

the poetics of transition

the ambiguous characteristics of virtual typography

Matthias Hillner

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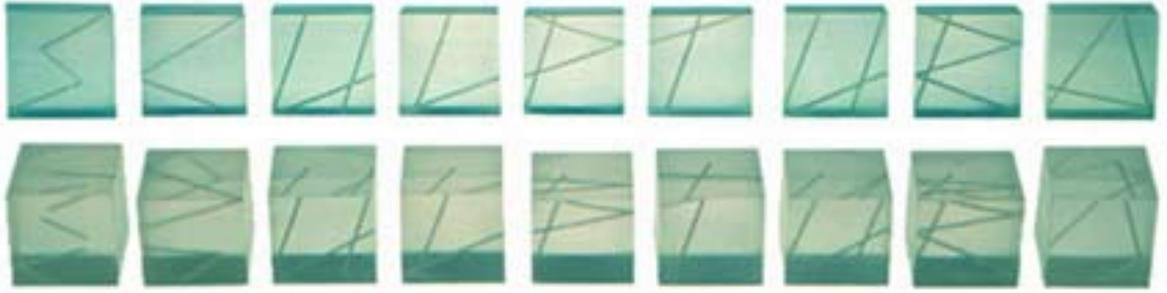
abstract Computer technologies in combination with fibre optics allow for information to be transmitted at the speed of light. But how fast can digital information be perceived by the information recipient? Digital media have fostered an information density that makes selecting and reflecting on information increasingly difficult for recipients. If communication processes cannot be decompressed, the growing information overload may impair the dissemination of knowledge and understanding within society.

This thesis defines virtual typography as visual data that appears virtually, i.e. almost typographical. It then analyses the perception of virtual typography in the context of new media communications. The thesis proposes that the visually stimulating effect of virtual typography can be deployed to counteract the ongoing acceleration of the written word in digital environments.

By conducting a range of case studies in the field of graphic design, motion graphics, and digital communications, this thesis argues that aesthetic perception can be seen as a para-communicative function. It explains how the potentially poetic quality of time-based typography seduces the viewer to spend more time on contemplating digitally transmitted text information.

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Figures 7 and 8, the author, *sculptura*, prototype, London, 2001

What is more important with respect to this investigation, is the fact that Picasso's sculpture was a sketch that proposed a bigger version of the work to be built in tribute to Guillaume Apollinaire. Alongside Stéphane Mallarmé and others Apollinaire introduced the revolutionary idea of visualising poetry [Figures 9-11] at the turn of the 19th century. This attempt to combine text and image through visually challenging typographic compositions inspired many forms of typographic art including Futurism, Dadaism, and even Constructivism. One must wonder what contemporary typographic design would be like without the intervention of visual poetry.

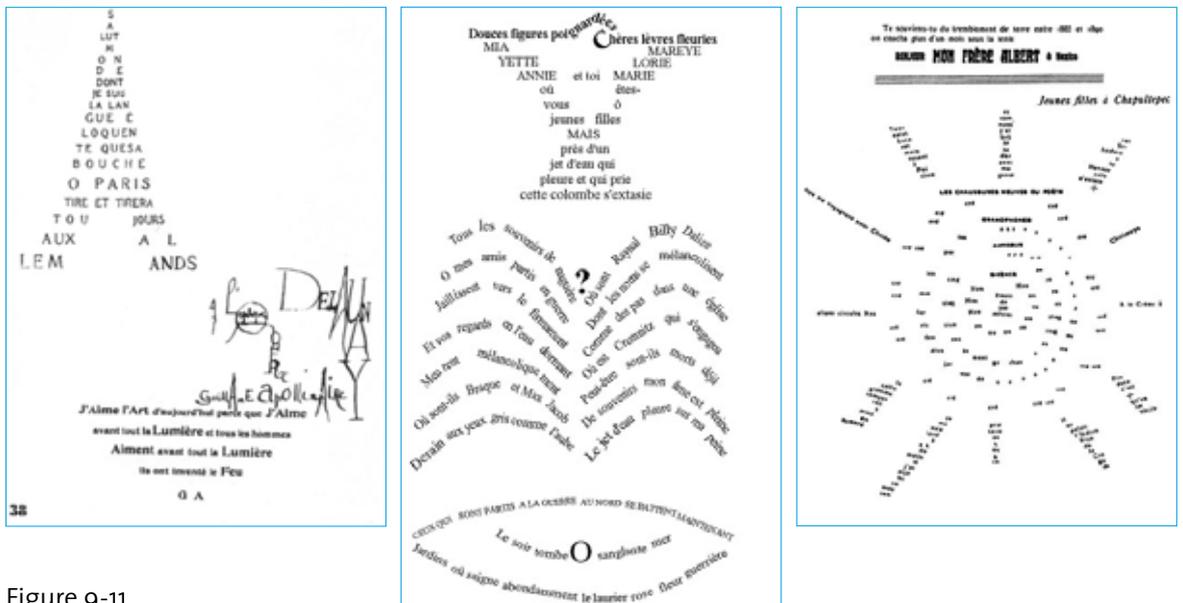
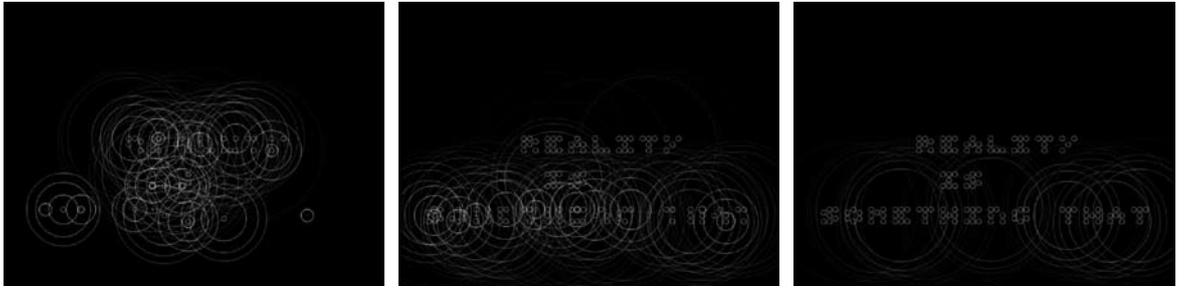


Figure 9-11
Guillaume Apollinaire,
figurative poetry

The question that led up to this research is, what happens if the image-text-relationship, as introduced by visual poetry, is time-based? How is a typographic piece of information perceived when it emerges gradually from an image pattern? What happens if such image patterns do not resolve into typography as expected?



Figures 12-14 the author, automotive hydraulic, music video created for Locarecords, London, 2004



Figures 15-17 the author, automotive hydraulic, music video created for Locarecords, London, 2004

A music video I created whilst preparing my research featured gradually emerging typographic information [Figures 12-14] followed by non-typographical patterns [Figures 15-17]. When peer-reviewed the latter were often perceived as typographic, even though their nature was of an entirely different origin. These misjudgments reminded me of a comment made by Professor Daniel Boyarski, Head of Graphic Design at Carnegie Mellon University in Pittsburgh, USA. In reference to *sculptura* Boyarski had claimed that he liked the typeface best just before he could read the words. (Boyarski, 2001) The idea that the period of time prior to the process of reading may be visually stimulating, alongside the reported joyful experience of failed perception, raised questions about the aesthetic that is inherent to virtually typographic information. The obvious question remaining was, what is it that lends transitional typography its intriguing quality? How exactly does it affect the viewer's mind-set?

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1. introduction approaching new media

'Ours is a brand-new world of allatonce. "Time" has ceased, "space" has vanished. