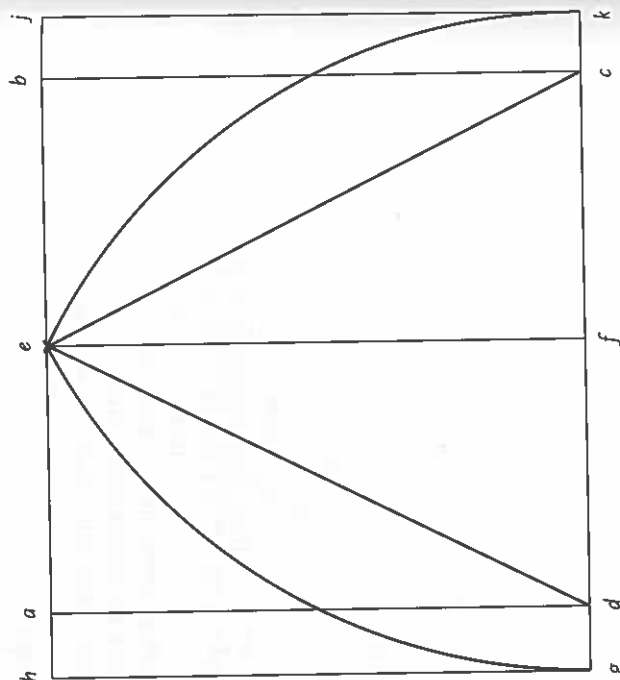
Finding the golden section in the square. Begin with the square *abcd*. Bisect the square (with the line *ef*) and draw diagonals (*ec* and *ed*) in each half. An isosceles triangle, *cde*, consisting of two right triangles, is formed. Extend the base of the square (draw the line *gk*) and project each of the diagonals (the hypotenuse of each of the right triangles) onto the extended base. Now *ce = cg*, and *de = dk*. Draw the new rectangle, *efgh*. This and its mirror image, *ejkf*, each have the proportions of the golden section. That is to say, $eh : gh = gh : (gh + eh) = ej : jk = jk : (jk + ej) = 1 : \varphi$. (Contrast this with figure Z₂ on page 153.)
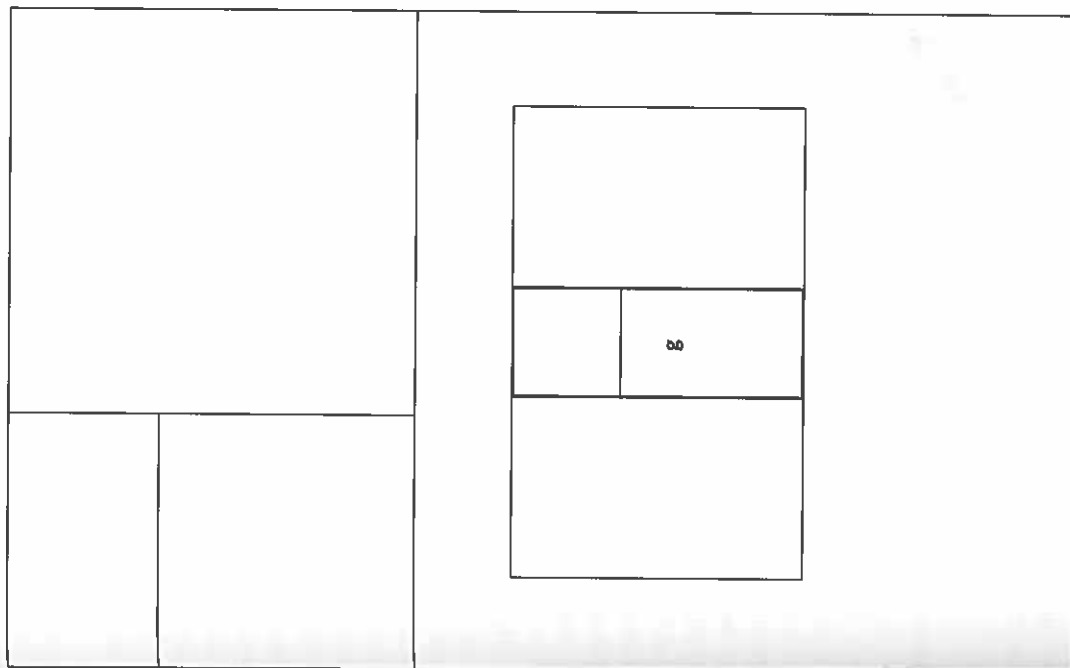
The relationship between the square and the golden section is perpetual. Each time a square is subtracted from a golden section, a new golden section remains. If two overlapping squares are formed within a golden-section rectangle, two smaller rectangles of golden-section proportions are created, along with a narrow column whose proportions are $1 : (\varphi + 1)$ = 1 : 2.618. This is g, the Extended Section, from the table on page 149. If a square is subtracted from this, the golden section is restored.

THIS PARAGRAPH, for example, is indented according to the golden section. The indent is to the remainder of the line as that remainder is to the full text measure. Here the measure is 21 picas, and the indent is 38.2% of that, which is 8 picas.

The amount of *sinkage* (the extra white space allowed at the top of the page) is 7 lines (here equal to 7 picas). Add the extra pica of white space created by the indent itself, and you have an imaginary 8-pica square of empty space in the upper left corner of the textblock.

The size of the elevated cap is related in turn to the size of the indent and the sinkage. Eight picas is 96 pt, and 61.8% of that is 59.3 pt. But the relationship between 59 or 60 pt type and an 8-pica indent would be difficult to perceive, because a 60 pt letter is not visibly 60 pt high. The initial used has an actual 60 pt cap height instead. Depending on the face, such a letter could be anywhere from 72 to 100 pt nominal size; here it is 84 pt Castellar.

8.3 PROPORTIONS OF THE EMPTY PAGE

8.3.1 *Choose inherently satisfying page proportions in preference to stock sizes or arbitrary shapes.*

The proportions of a page are like an interval in music. In a given context, some are consonant, others dissonant. Some are familiar; some are also inescapable, because of their presence in the structures of the natural as well as the man-made world. Some proportions also seem particularly linked to living things. It is true that wastage is often increased when an 8½ × 11 inch page is trimmed to 7¾ × 11 or 6¾ × 11, or when a 6 × 9 book page is narrowed to 5⅝ × 9. But an organic page looks and feels different from a mechanical page, and the shape of the page itself will provoke certain responses and expectations in the reader, independently of whatever text it contains.

The Golden Section

8.3.2 *Choose page proportions suited to the content, size and ambitions of the publication.*

There is no one ideal proportion, but some are clearly more ponderous, others more brittle. In general, a book page, like a human being, should not peer down its nose, nor should it sag. The narrower page shapes require a soft or open spine so that the opened book lies flat, and at smaller sizes, narrower pages are suitable only for text that can be set to a narrow measure. At larger sizes, the narrow page is more adaptable.

For ordinary books, consisting of simple text in a modest size, typographers and readers both gravitate to proportions ranging from the light, agile 5 : 9 [1 : 1.8] to the heavier and more stolid 4 : 5 [1 : 1.25]. Pages wider than $1 : \sqrt{2}$ are useful primarily in books that need the extra width for maps, tables, sidenotes or wide illustrations, and for books in which a multiple-column page is preferred.

When important illustrations are involved, these generally decide the shape of the page. Typically, one would choose a page somewhat deeper than the average illustration, both to leave extra blank space at the foot of the page, and to permit the insertion of captions. The e/π or turned hexagon page, 1 : 1.16, for example, which is slightly deeper than a perfect square, is useful for square artwork, such as photographs taken with a square-format camera. The π/e or broad hexagon page, 1 : 0.87, is useful for landscape photographs in the 4 × 5 format, and the full cross octagon page, 1 : 0.83, for landscape photos in the wider format of 35 mm. (Uncropped 35 mm transparencies embody the proportion 2 : 3.)

8.3.3 *Choose page and column proportions whose historical associations suit your intended design.*

Early Egyptian scribes (when not writing vertically) tended to write a long line and a wide column. This long Egyptian line reappears in other contexts over the centuries – on Roman imperial writing tablets, in medieval European charters and deeds, and in many poorly designed twentieth-century works of academic prose. It is a sign, generally speaking, that the emphasis is on the writing instead of the reading, and that writing is seen as an instrument of power, not an instrument of freedom.

Shaping the Page

Early Hebrew scribes generally favored a narrower column, and early Greek scribes a column narrower still. But they, like the Egyptians, were making scrolls instead of bound books. It is difficult, therefore, to compare modern notions of the page directly with theirs. You can open a scroll as wide as you like, exposing one column, two columns, three. This flexible approach to the concept of the page survives to some extent in early codices (bound books). There are early books that are three times taller than wide, others that are close to square, and many shapes between.

In medieval Europe, most books, though certainly not all, settled down to proportions ranging from 1 : 1.5 to 1 : 1.25. Paper – once the mills were built in Europe – was commonly made in sheets whose proportions were 2 : 3 [1 : 1.5] or 3 : 4 [1 : 1.33]. These proportions, which correspond to the acoustically perfect musical intervals of fifth and fourth, also reproduce one another with each fold. If a sheet is 40 × 60 cm [2 : 3] to start with, it folds to 30 × 40 [3 : 4], which folds to 20 × 30, and so on. The 25 × 38 inch [roughly 2 : 3] and 20 × 26 inch [roughly 3 : 4] press sheets used in North America today are survivors of this medieval tradition.

The page proportion $1 : \sqrt{2}$, which is now the European standard, was also known to the medieval scribes. And the tall half octagon page, 1 : 1.3 (the shape enshrined now in North American letter paper) has a similar pedigree. The British Museum has a Roman wax-tablet book of precisely this proportion, dated about AD 300.

Renaissance typographers continued to produce books in the proportions 1 : 1.5. They also developed an enthusiasm for narrower proportions. The proportions 1 : 1.87 (tall hexagon), 1 : 1.7 (tall pentagon), 1 : 1.67 [3 : 5], and of course 1 : 1.62, the golden section, were used by typographers in Venice before the end of the fifteenth century. The narrower page was preferred especially for works in the arts and sciences. Wider pages, better able to carry a double column, were preferred for legal and ecclesiastical texts. (Even now, a Bible, a volume of court reports or a manual on mortgages or wills is likely to be on a wider page than a book of poems or a novel.)

Renaissance page proportions (generally in the range of 1 : 1.4 to 1 : 2) survived through the Baroque, but Neoclassical books are often wider, returning to the heavier Roman proportion of 1 : 1.3.

8.4 THE TEXTBLOCK

8.4.1 *If the text is meant to invite continuous reading, set it in columns that are clearly taller than wide.*

Horizontal motion predominates in alphabetic writing, and for beginners, it predominates in reading. But vertical motion predominates in reading for those who have really acquired the skill. The tall column of type is a symbol of fluency, a sign that the typographer does not expect the reader to have to puzzle out the words.

The very long and very narrow columns of newspapers and magazines, however, have come to suggest disposable prose and quick, unthoughtful reading. A little more width not only gives the text more presence; it implies that it might be worth savoring, quoting and reading again.

8.4.2 *Shape the textblock so that it balances and contrasts with the shape of the overall page.*

The proportions that are useful for the shapes of pages are equally useful in shaping the textblock. This is not to say that the proportions of the textblock and the page should be the same. They often were the same in medieval books. In the Renaissance, many typographers preferred a more polyphonic page, in which the proportions of page and textblock differ. But it is pointless for them to differ unless, like intervals in music, they differ to a clear and purposeful degree.

For all the beauty of pure geometry, a perfectly square block of type on a perfectly square page with even margins all around is a form unlikely to encourage reading. Reading, like walking, involves navigation – and the square block of type on a square block of paper is short of basic landmarks and clues. To give the reader a sense of direction, and the page a sense of liveliness and poise, it is necessary to break this inexorable sameness and find a new balance of another kind. Some space must be narrow so that other space may be wide, and some space emptied so that other space may be filled.

In the simple format shown overleaf, a page whose proportions are 1 : 1.62 (the golden section) carries a textblock whose proportions are 1 : 1.8 [5 : 9]. This difference constitutes a primary visual chord which generates both energy and harmony in

8.5 MARGINS & SATELLITES

8.5.1 Bring the margins into the design.

In typography, margins must do three things. They must lock the textblock to the page and lock the facing pages to each other through the force of their proportions. Second, they must frame the textblock in a manner that suits its design. Third, they must protect the textblock, leaving it easy for the reader to see and convenient to handle. (That is, they must leave room for the reader's thumbs.) The third of these is easy, and the second is not difficult. The first is like choosing type: it is an endless opportunity for typographic play and a serious test of skill.

Perhaps fifty per cent of the character and integrity of a printed page lies in its letterforms. Much of the other fifty per cent resides in its margins.

8.5.2 Bring the design into the margins.

The boundaries of the textblock are rarely absolute. They are nibbled and punctured by paragraph indents, blank lines between sections, gutters between columns, and the sinkage of chapter openings. They are overrun by hanging numbers, outdented paragraphs or heads, marginal bullets, folios (page numbers) and often running heads, marginal notes and other typographic satellites. These features – whether recurrent, like folios, or unpredictable, like marginal notes and numbers – should be designed to give vitality to the page and further bind the page and the textblock.

8.5.3 Mark the reader's way.

Folios are useful in most documents longer than two pages. They can be anywhere on the page that is graphically pleasing and easy to find, but in practice this reduces to few possibilities: (1) at the head of the page, aligned with the outside edge of the textblock (a common place for folios accompanied by running heads); (2) at the foot of the page, aligned with or slightly indented from the outside edge of the text; (3) in the upper quarter of the outside margin, beyond the outside edge of the text; (4) at the foot of the page, horizontally centered beneath the textblock.

Shaping the Page

The Textblock

the page. It is supplemented by secondary harmonies created by the proportions of the margins and the placement of the textblock – not in the center of the page but high and toward the spine.

The textblock itself, in this example, is symmetrical, but it is placed asymmetrically on the page. The lefthand page is a mirror image of the right, but no mirror image runs the other way. The two-page spread is symmetrical horizontally – the direction in which the pages turn, either backward or forward, as the reader consults the book – but it is asymmetrical vertically – the direction in which the page stays put while the reader's eye repeatedly works its way in one direction: down.

This interlocking relationship of symmetry and asymmetry, and of balanced and contrasted shape and size, was not new when this example was designed (in Venice in 1501). The first European typographers inherited some two thousand years' worth of research into these principles from their predecessors, the scribes. Yet the principles are flexible enough that countless new typographic pages and page-spreads wait to be designed.
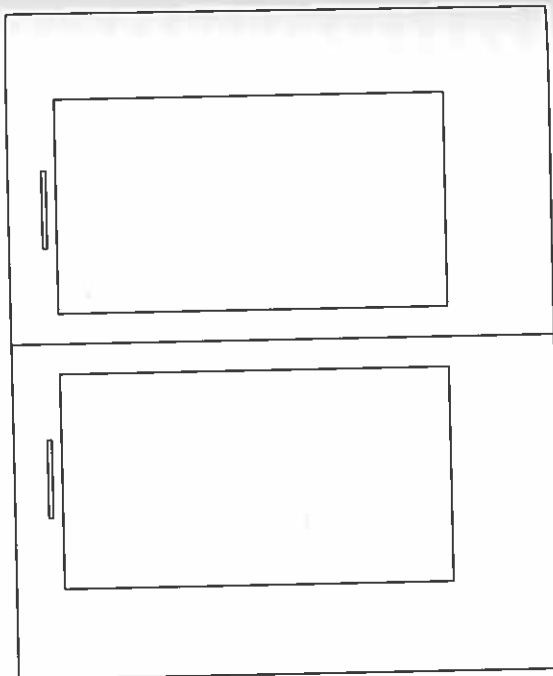
Page spread, probably by Francesco Griffo, Venice, 1501. The text is Virgil's *Aeneid*, set entirely in a crisp, simple italic lower case, 12/12 × 16, with roman small capitals, approximately 5 pt high. The original page size is 10.7 × 17.3 cm.

Standard grid for three-column magazine

Margins and Satellites

The fourth of these choices offers Neoclassical poise but is not the best for quick navigation. Folios near the upper or lower outside corner are the easiest to find by flipping pages in a small book. In large books and magazines, the bottom outside corner is generally more convenient for joint assaults by eye and thumb. Folios placed on the inner margin are rarely worth considering. They are invisible when needed and all too visible otherwise.

It is usual to set folios in the text size and to position them near the textblock. Unless they are very black, brightly colored or large, the folios usually drown when they get very far away from the text. Strengthened enough to survive on their own, they are likely to prove a distraction.

8.5.4 *Don't restate the obvious.*

In Bibles and other large works, running heads have been standard equipment for two thousand years. Photocopying machines, which can easily separate a chapter or a page from the rest of a book or journal, have also given running heads (and running feet, or footers) new importance.

Except as insurance against photocopying pirates, running heads are nevertheless pointless in many books and documents with a strong authorial voice or a unified subject. They remain essential in most anthologies and works of reference, large or small.

Like folios, running heads pose an interesting typographic problem. They are useless if the reader has to hunt for them, so they must somehow be distinguished from the text, yet they have no independent value and must not become a distraction. It has been a common typographic practice since 1501 to set them in spaced small caps of the text size, or if the budget permits, to print them in the text face in a second color.

8.6 PAGE GRIDS & MODULAR SCALES

8.6.1 *Use a modular scale if you need one to subdivide the page.*

Grids are often used in magazine design and in other situations where unpredictable graphic elements must be combined in a rapid and orderly way.

Modular scales serve much the same purpose as grids, but they are more flexible. A modular scale, like a musical scale, is a
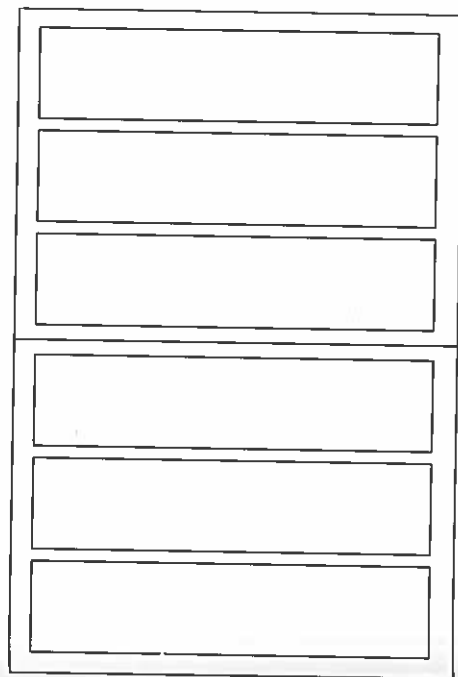
prearranged set of harmonious proportions. In essence, it is a measuring stick whose units are indivisible and not of uniform size. The traditional sequence of type sizes shown on page 45, for example, is a modular scale. The single- and double-stranded Fibonacci series discussed on pp 157–158 are modular scales as well. These scales can, in fact, be put directly to use in page design by altering the units from points to picas.

It is perfectly feasible to create a new modular scale for any project requiring one, and the scale can be founded on any convenient single or multiple proportion – a given page size, for example, or the dimensions of a set of illustrations, or something implicit in the subject matter. A work on astronomy might use a modular scale based on star charts or Bode's law of interplanetary distances. A book on Greek art might be laid out using intervals from one or more of the Greek musical scales or, of course, the golden section. A work of modernist literature might be designed using something more deliberately arcane – perhaps a scale based on the proportions of the author's hand. Generally speaking, a scale based on two ratios ($1 : \varphi$ and $1 : 2$, for example) will give more flexible and interesting results than a scale founded on just one.

The Half Pica Modular scale illustrated here is actually a miniaturized version of the architectural scale of Le Corbusier, which is based in turn on the proportions of the human body.

See Le Corbusier, *The Modulor* (2nd ed., Cambridge, Mass., 1954).

Shaping the Page

Page Grids and Modular Scales
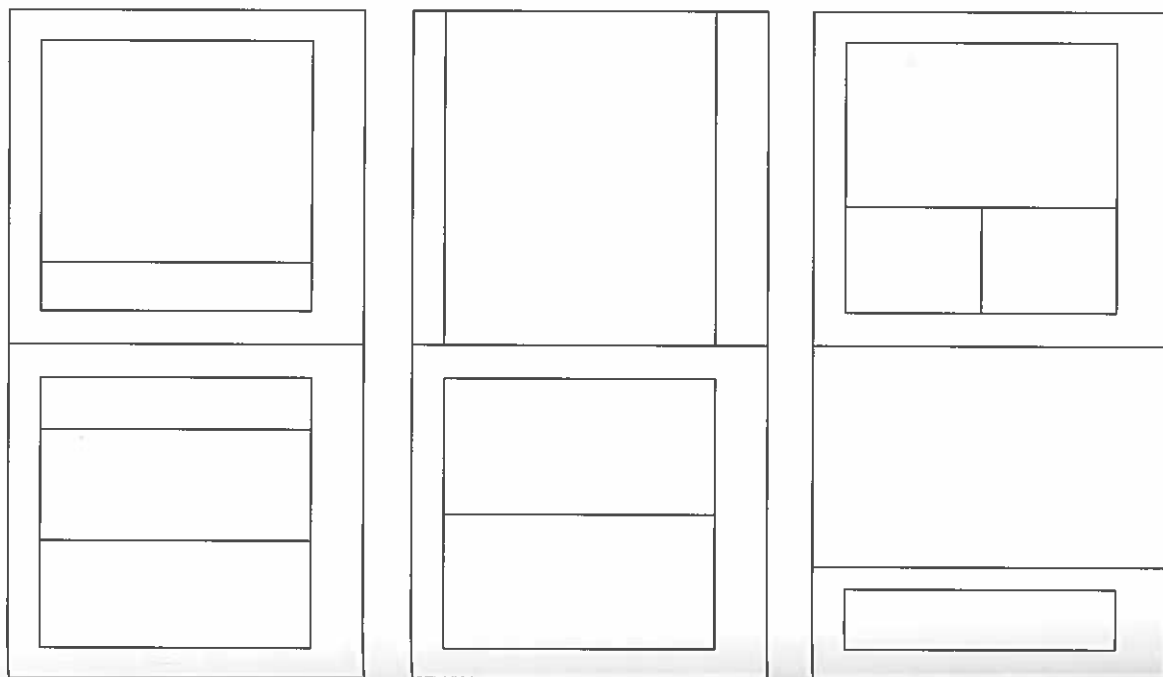
Use of the modular scale. These pages and textblocks have been subdivided using the Half Pica Modular scale. The pages are 52 × 55 picas (8⅝" × 9⅛"), with margins of 5, 5, 5 & 8 picas. The basic textblock is 42 picas square. Thousands of different subdivisions are possible. (For more complex examples on similar principles, see Le Corbusier, *The Modulor*.)

169
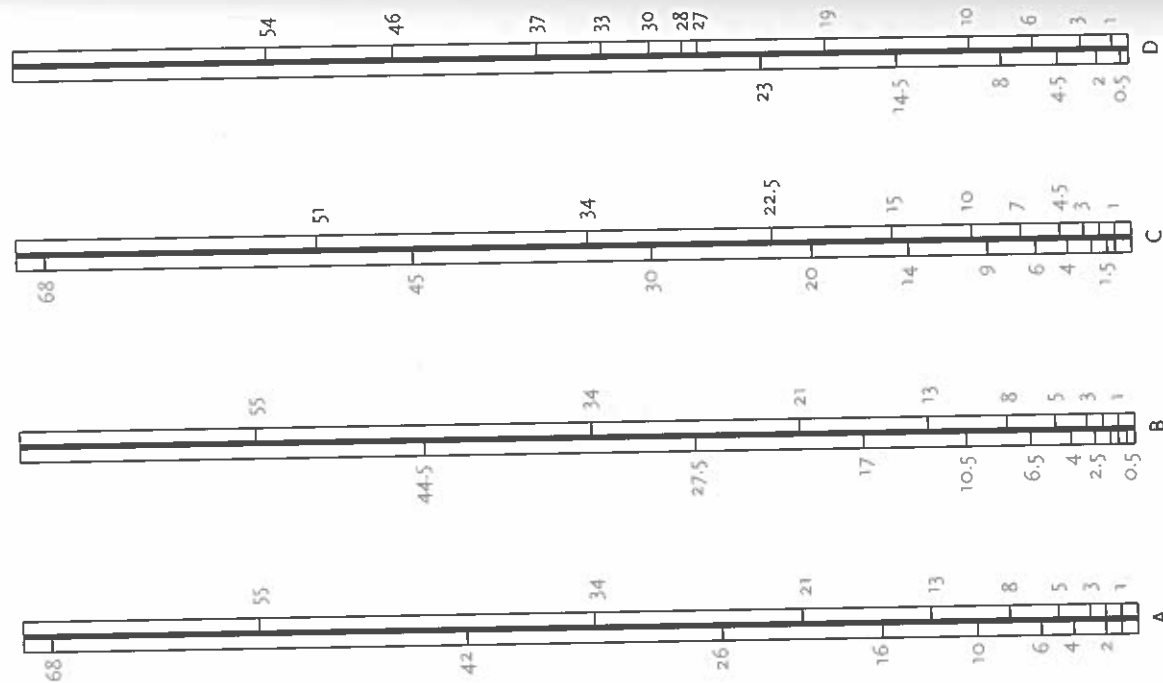
Four examples of modular pica sticks (shown at half actual size). A Whole Pica Modular scale. B Half Pica Modular scale. These are both two-stranded Fibonacci series, based on the ratios 1 : φ and 1 : 2. C Medieval Interval scale, based on the proportions 2 : 3 and 1 : 2. D Timaean Scale, a simplified version of the Pythagorean scale outlined in Plato's *Timaeus*.

168

A: 68, 55, 42, 34, 26, 21, 16, 13, 10, 8, 6, 5, 4, 3, 2, 1

B: 55, 44.5, 34, 27.5, 21, 17, 13, 10.5, 8, 6.5, 5, 4, 3, 2.5, 1, 0.5

C: 68, 51, 45, 34, 30, 22.5, 20, 15, 14, 10, 9, 7, 6, 4.5, 4, 3, 1.5, 1

D: 54, 46, 37, 33, 30, 28, 27, 23, 19, 14.5, 10, 8, 6, 4.5, 3, 2, 1, 0.5

Shaping the Page

P = variable; T = 1.75. Margins: $t = h/12$; $f = 1.5t$; $g = t/2$ or $t/3$. Text columns from Isaiah Scroll A, from Qumran Cave 1, on the Dead Sea. The column depth is 29 lines and the measure is 28 picas, giving a line length of roughly 40 characters. Elsewhere in the scroll, column widths range from 21.5 to 39 picas. Paragraphs begin on a new line but – in keeping with the crisp, square Hebrew characters – are not indented. (Palestine, perhaps first century BC.) Original size: 26 × 725 cm.

P = 1.5 [2 : 3]; T = 1.7 [tall pentagon]. Margins: $s = t = w/9$; $e = 2s$. The text is a fantasy novel, Francesco Colonna's *Hypnerotomachia Poliphili*, set in a roman font cut by Francesco Griffo. (Aldus Manutius, Venice, 1499.) Original size: 20.5 × 31 cm.

8.7 EXAMPLES

Examples

The formula for designing a perfect page is the same as the formula for writing one: start at the upper left hand corner and work your way across and down; then turn the page and try again. The examples on the following pages show only a few of the many kinds of typographic structures that might evolve along the way.

In fact, the weaving of the text and the tailoring of the page are thoroughly interdependent. We can discuss them one by one, and we can separate each in turn into a series of simple, unintimidating questions. But the answers to these questions must all, in the end, fold back into a single answer. The page, the pamphlet or the book must be seen as a whole if it is to look like one. If it appears to be only a series of individual solutions to separate typographic problems, who will believe that its message coheres?

In analyzing the examples on the following pages, these symbols are used:

Proportions: P = page proportion: h/w
                T = textblock proportion: d/m

Page size: w = width of page (trim-size)
                h = height of page (trim-size)

Textblock: m = measure (width of primary textblock)
                d = depth of primary textblock (excluding running heads, folios, etc)
                λ = line height (type size plus added lead)
                n = secondary measure (width of secondary column)
                c = column width, where there are even multiple columns

Margins: s = spine margin (back margin)
                t = top margin (head margin)
                e = fore-edge (front margin)
                f = foot margin
                g = internal gutter (on a multiple-column page)

Page and textblock proportions (P and T in the examples) are given here as single values (1.414, for example). To find the same values in the table on page 148, look up the corresponding ratio (1 : 1.414, for example).

Shaping the Page

P = T = 1.5 [2 : 3]. Margins: $s = w/9$; $t = h/9$; $e = 2s$; $f = 2t$. The margins are thus in the proportion $s : t : e : f = 2 : 3 : 4 : 6$. A sound, elegant and basic medieval structure, which will work for any proportion of page and textblock, so long as the two remain in unison. Spine and head margins may be ninths, tenths, twelfths or any other desired proportion of the page size. Twelfths, of course, give a fuller and more efficient page, with less white space. But if the page proportion is 2 : 3 and the spine and head margins are ninths, as shown here, the consonance of textblock and page is considerably deepened, because $d = w$, which is to say, the *depth* of the textblock matches the *width* of the page. Thus $m : w = d : h = w : h = m : d = s : t = e : f = 2 : 3$. Point a, where the half and full diagonals intersect, is one third of the way down and across the textblock and the page. Jan Tschichold, 1955, after Villard de Honnecourt, France, c. 1280. See Tschichold's *The Form of the Book* (1991).

FACING PAGE: P = 1.5 [2 : 3]; T = 2 [double square]. Margins: $s = e = w/5$; $t = s/2$. The text is a book of poems, set throughout in a chancery italic with roman capitals. The designer and publisher of this book was a master calligrapher, certainly aware of the tradition that the inner margins should be smaller than the outer. He followed that tradition himself with books of prose, but in this book of poems he chose to center the textblock on the page. The text throughout is set in one size. Titles are set in the capitals of the text font, letterspaced about 30%. There are no running heads or other diversions. (Giangiorgio Trissino, *Canzone*, Ludovico degli Arrighi, Rome, c. 1523.) Original size: 12.5 × 18.75 cm.

Scribes employing this format often designed their pages so that the line height was an even factor of the spine margin. If $\lambda = s/3$, the depth of the textblock will be 27 lines. If $\lambda = s/4$, the depth of the textblock will be 36 lines.

173

Examples

P = 1.62 [golden section]; T = 1.87 [tall hexagon]. Margins: $s = w/9$; $t = s$; $e = 2s$. Secondary column: $g = w/75$; $n = s$. The text is in Claude Garamond's 14 pt roman; the sidenotes are 12 pt italic. The gutter between main text and sidenotes is tiny: 6 or 7 pt against a main text measure of 33.5 picas. But the differences in size and face prevent any confusion. The text is a history of the Hundred Years' War. (Jean Froissart, *Histoire et chronique*, Jean de Tournes, Paris, 1559.) Original size: roughly 21 × 34 cm.

This grid is analyzed on the facing page.

172

$P = 1.414$ [$\sqrt{2}$]; $T = 1.62$ [φ, the golden section]. Margins: $s = t = w/9$ and $e = f = 2s$. This is a simple format for placing a golden-section textblock on an ISO page, locking the two together with margins in the proportions 1 : 2. Two possible locations for folios are shown: in the upper outside margin and (as an alternative) underneath the lower outside corner of the textblock. There is also ample room for sidenotes in the fore-edge if required. If the spine and top margins on these pages are increased to $w/8$, while the textblock and page are held at their original proportion, the relationship of the margins becomes $e = f = \varphi s$, another golden section.

FACING PAGE: $P = 1.1$; $T = 0.91$; $c = w/14$; $e = 2s$; $t = 3s$; $f = 3s/2$; $g = m/20$. Margins: $s = w/14$; $e = 2s$; $c = w/6$. The proportions of the textblock are the *reciprocal of the proportions of the page*: $0.91 = 1/1.1$, which is to say that the textblock is the same shape as the page, rotated 90°. But if the gutters are removed from the textblock and the four columns closed up solid, the textblock collapses to the same shape *in the same orientation* as the page. In other words, the textblock has been expanded from the same shape to the reciprocal shape of the page *entirely by the addition of white space*. The text is the Greek Bible, lettered in uncials, about 13 characters per line. There are no spaces between the words, but there is some punctuation, and the text has a slight rag, with line breaks carefully chosen. This subtle piece of craftsmanship was produced in Egypt in the fourth century. It is the Codex Sinaiticus, Add. Ms. 43725, at the British Library, London. Original size: 34.5 × 38 cm.

Examples

$P = 1.5$ [2 : 3]; $T = 1.54$ [pentagon textblock]. Margins: $s = w/20$; $t = s = h/30$; $e = w/15 = 4s/3$; $f = 2t$. This is the format used for the index to the fifth edition of the *Times Atlas of the World* (London, 1975). The page is a standard medieval shape. The text is set in 5.5 pt Univers leaded 0.1 pt on a 12-pica measure, in five subdivided columns per page. Columns are separated by thin vertical rules. Keywords and folios, at the top of the page, are in 16 pt Univers semibold. (Because of their prominence, these running heads are included here in calculating the size and shape of the textblock.) The text is 204 lines deep, yielding an average of 1000 names per page for 217 pages. This index is a masterpiece of its kind: a potent typographic symbol, an efficient work of reference, and a comfortable text to browse. Original size: 30 × 45 cm.

This grid is analyzed on the facing page.

Shaping the Page

8.8 IMPROVISATIONS & ADJUSTMENTS

8.8.1 *Improvise, calculate, and improvise some more.*

Numerical values – used by all typographers in their daily work – give an impression of exactness. Careful measurement and accurate calculation are indeed important in typography, but they are not its final purpose, and moments arise in every project when exactness bumps its head against approximation. On the mechanical side, paper expands and contracts, and printing presses, folding machines and trimming knives – not to speak of typesetting hardware and software – all have their margins of error. The typographer can rarely profit from these variations and cannot entirely prevent them. On the planning side, however, imprecision can often be put to better use.

Some typographers prefer to design by arithmetic from the outset, in a space composed of little invisible bricks called points and picas. Others prefer to work in the free two-dimensional space of a sketchpad, converting their layouts afterward to typographic measure. Most work involves a combination of these methods, with occasional collisions between the two. But the margins of inexactness that crop up in the rounding of units, in conflicts between optical and arithmetic spacing and centering, in combining proportions, and in translating from one form of measurement to another should be welcomed as opportunities, not as inconsistencies to be ignored, glossed over or begrudged. The equal temperament of the typesetting machine and the just intonation of the sketchpad should be used to test and refine one another until the final answer sings.

8.8.2 *Adjust the type and the spaces within the textblock using typographic increments, but rely on free proportions to adjust the empty space.*

Proportions are more flexible than picas, and it is usually convenient and appealing to work in even units. A margin of 5·32 picas, for example, begs to be altered to 5 or 5¼ or 5½. But picas per se are less important than proportions, and the system of typographic sizes and units serves the interrelations of letterforms better than it serves the interrelations of empty space. As a general rule, it is better to make incremental jumps in the textblock first and to readjust the margins thereafter – paying

Examples
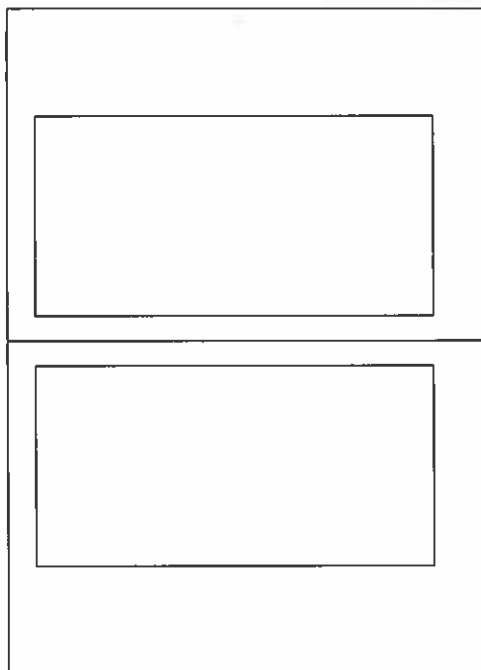
P = 1.414 [√2]; T = 2 [double square]. Margins: $s = w/12$; $f = 2t = h/9$; $e = w/3$. The wide fore-edge of this manuscript book had a purpose: it was deliberately left free for sidenotes to be added by the owner. The text is a sequence of short poems by the Roman poet Horace, written in Caroline minuscule. (Ms. Plut. 34.1, Laurentian Library, Florence; tenth century.)

P = 1.176 [truncated pentagon page]; T = 1.46. Margins: $s = h/11$; $t = 5s/6$; $e = 5s/2$; $f = 3s/2$. Columns: $c = 3w/10$; $g = s/4$. The text (set in Friedrich Poppl's Pontifex, 11/13 × 17 RR) is a series of essays on twentieth-century art, published in Canada in 1983, with many full-page illustrations. Original size: 24 × 28 cm.

176

177

more attention in the latter case to absolute proportion than to convenient units of measurement. When space is measured purely in points, the temptation to rearrange it into even picas is miraculously lessened.

8.8.3　*Keep the page design supple enough to provide a livable home for the text.*

Architects build perfectly proportioned kitchens, living rooms and bedrooms in which their clients will make, among other things, a mess. Typographers likewise build perfectly proportioned pages, then distort them on demand. The text takes precedence over the purity of the design, and the typographic texture of the text takes precedence over the absolute proportions of the individual page.

If, for instance, three lines remain at the end of a chapter, looking forlorn on a page of their own, the design must flex to accommodate them. The obvious choices are: (1) running two of the previous spreads a line long (that is, adding one line to the depth of two pairs of facing pages), which will leave the final page one line short; (2) running half a dozen of the previous spreads a line short, thereby bumping a dozen lines along to the final page; or (3) reproportioning some non-textual element – perhaps an illustration or the sinkage, if any, at the head of the chapter.

Spacious chapter heads stand out in a book, as they are meant to. Reproportioning the sinkage is therefore a poor option unless all chapter heads can be reproportioned to match. And running six spreads short is, on the face of it, clearly a greater evil than running two spreads long.

If there are only a few pages to the document, the whole thing can, and probably should, be redesigned to fit the text. But in a book of many pages, widow lines, orphaned subheads, and the runt ends of chapters or sections are certain to require reproportioning some spreads. A rigid design that demands an invariant page depth is therefore inappropriate for a work of any length. Altering the leading on short pages to preserve a standard depth (vertical justification, as it is sometimes called) is not a solution. Neither is stuffing extra space between the paragraphs. These antics destroy the fabric of the text and thus strike at the heart of the book.

THE STATE OF THE ART

The state of the art has more by far to do with the knowledge and skill of its practitioners than with the subtleties of their tools, but tools can constrain that skill or set it free. The limitations of the tools are therefore also of some interest. They are of special interest now, because they are subject to rapid change.

9.1　THE SIXTY THOUSAND CHARACTER ALPHABET

It is often said that the Latin alphabet consists of 26 letters, the Greek of 24 and the Arabic of 28. If you confine yourself to one case only, a narrow historical window and the dialect in power, this abstraction can come true. If you include both caps and lower case, accented letters and continental consonants and vowels – á à â ä ã å ā ă æ ç ć ĉ ċ đ ð é î ñ and all the rest – the Latin alphabet is not 26 letters long after all; it is at least 260 and able to increase at any time. The alphabet that classicists now use for classical Greek, with its long parade of vowels and diacritics – ἀ ἁ ἄ ἂ ᾆ ᾇ ᾳ ᾴ ᾷ, and so on – is modest by comparison: no more than 200 glyphs altogether.

To the 260-character European alphabet, mathematicians, grammarians, chemists and even typographers are prone to make additions: arabic numerals, punctuation, technical symbols, letters borrowed from Hebrew and Greek, and, where the letterforms require or invite them, a few typographic ligatures and alternates as well. There is no hope at this stage of counting the number of sorts or glyphs precisely, but it is easy to hit 300, and not hard to hit 500.

At the end of the eighteenth century, an English-speaking hand compositor's standard lower case had 54 compartments, holding roman or italic a to z, arabic numerals, basic ligatures, spaces and punctuation. The upper case had another 98, containing caps and analphabetics. That total, $98 + 54 = 152$, is the English-speaking hand compositor's minimum basic allotment. When more sorts are required, as they very often are, supplementary cases are used. Two pair give 304 compartments; three pair give 456; four pair give 608. This has been the ordinary typographic ballpark for some time. How Gutenberg's cases were arranged we do not know, but we know how big they were. He

" Paragraphs on Conceptual Art "
Sol Lewitt

The editor has written me that he is in favor of avoiding "the notion that the artist is a kind of ape that has to be explained by the civilized critic". This should be good news to both artists and apes. With this assurance I hope to justify his confidence. To use a baseball metaphor (one artist wanted to hit the ball out of the park, another to stay loose at the plate and hit the ball where it was pitched), I am grateful for the opportunity to strike out for myself.

I will refer to the kind of art in which I am involved as conceptual art. In conceptual art the idea or concept is the most important aspect of the work. When an artist uses a conceptual form of art, it means that all of the planning and decisions are made beforehand and the execution is a perfunctory affair. The idea becomes a machine that makes the art. This kind of art is not theoretical or illustrative of theories; it is intuitive, it is involved with all types of mental processes and it is purposeless. It is usually free from the dependence on the skill of the artist as a craftsman. It is the objective of the artist who is concerned with conceptual art to make his work mentally interesting to the spectator, and therefore usually he would want it to become emotionally dry. There is no reason to suppose, however, that the conceptual artist is out to bore the viewer. It is only the expectation of an emotional kick, to which one conditioned to expressionist art is accustomed, that would deter the viewer from perceiving this art.

Conceptual art is not necessarily logical. The logic of a piece or series of pieces is a device that is used at times, only to be ruined. Logic may be used to camouflage the real intent of the artist, to lull the viewer into the belief that he understands the work, or to infer a paradoxical situation (such as logic vs. illogic). Some ideas are logical in conception and illogical perceptually. The ideas need not be complex. Most ideas that are successful are ludicrously simple. Successful ideas generally have the appearance of simplicity because they seem inevitable. In terms of ideas the artist is free even to surprise himself. Ideas are discovered by intuition. What the work of art looks like isn't too important. It has to look like something if it has physical form. No matter what form it may finally have it must begin with an idea. It is the process of conception and realization with which the artist is concerned. Once given physical reality by the artist the work is open to the perception of al, including the artist. (I use the word perception to mean the apprehension of the sense data, the objective understanding of the idea, and simultaneously a subjective interpretation of both). The work of art can be perceived only after it is completed.

Art that is meant for the sensation of the eye primarily would be called perceptual rather than conceptual. This would include most optical, kinetic, light, and color art.

Since the function of conception and perception are contradictory (one pre-, the other postfact) the artist would mitigate his idea by applying subjective judgment to it. If the artist wishes to explore his idea thoroughly, then arbitrary or chance decisions would be kept to a minimum, while caprice, taste and others whimsies would be eliminated from the making of

the art. The work does not necessarily have to be rejected if it does not look well. Sometimes what is initially thought to be awkward will eventually be visually pleasing.

To work with a plan that is preset is one way of avoiding subjectivity. It also obviates the necessity of designing each work in turn. The plan would design the work. Some plans would require millions of variations, and some a limited number, but both are finite. Other plans imply infinity. In each case, however, the artist would select the basic form and rules that would govern the solution of the problem. After that the fewer decisions made in the course of completing the work, the better. This eliminates the arbitrary, the capricious, and the subjective as much as possible. This is the reason for using this method.

When an artist uses a multiple modular method he usually chooses a simple and readily available form. The form itself is of very limited importance; it becomes the grammar for the total work. In fact, it is best that the basic unit be deliberately uninteresting so that it may more easily become an intrinsic part of the entire work. Using complex basic forms only disrupts the unity of the whole. Using a simple form repeatedly narrows the field of the work and concentrates the intensity to the arrangement of the form. This arrangement becomes the end while the form becomes the means.

Conceptual art doesn't really have much to do with mathematics, philosophy, or nay other mental discipline. The mathematics used by most artists is simple arithmetic or simple number systems. The philosophy of the work is implicit in the work and it is not an illustration of any system of philosophy.

It doesn't really matter if the viewer understands the concepts of the artist by seeing the art. Once it is out of his hand the artist has no control over the way a viewer will perceive the work. Different people will understand the same thing in a different way.

Recently there has been much written about minimal art, but I have not discovered anyone who admits to doing this kind of thing. There are other art forms around called primary structures, reductive, rejective, cool, and mini-art. No artist I know will own up to any of these either. Therefore I conclude that it is part of a secret language that art critics use when communicating with each other through the medium of art magazines. Mini-art is best because it reminds one of miniskirts and long-legged girls. It must refer to very small works of art. This is a very good idea. Perhaps "mini-art" shows could be sent around the country in matchboxes. Or maybe the mini-artist is a very small person, say under five feet tall. If so, much good work will be found in the primary schools (primary school primary structures).

If the artist carries through his idea and makes it into visible form, then all the steps in the process are of importance. The idea itself, even if not made visual, is as much a work of art as any finished product. All intervening steps –scribbles, sketches, drawings, failed works, models, studies, thoughts, conversations– are of interest. Those that show the thought process of the artist are sometimes more interesting than the final product.

Determining what size a piece should be is difficult. If an idea requires three dimensions then it would seem any size would do. The question would be what size is best. If the thing were made gigantic then the size alone would be impressive and the idea may be lost entirely. Again, if it is too small, it may become inconsequential. The height of the viewer may have some bearing on the work and also the size of the space into which it will be placed. The artist may wish to place objects higher than the eye level of the viewer, or lower. I think the piece must be large enough to give the viewer whatever information he needs to understand the

work and placed in such a way that will facilitate this understanding. (Unless the idea is of impediment and requires difficulty of vision or access).

Space can be thought of as the cubic area occupied by a three-dimensional volume. Any volume would occupy space. It is air and cannot be seen. It is the interval between things that can be measured. The intervals and measurements can be important to a work of art. If certain distances are important they will be made obvious in the piece. If space is relatively unimportant it can be regularized and made equal (things placed equal distances apart) to mitigate any interest in interval. Regular space might also become a metric time element, a kind of regular beat or pulse. When the interval is kept regular whatever is ireregular gains more importance.

Architecture and three-dimensional art are of completely opposite natures. The former is concerned with making an area with a specific function. Architecture, whether it is a work of art or not, must be utilitarian or else fail completely. Art is not utilitarian. When three-dimensional art starts to take on some of the characteristics, such as forming utilitarian areas, it weakens its function as art. When the viewer is dwarfed by the larger size of a piece this domination emphasizes the physical and emotive power of the form at the expense of losing the idea of the piece.

New materials are one of the great afflictions of contemporary art. Some artists confuse new materials with new ideas. There is nothing worse than seeing art that wallows in gaudy baubles. By and large most artists who are attracted to these materials are the ones who lack the stringency of mind that would enable them to use the materials well. It takes a good artist to use new materials and make them into a work of art. The danger is, I think, in making the physicality of the materials so important that it becomes the idea of the work (another kind of expressionism).

Three-dimensional art of any kind is a physical fact. The physicality is its most obvious and expressive content. Conceptual art is made to engage the mind of the viewer rather than his eye or emotions. The physicality of a three-dimensional object then becomes a contradiction to its non-emotive intent. Color, surface, texture, and shape only emphasize the physical aspects of the work. Anything that calls attention to and interests the viewer in this physicality is a deterrent to our understanding of the idea and is used as an expressive device. The conceptual artist would want o ameliorate this emphasis on materiality as much as possible or to use it in a paradoxical way (to convert it into an idea). This kind of art, then, should be stated with the greatest economy of means. Any idea that is better stated in two dimensions should not be in three dimensions. Ideas may also be stated with numbers, photographs, or words or any way the artist chooses, the form being unimportant.

These paragraphs are not intended as categorical imperatives, but the ideas stated are as close as possible to my thinking at this time. These ideas are the result of my work as an artist and are subject to change as my experience changes. I have tried to state them with as much clarity as possible. If the statements I make are unclear it may mean the thinking is unclear. Even while writing these ideas there seemed to be obvious inconsistencies (which I have tried to correct, but others will probably slip by). I do not advocate a conceptual form of art for all artists. I have found that it has worked well for me while other ways have not. It is one way of making art; other ways suit other artists. Nor do I think all conceptual art merits the viewer's attention. Conceptual art is good only when the idea is good.

Sentences on Conceptual Art

1. Conceptual artists are mystics rather than rationalists. They leap to conclusions that logic cannot reach.

2. Rational judgements repeat rational judgements.

3. Irrational judgements lead to new experience.

4. Formal art is essentially rational.

5. Irrational thoughts should be followed absolutely and logically.

6. If the artist changes his mind midway through the execution of the piece he compromises the result and repeats past results.

7. The artist's will is secondary to the process he initiates from idea to completion. His wilfulness may only be ego.

8. When words such as painting and sculpture are used, they connote a whole tradition and imply a consequent acceptance of this tradition, thus placing limitations on the artist who would be reluctant to make art that goes beyond the limitations.

9. The concept and idea are different. The former implies a general direction while the latter is the component. Ideas implement the concept.

10. Ideas can be works of art; they are in a chain of development that may eventually find some form. All ideas need not be made physical.

11. Ideas do not necessarily proceed in logical order. They may set one off in unexpected directions, but an idea must necessarily be completed in the mind before the next one is formed.

12. For each work of art that becomes physical there are many variations that do not.

13. A work of art may be understood as a conductor from the artist's mind to the viewer's. But it may never reach the viewer, or it may never leave the artist's mind.

14. The words of one artist to another may induce an idea chain, if they share the same concept.

15. Since no form is intrinsically superior to another, the artist may use any form, from an expression of words (written or spoken) to physical reality, equally.

16. If words are used, and they proceed from ideas about art, then they are art and not literature; numbers are not mathematics.

17. All ideas are art if they are concerned with art and fall within the conventions of art.

18. One usually understands the art of the past by applying the convention of the present, thus misunderstanding the art of the past.

19. The conventions of art are altered by works of art.

20. Successful art changes our understanding of the conventions by altering our perceptions.

21. Perception of ideas leads to new ideas.

22. The artist cannot imagine his art, and cannot perceive it until it is complete.

23. The artist may misperceive (understand it differently from the artist) a work of art but still be set off in his own chain of thought by that misconstrual.

24. Perception is subjective.

25. The artist may not necessarily understand his own art. His perception is neither better nor worse than that of others.

26. An artist may perceive the art of others better than his own.

27. The concept of a work of art may involve the matter of the piece or the process in which it is made.

28. Once the idea of the piece is established in the artist's mind and the final form is decided, the process is carried out blindly. There are many side effects that the artist cannot imagine. These may be used as ideas for new works.

29. The process is mechanical and should not be tampered with. It should run its course.

30. There are many elements involved in a work of art. The most important are the most obvious.

31. If an artist uses the same form in a group of works, and changes the material, one would assume the artist's concept involved the material.

32. Banal ideas cannot be rescued by beautiful execution.

33. It is difficult to bungle a good idea.

34. When an artist learns his craft too well he makes slick art.

35. These sentences comment on art, but are not art.

First published in 0-9 (New York), 1969, and Art-Language (England), May 1969.

Architectures Typographiques

TYPO GRAP HIC

Typographic Architectures

Wim Crouwel

ARCH ITECT URES

Catherine de Smet, Emmanuel Bérard

TYPO GRAPH IQUES

Catherine de Smet

Atomes

Un musée imaginaire en noir et blanc : quatre-vingt-seize images d'un format carré identique, juxtaposées et réparties en quatre séries successives. L'ensemble accompagne « La typographie à l'ère de l'ordinateur », article publié par Wim Crouwel en 1970, dont l'illustration, soigneusement conçue par l'auteur, expose avec éloquence la problématique soulevée[1]. Structures atomiques, architecture moderne modulaire, Op art, images électroniques et témoignages de la conquête spatiale côtoient lettres, mots et alphabets [fig. 1]. Quelques planches extraites du *Traité de la Divine Proportion* de Luca Pacioli, montrant le processus d'élaboration des caractères à partir de figures géométriques, mettent en évidence le modèle constructif qui prévaut depuis les débuts de l'imprimerie dans la conception typographique[2]. Crouwel souligne cet invariant et insiste, à travers la diversité des domaines auxquels renvoie ce mélange iconographique, sur l'universalité de certains principes (ce que vient confirmer la reproduction du dessin de l'homme vitruvien de Léonard de Vinci). L'infiniment grand y côtoie l'infiniment petit, sans que l'on puisse souvent distinguer à quelle échelle il conviendrait de se représenter mentalement ce qui est montré : on ne sait si telle théorie de parallélépipèdes dentés disposés perpendiculairement les uns par rapport aux autres est une quelconque cité d'habitation, fleuron du patrimoine moderne vu d'avion, ou le contenu d'une boîte de Lego ingénieusement étalé sur le tapis du salon.

« L'ordinateur se compose d'un assemblage de cellules […] qui ressemble fort à la composition des organismes vivants et à la structure de notre société tout entière, [et qui] pourrait servir de points de départ au développement de nombreux caractères[3] », nous dit Crouwel, pointant par ailleurs l'anachronisme qui menace la forme de l'écriture. Celle-ci devrait en effet refléter l'état de l'art et de la science de l'époque, et l'élégance classique des empattements, des pleins et déliés d'un A ou d'un R du XVIe siècle s'accorde mal à l'environnement contemporain. C'est ce que démontre la partie visuelle de l'article, à l'aide de confrontations qui rendent flagrant ce décalage stylistique et révèlent à l'inverse d'heureuses parentés. Ainsi les fines lignes droites du New Alphabet [p. 3-22 / p. 56-63] dessiné par Crouwel entre 1964 et 1967, l'épais lettrage de son affiche de 1968 « Vormgevers » [fig. 2] (qui apparaît indissociable de la grille dont il est issu), mais encore le fruit, toujours sans la moindre courbe, des recherches des deux Anglais Timothy Epps et Christopher Evans[4], apparaissent en pleine harmonie avec l'ambiance technologique qui domine la sélection proposée. Harmonie fondée sur l'orthogonalité, l'usage de formes élémentaires et l'absence d'ornement.

Atoms

An imaginary museum in black and white: ninety-six images in an identical square format, juxtaposed and arranged in four successive series. They accompany "Type Design in the Computer Age," an article published by Wim Crouwel in 1970. The illustrations, carefully devised by the author, eloquently express the issue being addressed[1]. Atomic structures, modern modular architecture, Op art, electronic images, and pictures of the conquest of space are set beside letters, words, and typefaces [fig. 1].

A few plates from Luca Pacioli's *De Divina Proportione*, showing the process of elaborating letterforms from geometric figures, point up the constructive model that has prevailed in type design ever since the early days of printing[2]. Crouwel's imagistic mélange underscores this historical constant and stresses the universality of certain principles by evoking many different realms (as confirmed by the reproduction of Leonardo's drawing of the *Vitruvian Man*). Since the infinitely large is placed alongside the infinitely small, the reader is often unable to distinguish the scale on which the illustration should be mentally represented: we cannot tell whether a given system of notched parallepipeds set perpendicular to one another is a housing project (the pride of modern architecture) seen from an airplane or the contents of a box of Lego blithely spread across the living-room carpet.

"The memory of a computer is an assembly of cells… so similar to the composition of organisms and to the structure of the entire society that it might serve as the point of departure for the development of numerous typefaces", wrote Crouwel, also noting that current forms of writing were threatened with anachronism[3]. Letterforms should reflect the state of arts and sciences of the day, whereas the classic elegance of serifs, like the ascenders and descenders of a sixteenth-century A or R, are poorly suited to today's environment. That is what the visual part of the article demonstrated, thanks to juxtapositions that made this stylistic time-warp clear and, conversely, revealed other, felicitous relationships. Thus the thin, straight lines of the New Alphabet [p. 3-22 / p. 56-63] designed by Crouwel between 1964 and 1967, the thick lettering on his 1968 poster *Vormgevers* [fig. 2] (which appear indissociable from the grid it is derived from), and also the outcome of experiments – again, devoid of the least curve – by two Englishmen, Timothy Epps and Christopher Evans[4], all appear fully harmonious with the technological ambiance that dominated the proposed selection. This harmony was based on orthogonal axes, the use of elementary forms, and the absence of ornamentation.

Le Cosmonaute   33   Catherine de Smet

[fig. 1]
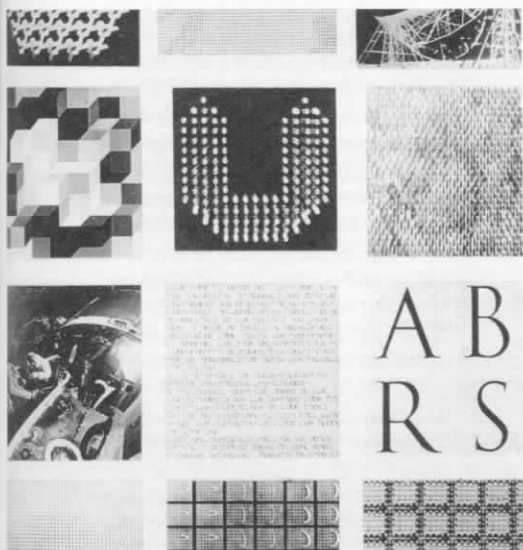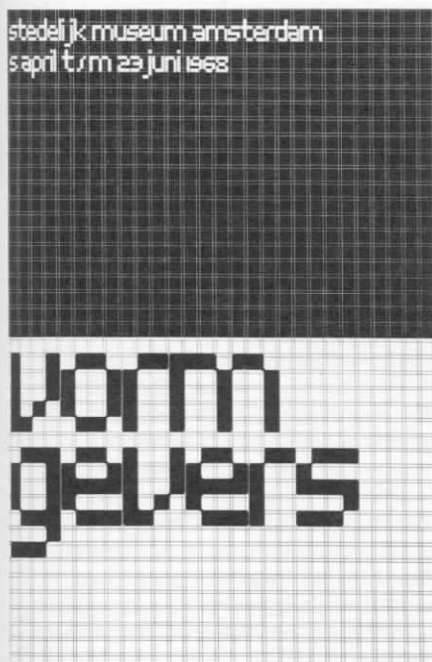
Univers(e)

Described thus, Crouwel's agenda recalled avant-garde precepts, and his assertion that "writing by hand is fortunately a vanishing skill" and that, "for true communicative purposes, its role is finished,"[5] seemed like an extension of Jan Tschichold's declarations regarding New Typography, namely that handwriting should be abandoned in favor of mechanical methods of composition[6]. Designed for cathode-tube ray display, Crouwel's New Alphabet was rightly described as typography's most recent attempt to establish a correlation between production technique and output[7]. That the shapes of his letterforms had nothing to do with any machine, and were the result of long hours spent over a sheet of paper during a period of several years, was not the least of the paradoxes[8].

Although based on values of functionalism and rational creativity, it was probably one of the specificities of his oeuvre to employ unexpected methods and to be constantly spurred by an experimental thrust, by a radical, inventive, and fanciful drive that dodged unequivocal definition whatever the sector concerned. Indeed, Crouwel practiced his trade in a wide-ranging fashion, beginning in the 1950s with exhibition design (which he never completely abandoned, and to which he has recently returned more regularly), then working as a graphic designer (both independently and as a founding partner of Total Design). Clearly expressed in the name its partners gave it, the ambition of the Total Design agency, founded in Amsterdam in 1963 on modernist principles, was to respond to *everything*, to provide solutions to all types of problems from the simplest to the most complex, in all kinds of contexts – corporate as well as cultural, private as well as public, in the Netherlands as well as abroad. Perfectly adapted to this desire for ubiquitous presence given its unlimited adaptability, the Univers typeface designed by Adrian Frutiger was therefore adopted by Total Design for its overall output[9].
Crouwel himself – whose Swiss friends had introduced him to Akzidenz Grotesk, which he had used as best he could, depending on the availability of fonts in the Dutch market – also opted for Univers. This typeface became a constant feature of his museum posters and catalogues, which represented a major aspect of his creative work over four decades, until he himself became director of the Boijmans van Beuningen Museum in Rotterdam in 1985, abandoning the job of graphic designer for the role of commissioning client.

Form

In Crouwel's museum work, typographic simplification was applied to the inner pages of publications and to secondary information on posters, whereas in both

[fig. 2]

Catherine de Smet

Univers

Énoncé de la sorte, ce programme rappelle les préceptes des avant-gardes, et l'assertion de Crouwel, selon laquelle « l'écriture manuscrite est un savoir qui, heureusement, tend à disparaître » et qui, « dans une vraie perspective communicationnelle », n'aurait plus aucun rôle à jouer[5], reconduit les déclarations de Tschichold à propos de la Nouvelle Typographie, recommandant d'abandonner « l'écriture à la main » au profit des moyens de composition mécaniques[6]. Conçu en vue de l'affichage cathodique, le New Alphabet a été très justement décrit comme la dernière tentative, dans le champ typographique, visant à établir une corrélation entre technique de production et résultat[7]. Que le tracé de ce caractère ne doive pourtant rien à une quelconque machine et soit l'aboutissement de longues heures passées par Crouwel au-dessus d'une feuille de papier, plusieurs années durant, n'est pas le moindre des paradoxes[8].

Sans doute est-ce l'une des particularités de cette œuvre, attachée aux valeurs du fonctionnalisme et de la création rationnelle, que de recourir à des moyens inattendus et d'être relancée sans cesse par une dynamique expérimentale, un désir de radicalité, une inventivité et une fantaisie qui la soustraient aux définitions univoques, et cela quel que soit le secteur concerné. Car Crouwel a exercé son activité de façon très large, débutant au cours des années 1950 par la scénographie d'exposition – qu'il ne quitta jamais tout à fait et à laquelle il revint de façon plus soutenue récemment –, puis travaillant comme graphiste, selon les périodes en indépendant ou en tant qu'associé fondateur de Total Design. Clairement exprimée dans le nom que lui choisirent ses protagonistes, l'ambition de cette agence, créée à Amsterdam en 1963 sur des bases héritées du modernisme, était de répondre à *tout*, d'apporter des solutions à tous les types de problèmes posés, du plus simple au plus complexe, dans tous les milieux – *corporate* aussi bien que culturel, privé aussi bien que public –, aux Pays-Bas aussi bien qu'à l'étranger. Parfaitement adapté à ce désir d'ubiquité, le caractère Univers dessiné par Adrian Frutiger fut adopté, en vertu de son adaptabilité sans limite, par Total Design pour l'ensemble de sa production[9]. Après avoir utilisé tant bien que mal, selon la disponibilité des polices sur le marché hollandais, l'Akzidenz Grotesk que lui avaient fait découvrir les Suisses, Crouwel opta donc pour l'Univers, qui devint une constante des affiches et catalogues réalisés pour les musées – part importante de sa création durant quatre décennies, jusqu'à ce qu'il devienne lui-même, en 1985, directeur du musée Boijmans van Beuningen de Rotterdam et abandonne la pratique du graphisme pour endosser dès lors le rôle du commanditaire.

34   **The Astronaut**

cases the actual title of an event would call for specific typographic creativity, all the more important in so far as no illustrations were used to evoke the content of exhibitions until the mid 1970s (with rare exceptions). In addition to the New Alphabet (which retained its original name) and the electric-typewriter letterforms initially commissioned by Olivetti (which became Gridnik)[10], during that period Crouwel designed three typefaces that were only released some twenty or thirty years later; in each case this release required further development of something originally designed for a strictly specific use. Thus Stedelijk was based on the *Vormgevers* poster, Fodor on covers for catalogues [p. 98-100] designed for the Museum Fodor from 1973 to 1977, and Catalogue on the typeface designed for the *Claes Oldenburg* [fig. 3] exhibition in 1970[11].

Several different aesthetics coexist within Crouwel's oeuvre, but it would be pointless to try to make each one coincide with the world of the specific artist featured in the posters and publications he designed. Indeed, despite Crouwel's constant attention to artists' work and to potential relations between their work and his graphic design of titles (relations that remain undecipherable to anyone ignorant of their genesis)[12], his style retained its own clear autonomy. What is noticeable is his acquaintance with several major trends of the latter half of the twentieth century, such as geometric abstraction, minimal art, and Pop art. The success of the emphatic Oldenburg typeface is due to Crouwel's special interest in the American artist's work and the larger context in which it emerged[13].

Used on the cover of the catalogue, the letterforms appeared twice: blue on white in the upper part, and then in relief, white on white, in the initials of the museum embossed in the lower part, offering a tactile version of their bulbous lines. Equally "Pop" were the green and blue hues and the comic-book balloon in the middle of the poster for *Lucht/Kunst*, the inflated pink and red letterforms for *Visuele Communicatie Nederland*, and the more compact ones for *Jaap Wagemaker* [p. 72, 74, 97]. Quite distinct from these curves, which might make it a graphic equivalent of minimal art, the rectilinear New Alphabet was designed for the setting of long strips of text with vertical as well as horizontal regularity, and to offer a reading experience based on an original visual composition. And should we seek further correlations, the liquid letterforms of *Henri Michaux* [fig. 4] and the airy ones of *Lucht/Kunst* which, indifferent to their original shapes, come together to form new, unexpected units, provide a good example of a transposition of *antiform* into the register of writing.

Le Cosmonaute   35   Catherine de Smet

Forme

La réduction typographique s'appliquait effectivement,
dans les réalisations de Crouwel pour les musées, aux
pages intérieures des publications et aux informations
secondaires des affiches, cependant le titre des
manifestations se prêtait dans les deux cas à une
création spécifique – d'autant plus décisive qu'aucune
illustration ne venait (jusqu'au milieu des années 1970
et à de rares exceptions près) évoquer le contenu des
expositions annoncées. Outre le New Alphabet, qui
conserva son nom, et le caractère pour machine à
écrire électrique initialement commandé par Olivetti[10],
qui devint le Gridnik, trois des alphabets dessinés alors
furent édités quelque vingt ou trente ans plus tard,
et cette adaptation exigea chaque fois de développer
ce qui n'avait été dessiné que pour un usage limité,
et strictement individuel. Ainsi le Stedelijk trouve sa
source dans l'affiche « Vormgevers », le Fodor dans
les couvertures des catalogues [p. 98-100] conçus
pour le musée éponyme de 1973 à 1977, et le
Catalogue reprend la typographie créée à l'occasion
d'une exposition Oldenburg [fig. 3] en 1970[11]. Si les
deux premiers, à l'instar du New Alphabet, imitent
l'apparition à l'écran et simulent les contraintes d'une
technologie alors incapable de traduire les arrondis
des lettres, en revanche le dernier cultive un effet
polochon qui le relie directement aux sculptures,
molles ou gonflables, de l'artiste.

Plusieurs esthétiques différentes cohabitent chez
Crouwel, mais il serait vain de chercher à faire
coïncider celles-ci avec l'univers des différents
créateurs concernés par les posters et publications
qu'il réalise. En effet, malgré l'attention toujours portée
à l'œuvre de chacun et les relations, au demeurant
souvent indéchiffrables si l'on en ignore la genèse,
établies entre celle-ci et la conception graphique des
titres[12], le style de Crouwel conserve une évidente
autonomie. On constate plutôt des accointances avec
quelques grands courants de la seconde moitié du
XXe siècle : art abstrait géométrique, art minimal ou
Pop art. C'est à l'intérêt particulier de Crouwel pour le
travail de l'Américain, et pour le contexte plus général
dans lequel celui-ci s'inscrivait, que l'empathique
alphabet Oldenburg[13] doit sa réussite.

Utilisé en couverture du catalogue, il apparaît deux
fois, bleu sur fond blanc dans la partie supérieure puis
en relief blanc sur blanc, à travers les initiales du
musée embossées dans la partie inférieure, traduction
tactile de ses lignes rebondies. Pop également, les
dégradés vert et bleu de l'affiche *Lucht/Kunst* et la
bulle façon BD qui en occupe le centre, les
pneumatiques lettres roses et rouges de « Visuele
communicatie Nederland » , ou celles, compactes,
de « Jaap Wagemaker » [p. 72, 74, 97]. À l'opposé
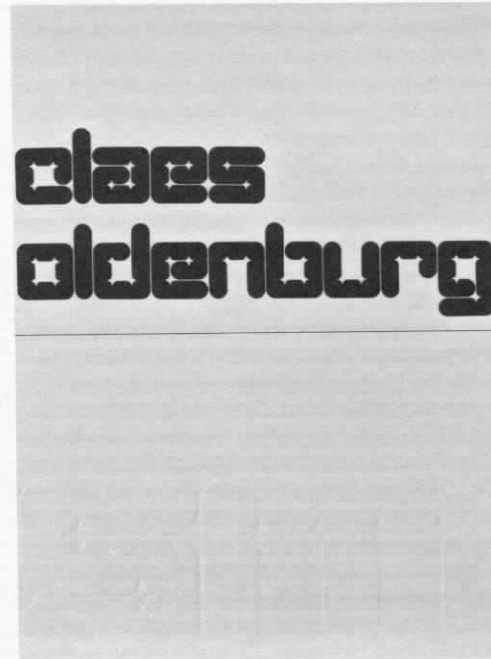
[fig. 3]

[fig. 4]

Catherine de Smet

de ces rondeurs, le rectiligne New Alphabet, conçu pour composer de longs bandeaux de texte aussi réguliers à la verticale qu'à l'horizontale, et proposer une expérience de lecture à partir d'une composition plastique inédite, pourrait faire figure d'équivalent graphique de l'art minimal. Et, s'il fallait trouver d'autres correspondances, les caractères liquides de *Henri Michaux* [fig. 4, p. 35] (ou ceux, gazeux, de *Lucht/Kunst*) qui, indifférents à leurs contours d'origine, se rejoignent pour former de nouvelles et improbables unités, fourniraient un bon exemple de transposition de l'*antiform* au registre de l'écriture.

[fig. 5]

Pointer de tels liens permet de souligner une connivence moins fréquente qu'on ne pourrait le croire entre les recherches d'un graphiste et celles des artistes du temps. Ce jeu des rapprochements ne permet pas cependant de rendre totalement justice à une démarche singulière, qui semble même contredire parfois le credo que son auteur lui-même avait pu énoncer, lorsqu'il précisait par exemple, à propos de la collaboration avec les musées, que « le designer doit prendre grand soin de ne pas projeter sa propre histoire ou sa propre image »[14] – ce qui oblige à respecter, ajoutait-il, un principe typographique peu propice à de riches variations. Or, que sont les posters et les couvertures de Crouwel, sinon de somptueuses variations, et la manifestation la plus criante de ses positions? Que celles-ci fussent du côté de l'abstraction et d'un refus de l'expressivité ne les rendait pas moins personnelles, et n'évitait pas le conflit avec l'œuvre de certains. Regardons l'affiche « Antonio Saura » [fig. 5] : deux couleurs et une superposition, à la fois simple et savante, le mot « SAURA », se découpant sur le fond plus clair constitué par son double à peine modifié (ASAUR). L'opposition avec le trait exubérant des tableaux figuratifs de l'artiste est frappante, et la lisibilité – que Crouwel déclarait prioritaire[15] – à telle point compromise qu'un autre « Saura », cette fois en linéale – fut placé au-dessus du titre.

Clarté

La mise en pages des catalogues répond sans doute de façon plus évidente aux principes du « bon design », efficace et soigné, que Crouwel avait retenus de l'enseignement des maîtres suisses. Régis par un système de collection assurant une unité de format, de caractère et d'organisation du contenu, les publications conçues pour le Van Abbe Museum de 1956 à 1963, puis pour le Stedelijk Museum dès le début des années 1960, ou pour le Museum Fodor au milieu des années 1970, se présentent comme des objets peu spectaculaires. Il s'agit de minces brochures réalisées avec des moyens modestes. Aux informations de base – biographie de l'artiste,

Le Cosmonaute

bibliographie, liste des œuvres exposées – s'ajoutent des images, généralement peu nombreuses, dont l'ordre de reproduction est défini selon des critères objectifs (le plus souvent chronologiques) et non en fonction de la quête d'un quelconque effet. Le détourage de certaines sculptures et, à l'occasion, leur mise en valeur dans l'espace d'une double page font figure, dans ce contexte d'austérité, de débauche visuelle. La sobriété générale n'exclut pas quelques particularités : des blocs de texte, dans *Tajiri* [p. 85-89], aux formes dictées par les bronzes de l'artiste ; parfois la présence chatoyante de pages intercalaires de papier cristal de couleur (jaune citron et brun pour *De Verzameling* [p. 84-85], jaune vif pour *Edgar Fernhout*, bleu pétrole pour *Brusselmans*) ; la première page d'*Arman* identique à la couverture (même couleur rouge, même grammage) ; l'impression de la totalité de *Lucht/Kunst* [p. 100-103], iconographie (noir et blanc) comprise, sur un dégradé du blanc au bleu ou encore l'obligation de consulter *Jaap Wagemaker* [p. 96-97] en tournant le volume à 90°. Mais le trait saillant, si l'on peut dire, tient surtout dans ce que l'on ne remarque pas d'ordinaire, que l'édition néglige trop souvent, et qui se révèle ici traité avec une extrême subtilité : l'appareil scientifique du livre, ordonné, par une opération de mise en pages parfaitement réglée, en colonnes et en rangées d'une stupéfiante clarté. Un exercise virtuose, à partir d'éléments limités : un caractère unique, exploité dans un seul corps et deux graisses, un usage parcimonieux des capitales, et des filets typographiques.

Le cas de la série des catalogues Fodor [p. 98-100] (constitués souvent de quatre pages seulement), est un peu différent : grâce à une charte astucieuse, Crouwel transforma la contrainte d'un budget très restreint en une identité forte pour le commanditaire. Le modèle unique de couverture insiste plus sur la permanence institutionnelle que sur la diversité de la programmation : composés dans un caractère « pixellisé », auquel fait discrètement écho la trame de points minuscules qui couvre la feuille, le nom du musée, rose sur fond rouge, et le numéro, noir et dans un corps plus important, constituent les informations dominantes. Le titre, dans le même caractère de machine à écrire que l'intérieur – alternative « maison » à l'Univers –, apparaît comme secondaire.

Histoire

Objectivité et lisibilité, les deux piliers de la modernité appliquée, pour apparaître ici et là dans son discours, n'en sont pas moins en permanence mises à mal chez Crouwel. Si le graphiste suggère de jeter l'écriture manuscrite aux orties, il en préconise aussi un enseignement plus individualisé, conseillant d'apprendre non pas à former le « a » mais à

37   Catherine de Smet

Pointing out such connections underscores a certain complicity between the experiments of a graphic designer and those of the artists of his day, which is less frequent than might be expected. This interplay of convergences, however, does not do complete justice to the originality of an approach that occasionally seems to contradict Crouwel's own credo: for example, he stated that, when working with museums "the designer has to take great pains not to project his own story or image," which, he added, meant respecting typographic principles little conducive to lavish variation[14]. Yet what are Crouwel's own posters and covers if not magnificent variations that come across as clear statements of his own positions? That they opt for an abstract quality and reject expressivity does not make them any less personal, and does not prevent clashes with the work of certain artists. Take the poster for *Antonio Saura* [fig. 5]: two colors and the simple yet skillful superimposition of the word SAURA over the lighter ground constituted by its barely modified twin, ASAUR; the stark opposition to the exuberant lines of Saura's figurative painting was striking, whereas the legibility – which Crouwel claimed was paramount[15] – was so compromised that another "Saura," this time in lineal face, had to be set above the title.

Clarity

The layout of a catalogue probably fulfills in clearest fashion the principles of "good design" – effective and meticulous – that Crouwel learned from his Swiss mentors. Governed by the idea of a series or imprint that employed uniform format, typeface, and organization of content, the publications he designed for the Van Abbe Museum from 1956 to 1963, then for the Stedelijk Museum from the early 1960s onward, and also for the Museum Fodor in the mid 1970s, came across as unspectacular objects. They were little brochures produced with limited resources. Basic information – a biography of the artist, a bibliography, a list of works on show – was accompanied by illustrations, usually limited in number, whose order of reproduction was defined according to objective criteria (usually chronological) rather than the search for any given effect. In this austere context, shaped photos of certain sculptures – occasionally spread over two pages – constituted visual luxury. The overall soberness did not exclude a few particularities: blocks of texts dictated by the shape of the artist's bronzes in *Tajiri* [p. 86-89]; the occasionally shimmering presence of interleaves of colored glassine (lemon yellow and brown for *De Verzameling* [p. 84-85], bright yellow for *Edgar Fernhout*, petrol blue for *Brusselmans*); a first page identical to the cover (same color, same weight) in *Arman*; the impression of totality in *Lucht/Kunst* [p. 100-103] generated by a white-to-

Catherine de Smet

comprendre les caractéristiques du « a » afin de le dessiner selon ses propres inclinations scripturales[16]. À côté des sources graphiques majeures invoquées pour situer ses propres recherches d'alphabets dans une continuité historique – Kurt Schwitters, Herbert Bayer, Van Doesburg et d'autres – Crouwel ne dédaigne pas les références vernaculaires et rappelle la problématique modulaire des inscriptions réalisées sur les toits de tuiles ou les constructions en briques[17]. Il cite aussi, en toute subjectivité autobiographique, les alphabets que brodait sa grand-mère au point de croix sur du canevas, qu'il rapproche de la technique de composition numérique à ses débuts, prisonnière d'une grille rigide incompatible avec les caractères qu'il s'agissait de reproduire. À en juger par la photographie qui accompagne cette évocation, l'aïeule ne s'en tirait pas mal, malgré la difficulté accrue par le choix de caractères décoratifs à volutes imitant un tracé manuel à la plume[18].

Cette image me renvoie à mon tour à l'histoire familiale, faisant surgir l'image d'un grand-père que je ne connus pas mais dont les travaux d'aiguille ont été conservés. Intellectuel excentrique, il pratiquait à ses heures perdues la tapisserie, et avait en particulier réalisé, probablement dans les années 1920 ou 1930, un tableau typographique présentant le nom de ses écrivains favoris sur fond de losanges multicolores. Il ne s'essayait nullement au rendu des courbes et l'allure de ses lettres en escaliers, qui rejoignait malgré les sérifs celle d'alphabets à tendance géométrique, mériterait aujourd'hui le qualificatif de « pixellisé ». Il est du reste frappant de constater la présence, dès les premières années du XXe siècle, de lettrages de ce type, que l'on songe, pour rester en terre néerlandaise, aux caractères architecturés créés par Hendrik Wijdeveld dans les années 1920 pour le périodique *Wendingen*, et plus encore à ceux que son compatriote J. L. M. Lauweriks [fig. 6, fig. 7], alors établi à Stuttgart, avait dessinés en 1908-1909 pour la couverture de sa revue *The Ring* [fig. 6], composés d'anneaux et proches de certaines esquisses à base de points qui conduisirent au New Alphabet [fig. 8].

« Nous nous habituons à tout. L'indispensable lisibilité s'est tout simplement évanouie »[19], constatait naguère Crouwel. Pourtant le New Alphabet n'a rien perdu aujourd'hui de sa faculté d'« estrangement », selon le terme forgé par les Formalistes russes afin de désigner la fonction de décontextualisation et de distanciation de l'art[20] – pas plus que ne se sont banalisés les caractères créés pour les affiches, ou émoussés les effets des inventions graphiques diverses qui distinguent l'ensemble de cette production hors normes : chaque expérience de lecture fournit une nouvelle occasion de « désautomatiser » notre

---

38   The Astronaut

blue tonal progression, including (black and white) illustrations; the need to rotate the book by 90° to read *Jaap Wagemaker* [p. 96-97]. Yet their salient character, so to speak, derived above all from something that is not usually noticed, which publishing too often overlooks, but which Crouwel handled with extreme subtlety – the scholarly apparatus of the book, organized through a perfectly ruled page layout into rows and columns of stunning clarity. This virtuoso exercise was achieved with limited means: a single typeface (employed in a single point-size plus two bolds), a parsimonious utilization of upper-case letters, and use of rules. The situation was somewhat different with the series of catalogues for the Museum Fodor, often just four pages long. Thanks to a shrewd set of guidelines, Crouwel transformed tight budgetary constraints into a strong image for his client. A fixed cover design placed more emphasis on institutional continuity than on programming diversity; composed of "pixelated" lettering discreetly echoed by the screen of tiny dots covering the page, the name of the museum (printed in pink on red) and the number of the publication (in black, in larger type) constituted the main information. The title of the show, in the same typewriter face used inside – a house version of Univers – appeared secondary.

History
Objectivity and legibility, the two pillars of applied modernism that Crouwel mentioned here and there in his rhetoric, were nevertheless regularly manhandled by the designer. Although he suggested throwing handwritten letters out the window, he also advocated a more individualized education that entailed learning not to form an "a" but to understand the characteristics of "a" in order to write it according to one's own scriptural inclinations. Alongside the major graphic sources cited in order to place his own letterform experiments within an historical continuity – Kurt Schwitters, Herbert Bayer, Van Doesburg, and others – Crouwel did not disdain vernacular allusions and recalled the modular concerns of inscriptions done on tile rooftops and brick constructions[17]. With great autobiographical subjectivity, he compared the digital composition techniques of his early career to the lettered samplers that his grandmother embroidered on woven fabric, imprisoned in a rigid grid that was incompatible with the letterforms she was trying to produce. To judge by the photograph that accompanies this passage, his forebear managed pretty well despite the added difficulty of choosing decoratively scrolled letters that imitated handwriting with a fountain pen[18].

This story reminds me of my own family, evoking an image of the grandfather whom I never knew

Le Cosmonaute

39   Catherine de Smet

[fig. 6]

[fig. 8]

[fig. 7]
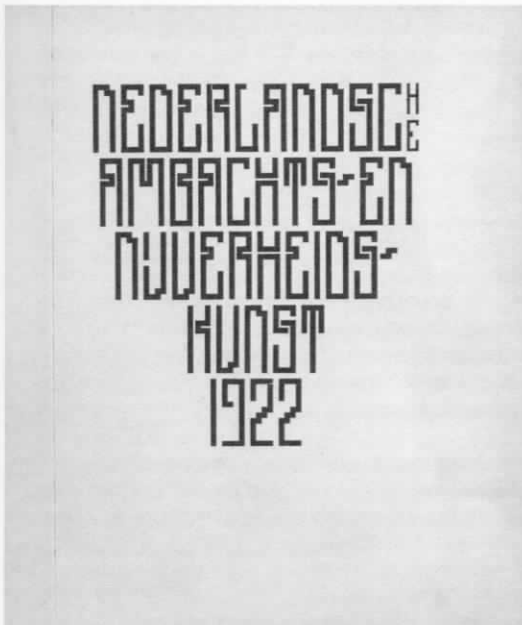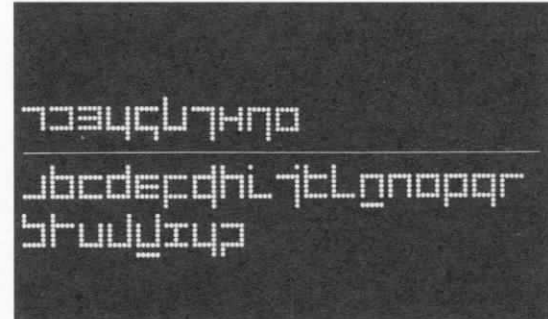
Catherine de Smet   **40**   **The Astronaut**

perception. Les catalogues eux-mêmes, et leurs pages agencées en listes et tableaux d'une rare élégance, paraissent aujourd'hui des ovnis au regard de l'édition contemporaine. Poursuivant des recherches entreprises par les avant-gardes, anticipant celles qui sauraient exploiter l'outil électronique et faire exploser l'espace typographique, cet œuvre ne représente pas un moment révolu de l'histoire du graphisme : il nous apparaît plutôt, tel le cosmonaute [fig. 9] du Kwadraat-Blad, en apesanteur. Parlant de l'érosion actuelle des formes de l'écriture, Crouwel notait : « Cela ressemble à un plat servi dans un avion, réchauffé une semaine plus tard et mangé sous une averse. Mais personne ne proteste et nous n'avons aucune difficulté à le lire »[21].

On peut aussi décider de ne pas avaler de telles couleuvres détrempées. S'insurger. Et vérifier chaque jour les vertus revitalisantes du New Alphabet.

[fig. 9]
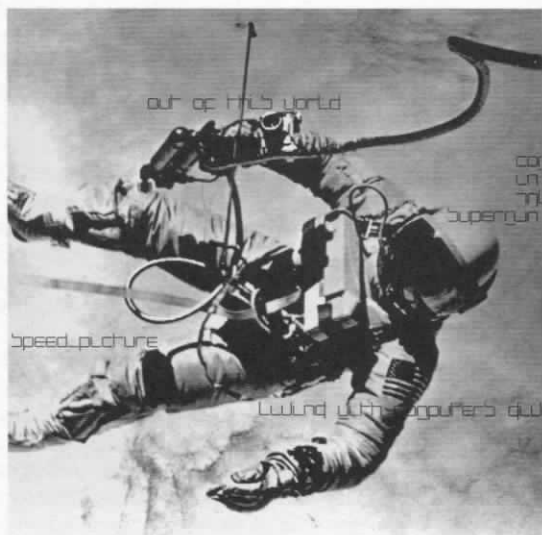
but whose needlework has survived. An eccentric intellectual, he did embroidery in his spare time and notably made, probably in the 1920s or 1930s, a typographical tableau of the names of his favorite writers set against a colorful diamond-patterned ground. He made no attempt to render the curves, so the appearance of his stepped letters, despite their serifs, was similar to geometric-style typefaces, and today would merit the adjective "pixelated." It is moreover striking to note the existence of this type of lettering right from the early twentieth century – in the Netherlands alone, we need merely think of the architectured letterforms designed by Hendrik Wijdeveld in the 1920s for the periodical *Wendingen*, and more particularly of those devised in 1908-1909 by his compatriot J.L.M. Lauweriks [fig. 6, fig. 7, p. 39], then working in Stuttgart, for the cover of the magazine *The Ring* [fig. 6, p. 39] – they were composed of rings and are similar to Crouwel's lettering on the 1964 *Job Hansen* poster and certain dot-based sketches that eventually yielded the New Alphabet [fig. 8, p. 39].

"We get used to everything. The once indispensable legibility has simply gone away," Crouwel observed[19]. And yet even today the New Alphabet has lost none of its effect of "strangeness," to use the term employed by the Russian Formalists to describe art's role of decontexualization and distanciation[20]. Nor have the letterforms created for his posters become common-place, nor have the effects of the various graphic inventions that mark his exceptional oeuvre lost their edge: every reading experience is a new occasion for making perception less "automatic." The catalogues themselves, with pages laid out in lists and tableaus of rare elegance, now seem like UFOs in the realm of contemporary publishing. Pursuing the experiments undertaken by the avant-gardes, anticipating those that would exploit electronic technology and blast a hole in typographic space, Crouwel's oeuvre does not represent a finite chapter in the history of graphic design – rather, it appears to be weightless, like the Kwadraat-Blad astronaut [fig. 9]. Speaking of the current erosion in forms of writing, Crouwel noted, "It's like the food they serve in airplanes, reheated a week later and eaten in a rainstorm. But no-one complains and we don't have any difficulty reading it[21]."

We could also decide not to swallow such sodden affronts. We could rebel. And thereby confirm, day by day, the reinvigorating virtues of the New Alphabet.

Le Cosmonaute

Notes

1
Wim Crouwel, « Type Design for the Computer Age », *Journal of Typographic Research*, vol. 4, no. 1, 1970, p. 51-59. Cet article a paru en français en 1974 sous le titre « Une typographie pour l'ère de l'ordinateur » dans *Arts et techniques graphicaes*, no. 89, et en 2006 sous le titre « La typographie à l'ère de l'ordinateur » dans *Marie Louise*, no. 3, p. 8-11, trad. A. Illiouz, mais dépourvu de son illustration.

2
Luca Pacioli, « Divine proportion. Œuvre nécessaire à tous les esprits perspicaces et curieux » [ca 1509], trad. M. Giraud et G. Duchesne, Paris, Librairie du Compagnonnage [1980], 1988.

3
« La typographie à l'ère de l'ordinateur », *op. cit.*, p.10.

4
Timothy Epps et Christopher Evans, *Alphabet*, Kwadraat Blad, Hilversum, De Jong & Co, 1970.

5
« La typographie à l'ère de l'ordinateur », *op. cit.*, p. 9-10.

6
Jan Tschichold, *The New Typography* [1928], trad. Ruari McLean, University of California Press, 1998, p.64-79.
Un résumé de ce livre a paru en français sous le titre « Qu'est-ce que la nouvelle typographie et que veut-elle? » dans la revue *Arts et Métiers Graphiques*, no. 19, 15 septembre 1930, p. 46-50.

7
Evert Bloemsma « Balance, Avance, Cocon », Van Rixtel and Westerveld éd., *Letters*, Eindhoven, 2001, p.77, cité par Jan Middendorp, « Wim Crouwel and Dutch Calvinism », *Dutch Type*, Rotterdam, 010 Publishers, 2004, p. 121.

8
Sur le processus de conception du New Alphabet, voir l'ouvrage très documenté de Paolo Palma (éd.), *New Alphabet. Wim Crouwel e la tipografía sperimentale*, auto-édition hors commerce, 2003.

9
Total Design (graphiste Daphné Duijvelshoff-van Peski) avait notamment conçu en 1985 l'identité visuelle du Capc à Bordeaux, dont la signature en forme de jeu de mots était alors « Notre logo c'est l'Univers ».

10
Commandé par Olivetti en 1974, ce caractère ne vit pas le jour en raison de la rapide obsolescence de la machine électrique face à l'ordinateur.

11
Caractères typographiques édités par The Foundry, Londres : New Alphabet, Stedelijk, Fodor et Gridnik en 1997, et Catalogue en 2003.

12
Sur l'interprétation par Crouwel de l'œuvre des artistes dans les affiches d'exposition qu'il concevait, voir en particulier *Wim Crouwel Alphabets*, David Quay éd., Amsterdam, Bis Publishers, 2003.

13
Oldenburg demanda à Crouwel une version complète de l'alphabet, que celui-ci réalisa en lettres de papier rose découpé.

14
Wim Crouwel, « Designing for a Museum », article initialement publié en néerlandais dans *Om de kunst*, Wim Crouwel (dir.), Eindhoven, Lecturis, 1978. À paraître fin 2007 dans un ouvrage publié par l'AGI (Alliance graphique internationale).

15
Ibid.

16
Wim Crouwel, « A Proposition for Education in Letterforms and Handwriting », *Visible Language*, vol. 8, no. 3, été 1974, p. 261-264.

17
Wim Crouwel, « Regarder, apprendre, savoir… douter », *Étapes*, no. 33, décembre 1996, p. 35.

18
Ibid.

19
Ibid.

20
Voir Viktor Chklovski, « L'art comme procédé », *Théorie de la littérature*, Tzvetan Todorov éd. et trad., Paris, Seuil, 1965, p. 76-97, et Carlo Ginzburg, « L'estrangement », *À Distance. Neuf essais sur le point de vue en histoire*, trad. P.-A. Fabre, Paris, Gallimard, 1998, p. 15-36.

21
« Regarder, apprendre, savoir… douter », *op.cit.*, p. 36.

41   Catherine de Smet

Notes

1
Wim Crouwel, "Type Design for the Computer Age", *Journal of Typographic Research* (1970), vol. 4, no. 1, p. 51-59.

2
Luca Pacioli, *De Divina Proportione* (Venice, 1509); *Divine Proportion* (Norwalk, Conn: Abaris Books, 2007).

3
Crouwel, "Type Design..," **.

4
Timothy Epps and Christopher Evans, *Alphabet*, Kwadraat Blad (Hilversum, De Jong & Co., 1970).

5
Crouwel, "Type Design..," **.

6
Jan Tschichold, *The New Typography* [1928], translated by Ruari McLean (Berkeley: University of California Press, 1998), p. 64-79.

7
Evert Bloemsma, "Balance, Avance, Cocon", in Van Rixtel and Westerveld (eds.), *Letters* (Eindhoven: 2001), 77 quoted in Jan Middendorp, "Wim Crouwel and Dutch Calvinism", *Dutch Type* (Rotterdam: 010 Publishers, 2004), p. 121.

8
On the process of designing the New Alphabet, see the well-documented book edited by Paolo Plama, *New Alphabet: Wim Crouwel e la tipgrafia sperimentale* (self-publication, 2003).

9
In 1985 Total Design's Daphne Duijvelshoff-van Peski notably designed the visual image of the Capc Museum in Bordeaux, whose punning signature at the time was "The Universe is our Logo".

10
Commissioned by Olivetti in 1974, this typeface was never released due to the rapid obsolescence of electric typewriters upon the arrival of computers.

11
The Foundry, London, distributes the following typefaces: New Alphabet, Stedelijk, Fodor, Gridnik (1997) and Catalogue (2003).

12
On Crouwel's interpretation of the work of artists on the various exhibition posters he has designed, see in particular David Quay (ed.), *Wim Crouwel Alphabets* (Amsterdam, Bis Publishers, 2003).

13
Oldenburg asked Crouwel for a complete version of the alphabet, which the latter produced in letters cut from pink paper.

14
Wim Crouwel, "Designing for a Museum", initially published in Dutch in Wim Crouwel (ed.), *Om de Kunst* (Eindhoven: Lecturis, 1978). Forthcoming (late 2007) in a book published by Alliance Graphique Internationale (AGI).

15
Ibid.

16
Wim Crouwel, "A Proposition for Education in Letterforms and Handwriting", *Visible Language* (Summer 1974), vol. 8, no. 3, p. 261-264.

17
Wim Crouwel, "Regarder, apprendre, savoir… douter", *Étapes* 33 (December 1996), p. 35.

18
Ibid.

19
Ibid.

20
See Victor Shklovsky, "Art as Technique" in L.T. Lemon & M.J. Reis (eds.), *Russian Formalist Criticism*, (Lincoln: Univ. of Nebraska Press, 1965), p. 3-23, and Carlo Ginzburg, "Making Things Strange: The Prehistory of a Literary Device", *Representations* 56, Special Issue: The New Erudition (Autumn 1996), p. 8-28.

21
Crouwel, "Regarder…," p. 36.

Emmanuel Bérard

Deux dimensions du travail de Wim Crouwel sont aujourd'hui largement reconnues : sa production de systèmes d'identité visuelle (développés notamment au sein de son agence, Total Design) et son expérience typographique audacieuse, le New Alphabet.

Si la première lui assure une place importante au sein des graphistes « modernes » dans la lignée des maîtres suisses, la seconde est le symbole éclatant du rôle pionnier que Wim Crouwel joua dans la création et l'émergence du graphisme dit *électronique*. En effet, il y aurait fort à parier que ce soit ce même Crouwel, pourtant fonctionnaliste revendiqué, fervent de l'Helvetica et de sa neutralité[22], qui transposa sur papier les premières formes typographiques « électroniques » de l'histoire du design graphique. C'est sur cet aspect encore inexploré que s'attardera ce court essai.

Wim Crouwel a à peine plus de trente ans lorsqu'il est informé des recherches menées par l'Allemand Rudolf Hell[23], inventeur de la composition typographique par ordinateur. Ce nouveau système, qui précipitera la désuétude de la composition traditionnelle au plomb, impose une étape de travail du texte sur écran. Afin de pallier la piètre qualité de reproduction des alphabets « classiques » sur ces écrans, Crouwel inventera, après plusieurs années de recherches, un alphabet dont le dessin ne subirait aucune altération du fait de ces nouveaux dispositifs technologiques. Le New Alphabet naît et il est publié en 1967.

Le contexte dans lequel se déroule cet épisode est celui de l'irruption des ordinateurs dans des domaines jusqu'alors dominés par des techniques mécaniques ou artisanales. Cette explosion s'accompagne de nombreuses recherches ayant pour objectif l'amélioration de la communication entre l'homme et la machine dont la résolution se dessinait selon trois pistes (chacune visant des solutions formelles distinctes). La première de ces pistes engageait les chercheurs à envisager cette communication à partir du double point de vue de ses protagonistes, cherchant le compromis entre esthétisme et contrainte. Cela débouchera sur la création d'alphabets à reconnaissance optique dont les formes, proches des alphabets habituels, sont aussi lisibles par la machine. Le premier alphabet de ce type, OCR-A, sera publié en 1966 et redessiné deux années plus tard par Adrian Frutiger (OCR-B)[24]. La deuxième piste consistait, à l'inverse, à créer une forme radicalement nouvelle, adaptée aux contraintes dictées par l'ordinateur et par son dispositif d'affichage. Convaincu que « les caractères de notre époque ne s'appuieront sans doute pas sur les

44   The Computerless Electronic Designer

Two aspects of Wim Crouwel's work are widely recognized today: his designs of overall corporate (or institutional) image – notably developed by his agency, Total Design – and his bold typographical experiment, the New Alphabet.

While the former earned him a major place among "modern" graphic designers in the tradition of the Swiss masters, the latter was the striking symbol of Crouwel's pioneering role in the creation and emergence of what is called *electronic* design. Indeed, the odds are it was Crouwel – a self-proclaimed functionalist and a fan of the neutrality of Helvetica[22] – who put onto paper the first "electronic" typographical forms in the history of graphic design. This brief essay will dwell on this latter, unexplored aspect of his career.

Crouwel was barely thirty when he learned of the research done by Rudolf Hell, the German inventor of computerized typesetting[23]. One step of the new system, which hastened the obsolescence of traditional lead type, involved working on a screen. In order to overcome the poor reproduction quality of "standard" typefaces on a screen, Crouwel devised, after several years of experimentation, an alphabet whose forms would not be distorted by the new technological apparatus. Thus was born his New Alphabet, released in 1967.

The context in which this incident took place entailed the invasion of computers into every sphere previously dominated by mechanical or craft practices. This explosion was accompanied by numerous research projects that sought to improve man–machine communication. The answer seemed to lay in one of three possible paths (each of which led to distinct formal solutions). The first path required researchers to envisage communication from the double viewpoint of its two protagonists, seeking a compromise between aestheticism and constraint; it resulted in the design of optical character-recognition systems employing typefaces similar to ordinary ones yet also machine-readable. The first typeface of this kind, OCR-A, was released in 1966 and redesigned two years later by Adrian Frutiger as OCR-B[24]. The second path, in contrast, involved creating a radical new form dictated by the constraints of computers and their display system. Convinced that "the letter-type for our time will... certainly not be based on the written or drawn examples of the past," Crouwel therefore boldly proposed his New Alphabet[25]. The third, more prudent path, involved waiting for improved technology that would be able to read and display every kind of writing. Crouwel's decision meant wagering on the dawn of a brand new era. He therefore logically called his typeface "new," an adjective evoking major

Graphiste Électronique Sans Ordinateur   45   **Emmanuel Bérard**

exemples manuscrits ou dessinés du passé »,
Crouwel, intrépide, propose le New Alphabet[25].
La troisième voie était celle qui, prudente, poussait à
attendre une technologie permettant d'afficher et de
lire tous types d'écritures.

Par son choix, Crouwel prend le pari d'initier une
ère absolument nouvelle. C'est donc logiquement
qu'il qualifie son alphabet de « nouveau », adjectif qui,
dans l'histoire du graphisme, renvoie aux grandes
ruptures ayant marqué son évolution telles que, par
exemple, *Die neue typographie* (manifeste
pour l'asymétrie promue par Jan Tschichold à Berlin
en 1928) et *New Graphic Design* (magazine promoteur
du style international édité à Zurich par, entre autres,
Josef Muller-Brockman)[26].

Sans doute trop « théorique »[27], ou tout simplement
illisible, le New Alphabet ne connut de véritable
utilisation que grâce à son pouvoir d'évocation d'un
futurisme dépassé. C'est d'ailleurs à cette fin que
Peter Saville l'utilisera, en 1988, pour la pochette d'une
compilation (« Substance ») [fig.10] de titres de la
période 1977-1980 du groupe Joy Division, qui reste
l'un des plus célèbres emplois du New Alphabet.
En effet, à peine seize ans après sa publication, le
premier ordinateur « personnel », Macintosh, dans
une campagne publicitaire mondiale restée dans les
mémoires[28], affichait sur son écran un « hello » [fig. 11]
manuscrit prouvant qu'en moins d'une génération
l'ordinateur avait appris à s'adresser à l'Homme en
imitant sa propre écriture et avait également appris
à la reconnaître.

L'expérience audacieuse que constituait le New
Alphabet cache trop souvent le travail véritablement
pionnier que mena Crouwel à cette période. En effet,
durant la décennie 1960 il ne cessera de prêter
attention à ces nouvelles formes accompagnant
la naissance de l'informatique. Non sans fascination
pour les perspectives qu'il y décelait, il se fera le
prophète d'une nouvelle ère typographique, étayant
sa théorie d'une iconographie futuriste (atomes,
vues microscopique de circuits imprimés, clichés
d'homme dans l'espace…), dessinera la carrosserie
d'une voiture futuriste et sera également le mannequin
favori de la styliste de mode *space-age* Alice Edeling.
Fustigeant son époque, qui n'avait pas su créer
la forme typographique adaptée, « les Phéniciens
(ayant eu) leurs tablettes d'argiles, les Romains leurs
inscriptions gravées dans le marbre et les humanistes
leur caractère au plomb », Crouwel crée et s'empare
de nouvelles formes qui seront, une décennie durant,
sa marque de fabrique.
Dès 1964, quelques années avant le New Alphabet,
il dessine pour l'affiche de l'exposition « Job Hansen »

[fig. 10]

[fig. 11]

Emmanuel Bérard

46   The Computerless Electronic Designer
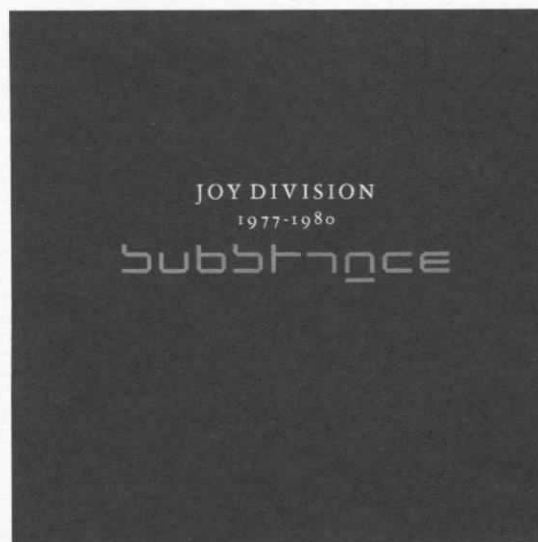
au musée Fodor d'Amsterdam un alphabet formé d'une matrice de points évoquant clairement les écrans à diodes lumineuses utilisés alors comme dispositif d'affichage informatique.

Avant l'existence même du terme « pixel »[29], et par conséquent la large diffusion de cette notion, Crouwel invente les premières lettres d'inspiration électronique[30]. Influencé par les ordinateurs qu'il observe, il développe et s'approprie un nouveau système de description des formes et, jouant des contrastes et variant la forme des « cellules » mises en œuvre (rondes ou hexagonales, pleines ou creuses...), l'applique à nombre de ses travaux.

De la même façon, et poursuivant son obsession technologique, Crouwel s'inspira des premiers codes-barres pour la conception de l'affiche « Visuele communicatie Nederland »[31], en 1969 [p. 72]. Ils constituent alors les exemples orphelins dans le paysage graphique de l'époque, encore très marqué par *le style international*. Le seul exemple contemporain de l'affiche « Job Hansen » [fig. 12] relevé est le logo de l'agence Reuters [fig. 13], dessiné en 1965 par Alan Fletcher.

Quelques années plus tard, jouant de cette nouveauté et utilisant cette même matrice, Crouwel dessinera notamment les logos de « Spectrum Encyclopédie » [fig. 14] en 1971 et, l'année suivante, celui de la Ville de Rotterdam [fig. 15].

Alors qu'au même moment, dans le domaine musical se répand l'emploi du synthétiseur vocal *vocoder*[32] qui « robotise » électroniquement la voix de l'interprète, le filtre graphique « inventé » par Crouwel devient rapidement la marque d'un graphisme moderne et technologique. Rapidement adopté par les collaborateurs de Total Design, il est bientôt imité à plus grande échelle.

C'est en 1970 que Crouwel signera son projet « électronique » le plus spectaculaire et certainement parmi les derniers. Dépassant les deux dimensions de l'imprimé, il imaginera la scénographie du Pavillon hollandais de l'exposition universelle de 1970 organisée à Osaka avec les équipes de Total Design, pour laquelle il concevra un environnement dont le pixel est l'élément prépondérant. Consacré au programme d'urbanisation des Pays-Bas, le pavillon s'articule autour d'un écran circulaire géant, de plus de 3 mètres de diamètre dont les pixels changent de couleurs au fil de l'évolution du processus d'urbanisation [fig. 16, p. 48].

Fruits de l'imagination d'un graphiste électronique sans ordinateur, ces pixels n'existent pas davantage que l'écran sensé les contenir. Chaque élément, patiemment dessiné puis peint à la main, est ensuite

developments that had marked the history of graphic design, such as "The New Typography" (Jan Tschichold's manifesto on asymmetry, issued in Berlin in 1928) and *The New Graphic Design* (magazine that promoted the international style, published in Zurich by Josef Muller-Brockman and others)[26].

The New Alphabet was perhaps too "theoretical,"[27] or simply too illegible, to be employed for anything other than its ability to evoke an outmoded futurism. It was to that end, moreover, that Peter Saville used it in 1988 for the cover of a compilation album of music tracks [fig. 10, p. 45] by Joy Division from 1977 to 1980 (Substance), in what has remained one of the most well-known examples of the face. Indeed, barely sixteen years after the New Alphabet was released, the first Macintosh computer appeared in a memorable, world-wide advertising campaign that featured a screen with a cursive "Hello" [fig. 11, p. 45] proving that in less than a generation the computer had learned to communicate with humans by imitating – and recognizing – their own handwriting[28].

The bold experiment of the New Alphabet too often masks other, truly pioneering work undertaken by Crouwel during that period. In the 1960s he paid constant attention to the new forms that were accompanying the birth of information technology. With a certain fascination for what he sensed were new perspectives, he became the prophet of a new era in typography, bolstering his theory with futurist imagery (atoms, microscopic views of printed circuits, photos of astronauts in space, etc.), designed the body of a futuristic car, and was also the favorite model of space-age fashion designer Alice Edeling. Criticizing his own times for failing to come up with appropriate typographic forms (after having noted that Phoenicians had their clay tablets, Romans, their marble inscriptions, and humanists their lead letters), Crouwel created and seized upon new forms that would be his trademark for a decade.

As early as 1964, a few years before the New Alphabet, he devised a dot-matrix alphabet for a poster for the Job Hansen exhibition at Amsterdam's Museum Fodor; it clearly evoked the luminous diode screens then used for computer displays. Even prior to the existence of the term "pixel"[29] and hence of wide awareness of that notion, Crouwel invented the first electronically inspired letterforms[30]. Based on his observation of computers, he developed and appropriated a new system for describing forms; then, playing on contrasts and varying the shape of the "cells" employed (round or hexagonal, empty or solid), he applied it to much of his work. Similarly, his obsession with technology meant that early barcode systems inspired his design

Graphiste Électronique Sans Ordinateur   47   Emmanuel Bérard

[fig. 12]

13|3-26|4

museum
fodor
amsterdam

jobhansen

[fig. 13]

REUTERS

[fig. 14]

[fig. 15]
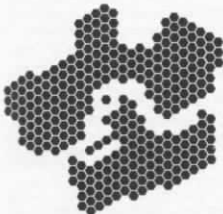
of the poster for *Visuele Communicatie Nederland*[31] in 1969 [p. 72]. These examples nevertheless remained isolated in the graphic landscape of the day, still heavily marked by the International Style, the only example contemporary with the *Job Hansen* poster [fig. 12] being the Reuter agency logo [fig. 13], designed by Alan Fletcher in 1965. A few years later, playing on the novelty of this same matrix, Crouwel designed the logos for the *Spectrum Encyclopedie* (1971) [fig. 14] and the urban signage for the city of Rotterdam [fig. 15] (1972).

In the days when the vocoder[32] synthesizer was becoming popular in the musical world, thus electronically "robotizing" a singer's voice, the graphic filter "invented" by Crouwel swiftly became the mark of modern, high-tech graphic design. Initially adopted right away by the team at Total Design, it was soon imitated on a wider scale.

In 1970 Crouwel devised his most spectacular "electronic" project, which was certainly one of his last. Going beyond the two dimensions of print, he and the Total Design team conceived the Dutch Pavilion for the 1970 World's Fair in Osaka, devising an environment in which the pixel was the dominant element. Devoted to urban planning in the Netherlands, the pavilion was organized around a giant circular screen (over ten feet in diameter) whose pixels changed color to reflect the evolution in urban development [fig. 16, p. 48]. These pixels, which sprang from the imagination of a computerless electronic designer, didn't really exist, any more than the screen allegedly displaying them. In fact, each element was patiently drawn and painted by hand, then animated by the circular movement of two polaroid filters that changed color as they rotated[33]. For that matter, similar artisanal techniques were used ten years later in the film *Tron*, whose sets (and certain costumes) were painted on the film frame by frame[34]. As proof of Crouwel's leadership in this sphere, it might be noted that IBM, the main computer manufacturer, would wait another few years before adapting its logo to the new era by abandoning the mechanical typeface that dated back to the 1950s. Paul Rand, who devised the original logo [fig. 17, p. 48], proposed a new, electronically filtered version [fig. 18, p. 48] in 1972, which would go down in history.

In the 1970s, on the eve of the explosion in personal computing, Crouwel abandoned his own discoveries and returned to graphic design that remained faithful to the "modernist" tradition. From this deliberate *retreat* he observed the birth of desktop publishing and a revival of taste in electronic style, which grew over the 1980s and 1990s with the notable emergence of the Californian New Wave and the popularity of

Emmanuel Bérard

animé par le mouvement giratoire de deux filtres polaroids qui transforment leur couleur au fur et à mesure de la rotation[33]. Ce sont d'ailleurs des recettes artisanales semblables qui seront utilisées dix années plus tard pour la réalisation du film *Tron*, dont les décors et certains costumes furent peints, image par image, sur le film[34]. Pour se convaincre de l'avance de Crouwel dans ce domaine, nous pourrions aussi observer que le principal constructeur informatique, IBM, attendra encore quelques années pour adapter son logo à cette ère nouvelle et abandonner sa typographie d'aspect mécanique datant des années 1950. Paul Rand, auteur du logo d'origine [fig. 17], en proposera, en 1972, une nouvelle version [fig. 18] transformée au filtre cathodique qui passera à la postérité.

À la veille de l'explosion de l'informatique personnelle, Crouwel retourna, dans le cours des années 1970, à un graphisme fidèle à la tradition « moderniste » et abandonna l'usage de ses découvertes. De cette *retraite* choisie, il observa la naissance de la PAO et le retour du goût pour la facture électronique, qui s'intensifia au cours des années 1980 et 1990 avec notamment l'apparition de la nouvelle vague californienne et le succès des alphabets « bitmap » dessinés par Zuzana Licko pour la fonderie Emigre[35].

À l'image des catalogues d'exposition qu'il concevait pour le Stedelijk Museum et le Van Abbe Museum dès les années 1950 et qui présentaient le plus souvent, sous une couverture expérimentale aux couleurs séduisantes, une mise en pages qui satisfaisait tout les canons du modernisme typographique[36], Wim Crouwel a eu, sa carrière durant, ce don d'ubiquité – ou ce souci de fantaisie – lui permettant d'être à la fois le digne héritier des graphistes modernes suisses tout en se livrant à d'hérétiques expérimentations confinant à l'illisibilité.

48 The Computerless Electronic Designer

the bitmap faces designed by Zuzana Licko for the Emigre typefoundry[35].

Like the exhibition catalogues he designed for the Stedelijk and Van Abbe Museums in the 1950s, which usually featured a layout that respected all the canons of typographic modernism while being wrapped in a colorful, strikingly experimental cover[36], Wim Crouwel has displayed throughout his career a talent for ubiquitousness – or a penchant for imaginativeness – that makes him a worthy heir to the modern Swiss designers even as he indulges in heretical experiments bordering on illegibility.

[fig. 16]
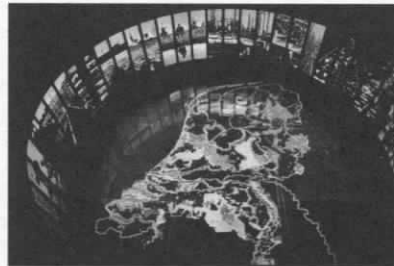
[fig. 17]

[fig. 18]

Graphiste Électronique Sans Ordinateur

Notes

22
« I love modernism […] that's my life »,
entretien avec Wim Crouwel dans
Helvetica, film documentaire de
Gary Hustwit, 2007.

23
Rudolf Hell (1901–2002) fut à l'origine,
dès l'après-guerre, de nombreuses
innovations qui marqueront les
arts graphiques.
C'est à Hell que l'on doit l'invention du
premier scanner couleur et, en 1964,
du système de composition
typographique électronique.

24
L'OCR-A (Optical Character
Recognition) a été le fruit de
l'*European Computer Manufacturers
Association* (ECMA). Son dessin a
été revu afin de lui donner davantage
de lisibilité pour l'Homme sans en
affecter l'efficacité. La nouvelle
version, OCR-B, livrée en 1968, sera
adoptée comme norme
internationale en 1973. Voir *Adrian
Frutiger, son œuvre typographique et
ses écrits*, Maison du Livre et de
l'image de Villeurbanne, 1994.

25
Wim Crouwel, « Type Design for
the Computer Age », *Journal of
Typographic Research*, vol. 4, no. 1,
1970, traduit et publié en français en
2006 sous le titre « La typographie
à l'ère de l'ordinateur » dans
Marie Louise, no. 3.

26
Cette liste se poursuivant après
la publication du New Alphabet
par l'apparition, dans les années 1980,
du graphisme « New Wave », importé
de Suisse aux États-Unis par, entre
autres, April Greiman.

27
Wim Crouwel, 1988, cité par
Sergio Polano dans Paolo Palma,
New Alphabet, Trévise, 2003.

28
1984.

29
Richard F. Lion date la naissance
du terme pixel à 1965 et l'attribue à
Frederic Crockett Billingsley,
ingénieur informatique américain.
Il utilise ce mot comme diminutif de
« picture element » pour décrire
une image vidéo en provenance
de l'espace.
« A Brief History of Pixel», R. F Lion,
dans *Digital Photography*, IS&T / SPIE
Symposium on Electronic Imaging,
janvier 2006, San Jose, États-Unis.

30
Il le reconnaîtra concernant cette
affiche, voir *Wim Crouwel, Alphabets*,
Bis Publishers, Amsterdam, 2006.

31
Entretien avec Wim Crouwel,
mars 2007.

32
Système popularisé en 1971
par son emploi dans la bande
originale d'*Orange mécanique* de
Stanley Kubrick, composée par
Wendy Carlos.
Le *vocoder* y était utilisé pour chanter
le titre *Timesteps* considéré comme
l'un des premiers exemples de
musique électronique. Le *vocoder*
sera plus tard notamment utilisé par
de nombreux musiciens, Giorgio
Moroder, Kraftwerk… Il s'impose
dans les années 1970 comme le « son »
nouveau d'inspiration technologique.

33
Sur ce projet, voir *Graphis*, no. 220,
juillet-août 1982, p. 8-23.

34
Tron, 1982, de Steven Lisberger,
produit par les Studios Disney,
est inspiré par l'univers futuriste
du dessinateur français Moebius
(Jean Giraud). Bien que reconnu
comme étant le premier film
d'inspiration « électronique », il a
été réalisé entièrement à la main,
utilisant lumière noire, stroboscope
et filtres polarisants. Les studios
Disney annoncent régulièrement la
production d'une suite de ce film
devenu culte.

35
Zuzana Licko dessina en 1985 pour
la fonderie californienne Emigre
plusieurs alphabets *pixellisés* :
Emperor, Universal, Oakland et
Emigre que l'on peut rapprocher
des Stedelijk et Fodor dessinés
par Crouwel dans les années 1970.

36
Ces mises en pages se caractérisent
notamment par une grande lisibilité
et la limitation des polices utilisées
à un seul alphabet (l'Univers) dans
des corps et graisses quasi uniques.

49
Emmanuel Bérard

Notes

22
"I love modernism… that's my life."
Interview with Wim Crouwel in
Gary Hustwit's documentary film,
Helvetica, 2007.

23
Rudolf Hell (1901–2002) was a
post-war pioneer of many innovations
that impacted on graphic design.
It was Hell who invented the first color
scanner and, in 1964, an electronic
typesetting system.

24
OCR-A (Optical Character
Recognition) was the brainchild
of the European Computer
Manufacturers Association (ECMA).
Its design was revised in order to give
it greater human legibility without
reducing its efficiency. The new
version, OCR-B, released in 1968, was
adopted as an international standard
in 1973. See *Adrian Frutiger, son
Œuvre Typographique et ses Écrits*
(Villeurbanne: Maison du Livre et
de l'Image, 1994).

25
Wim Crouwel, "Type Design for
the Computer Age," *Journal of
Typographic Research* (1970),
vol. 4, no. 1.

26
This list of "new breakthroughs" grew
after the release of the New Alphabet
with the emergence of "New Wave"
graphics in the 1980s, imported from
Switzerland into the U.S. by, among
others, April Greiman.

27
Wim Crouwel (1988), quoted by Sergio
Polano in Paolo Palma, *New Alphabet*
(Treviso, 2003).

28
1984.

29
Richard F. Lion dates the birth of
the term pixel to 1965, crediting
it to Frederic Crockett Billingsley,
an American computer engineer.
The word was an abbreviation of
"picture element," to describe a video
image sent from space. See R.F. Lion,
Digital Photography, IS&T / SPIE
Symposium on Electronic Imaging
(San José, California: January 2006).

30
Crouwel admitted as much,
concerning this poster, in
Wim Crouwel, Alphabets
(Amsterdam: Bis Publishers, 2003).

31
Interview with Wim Crouwel,
March 2007.

32
The vocoder was popularized by
the soundtrack for Stanley Kubrick's
Clockwork Orange, composed by
Wendy Carlos. The synthesizer was
used on the title song, *Timesteps*,
considered one of the earliest
examples of electronic music.
The vocoder was subsequently used
by various musicians such as Giorgio
Moroder, Kraftwerk, and others.
In the 1970s it became the leading new
technological "sound."

33
On this project, see *Graphis* no. 220,
July–August 1982, p. 8-23.

34
Steven Lisberger's 1982 *Tron*,
produced by the Disney Studios,
was inspired by the futurist world
of the French illustrator Moebius
(Jean Giraud). Although hailed as
the first "electronic" film, it was made
entirely by hand using ultraviolet light,
stroboscopes, and polarizing filters.
Every now and then Disney
announces that there will be a sequel
to what has become a cult film.

35
In 1985 Zuzana Licko designed
several pixelated faces for the Emigre
typefoundry in California: Emperor,
Universal, Oakland, and Emigre,
which could be compared to the
Stedelijk and Fodor faces designed by
Crouwel in the 1970s.

36
His layouts were notably
characterized by great legibility
and a highly limited number of fonts
from a single typeface (Univers).
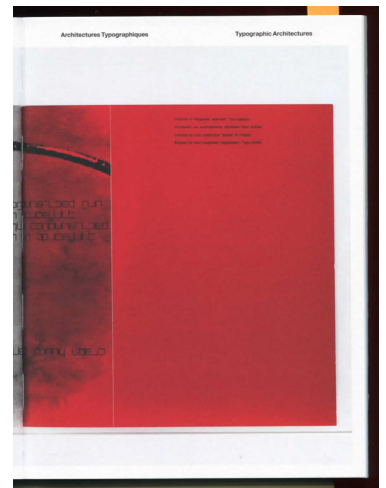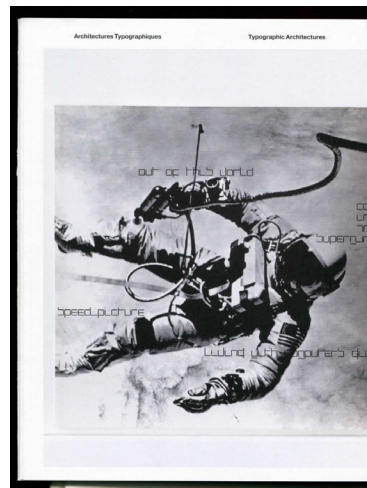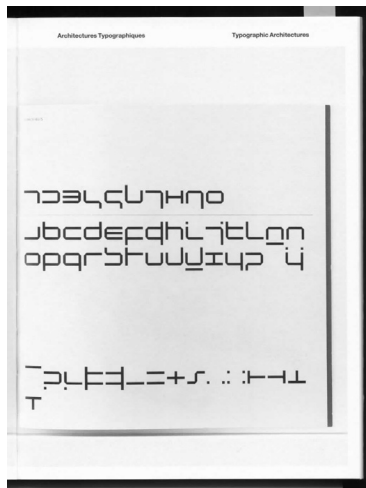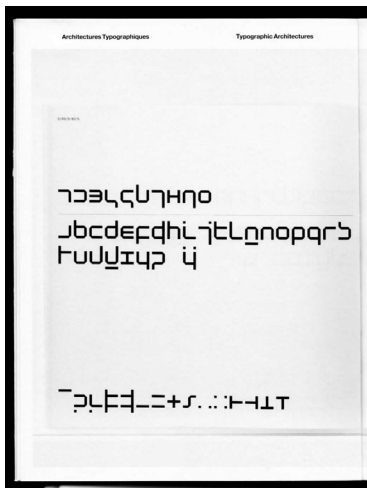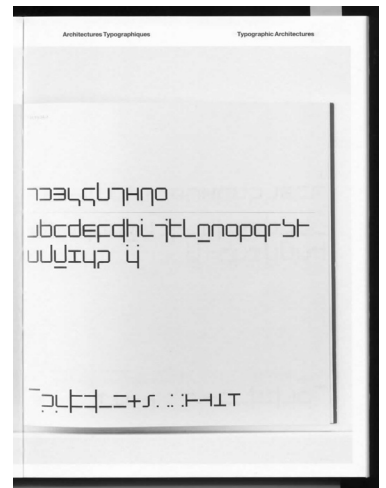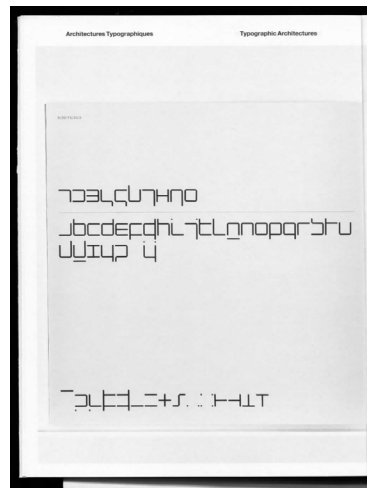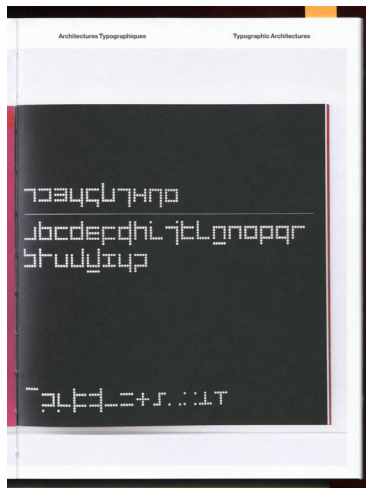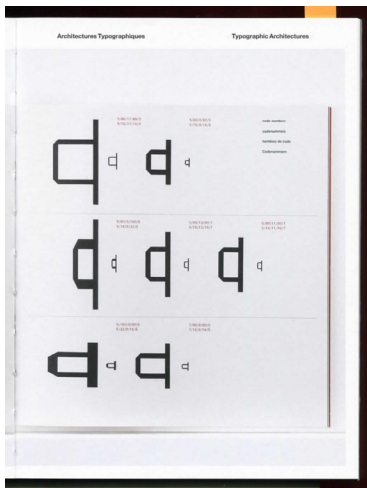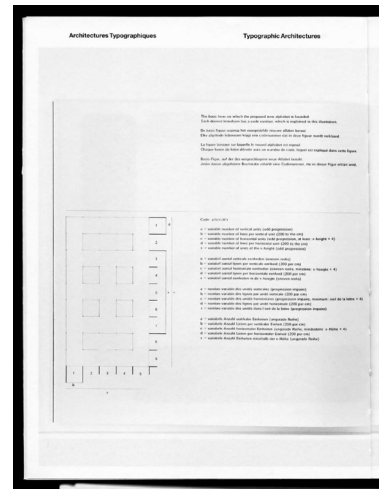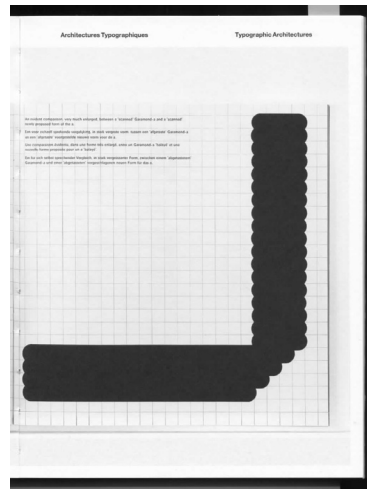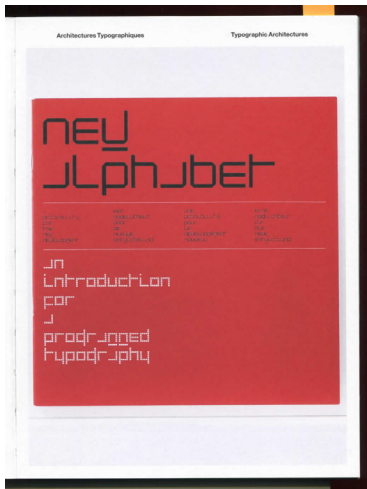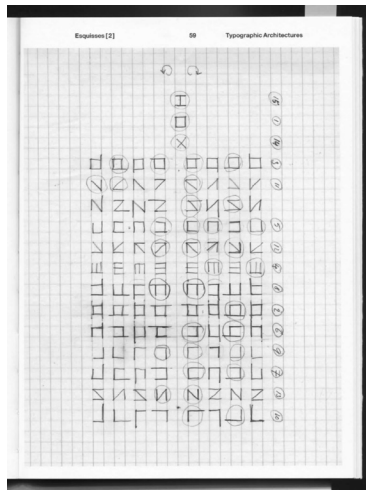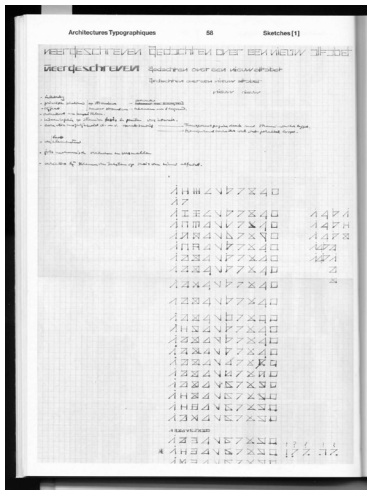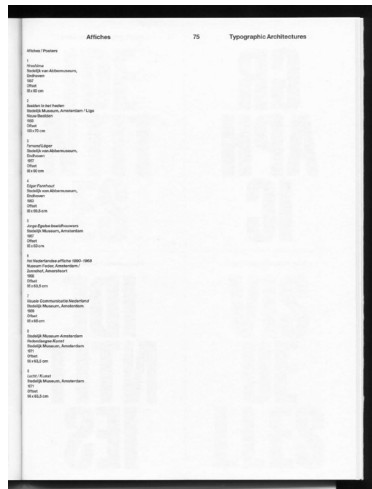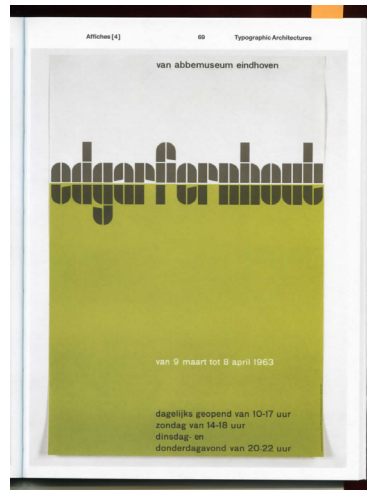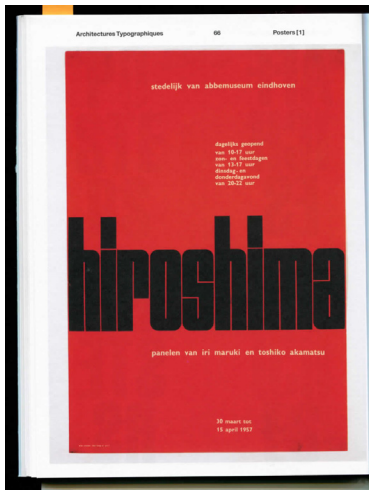
Der Verfasser dieses Buches ist seit fünfundzwanzig Jahren Fachlehrer für Typographie. Die gezeigten Arbeiten stammen von ihm selber oder sind von seinen Schülern während des Unterrichtes erstellt worden. Das Buch will weder unfehlbare Rezepte vermitteln, noch erhebt es Anspruch auf endgültige Aussagen.

‹Gestaltungslehrbuch› heißt das Buch, weil die Typographie mit ihren technischen Vorgängen sich nicht von den Fragen der Gestaltung trennen läßt. Die kleinste technische Manipulation in der Typographie wird zur formalen Aussage. Es gibt keinen Typographen, der nicht gestaltet.

Unsere Zeit kennt viele Postulate der Moderne, und es hat den Anschein, als ob die Fragen guter Formgebung zur Selbstverständlichkeit geworden seien. Doch der Schein trügt, denn handwerkliche Verlotterung und modernistisches Gehabe in zeitgemäßer Verkleidung verursachen nicht geringe Verwirrung. Auch bei optimistischer Beurteilung muß man feststellen, daß noch viel Arbeit geleistet werden muß, um die gewonnenen Erkenntnisse durchzusetzen und zu verfeinern.

Zwei Voraussetzungen gehören zur Arbeit in der Typographie: Berücksichtigung der erreichten Erkenntnisse und ein offener Sinn für neue Aspekte. Bekanntlich verleiten erreichte Positionen zur Selbstzufriedenheit. Die Ausbildung in experimenteller Typographie, in der die Werkstatt zum Laboratorium und zur Versuchsstätte wird, ist deshalb nötiger denn je, wenn die Typographie nicht an längst erkannten Grundsätzen erstarren soll. Der Wille, lebendige und zeitnahe Arbeit zu leisten, darf nie erlahmen; Zweifel und Unruhe sind gute Grundlagen gegen das Abgleiten auf den bequemen Weg des geringsten Widerstandes.

Dieses Buch verfolgt die Absicht, dem Typographen zu zeigen, daß das Faszinierende seines Handwerks vielleicht gerade in der Beschränkung der Mittel und in der Zweckgebundenheit liegt. Das Buch möchte die eigengesetzliche Kraft der Typographie sichtbar machen, die zu einem großen Teil das optische Bild unserer Zeit mit bestimmt.

Ob es dem Verfasser gelungen ist, das allzu Modische und die Launen des Tages aus Zeilen und Beispielen zu verbannen, das mag der Leser beurteilen, und die Zukunft wird entscheiden.

The author of this book has taught typography to professional students for the past twenty-five years. The examples illustrated are his own work or that of his pupils. It is not the intention of the book to offer infallible recipes nor does it claim to have said the last word on the subject.

"Manual of Typographical Design" is the name of the book. It was given this title because typography, since it involves technical processes, inevitably raises questions of design. Typography and design are virtually synonymous.

The present age knows many of the underlying assumptions and hypotheses of modernism and it looks as if good design has become something taken for granted. Yet appearances are deceptive for shoddy craftsmanship and modernistic affectation got up in contemporary garb cause no little confusion. Even taking the optimistic view, it is certain that a great deal of work remains to be done before the knowledge we have acquired gains acceptance and receives its ultimate refinement.

There are two essential aspects to the work of the typographer: he must take into account knowledge already acquired and keep his mind receptive to novelty. It is notoriously easy for satisfaction with what has been already achieved to degenerate into complacency. For this reason training in experimental typography, which involves the workshop becoming a laboratory and testing station, is more necessary than ever before if typography is not to congeal round principles that have long been recognized. There must be no letting up in the determination to produce vital work reflecting the spirit of the times; doubt and perturbation are good antidotes against the tendency to follow the line of least resistance.

It is the intention of this book to bring home to the typographer that perhaps it is precisely the restriction of the means at his disposal and the practical aims he has to fulfill that make the charm of his craft. It is hoped that the book will elicit those strict and inherent laws of the craft of typography which wields such influence in determining the visual aspect of our world today.

It is left to the reader and the future to decide whether the author has succeeded in banishing from his text and examples the excessively modish and the whims and fancies peculiar to our day and age.

L'auteur de ce livre est depuis 25 ans maître de technologie en typographie. C'est à lui et à ses élèves que nous devons les travaux qui figurent dans ces pages. Son intention n'est pas de donner ici des recettes infaillibles, ni d'avancer des affirmations définitives.

Le titre « Un Manuel de création » précise bien que l'œuvre typographique naît du creuset où s'associent procédés techniques et phénomène de création. Dans ce domaine en effet la plus infime manipulation technique se traduit par une expression formelle. Il n'est point de typographe qui ne soit créateur.

Les arts modernes témoignent de plus d'un postulat, et on pourrait croire que dans la recherche de la « bonne forme », le niveau des virtualités est dépassé et l'indépendance atteinte. Mais l'apparence est trompeuse. Les réalisations ne sont souvent qu'expressions travesties aux goûts du jour, où aberration manuelle et afféteries soi-disant modernes se donnent libre cours et créent la confusion. Il faut convenir, même avec un jugement optimiste, qu'un grand pas doit encore être fait pour que les connaissances acquises s'affinent et s'affirment jusqu'à produire des œuvres authentiques.

Un travail typographique répond à deux impératifs: une utilisation des connaissances techniques et un esprit ouvert à toutes les possibilités nouvelles de création. Mais chaque jalon atteint dans la recherche procure un contentement de soi qui est récompense. La formation en typographie expérimentale, qui sous-entend l'atelier devenu laboratoire et lieu d'essais, est de ce fait plus nécessaire que jamais si la typographie ne veut pas se pétrifier dans une conception depuis longtemps dépassée. La volonté de faire œuvre vivante et accordée à son temps ne doit jamais se lasser, ni voir se ralentir son élan. Le doute et l'inquiétude sont les meilleures armes contre la tentation de se laisser glisser sur la pente du moindre effort.

Le but poursuivi ici est de montrer au typographe que c'est peut-être et précisément dans la limite de ses moyens et sa subordination au but de l'œuvre que repose tout l'attrait de son métier-art. Ce livre voudrait enfin rendre évidente cette puissance inhérente à la typographie qui est pour une grande part si décisive dans les réalisations visuelles actuelles.

Nous laissons au lecteur et à l'avenir le soin de juger si l'auteur est parvenu à son dessein de bannir de ses exemples toute idée surannée et d'éviter de céder aux caprices de la mode.

Die Typographie ist einem eindeutigen Zweck verpflichtet, und zwar der schriftlichen Mitteilung. Durch kein Argument und durch keine Überlegung kann die Typographie von dieser Verpflichtung entbunden werden. Das Druckwerk, das nicht gelesen werden kann, wird zu einem sinnlosen Produkt.

Von der Erfindung des Buchdrucks im 15. Jahrhundert bis zum Druckwerk des 20. Jahrhunderts hatten und haben alle Bemühungen nur ein Ziel: billigste und rascheste Verbreitung von Mitteilungen in der Öffentlichkeit. Mit einer Ausnahme: Die Pressendrucke in der Zeit des Übergangs vom 19. ins 20. Jahrhundert, in einer Zeit, in der man dem technischen Fortschritt und damit der Industrialisierung blinde Bewunderung entgegenbrachte. Um der damaligen Zeit die Schönheit einer material- und werkgerechten Gestaltung erneut ins Bewußtsein zu bringen, geschah etwas, das dem Wesen der Typographie zutiefst widerspricht: künstliche Auflagebeschränkung, die dem einzelnen Werkexemplar Rarität und damit größere Kostbarkeit sicherte. Die bewußte Anerkennung gewisser Voraussetzungen in der Typographie ist immerhin jenen Pressendrucken zu verdanken: Gefühl und Verständnis für die Schriftform; richtige Gliederung der Typen als Wort, als Zeile, als Seite und als kompakte Fläche in einem klaren Verhältnis zum Unbedruckten; Bearbeitung eines Buches von der Doppelseite aus; Einheit der Schrift, Beschränkung bezüglich Schriftart und Schriftgrad.

Schon am Anfang des 20. Jahrhunderts werden die Einwände gegen das Bibliophile formuliert: das ‹nur› schöne Buch in beschränkter Auflage ist sinnlos; ein Buch muß *schön und billig* sein, Voraussetzung dafür ist eine möglichst hohe Auflage. Die Bibliophilie wird als überholte, antiquierte Daseinsform des Buches belächelt.

Heute ist das Buch zum wohlfeilen Gebrauchsgegenstand geworden und ist damit von der Buchhandlung über das Warenhaus zum Kiosk auf der Straße gelangt, in die nächste Nachbarschaft von Zeitung, Flugblatt und Plakat. Damit dürfte eigentlich die Typographie als Mittel zum Zweck der Massenkommunikation ihre Erfüllung gefunden haben.

Typography has one plain duty before it and that is to convey information in writing. No argument or consideration can absolve typography from this duty. A printed work which cannot be read becomes a product without purpose.

From the invention of printing in the 15th century down to the printed work of the 20th efforts have been directed exclusively to one end: to disseminate information in the cheapest and quickest possible way. The only exceptions were the fine editions printed at the turn of the century at a time when technical progress and the industrialization that went with it commanded unqualified admiration. To impress upon that age the beauty of work which was true to material and the craft, something happened which was quite contrary to the essential nature of typography: editions were artificially limited in order to confer rarity and therefore greater value upon the individual copy. Nevertheless we are indebted to these limited editions for obtaining recognition for certain prerequisites in typography: a feeling for the written form and an understanding of its nature; a proper division of the type into word, line, page and a compact area of type unequivocally related to the blank areas; the double-spread as the starting point for work on a book; unity of type face and limitations as regards kind and size.

At the beginning of the 20th century the bibliophile was already under criticism: the limited edition of a "merely" beautiful book is absurd; a book must be *beautiful and cheap*. And this calls for as big an edition as possible. Book production for the bibliophile is ridiculed as antiquated and obsolete.

Today the book has become a cheap consumer article and has made its way from the bookshop through to the department store to the kiosk in the street, side by side with the newspaper, leaflet and poster. It is here, no doubt, that typography has found its fulfilment as a means to mass communication.

La typographie est soumise à un but précis: le message imprimé. Elle ne peut d'aucune manière se libérer de cette sujétion. L'ouvrage imprimé qui ne peut être lu devient un non-sens.

De l'invention de cet art au 15e siècle à l'imprimerie du 20e siècle, tous les efforts tentés n'eurent et n'ont encore qu'un seul but: rendre publiques des informations d'une manière toujours plus rapide et moins onéreuse. Fait exception l'impression à la presse de la fin du 19e, début du 20e siècle, époque où l'on voua une admiration aveugle au progrès technique et à l'industrialisation. Pour rappeler la beauté d'anciens ouvrages réalisés avec le matériel et l'outillage de leur temps, survint un fait qui contredit par trop profondément l'essence même de la typographie: l'édition d'art à tirage limité qui assurait à chaque exemplaire le privilège d'être rare et de grand prix. C'est cependant grâce à ces impressions à la presse que furent sanctionnées certaines conditions et exigences de la typographie: sens et compréhension de la forme des caractères, assemblage correct des caractères en mots, en lignes, en pages, en une surface compacte placée dans un juste rapport avec la surface non imprimée; construction du livre à partir de la double page; unité des caractères, limitation relative au style et à la graduation des corps.

Au début du 20e siècle déjà s'élevèrent des protestations contre le bibliophile: la seule beauté du livre à tirage limité ne se justifie pas, un livre doit être *beau et bon marché*, ce qui exige le plus grand tirage possible. On raille en la bibliophilie son caractère antique et suranné. De nos jours, le livre est devenu un objet courant et bon marché qui a passé de la librairie au grand magasin, puis au kiosque, voisinant dès lors avec les quotidiens, les feuilles volantes et les affiches. C'est ainsi que la typographie pourrait avoir trouvé son accomplissement en servant de moyen de communication entre les masses.

Der Typograph wählt die ihm passenden Schrift-typen aus einem großen Angebot von Schriften, die er alle nicht selber entworfen hat. Daß er dabei auf das angewiesen ist, was vor ihm Schriftgestalter und Schriftgießer geschaffen haben, empfindet der Typograph oft als Nachteil. Unangenehm wird dieses Abhängigkeitsverhältnis dann, wenn die zur Auswahl stehenden Typen weder technisch noch künstlerisch den Anforderungen genügen.

Der Typograph muß sich bewußt sein, daß er innerhalb des Druckgewerbes einen Platz ein-nimmt, auf dem er einerseits auf fertige Arbeiten, die andere geleistet haben, angewiesen ist (Schrift, Papier, Farbe, Werkzeuge, Maschinen), anderer-seits aber die Weiterbehandlung seiner eigenen Arbeit in späteren Prozessen zu ermöglichen hat (Druck, Ausrüstung). Er kann seine Entschei-dungen nicht selbständig und frei treffen; er ist abhängig vom Vorher und muß Rücksicht nehmen auf das Nachher.

Die Tatsache, daß der Typograph nichts zur Schriftform beitragen kann, sondern diese fertig übernimmt, gehört zum Wesen der Typographie und ist nicht etwa eine Beeinträchtigung, im Gegenteil: das Schriftgestalten ist ja nicht nur ein ästhetisches Problem, sondern die Formen basieren größtenteils auf technischen Gegeben-heiten, die der Typograph nicht kennt.

Der Schriftschöpfer sollte persönliche Intentionen in seinen Schriftformen möglichst vermeiden, da sie einer universellen Verwendung der Typen abträglich wären. Es kann auch festgestellt werden, daß gerade der Schriftgestalter in der Anwendung seiner Typen nicht immer erfolgreich ist, weil ihm oft der nötige Abstand zu seiner eigenen Schöpfung fehlt. Diesen Abstand jedoch besitzt der Typo-graph, und er kommt ihm bei seiner Arbeit zugute, denn innere Distanz ist in der Typographie eine Tugend. Entpersönlichung ist eine Voraussetzung, Eigenwilligkeit und Emotionen finden in der Typo-graphie ihre Grenzen.

Die Summe aller vorfabrizierten Elemente ist so groß, daß die Möglichkeiten immer neuer Varia-tionen des Zusammensetzens ins Unendliche reichen. Von einer Erschöpfung der Kombinations-möglichkeiten kann nie die Rede sein. Ein Ein-engen der typographischen Formen müßte schon systematisch betrieben und auf wenige Rezepte beschränkt werden, um die Typographie erstarren zu lassen.

The typographer chooses the printing types he requires from a large variety of typefaces, none of which he has designed himself. He often considers his dependence on the founts the type designer and founder have created for him to be a disadvantage. This dependence is particularly inconvenient when the variety of types available does not meet his requirements either artistically or technically.

The typographer has to realize that he occupies a place in the printing trade in which, on the one hand, he is dependent on the finished work of others (type, paper, ink, tools, machines) and, on the other, he has to enable others to put his work through subsequent additional processes (printing, finishing). He is not free to make his own indepen-dent decisions; he must depend on what went be-forehand and take into account what is to come.

The fact that the typographer has no contribution of his own to make to the form of the typeface but takes these ready-made is of the essence of typogra-phy and must not be regarded as a detraction from the craft. Quite the contrary. It is not merely that type design involves aesthetic problems; the forms are largely determined by technical factors which are quite unknown to the typographer.

The type designer should avoid idiosyncrasies as far as possible in his typefaces since these are detrimental to the universal use of the type. The designer of type is often found to be the very man who is not invariably successful in his application of type since he often lacks the necessary critical distance from his own creation. But the typographer does possess this ability to stand back from the work, and it is very useful to him in his craft since critical distance is a virtue in a typographer. The typographer must be able to take the impersonal view; wilful individuality and emotion have little place in his work.

The sum total of all these prefabricated elements is so large that there is an almost infinite number of possible ways of arranging them in ever-new patterns. There can be no question of the typogra-pher exhausting all the potential combinations. There would have to be a systematic effort to narrow down typographical forms and reduce them to a few formulae before typography became rigid and lifeless.

Le typographe choisit les caractères qui lui con-viennent parmi un riche assortiment dont il n'est pas lui-même l'auteur. Le fait d'être lié à cette création et à la fonte préalables, qui lui restent étrangères, lui paraît souvent un inconvénient. Et lorsque les types mis à sa disposition ne répondent pas plus au point de vue technique qu'artistique aux exigences de la composition, s'ajoute alors, au désavantage de cette dépendance, un senti-ment de frustration.

Le typographe doit donc bien être conscient qu'il accepte dans le métier d'imprimeur une place où, d'une part, d'autres que lui ont déjà déterminé une partie du travail (caractères, papier, couleur, outils, machines) et où, d'autre part, il devra rendre son propre ouvrage apte à être soumis à d'autres procédés (impression, façonnage des imprimés). Il n'est donc pas libre et indépendant dans ses décisions; il doit œuvrer en tenant compte à la fois des limites que lui assigne la préfabrication, et des exigences engendrées par les travaux postérieurs au sien.

Que le typographe ne participe en rien à la créa-tion des caractères, mais ne peut que les accepter tels qu'ils lui sont offerts, est une condition de travail en typographie, mais ne constitue pas pour autant un préjudice, bien au contraire. La gravure de caractères n'est pas seulement un problème esthétique, mais repose pour une grande part sur des données techniques inconnues du typo-graphe.

Le dessinateur de caractères devrait se garder de faire intervenir sa personnalité dans les formes qu'il crée, car elles sont destinées à être em-ployées universellement. On a constaté en outre que certaines créations de caractères ne sont pas toujours heureuses, l'auteur ayant manqué du recul nécessaire pour en juger valablement. Le typographe possède précisément ce recul, et ce lui est un avantage indéniable, car en typographie cette distance intérieure est une vertu, comme la dépersonnalisation est une condition; l'entête-ment et l'émotivité doivent être tenus en laisse.

La somme de tous les éléments préfabriqués est si grande que les possibilités de créer toujours de nouvelles variations et combinaisons sont infinies et qu'on ne peut jamais prétendre les avoir épuisées. Pour rendre la typographie plus rigide, il faudrait réduire systématiquement le nombre des caractères et limiter ainsi les multiples possi-bilités.

E E E

E E E

E E E

E E E

E E IE

E E E

Die Schrift ist und bleibt die Grundlage jeder typographischen Verrichtung. Schrift ist aber keine Schöpfung des 20. Jahrhunderts, sie ist Kulturgut, in Jahrhunderten geformt, von uns übernommen und von uns in gutem Zustande weiterzugeben. Wie alles historisch Gewachsene ist die Schrift voll von Widersprüchen und vom Typographen muß gefordert werden, daß er Entwicklung und Problematik der Schrift kennt und sich daraus einigermaßen ein Bild über den weiteren Verlauf der Dinge formen kann.

In den frühgriechischen Steinschriften, über die furchenwendige Zwischenstufe, ist unsere Leserichtung entwickelt worden, und auf diesem Wege kann auch die Wandlung des Großbuchstabens zum Kleinbuchstaben verfolgt werden. Ein Teil der antiken Majuskeln ist an der reizvollen Metamorphose zum Kleinbuchstaben beteiligt, ein geringerer Teil verharrte in den Majuskelformen. Die Kleinbuchstaben, erstmalig in der karolingischen Minuskel, ermöglichen im zusammengefaßten Wortbild, durch die Ober- und Unterlängen, den raschen Leseprozeß. Die Entwicklung der Schrift ist abgeschlossen, der Rest ist Variation und Konfusion.

Variation: Die karolingische Minuskel ist in den Schriften der Gotik, der italienischen und deutschen Renaissance und in der Grotesk unserer Zeit wohl variiert worden, ihre Grundformen jedoch wurden nie ernsthaft verändert.

Konfusion: Die humanistische Minuskel ist zu einem heterogenen Gebilde geworden; dem Kleinbuchstaben wurde der Großbuchstabe der Antike beigefügt, und dem Arabischen wurden die Ziffern für die abendländische Schrift entnommen. Nicht nur der Schriftgestalter, sondern auch der Typograph sollte sich der Kompliziertheit der Schrift bewußt sein. Vielleicht ist unsere Lage mit derjenigen Karls des Großen vergleichbar, der sich bewogen fühlte, die Schaffung einer Minuskel anzuordnen, in der die vielen Übergangsformen der Vergangenheit miteinander verschmolzen wurden. Die regen, gegenseitigen Kontakte der heutigen Menschen aller Länder bieten keinen Raum mehr für Schriften mit ausgeprägtem Nationalcharakter.

Die neutrale, über dem Nationalen stehende Schrift ist teilweise bereits Wirklichkeit geworden. Der technische Fortschritt strebt nach Vereinfachung, und es kann kaum noch verantwortet werden, daß zum Setzen eines gewöhnlichen Textes fünf verschiedene Alphabete Verwendung finden: Versalien, gerade und kursiv, Gemeine, gerade und kursiv, mit Kapitälchen. Fernschreiber benützen direkte Linien um die ganze Erde, und es sind Alphabete im Entstehen, die von einer Maschine automatisch abgelesen werden können. Die Technik zwingt zu neuem Denken, bedingt neue Formen als wahren Ausdruck unserer Zeit.

The written character is and remains the basis of every typographical activity. It is not a creation of our century. The written character goes far back in time, spanning the vast distance from early hieroglyphics to the abstract written symbols of today and involving many contradictions. The typographer must be familiar with this evolution and recognize its problems so that he can do justice to the tasks of the future.

Our direction of reading was developed in Early Greek lapidary writing (by way of the boustrophedonic intermediate stage) and the transformation of capitals into lower-case letters can also be followed as a parallel phenomenon. Some of the ancient majuscules underwent a charming metamorphosis into lower-case letters; a smaller number remained in the majuscule form. Lower-case letters, initially used in Carolingian minuscule, make for more rapid reading when composed into a word virtue of their ascenders and descenders. The evolution of written characters was concluded; all the rest is variation and confusion.

Variation: Carolingian minuscle appears in variant forms in the characters of Gothic, the Italian and German Renaissance, and the sans-serif of our time but there have been no drastic changes in its basic forms.

Confusion: Littera umanistica grew into a heterogeneous alphabet; its lower-case letters were supplemented by capitals taken from the classical world and figures from Arabic were added to the Western hand. Not only the type designer but also the typographer ought to be alive to the complex nature of written characters. Perhaps we are in much the same position as Charlemagne, who felt constrained to order the creation of his minuscule in which the many transitional forms of the past were amalgamated. The many active contacts between people from every country today leave no scope for type faces with a pronounced national character.

The neutral type face, aloof from all national considerations, has already to some extent become reality. Simplicity is the goal of technical progress and there is hardly any warrant for using five different alphabets to set an ordinary text: capitals, roman and italic; lower-case, roman and italic; and small capitals. Direct lines right round the world are used for teleprinters, and alphabets are being evolved which can be read automatically by a machine. Technology compels us to think afresh and calls for new forms as a living expression of the age in which we live.

L'écriture est et reste la base fondamentale de tout travail typographique. Elle n'est pas une invention de notre temps. L'écriture remonte loin dans l'antiquité et un long chemin, semé de contradictions, fut parcouru des premiers idéogrammes aux caractères modernes abstraits. Le typographe est tenu de connaître cette évolution et les problèmes qui se sont posés, afin d'être également à l'avenir à la hauteur de sa tâche.

Des inscriptions archaïques grecques gravées sur la pierre en passant par maintes époques transitoires, notre sens de la lecture s'est développé, et on assiste à un certain moment à la transformation des capitales en minuscules. Une partie des majuscules antiques prirent part à cette charmante métamorphose en minuscules et une moindre part resta figée dans sa forme d'onciale. Avec leurs prolongements supérieurs et inférieurs, les minuscules carolingiennes les premières, assemblées en mots distincts, permettent une lecture rapide. Le développement de l'écriture est en fait terminé, la suite n'est plus que variation et confusion.

Variation: la minuscule caroline s'est modifiée dans l'écriture gothique, dans les caractères de la Renaissance italienne et allemande, dans l'Antique actuelle, mais sa forme initiale transparaît toujours.

Confusion: la minuscule humanistique devint un tracé hétérogène; l'antique vit sa capitale incorporée au bas de casse, et l'Occident emprunta les chiffres aux Arabes. Tout créateur de caractères comme tout typographe devraient être conscients de la complexité de l'écriture.

Notre situation est peut-être comparable à celle de Charlemagne, qui se sentit porté à créer une lettre minuscule dans laquelle se fondent toutes les formes transitoires du passé. Les contacts étroits et constants qui règnent aujourd'hui entre les humains de tous pays ne permettent plus à l'écriture de conserver un caractère national bien différencié. Une forme d'écriture neutre, sans caractère national, est déjà presque une réalité.

Le progrès technique tend vers une simplification et on admet déjà avec peine de disposer de cinq alphabets différents pour composer un simple texte: capitales, droites et cursives, bas de casse, droites et cursives, petites capitales. Le télégraphe utilise des lignes directes à travers le monde entier, et des alphabets sont à l'étude qui pourront être lus par des machines automatiques. Pour une expression vivante de notre temps, la technique oblige à un penser nouveau et exige des formes inédites.

Die Arbeit des Typographen ist zeitgebunden wie jede andere handwerkliche Beschäftigung. Mit den Mitteln seiner Zeit hat er Druckwerke aus den Bedürfnissen seiner Zeit heraus zu schaffen. Die typographische Tätigkeit hat zwei Aspekte: Einmal ist sie einem praktischen Zweck verpflichtet, und dann, darüber hinaus, spielt sie sich in formal-künstlerischen Gebieten ab. Beide, das Zweckgebundene und das Formale, waren schon immer echte Kinder ihrer Zeit; manchmal lag der Akzent mehr auf der Form, zeitweise wieder mehr auf der Funktion, und in besonders glücklichen Epochen zeigten sich Funktion und Form in schöner Ausgewogenheit.

Der Ruf nach zeitgemäßer typographischer Formung ist eine beharrlich wiederkehrende Forderung in der Fachliteratur der neueren Zeit. Paul Renner schrieb 1931: ‹ Die Druckerei ist keine Maskenverleihanstalt. Es ist nicht unsere Aufgabe, jedem literarischen Inhalt ein zeitgemäßes Kostüm anzuziehen; wir haben nur dafür zu sorgen, daß er im Stile unserer Zeit ein passendes Kleid bekommt. Denn wir wollen typographisches Leben, kein typographisches Theater oder Maskenfest.› Stanley Morison schrieb 1948: ‹ Druck will nicht in erster Linie Kunst sein, sondern der verantwortungsvollste Teil unseres gesellschaftlichen, wirtschaftlichen und geistigen Gefüges.›

Aus der Distanz gesehen ergibt jede Epoche ein geschlossenes und einheitliches Bild. Die Typographie der Gotik hat eine frappante Ähnlichkeit mit andern Werken der Epoche, der Yachting-Stil der Jahrhundertwende manifestiert sich in der Schrift von Otto Eckmann und der Konstruktivismus der zwanziger Jahre in der Bauhaus-Typographie. Für den Zeitgenossen aber ist die Gegenwart nie einfach und präsentiert sich in verwirrender Fülle, und doch sollten wir deutlich die Züge des 20. Jahrhunderts erkennen. Diese Merkmale entstehen im Bemühen, die uns gestellten Probleme so gut wie möglich zu lösen, erst dann wird das Druckwerk zum echten Zeitdokument mit den unverkennbaren Zügen unserer Zeit. Die Schaffensgebiete sind nicht autonom geworden und es ist unmöglich, die Typographie aus dem gesamten Geschehen auszuklammern. Damit wäre sie zur Sterilität verurteilt. Ihre technisch bedingte Eigengesetzlichkeit kann und soll sie auch bei enger Verkettung mit andern Gebieten bewahren. Wenn man es auch manchmal bedauern möchte, daß sich die Typographie den Regungen des Zeitgeistes allzu leichtfertig an den Hals wirft, so ist dies immer noch besser als das Beiseitestehen. Der schöpferisch Tätige hingegen kümmert sich wenig um den Zeitstil, denn er weiß, daß ein Stil nicht bewußt geschaffen werden kann; er entsteht eher unbewußt.

The craft of the typographer, like any other, necessarily reflects the times. The age gives him the means with which to satisfy the needs the age creates. There are two sides to typography. First, it does a practical job of work; and second, it is concerned with artistic form. Both these aspects, the utilitarian and the formal, have ever been true children of their day and age; sometimes form has been accentuated, sometimes function, and in particularly blessed periods form and function have been felicitously balanced.

In recent years specialist literature has been very insistent in its call for typographical design matched to modern times. In 1931 Paul Renner wrote: "The printing works is not a place that hires out fancy dress. It is not our task to fit out any literary content with a fashionable costume; we have done our job if we see that it gets a dress in the style of our day. For what we want is typographical life and not a typographical theatre or masked ball." In 1948 Stanley Morison wrote: "Printing does not want primarily to be art but the most responsible part of our social, economic and intellectual structure."

Seen over a tract of years, any period makes a solid, uniform impression. The typography of the Gothic age bears a striking similarity to other works of the same epoch, the "yachting style" at the turn of the century is reflected in the fount of Otto Eckmann, and the Constructivism of the twenties in the typography of the Bauhaus. For contemporary man the present is never simple, it confuses him with its multifariousness; yet we ought to recognize the features of the twentieth century clearly enough. These characteristics come into being by way of our efforts to find the best possible answer to the problems facing us; only then will the printed work become a genuine document marked with the unmistakable traits of our day. The different fields of creative activity have not yet become autonomous, and typography cannot be segregated from the general flux of events. This would be tantamount to condemning it to sterility. But it has laws of its own, imposed by its technical nature, and these can and should preserve its identity even when it is closely bound up with other fields. One may sometimes regret the way typography becomes all too easily involved in the fits and moods of the age, but it is better than standing by aloof. The creative worker, on the other hand, spares little thought for contemporary style, for he realizes that style is not something that can be deliberately created; it comes all unawares!

Le travail du typographe, comme tout autre artisanat, est étroitement lié à son époque et soumis aux exigences et aux moyens de son temps. Il nous offre deux aspects: d'une part, il dépend du but pratique qui lui est imposé, et d'autre part il s'exprime dans un domaine artistique formel.

Formel et utilitaire, deux qualités déterminées par l'actualité qui, suivant l'époque, met l'accent alternativement sur la forme ou sur la fonction. Surgit parfois une époque privilégiée où forme et fonction s'allient en un harmonieux équilibre.

Les temps modernes, dans le domaine d'une littérature professionnelle, en appellent d'une façon persistante à la réalisation typographique. Paul Renner écrivait en 1931: ‹ L'imprimerie ne prête point de masques. Son rôle n'est pas d'affubler un texte littéraire d'un déguisement moderne, mais de veiller à ce qu'il soit vêtu selon le style prédominant de son époque. Elle ne veut et ne doit être qu'un travail typographique vivant et non une mascarade.› Et Stanley Morison, plus tard, s'exclamait: ‹ L'imprimerie ne veut pas être a priori un art, mais la partie consciemment responsable de notre structure sociale, économique et spirituelle.›

Considérée à distance, chaque époque nous livre une image d'elle-même fermée et homogène. Les caractères gothiques offrent une parenté frappante avec les œuvres de l'époque, le ‹ modern-style › du début du siècle transparaît dans le style d'Otto Eckmann, et le constructivisme des années 20 se manifeste dans les réalisations du Bauhaus. Pour ses contemporains, une époque n'apparaît jamais simple et claire, mais bien plutôt chaotique et déconcertante. De notre 20e siècle cependant, nous devrions discerner les grands traits marquants. Les caractéristiques ressortent des tentatives et des efforts à trouver une solution valable aux problèmes actuels, et c'est là que l'œuvre d'imprimerie peut devenir un véritable témoignage des faits méconnus de notre temps. Les divers domaines créateurs n'ont aucune autonomie, et la typographie ne peut se dissocier de l'évolution générale sans se condamner à la stérilité. Mais, tout en acceptant son conditionnement technique, elle peut et doit préserver une certaine indépendance et échapper ainsi à une infertile sujétion.

Si parfois on vient à regretter que la typographie s'empare trop facilement des engouements du jour, ceci est préférable à une mise à l'écart qui lui serait mortelle.

Au reste, le véritable créateur ne se soucie guère de la mode; il sait que la volonté consciente n'entre pas dans la recherche d'un style et que celui-ci ne naîtra que d'un lent processus inconscient.

Johannes Froben   und der Basler Buchdruck
Froben   des 16. Jahrhunderts

Die Typographie ist in größerem Ausmaß als die Gebrauchsgraphik ein Ausdruck der Technik, der Präzision und der Ordnung. Es geht in der Typographie nicht mehr um anspruchsvolle künstlerische Postulate und Kreationen, sondern um das Bemühen, den täglichen Ansprüchen formal und funktionell gerecht zu werden. Die maschinelle Herstellung der Typen und das Setzen innerhalb eines präzisen Maßsystems im rechten Winkel verlangen einen klaren Aufbau mit deutlich geordneten Verhältnissen.

Die dringlichste Forderung, welche an die Typographie gestellt werden muß, ist das Abteilen und Ordnen der unterschiedlichsten Dinge. Die unüberblickbare Textmenge eines Buches wird so aufgeteilt, daß der Text der einzelnen Buchseiten vom Leser mühelos bewältigt werden kann, wobei Satzbreite und Durchschuß so behandelt werden, daß ein flüssiges Lesen gewährleistet ist: Zeilenbreiten von über 60 Buchstaben sind schwer lesbar, zu wenig Durchschuß zerstört das Zeilenband, zu viel Durchschuß macht die Bandwirkung von Durchschuß und Zeile zu auffällig.

In tabellarischen Werken soll der ordnende Charakter der Typographie sich voll entfalten, ohne daß diese rein funktionelle Forderung der Form schadet. Es gibt eine Schönheit und einen technischen Reiz des Tabellensatzes, und die einfachste Fahrplanseite kann einer mit Farben und Formen reich befrachteten Akzidenzarbeit sehr wohl überlegen sein.

Aber auch die Publizität stellt Forderungen an die Typographie. Unsere Zeit braucht Druckwerke, die im Wettbewerb der Ideen und Produkte sich Beachtung verschaffen können. Aus dem Riesenangebot von unterschiedlich großen, fetten, schmalen und breiten Typen ist die richtige Wahl zu treffen, mit diesen Typen ist der Text zu gliedern und zu interpretieren. Dem Typographen sollen gut aufeinander abgestimmte Schriftschnitte zur Verfügung stehen, und es sei hier auf die vorzüglich aufgebaute und durchdachte Schriftfamilie der ‹ Univers › hingewiesen. Es ist zu hoffen, daß diese Leistung wegleitend wird, damit das mehr oder weniger chaotische Nebeneinander im Schriftschaffen unserer Zeit überwunden werden kann.

Viele Druckwerke sind gerade deswegen schön, weil sie, ohne künstlerische Ambitionen, bescheiden ihrer Zweckbestimmung dienen. Sie erfüllen die Forderung Stanley Morisons, daß ein Druckwerk, wie ein Verkehrsmittel, aufs feinste durchgebildet und von höchster Zweckmäßigkeit sei.

More than graphic design, typography is an expression of technology, precision and good order. Typography is no longer concerned with meeting the lofty and difficult demands of art but with satisfying, formally and functionally, the everyday requirements of a craft. The mechanical production of printing types and composition within a right-angled system of fixed dimensions makes a clear structure and cleanly ordered relationships imperative.

What the typographer has to do first and foremost is to sort out and organize things which are of a very disparate nature. The whole text of a book is so unwieldy that it has to be divided up in such a way that the reader can manage each page comfortably and follow the print without impediment. A line of more than 60 characters is hard to read; too little space between lines destroys the pattern they make, too much exaggerates it.

Tabular works afford the typographer his best opportunity to show his skill in arranging his material, but he must not let such purely formal requirements get out of hand. The composition of tables has a beauty and technical charm of its own and a simple page of a railway timetable may well be a better piece of craftsmanship than jobbing work replete with colours and fancy shapes. But advertising is also a challenge to the typographer.

Our age needs printed works which catch the eye when ideas and products are forever competing for our attention. With an enormous range of typefaces available, thin or thick, large or small, it is a question of selecting the right one, composing the copy with these faces and interpreting it. The typographer should have founts at his disposal which combine agreeably, and mention might be made in this connection of the Univers family which is very well graded and embodies a great deal of careful thought. Let us hope that this achievement will show the way to better things and help to sort out the more or less chaotic state of affairs in typefounding today.

Many pieces of printing are attractive for the simple reason that the typographer put aside artistic ambitions and tried to make the print do its job well. They are just what Stanley Morison wanted when he said that a printed work, being a means of communication, should be thought out to the last detail and made superlatively fit for the purpose it serves.

Technique, précision et ordre trouvent leur expression dans la typographie mieux encore que dans l'art graphique appliqué. Il ne s'agit plus en typographie de postulats artistiques, d'une aspiration à satisfaire un instinct créateur, mais du côté artisanal de la création, de l'application à exécuter quotidiennement un travail formel et fonctionnel. La production mécanique des caractères et la mise en page selon un système de mesure précis exigent une construction rigoureuse et des rapports clairement établis.

La typographie est soumise à un impératif: répartir et ordonner les éléments les plus divers. Inabordable dans son ensemble, le texte d'un livre une fois réparti, divisé en pages, devient spontanément accessible au lecteur. Une justification et un interlignage adéquats garantissent une bonne lisibilité; des lignes de plus de 60 lettres nuisent à la lisibilité; un interlignage trop serré brouille le texte qui, par contre, ressort trop fortement si l'interlignage est trop espacé.

L'ordonnance, caractère spécifique de la typographie, s'épanouit dans les réalisations de tabelles, sans être aucunement desservie par cette subordination fonctionnelle. Un attrait, une certaine beauté émanent de ces tableaux bien dressés, et la plus banale page d'horaire peut prévaloir sur un ouvrage fortuit où s'accumulent formes et couleurs.

La typographie participe également aux réalisations publicitaires, et dans l'énorme compétition actuelle d'idées et de produits, elle a su trouver sa place et sa considération. L'art typographique consiste à interpréter et à charpenter le texte à l'aide d'un juste choix de caractères parmi de nombreux jeux de formes allant du maigre au gras, du court à l'allongé. Le typographe dispose pour œuvrer de séries de jeux de caractères parfaitement harmonisés et précis; il n'est qu'à considérer l'admirable ensemble des 20 séries qui composent l'‹ Univers ›, qui permettent une couleur et une unité typographiques parfaites. Il est souhaitable que la typographie concentre ses efforts à ordonner et à maîtriser toujours plus l'accumulation plus ou moins chaotique d'inscriptions qui submergent notre monde.

Parce qu'elles sont dépourvues de prétentions artistiques, bien des œuvres d'imprimerie tirent leur beauté de cette modestie avec laquelle elles remplissent leur but. Elles répondent au désir de Stanley Morison, qui pensait qu'une composition typographique était, tel un moyen de communication, une œuvre de précision et de la plus grande utilité.

onde

39

onde	onde	onde	onde	onde
45	46	47	48	49

onde	onde	onde	onde	onde	onde
53	55	56	57	58	59

onde	onde	onde	onde	onde
63	65	66	67	68

onde	onde	onde
73	75	76

onde

Die Architektur des Barocks, die moderne Architektur und Plastik, die Kunst und Philosophie des Fernen Ostens haben der Bedeutung der gestalteten Form die Wirkung der sich im Raum vollziehenden Gegenform als gleichwertig gegenübergestellt.

Die Neubewertung der Barockarchitektur durch die Moderne beruht zum Teil darauf, daß das Einbeziehen des leeren Raumes in das Ganze mit den Postulaten der modernen Kunst übereinstimmt. Wohnraum wird in großen Kuben zusammengefaßt, und der leere Raum zwischen den Gebäuden wird in das Geschehen mit einbezogen. Daraus ergibt sich der freie Platz, der Raum für jenes ‹Treiben des aus Geschäft, Gespräch und holdem Müßiggang gemischten Zusammenstehens und Schlenderns› (Jakob Burckhardt).

Nach der Philosophie des Fernen Ostens bewirkt erst der leere Raum das Wesen der gestalteten Form. Ohne inneren Hohlraum ist ein Krug nur ein Tonklumpen, und erst der leere Raum im Innern macht ihn zum Gefäß, so wie es im elften Spruch des Lao-Tse zu lesen ist:

‹ Dreißig Speichen treffen die Nabe,
aber das Leere zwischen ihnen erwirkt das Wesen des Rades.
Aus Ton entstehen Töpfe,
aber das Leere in ihnen erwirkt das Wesen des Topfes.
Mauern mit Fenstern und Türen bilden das Haus,
aber das Leere zwischen ihnen erwirkt das Wesen des Hauses.
Grundsätzlich: Das Stoffliche birgt Nutzbarkeit, das Unstoffliche wirkt Wesenheit. ›

Diese Überlegungen können und sollen auf die Typographie übertragen werden. Im Gegensatz zur Renaissance, in der das Unbedruckte nur Hintergrund für das typographische Geschehen war, hat die zeitgemäße Typographie den leeren Raum der unbedruckten Fläche längst als Gestaltungselement anerkannt. Der Typograph kennt Weiß als Gestaltungswert, und er kennt auch die optischen Veränderungen von Weiß.

Das Beispiel auf der rechten Seite zeigt verschieden große Weißflächen mit deutlichen Helligkeitsstufen, wie sie beim Absetzen von drei Buchstaben auftreten. Die Typenzwischenräume sind schmal und deshalb von intensiver Helligkeit, das Weiß innerhalb des ‹o› ist etwas milder, während das über dem ‹o› liegende Weiß am schwächsten wirkt. Es entstehen Variationen von Weiß, an denen die verschieden großen Schwarzflächen beteiligt sind.

In the architecture of the Baroque, in modern architecture and sculpture, and in oriental philosophy and art the significance of created form and the effect of the counter-form arising in space are held to be of equal value.

The re-assessment of Baroque architecture by the modern age is partly based on the fact that the incorporation of empty space into the whole is consistent with the axioms of modern art. Living space is articulated into large cubes and the empty space between the buildings is fitted into the overall scheme. This gives rise to an unencumbered area for that "activity of standing together or strolling which derives variously from business, conversation and sweet leisure" (Jakob Burckhardt).

The oriental philosophers hold that the essence of created form depends on empty space. Without its hollow interior a jug is merely a lump of clay, and it is only the empty space inside that makes it into a vessel. Thus we read in the eleventh aphorism of Lao-Tse:

"Thirty spokes meet the hub,
but it is the emptiness between them that makes the essence of the wheel.
From clay pots are made,
but it is the emptiness inside them that makes the essence of the pot.
Walls with windows and doors form the house,
but it is the emptiness between them that makes the essence of the house.
The principle: The material contains usefulness, the immaterial imparts essence."

These are considerations which can and should be transferred to typography. Unlike the Renaissance, when the unprinted blank was merely a background for what was printed thereon, contemporary typographers have long recognized the empty space of the unprinted surface to be an element of design. The typographer is familiar with white as a value in design and he is familiar with the visual changes of white.

The example on the right-hand page shows areas of white of varying sizes with clear gradations of brightness arising from the composition of three letters. The spaces between the letters are narrow and therefore very bright, the counter of the "o" is milder, whereas the white above the "o" is the weakest of all. Variations arise in the strength of the white which depend on the varying sizes of the black areas.

L'architecture baroque, la sculpture et l'architecture modernes, l'art et la philosophie d'Extrême-Orient ont fait se confronter la forme pure et la contre-forme se développant dans l'espace, accordant à la signification de l'une et à l'effet de l'autre une égale valeur.

La raison pour laquelle les modernes tiennent l'architecture baroque dans une estime nouvelle vient en partie de cette intégration de l'espace vide dans le tout qui, après avoir été une caractéristique du baroque, s'accorde aux postulats modernes. De grands cubes assemblés forment l'espace habitable, et l'espace vide entre les bâtiments, qui est compris dans la conception générale, donne la place libre, l'espace où «l'on se réunit et s'adonne à la fois aux affaires, à la conversation et à une douce flânerie ». (Jakob Burckhardt.)

Selon la philosophie d'Extrême-Orient, seul l'espace vide engendre l'essence de la forme créée. Sans le vide intérieur une cruche n'est qu'un tas de glaise ; elle ne devient vase que par son seul espace intérieur, car il est bien dit à la onzième sentence du livre de Lao-Tseu :

«Trente rayons convergent vers le moyeu,
mais le vide entre eux crée la nature de la roue.
De la glaise surgissent les jarres,
mais le vide en elles crée la nature de la jarre.
Les murs, avec les fenêtres et les portes qui leur sont adjointes, forment la maison,
mais le vide entre eux crée la nature de la maison.
Voici le principe :
La matière recèle l'utilitaire,
l'immatériel crée l'essence véritable. »

Ces considérations peuvent et doivent être adoptées en typographie. Au contraire de la Renaissance, qui reléguait l'inimprimé de l'œuvre typographique à l'arrière-plan, la typographie moderne reconnaît depuis longtemps à l'espace vide que forme la surface non imprimée une valeur d'élément de création. Le typographe admet le blanc comme un élément formel, il en connaît aussi les variations d'optique.

L'exemple de la page de droite montre diverses surfaces blanches avec d'évidentes nuances de clarté, telles qu'en laisserait le retrait de trois lettres. Les espaces entre les caractères sont étroits d'où leur intense clarté ; le blanc à l'intérieur du «o» est un peu plus doux, alors que le blanc surplombant le «o» n'agit plus que faiblement. Les divers grands aplats noirs participent à ce jeu de variations du blanc.

Rhythmus ist eine Voraussetzung für alles Lebendige, für die ganze Schöpfung überhaupt. Das Wachstum jeder Kreatur vollzieht sich in rhythmischen Intervallen, unter Windeinfluß bewegen sich rhythmisch Rauch, Wald, Getreidefeld und beweglicher Sand. Durch den Einbruch der Maschine wird man erneut auf das Wertvolle des Arbeitsrhythmus aufmerksam, und man weiß, wie stark das seelische Gleichgewicht, die Gesundheit des Arbeitenden davon abhängt, daß er seine Arbeit rhythmisch verrichtet. In den Kunstwerken aller Zeiten können alle Grade rhythmischen Empfindens abgelesen werden. Gerade die Kunst des 20. Jahrhunderts ist sich der Bedeutung und der Kraft rhythmischer Gestaltung wieder stärker bewußt geworden.

Der Typographie eröffnen sich viele Möglichkeiten, mit rhythmischen Werten zu arbeiten. Die Buchdruckschrift ist ein rhythmisches Gebilde, in dem Geraden, Rundungen, Senkrechte, Waagrechte, Schrägen und Ein- und Ausgangsformen wechselnd wirksam sind. Eine gewöhnliche Textgruppe ist reich an rhythmischen Werten: Ober- und Unterlängen, runden und spitzen, symmetrischen und asymmetrischen Formen. Die Wortabstände gliedern Zeile und Satz in Worte von ungleicher Länge, in ein rhythmisches Spiel von verschiedenen Längen und unterschiedlich gewichtigen Werten. Ausgangs- und Blindzeilen tragen weiter zur Gliederung einer Satzmenge bei, und vollends die Gradabstufung der Typen ist ein ausgezeichnetes Mittel der Rhythmisierung einer typographischen Aufgabe. Es genügt schon, ein schlichtes Druckwerk gut zu setzen, um eine rhythmisch ansprechende Arbeit zu erstellen.

Auch das Papierformat ist ein rhythmisches Gebilde, sei dies im Gleichmaß aller Längen im Quadra oder im betonten Rhythmus kurz-lang beim Rechteck. Der Typograph hat unbeschränkte Möglichkeiten des Rhythmisierens durch die Art, in der das Satzgebilde auf das Papierformat verteilt wird. Der Rhythmus des Satzformates kann mit dem Rhythmus des Papierformates zusammenklingen oder mit diesem kontrastieren.

Der Satzgestalter soll jede Möglichkeit prüfen, die ihn vom starren Schema und von der monotonen Wiederholung wegführt, und dies nicht nur im Hinblick auf eine lebendige Form, sondern ebensosehr im Interesse einer guten Lesbarkeit.

Without rhythm there would be no life, there would be no creation at all. Each creature passes rhythmically through its stages of growth; under the wind's influence, forests, corn fields and the shifting sands move in rhythm. The advent of the machine has brought home to us again the value of a working rhythm, and we know that the health of the worker, his mental equilibrium, depends on his working in rhythm. Every shade of rhythmic awareness can be seen reflected in works of art down the ages. And in the twentieth century in particular, artists have again become alive to the significance and power of rhythm in design.

In typography there are many opportunities of working with rhythmic values. Take a typeface for instance. The straights and curves, verticals and horizontals, sloping elements, starts and finishes work together to produce a rhythmic pattern. There is an abundance of rhythmic values in an ordinary piece of composition: ascenders and descenders, round and pointed forms, symmetry and asymmetry. The word spaces divide the line and type matter into words of unequal size, into a rhythmic interplay of varying lengths and values of different weight. Break and blank lines also add accents of their own to the pattern of composition, and finally the graded sizes of the type are another excellent means of bringing rhythm into the typographer's work. If a simple piece of text is well composed, it will of its own accord give the work a rhythmic appeal.

The format of the paper is another rhythmic pattern, whether it is the symmetry of the equilateral square, or the stressed rhythm of the edges and sides of the rectangle. The typographer has endless possibilities of creating rhythms by the way he disposes his composition on the page. The shape of the composition can harmonize or contrast in its rhythm with the format of the paper. In designing composition, the typographer should examine every possible means of getting away from rigid systems and dull repetition, not merely for the sake of vitalizing the form but also in the interests of legibility.

Le rythme fait vibrer le monde entier, tant il est vrai que le rythme est à la naissance de toute vie. Chaque créature croît et se développe par intervalles rythmés, et dans un rythme encore s'agitent, sous l'action du vent, fumée, forêt, champs de blé ou dunes de sable. L'intervention de la machine nous rend attentifs à la pleine valeur d'une action rythmée, et l'on sait que de la cadence bien ordonnée d'un travail dépendent l'équilibre moral et la santé de l'ouvrier.

Toutes les vibrations des sensations nous ont été de tout temps transmises par les œuvres d'art. Mais jamais la signification profonde, la force du rythme n'avaient été exprimées avec tant de lucidité que dans l'art du 20e siècle. De multiples possibilités d'appréhender les valeurs rythmiques sont offertes à la typographie. Les caractères d'imprimerie sont une image rythmée, où droites, courbes, verticales, horizontales, obliques, figures divisées ou développées agissent tour à tour. Un simple texte est riche de valeurs rythmiques: prolongements supérieurs ou inférieurs, formes arrondies ou pointues, symétriques ou asymétriques. Les espacements charpentent les lignes et la composition en mots de longueurs inégales, telle une phrase musicale ponctuée de temps variables plus ou moins accentués. Fins d'alinéas et lignes en blanc structurent également la composition, et l'échelle harmonieuse des corps donne à l'ouvrage typographique cet envol, ce rythme général qui le caractérisera. D'un simple ouvrage typographique bien compris naît déjà une vision de rythme.

Le format du papier est à lui seul une expression de mouvement, qu'il soit compris dans les dimensions équilibrées du carré ou l'alternance des côtés longs et courts du rectangle. Ce champ créateur de rythmes offert au typographe est si vaste que ce dernier peut varier à l'infini caractères et formats. Le rythme qui se dégage de la composition peut s'harmoniser ou contraster avec celui du format du papier.

Le typographe devra envisager avec circonspection toute invite à s'éloigner du schéma rigide et éviter la monotonie des répétitions, s'il veut, non seulement rendre sa composition vivante, mais lui conférer également une parfaite lisibilité.

das getränk
für
jung und alt

jung und alt
für
das getränk
banago banago
banago
das getränk
für
jung und alt

banago
das getränk
für
jung und alt

jung und alt
für
das getränk
banago banago
banago
das getränk
für
jung und alt
jung und alt
für
das getränk
banago banago
banago
das getränk
für
jung

jung und alt
für
das getränk
banago
das getränk
für
jung und alt

das getränk
für
jung und alt
jung und alt
für
das getränk
banago banago
banago
das getränk
für
jung und alt

banago
das getränk
für
jung und alt
jung und alt
für
das getränk
banago banago
banago
das getränk
für
jung und alt

DESIGN AS ART

Today it has become necessary to demolish the myth of the 'star' artist who only produces masterpieces for a small group of ultra-intelligent people. It must be understood that as long as art stands aside from the problems of life it will only interest a very few people. Culture today is becoming a mass affair, and the artist must step down from his pedestal and be prepared to make a sign for a butcher's shop (if he knows how to do it). The artist must cast off the last rags of romanticism and become active as a man among men, well up in present-day techniques, materials and working methods. Without losing his innate aesthetic sense he must be able to respond with humility and competence to the demands his neighbours may make of him.

The designer of today re-establishes the long-lost contact between art and the public, between living people and art as a living thing. Instead of pictures for the drawing-room, electric gadgets for the kitchen. There should be no such thing as art divorced from life, with beautiful things to look at and hideous things to use. If what we use every day is made with art, and not thrown together by chance or caprice, then we shall have nothing to hide.

Anyone working in the field of design has a hard task

Design came into being in 1919, when Walter Gropius founded the Bauhaus at Weimar. Part of the prospectus of this school reads:

'We know that only the technical means of artistic achievement can be taught, not art itself. The function of art has in the past been given a formal importance which has severed it from our daily life; but art is always present when a people lives sincerely and healthily.

'Our job is therefore to invent a new system of education that may lead – by way of a new kind of specialized teaching of science and technology – to a complete knowledge of human needs and a universal awareness of them.

'Thus our task is to make a new kind of artist, a creator capable of understanding every kind of need: not because he is a prodigy, but because he knows how to approach human needs according to a precise method. We wish to make him conscious of his creative power, not scared of new facts, and independent of formulas in his own work.'

From that time on we have watched an ever more rapid succession of new styles in the world of art: abstract art, Dada, Cubism, Surrealism, Neo-Abstract art, Neo-Dada, pop and op. Each one gobbles up its predecessor and we start right back at the beginning again.

What Gropius wrote is still valid. This first school of design did tend to make a new kind of artist, an artist useful to society because he helps society to recover its balance, and not to lurch between a false world to live one's material life in and an ideal world to take moral refuge in.

When the objects we use every day and the surroundings we live in have become in themselves a work of art, then we shall be able to say that we have achieved a balanced life.

ahead of him: to clear his neighbour's mind of all preconceived notions of art and artists, notions picked up at schools where they condition you to think one way for the whole of your life, without stopping to think that life changes – and today more rapidly than ever. It is therefore up to us designers to make known our working methods in clear and simple terms, the methods we think are the truest, the most up-to-date, the most likely to resolve our common aesthetic problems. Anyone who uses a properly designed object feels the presence of an artist who has worked for *him*, bettering his living conditions and encouraging him to develop his taste and sense of beauty.

When we give a place of honour in the drawing-room to an ancient Etruscan vase which we consider beautiful, well proportioned and made with precision and economy, we must also remember that the vase once had an extremely common use. Most probably it was used for cooking-oil. It was made by a designer of those times, when art and life went hand in hand and there was no such thing as a work of art to look at and just any old thing to use.

I have therefore very gladly accepted the proposal that I should bring together in a volume the articles I originally published in the Milanese paper *Il Giorno*. To these I have added other texts, as well as a lot of illustrations which it was not possible to publish in the limited space of a daily paper. I have also made a few essential changes for the English edition.

I hope that other designers will make similar efforts to spread knowledge of our work, for our methods are daily asserting themselves as the fittest way of gaining the confidence of men at large, and of giving a meaning to our present way of life.

sion of the solutions found for its various components. It is 'beautiful' because it is just right. An exact project produces a beautiful object, beautiful not because it is like a piece of sculpture, even modern sculpture, but because it is only like itself.

If you want to know something else about beauty, what precisely it is, look at a history of art. You will see that every age has had its ideal Venus (or Apollo), and that all these Venuses or Apollos put together and compared out of the context of their periods are nothing less than a family of monsters.

A thing is not beautiful because it is beautiful, as the he-frog said to the she-frog; it is beautiful because one likes it.

'The basic teaching error of the academy was that of directing its attention towards genius rather than the average.' (*Bauhaus*)

36

A Living Language

'Good language alone will not save mankind. But seeing the things behind the names will help us to understand the structure of the world we live in. Good language will help us to communicate with one another about the realities of our environment, where we now speak darkly, in alien tongues.'
(*Stuart Chase*, The Tyranny of Words)

'... And after whan ye han examined youre conseil, as I han said beforne, and knowen wel that ye moun performe youre emprise, conferme it than sadly til it be at an ende.' Can one now address the public in the language of the fourteenth century? It is most unlikely that the public would understand.

Just as there are dead languages, it is natural that there should be modes of expression and communication that have gone out of use. It is a well-known fact that to get a message across we can use not only words, but in many cases also images, forms and colours, symbols, signs and signals. Just as there are words which belong to other ages, so there are colours, forms, signs and so on which in our time have come to mean nothing, or would convey a wrong meaning.

What does a blacksmith's sign mean to the children of today? To children in 1900 it meant a lot: it meant excitement. When they saw it they ran to watch the blacksmith hammering the glowing iron on his anvil, heating it every now and then in a furnace that threw off sparks like a firework display, nailing the finished shoe to the horse's hoof. Imagine the pungent stench of the hot iron, and the huge impassive horse tethered to an iron ring set in the blackened wall of that smoky cavern. . . . .

A Living Language

traffic lights), and each colour has its well-defined meaning. In advertising we use bright brash colours or very refined ones according to our purpose. In printing we use the dull four-colour system which reduces all colours to a norm, while women's fashions make use of all the colours in rotation.

A double-bend sign in the style of Louis XIV. There have always been dangerous double bends, even in the time of Louis XIV, but then there were no roadsigns. They had heraldic arms instead. As the speed and volume of traffic increases, decoration is proportionally reduced, until it reaches the bare essentials of our present-day signals. Visual language changes according to the needs of the day.

Maybe a city child of today doesn't even know what a horseshoe is, and for this reason an object that was a symbol and a sign that evoked many images and meanings is now reduced to the status of a lucky charm.

We can point out similar changes in the colours used for visual communication. Looking into the past we find certain periods dominated by certain colours and forms: periods in which all the colours are earthy and the forms hard, some in which the whole range of colours is put to use, others in which everything is done with three or four colours. And so on down to our own times, when thanks to chemistry, plastic materials and other inventions, the kingdom of colour is governed by total chaos.

Certainly if we now used the colours of the 'art nouveau' period for roadsigns, these would fade magnificently into their surroundings. At that time they used some really refined combinations of colour. A faint idea of them can still be had from Roberts's talcum powder boxes and the labels on Strega bottles. They used to put pink and yellow side by side, or brown and blue, coffee and chocolate, pea-green and violet. Then they would make unexpected leaps from one shade to another, putting red with pale blue (instead of dark) and so on. Can we imagine a 'No Overtaking' sign with a coffee and chocolate car on a violet background? Well, yes. We can imagine it for fun, but we cannot use it for a roadsign in real life.

At some times in the past a certain series of colours, let us say all of dark tone, were indiscriminately adapted to all branches of human activity. The colours used for furnishings did not differ much from those for clothes or carriages. But today different colours have different uses. For roadsigns we use only red, blue and yellow (apart from the green light at

A Rose is a Rose is a

40

In the past, images were nearly all painted, drawn or carved, and they reproduced visible and recognizable reality. Now we can even see the invisible. We have a host of machines exploring for us what we cannot see with the naked eye. We have X-ray photos, the world of the microscope, and the abstract inventions of artists. We have machines that enable us to see music and sounds in the form of luminous waves, machines that show us photo-elasticity in colour by means of polarized light, machines that slow up pictures of motion until we get as it were a blow-up of each instant. Then there are the lights which already form an accepted part of the night-scape, fluorescent lights, neon, sodium vapour lights, black light. And we have forms that are beautiful and exact because they are true forms: the forms of aeroplanes and missiles are dictated by the demands of speed, and were inconceivable in the past. These are forms we see every day, the colours and lights of our own time. To accept, to know and to use them is to express oneself in the language of today which was made for the man of today.

And then you go up to it and see, for the sake of argument, that it is an artificial rose. Then you become aware of the fact that it is made of, cloth or plastic or paper. But at first glance you were certain of one thing only, that it was a rose. This apparently insignificant fact is the subject of careful study today, for it is vital to the problems of visual communication.

All over the world psychologists, designers and research workers in other fields are trying to understand and establish objective rules that will enable us to use these means of visual communication with increasing precision.

The growing use of symbols such as roadsigns and trademarks on a worldwide scale demands absolute clarity of expression. It is no longer possible to confine oneself to local tastes. If a visual message is going to get across to people of different languages and backgrounds it is essential that the message does not lend itself to wrong interpretations. Another point is the speed at which signs can be read, though now we are pretty well trained to take them in in the blinking of an eye. Reading them is a matter of conditioning, and we do it without thinking, as when we put our foot on the brake when we see a red light. We are surrounded by countless

43

So we all have inside us (naturally with some variation from person to person) groups of images, forms and colours which have exact meanings. There are masculine forms and colours and feminine forms and colours, warm colours and cold colours, images of violence and images of gentleness, images connected with culture and the arts and others that are just plain vulgar. It goes without saying that if I have to publicize a cultural campaign on behalf of works of art I must not use vulgar colours, lettering associated with ads for canned foods, or a brash method of composition. On the contrary, I must immediately convey the idea that here we are dealing with something lofty and not to be compared in any way with commonplace things. A lot of people think that the public does not understand such matters, but it is not a question of understanding. There is a whole mechanism already at work on its own, quite independent of logic or reason. It is true that a badly designed poster will have some effect if the walls are smothered with it, but a good poster would achieve the same results less wastefully by giving more pleasure.

Unhappily there is a lot of confusion and waste in these messages that surround us. They often weary us with their petulance, their insistence on cramming things we don't want down our throats, and (what is worse) doing it clumsily.

There is one American catalogue that gives a choice of one thousand two hundred colours, and that's not all of them. In the face of this one simply cannot go on using the same red as a background for quite different products, for car tyres, perfumes and foodstuffs, as if one had no other resources. The eye of the beholder is hopelessly muddled, and his first impression, which will determine whether he is interested or not, is a vague and indefinite one.

42

visual stimuli, posters that flash past the car windows, lighted signs, blinking lights, images that crowd in upon us on every side, and all intent on telling us something. We have already made a catalogue of stimuli in our own minds, and the process goes on without pause. Almost without realizing it we arrange these images in order, rejecting those that do not interest us. We already know that roadsigns occur at a certain height above the ground and have exactly those shapes and colours and no others.

Putting things in pigeon-holes like this helps us to make snap readings of signs, and today it is important to have quick reflexes, so as not to waste time, or worse.

All over the world this kind of lettering conveys an immediate message: 'strip cartoon'. Even before we read what it says. It goes without saying that an essay on Giotto as an architect ought not to have a title in such lettering. I know this is an exaggeration, and that no one would in fact think of using lettering like this for such a subject, but exaggeration often throws light upon the negative aspects of a problem (in this case a problem of graphic design). Between these letters and the right kind for the job there is a vast range of letters to choose from, both printed and drawn, and countless ways of arranging the title. Often a firm unwilling to call in a graphic designer will use lettering suited to cheese to present a book of famous artists, and we may see an advertisement for the Bible which looks at first sight as if it were trying to sell us beer.

44

The same can be said of form. There are things on sale that demand a tremendous effort to guess at their proper use. With the confusion of form that persists today a brush can look like a cat, a lamp like a weighing machine, a home like an office and an office like a drawing-room, a bank like an electrician's workshop and a church like a stand at the Earls Court Exhibition.

The Stylists

One of the commonest aspects of design, and one of the most facile, is styling. It is within the scope of all those who have artistic stirrings, who sign their work with a generous flutter of calligraphy as if setting their mark on a romantic master-piece, and whose lips are constantly laden with the words Poetry and Art.

Styling is a kind of industrial designing, and of all branches of design the most ephemeral and superficial. It does no more than give a veneer of fashion, a contemporary 'look', to any object whatever. The stylist works for the quick turnover, and takes his ideas from the fads of the day. The 'aero-dynamic' period was the Golden Age for stylists.

What most interests a stylist is line, sculptural form, a bizarre idea. A little science fiction does no harm and a sense of elegance is basic.

The project (let's say a car body) is first sketched out with coloured pencils. The stylist strikes while the iron is hot, perhaps making a thumbnail sketch on the back of a cigarette packet. The great thing is to get it down before inspiration cools. Then it is worked out in more detail and on a bigger scale, using artists' charcoals. This second sketch is always done with a great flaunting of perspective and with dazzling

Subpixel Space

writing   about

Report: The Diminishing Marginal Value of Aesthetics

Toby Shorin   September 14, 2018   Entry 017

Cultural production is typically ignored by economists and technology writers. At best it is only addressed within the context of various media verticals: film, music, news, and so on. In this post I will begin to correct this strategic oversight by combining a theory of cultural production with some common frameworks for understanding technology and value. This analysis leads to an unavoidable conclusion: the diminishing marginal value of aesthetics.

Why Edgy Aesthetics Have Value

Cultural production moves hearts, minds, and dollars. There are several types of cultural production, but here we are primarily concerned with aesthetic production: the production of images and their value in society.

To simplify things dramatically, consider that every aesthetic falls somewhere on the following spectrum. The left side of the spectrum corresponds to wide recognition and acceptance. The right side corresponds to unrecognizability and uncommonness. Altogether, this spectrum constitutes the entire "cultural field" of images.

OBSOLETE   **NORMAL**   **EXPERIMENTAL**

The large chunk in the middle represents the zone of normalcy, into which fall most aesthetics we encounter daily. On the far left is the zone of aesthetics which are so banal they are generally considered obsolete (such as oversized suits for men). On the far right is the zone of experimental aesthetics. The location where avant-garde artists operate, this zone comprises aesthetics and images that are still hard for most consumers to understand and appreciate.

Between the zone of normalcy and the zone of experimentation, there is a sweet spot. Just outside what is considered normal yet familiar enough to be comprehended, this is where good marketers work. When Weiden Kennedy says they want to capture "lightning in a bottle" this is what they mean: to take something just outside of mainstream culture, aestheticize it, and turn it into marketing for a consumer product. It doesn't matter how much of a commodity the product is—this works for makeup and sneakers as well as it does for high-performance cars.

Slightly controversial aesthetics cater to the leading edge of consumer culture, a large population willing to spend money in order to maintain its status. As this group consumes, the cultural Overton window shifts to accommodate more and more radical aesthetics, which lose their novel status as they become normalized. The cultural normalcy spectrum flows to the left, and the function of this sort of marketing is to accelerate its natural movement.

What I have described is the essential logic of fashion. Most people associate fashion with the recycling of aesthetics on the far left of the spectrum back into the right, but that is only one function within the general model. It's important to note that this machinery is not only present in aesthetics and garment design, but applies to innovation in music, natural and social sciences, ideology, and most other areas of culture.

In Marxist literature and cultural theory, it is common to cite the matter of capitalism's ability to incorporate oppositional elements into itself. Behind that insight, which is usually dressed up in theoretical language, is this regular movement of culture, automated by the existence of cultural producers: artists, designers, marketers, and brand strategists.

Now that we have established that the market values aesthetic edginess, we can complicate this idea by understanding how context and technology affects aesthetic production and consumer reception. Of course, it is not only edgy aesthetics that have value. Aesthetics that simply reinforce demographic associations, for instance, are valuable for selling things to those demographics. But we are interested in aesthetic novelty because we are interested in the limits of aesthetic production.
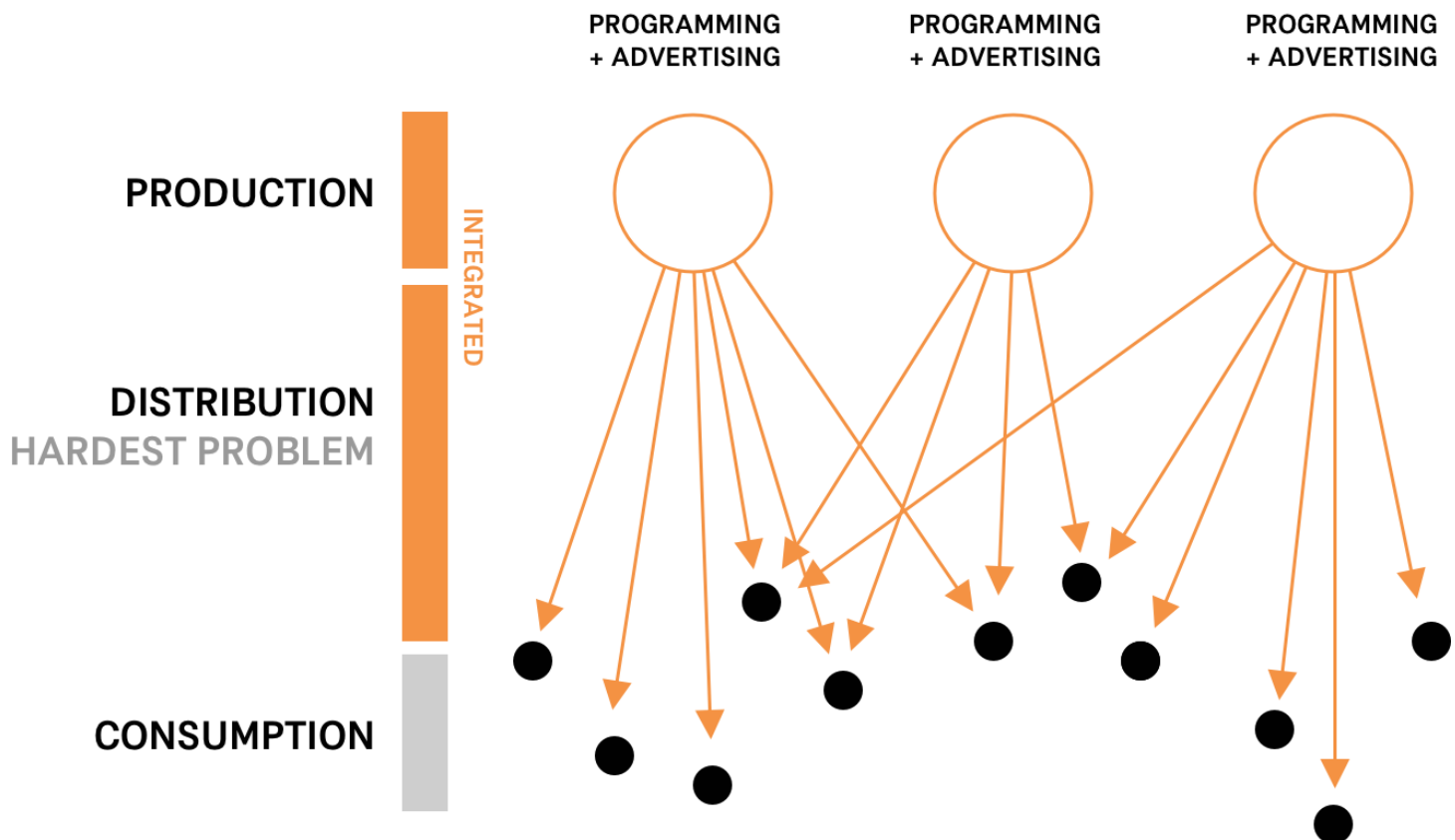
The Network Topology Constrains Aesthetic Value

The shape of the media environment is an important variable in aesthetic value creation.

The flow of cultural products in the pre-internet media environment was **unidirectional:** media channels (network hubs) broadcast toward consumers (terminal nodes in the network), and consumers could only receive visual media, not broadcast it themselves. Some independent broadcasting efforts such as zine culture did exist, but these networks were too limited in scale to be relevant to this discussion. The network was also **decentralized,** with no single source of media; but it was still concentrated, with perhaps only a few hundred mainstream media channels. This limited number of mainstream channels meant that the majority of available attention was bottlenecked through those hubs. This led to significant advertising revenues, but also posed the challenge of creating diversified programming while maintaining mainstream audience appeal.

Pre-Internet

ATTENTION BOTTLENECKS => MAINSTREAM PROGRAMMING

PROGRAMMING + ADVERTISING   PROGRAMMING + ADVERTISING   PROGRAMMING + ADVERTISING

PRODUCTION

INTEGRATED

DISTRIBUTION
HARDEST PROBLEM

**CONSUMPTION**

It is this largely mainstream programming that provided the backdrop for "edgy" material. When someone like Chris Cunningham rolled an Aphex Twin video on MTV, or when Cartoon Network played Toonami at night, it was broadly perceived edgy to consumers because of two reasons. First, the surrounding programming was firmly within the zone of normalcy, accentuating the difference of

aesthetically novel media. Secondly, the low supply of media channels meant that discovering alternative aesthetics was more difficult, heightening the significance (the value) of encountering a unique piece of media.

However, today's media landscape is completely different. The internet has enabled a truly **distributed and multidirectional** network, in which any node can be a content creator, broadcaster, and consumer. Any two nodes can have a 1:1 relationship; as a whole, the model can be described as many-to-many (M2M). However, despite the possibility of 1:1 relationships between producer-broadcasters and their audience members, those relationships are most often mediated by aggregator platforms like Twitter, Instagram, Tumblr, and so on.
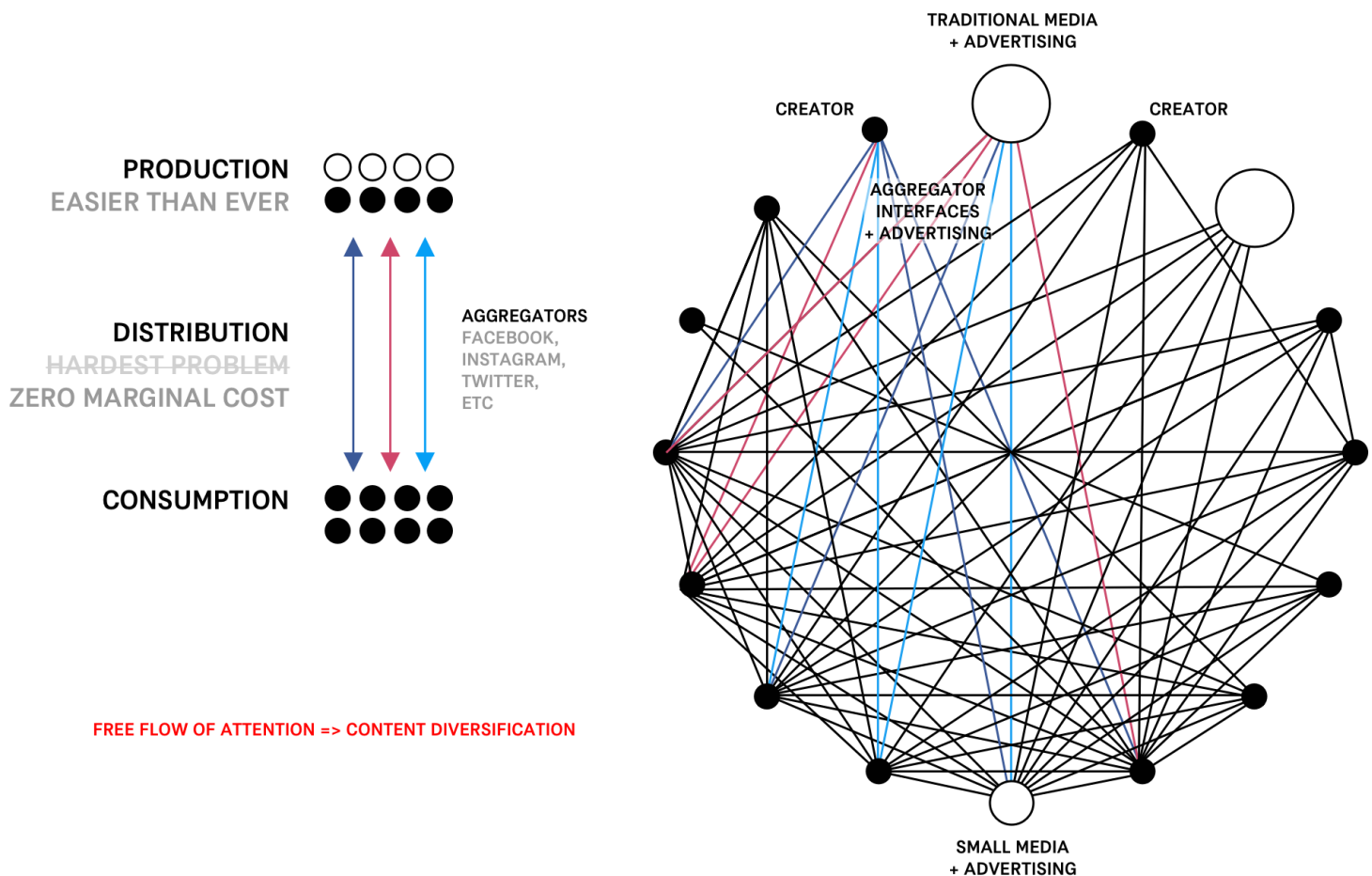
As predicted by Ben Thompson's aggregation theory, preexisting media institutions have lost out to these aggregators. But properly understood today, media institutions are not unitary organizations; they are concentrated collections of nodes with presences on aggregator platforms. Preliminary evidence for this understanding is visible in the recruiting practices of some media companies, which exhibit preferences for hiring high-follow-count nodes. Similarly, journalism schools teach social media marketing basics and routinely require students to create Twitter accounts. In short, media companies

are subject to the same broadcast dynamics as individual content producers, the main difference being the capital they can deploy to raise production value and promote their content.
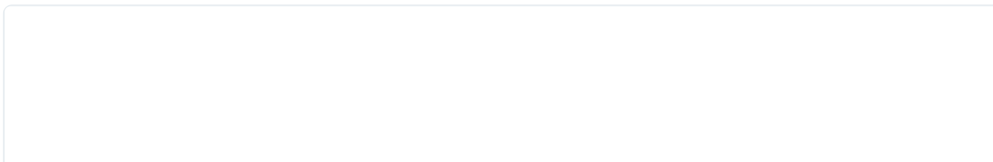
This is one example of how technology analysis frameworks and economic models are limited by their customary ignorance of cultural production. In Thompson's original rendering of aggregation theory, the act of media creation has been reduced to the notion of "user-generated content." Yet the decline of traditional media companies cannot be fully explained without accounting for the competition between cultural producers and media companies taking place on aggregator platforms.

However, we are not theorizing about the aggregators today; we are theorizing about the consequences of this new network topology on aesthetic production. The effects are threefold:

1. Everyone has equal access to every aesthetic. Media is available on demand, as opposed to the time-locked experience offered by traditional media.
2. Novel aesthetic strategies are brought to market much faster, thanks to zero marginal cost distribution. (This is not even to mention the falling cost of aesthetic production, driven down by cheap and efficient tooling.)
3. Aggregator interfaces impose uniformity of presentation (rectangular images with maximum size restraints), while positioning aesthetic artifacts above and below atomically unrelated items—other aesthetics, images and videos, the news, hot takes, memes, insights, personal updates, and so on. In short, the feed causes aesthetic relativism.

These effects are interrelated, working together in tandem to create various outcomes, some more or less surprising. For instance, universal asynchronous accessibility and low distribution cost means that an aesthetic can never die. Somewhere right now, someone is discovering vaporwave for the first time, and can contribute to its longevity by participating in a lively subreddit. This is why at any given time someone is willing to tell you that the 70s are coming back. The 70s are always coming back to someone. Of course, what is "alive" (that is to say, safely in the zone of normalcy) is not necessarily "on trend" (right-aligned) within the larger context represented by our cultural relevance spectrum.

The main event, however, is a dampening on the overall effectiveness of aesthetic strategies. The combination of ubiquitous exposure and the obliteration of predictable context desensitizes consumers to aesthetic novelty. Just as aesthetics can no longer truly die, it is now difficult to create an aesthetic that will be experienced as truly new.

This design style is

JUST SOME RANDOM LIL ICONS N SHIT

COOL

and all

BUT EVERYTHING LOOKS LIKE THIS NOW AND IT'S GETTING

🎧 Ⓜ ⚦ nelyspeck 🐙
@lonelyspeck

just practicing lol 🖌️

11.3K   4:48 PM - Aug 25, 2018

2,024 people are talking about this

Sophie
@jil_slander

Slicing an orange in half and photographing myself sticking my finger in it so that I can get featured on 198 art sites as a "groundbreaking artist" pushing the "boundaries of sexuality" see ya :)

279   3:15 PM - Aug 15, 2018

34 people are talking about this

Case Study: The Cultural Producer in an Era of Cheap Production

Creators who make money based on their image production skills are constantly hunting for new references. Their work is paid for and incorporated into the cultural field of images by means of fashion

logic described earlier. This creates perverse incentives for everyone to follow the same people, so as not to miss out on what other people are looking at, which in turn creates aesthetic micro trendwaves following the release of anything somewhat novel. A useful case study is the artwork for Jacques Greene's 2016 album Feel Infinite, designed by Hassan Rahim. After its release, the cover was subsequently exploited and picked over for evermore mainstream audiences for the next 6 months, peaking with the artwork for a Nick Jonas single.
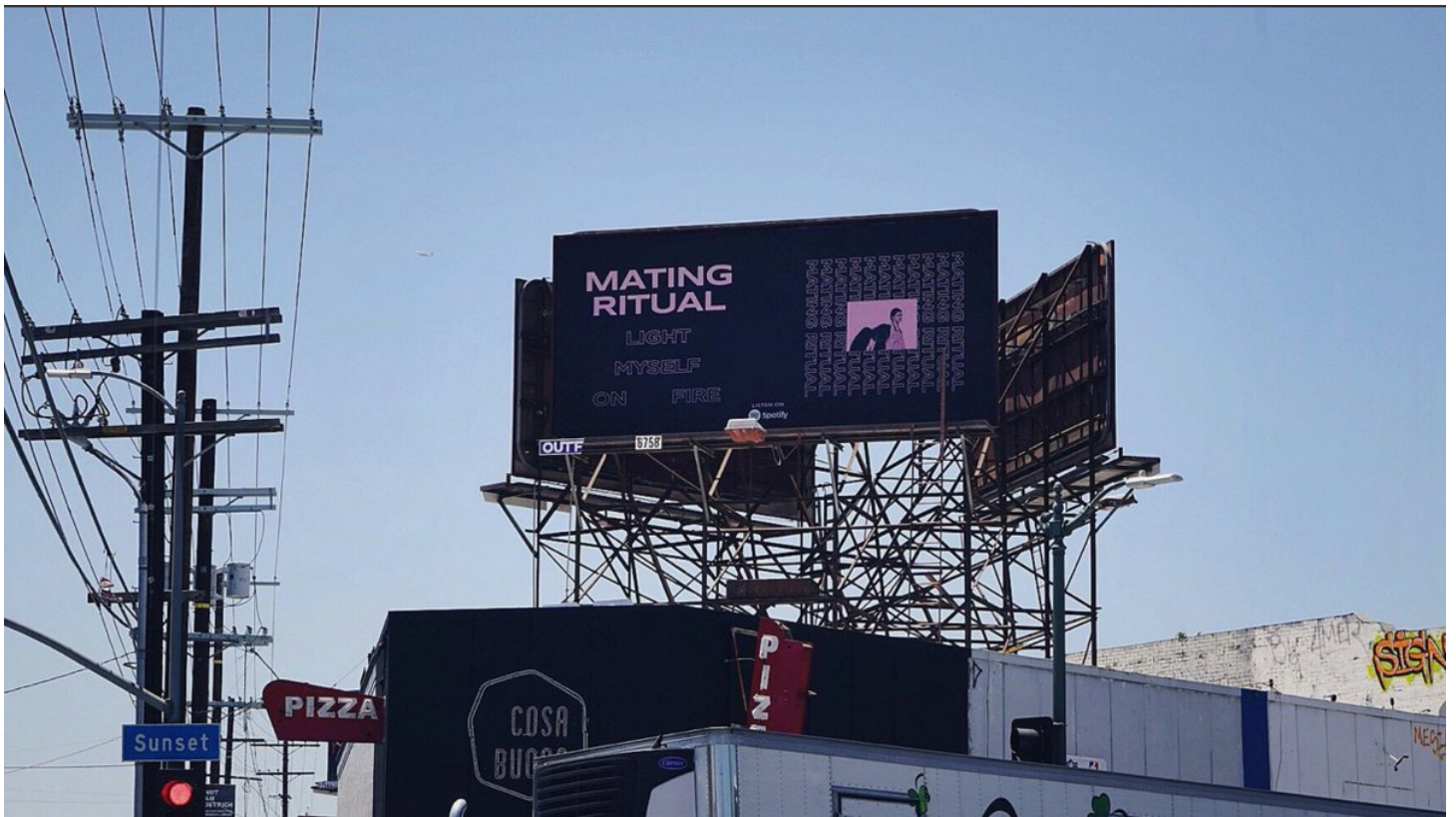
Events like these are becoming more and more common, forcing some fascinating public debates on authorship and creativity amongst graphic designers. Graphic design, the discipline of aesthetic production, is facing a crisis as it reconciles with catastrophic effects of network technology on its profitability. Even prolific designers who produce work with a characteristic original aesthetic are quickly copied. As their work is pillaged and reproduced downstream (leftstream), it becomes increasingly difficult to claim ownership over styles they themselves innovated. These designers are faced with a choice: abandon the allure of an original practice, or double down on the importance of originality and innovate further in order to maintain a competitive margin.

Eric Hu @_EricHu · Aug 9, 2018
Replying to @_EricHu
Other people much smarter than I (4) have alluded to this
previously, but at some point being a blowhard about making
original work is tapping into the same capitalist, hyper-individualist
tendencies that it was supposed to critique. The myth of the design
auteur benefits no one.

Eric Hu
@_EricHu

At some point, centering originality in discourse responds to
Capitalisms need for product differentiation. Be just 10%
different and talk about it a lot, and now you're selling
something. Take it too far and it becomes about the enforcement
of private property. 18

64   2:56 AM - Aug 9, 2018

See Eric Hu's other Tweets

neuroticarsehole
@neuroticarsehol

HOW "AUTEURISM" IN GRAPHICDESIGN TURNS OUT AS
LIKE THE OPPOSITE OF EMPOWERMENT → ALMOST AS IF
IT WAS A TRICK TO GET PEOPLE WORK FOR FREE
REINFORCE COMPETITION AND PREVENT SOLIDARITY

38   9:40 AM - Jul 1, 2018

See neuroticarsehole's other Tweets

Original typeface by David Rudnick and imitation, via The Fashion Law

These challenges apply to design practices like that of David Rudnick. David's widely influential custom typefaces and compositional style are often pointed to as an aesthetic imitated by everyone from

students to established designers. In the face of egregious examples of mimicry, David has remained good-humored but has relentlessly reaffirmed his stake in the techniques he developed and popularized. Publicly he has offered this advice for developing defensible mechanisms against derivative work:

ཤལབསརངད @David_Rudnick · Feb 20, 2018

Replying to @mvcdonvld

1. Build work of a depth that is improbably difficult to coopt effectively, marry craft and concept so that one is impossible to lift without the other

2. Without apology disown disavow+ distance yourself from individuals who adopt shallow or cynical models of cultural production

ཤལབསརངད
@David_Rudnick

and obviously;

3. Support support support others who take the time & risk to build their own practices and build tools for others. Forget trying to be a hero, be suspicious of anyone who tries to encourage you to be, or wants to be seen as one. Its about all of us, not 1 winner

123   3:06 PM - Feb 20, 2018

18 people are talking about this

David's creative strategies continue to differentiate him from his imitators. But such insistence on original work has been criticized on the grounds that creative "theft" is inevitable. With global visibility and effortless distribution, nobody's work is safe from being included in a client's moodboard. In this environment, people cannot be expected to develop a novel aesthetic for every project. Subject to harsh competitive dynamics and incapable of being picky with clients, some designers can only view the struggle to maintain authorship as futile, cynical, and privileged. I followed up with David regarding these criticisms and the present challenges of authorship.

David Rudnick
@David_Rudnick   davidrudnick.org

My struggle is not to maintain authorship. I think authorship's presence is paradoxical in design. Design to me is a synthesis of the message that must be shaped and the audience that must receive it. If one starts with an analysis of both message and audience, then authorship is unlikely to be compromised, because these two things are unique in every brief. If visual strategies are built outwards from these two things, then the author will always be present but hopefully invisible; they

are there, in their observation of the message and their observation of the audience. To be tasked with listening for those two things is a big enough privilege independent of any ego-validation for the form of the work. That is the way I am comfortable working forwards towards a goal. I agree with Eric — the goal is not work in which is recognised the triumphant presence of the Hyperoriginal author. Rather one which could only have emerged from the quietest most complete synthesis of the message and its audience. Eric refers to it as sincerity, hopefully my words above explain that I mean something similar when I use the term "Original"; its efficacy does not come from stolen visual flourishes or ego-presence.

I am in a very lucky position where my practice has a limited level of autonomy and visibility that I am grateful for. Some of that autonomy was gained with the adoption of a strategies that I was actively advised against; by not viewing my typefaces as products for distribution so that I might accumulate capital, I lost income and the cachet of publication, but retained tools that were impossible for outsiders to directly appropriate. I adopted systems of documentation that fingerprint the document-object (work 2) without changing its form-in-the-world (work 1), allowing a separation of tools for distinguishing authorship-in-documentation from the design-object itself.

These are just two of what may be seen as an emergent front of design strategies adapting to this moment of hypervisibility. This goal — at odds with the current model of design education — would be to discover and propagate more methodologies requiring no capital or special equipment or privilege to enact, and which enable designers able to utilize, share and document visual and systemic discoveries without fear that, by doing so, they are immediately sacrificing all autonomy and their tools and voices to entities higher up the visibility hierarchy.

Cheap to produce, free to distribute, yet still impossible to meaningfully automate, aesthetic production is an increasingly precarious vocation. The status associated with aesthetic novelty is eroding, and novelty itself has become difficult to eke out of a system in which everything is visible, accessible, and relativized. The graphic design profession is being strangled in a race to the bottom of the market, and the distributed network topology of the internet is largely responsible; aesthetics has, simply put, been disrupted.

Usually disruptions create new markets, which generate enormous wealth and value. In the case of aesthetics, much of this value has been soaked up by the existing infrastructure providers: PC manufacturers (hardware), Adobe, (software), advertising networks and aggregators (distribution). We do see vast growth in the number of boutique agencies, design studios, and so on. But as I have argued, the forces of technology that have created these markets are simultaneously destroying the monetizable value of the entire cultural category.

The Cultural Production Adoption Lifecycle

The changes brought about by a distributed network and the proliferation of aggregator influences do not stop with people who produce cultural images for a job. In fact, the line has become increasingly blurry.

To broaden our view: we must look at image production (and cultural production in general) not just as a specific vocation, but as a **novel consumer behavior.** The popular Technology Adoption Life Cycle framework proposes that different psychographic consumer segments—early adopters, early majority, late majority, and laggard markets—can be penetrated by developing products packaged for each segments. In the case of aesthetic production, these killer apps have not been Photoshop. They have been the aggregator interfaces, which make possible the effortless broadcasting of aesthetic artifacts.
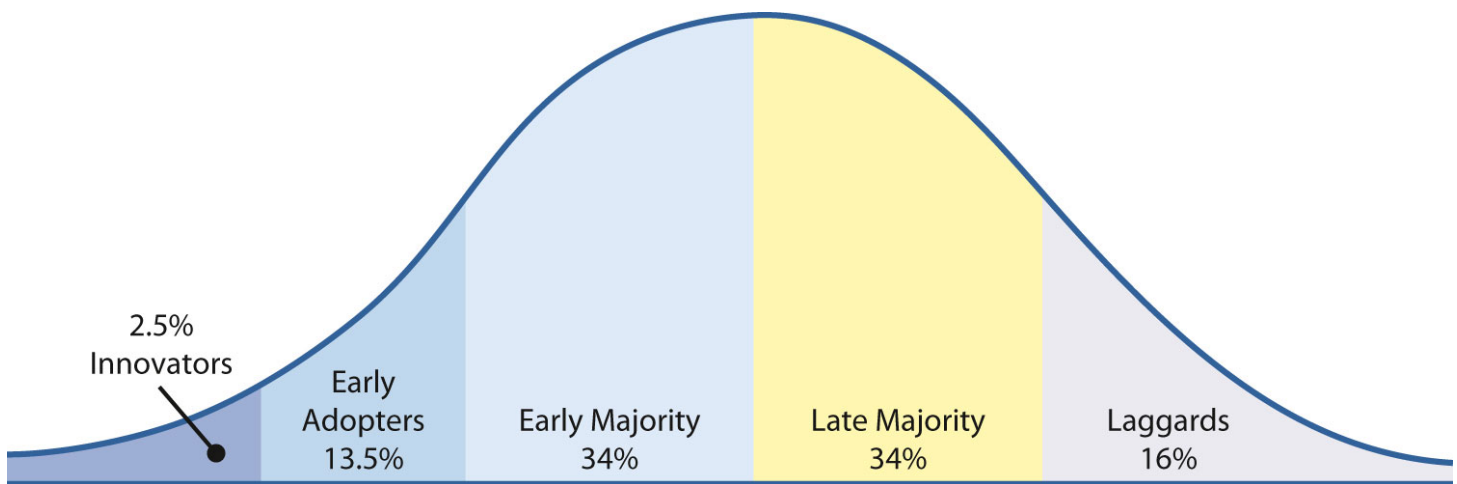

2.5% Innovators · Early Adopters 13.5% · Early Majority 34% · Late Majority 34% · Laggards 16%

Image via Saylor Academy

At the risk of repeating myself, casual broadcasting was not possible before the internet. The separation of broadcasters and consumers in the network meant that client funding or corporate backing was required to pay for the aesthetic production and distribution. Professionally employed designers, photographers, and graphic artists thus had the privilege of being the predominant image producers in society. Instagram, however, has made image producers and broadcasters out of everyone. The multidirectional distributed network of the internet has enabled a once-niche professional activity to become **a technology of self-expression.** Combined with the technology adoption life cycle, this explains why the loss of Vine was so widely lamented. Its shutdown destroyed a self-expressive behavior with strong network effects in the middle of its adoption by an early majority.

If image and aesthetic production is a fully saturated behavior, we should expect to see that the market for aesthetics is no longer about disruptive, product-driven innovation but about sustaining, process-driven innovation characterized by customer-stealing and market consolidation. In fact, this is exactly what we have, with established graphic designers competing with young guns to sell the aesthetics

they originated, and an endless homogeneity of Instagram lifestyle influencers all competing over the same types of aspirational consumer. In the adjacent world of music, a similar competitive dynamic is visible with producers making money selling "type beats."

Provided we accept this model, we should look for opportunities for true disruption in aesthetics by asking the following questions:

- What are emergent forms of self-expression?
- Where are avant-garde artists (early adopters) making new aesthetic movements happen, and what tools are they using? Turning to the far right side of the cultural normalcy spectrum may be useful.
- What emerging technologies could be used for cultural production in non-obvious ways?

Let's start with an an example of a technology that has failed to disrupt cultural production: 3D printing. Despite having expressive potential, the barriers to entry (skill and cost) are too high for anyone but tinkerers to adopt it, and it is not supported by network effects.

Crowdfunding, on the other hand, is very interesting. It is strongly self-expressive, supported by M2M network model dynamics, and has been efficiently packaged by companies like Kickstarter and Indiegogo. It's doubtful, however, that crowdfunding will penetrate the late majority market because crowdfunding products require entrepreneurship, an intrinsically messy activity.

The proliferation of streetwear brands and small middle-market fashion brands is a newer and even better case study. Creating a fashion brand involves all the normal skills of aesthetic production, but does not necessarily require garment production skills, which can be outsourced. Creating a clothing brand solves the context flattening problem posed by aggregator interfaces because a piece of clothing is not merely visual—it can also be worn. Moreover, from the perspective of the cultural producer, a brand is categorically better than a single form of media because of its flexibility—a single brand concept can be expressed through video, images, garments, text, and subsets of all of the above.

Kyle Chayka
@chaykak

"the parents who, in lieu of an iPad, bought their son a £600 birthday pop-up from which to launch his T-shirt brand for two weeks." ft.com/content/23ea59…

68   10:19 AM - Jul 29, 2018

Inside the pop-up economy

Appear Here launched 300 stores in London this month. Now, the company can furnish them, too. But can it save the high street?

ft.com

17 people are talking about this

The crowdfunding and tiny brand revolutions indicate that the **business entity can be a means of self-expression and an aesthetic medium of its own.** Pop-up shops and one-off capsule collections are effective single-shot versions of this medium, but projects with greater ambitions are emerging as well. LOT2046 and Urbit are vehicles for a set of values for with distinct auteurial aesthetic visions. Both are popularly disparaged as "art projects" because they are equally driven by ideological motivations, but that has not stopped them from being, respectively, a successful subscription business and a robust engineering organization. The business entity is the most important disruptive technology of cultural production to watch. In the United States, recent changes in tax incentives benefiting corporation owners over freelancers provide an infrastructural ground for this hypothesis.

To summarize: why is it worth paying attention to cultural production?

1. There are implications for every field involving cultural production: for example, the production and distribution conditions of advertising, political messages, memes, and every possible combination of these image-based media are all subject to M2M network logic.
2. The dynamics of cultural production at scale is under-theorized and simply fascinating.
3. Financial models for cultural production under contemporary media circumstances are an unsolved problem. The old models are dissolving, and there is widespread dissatisfaction with the aggregator "solution" (in scare quotes because none of the cultural producers are actually making money).
4. It's a way of understanding the media business today—and we are all in the media business now.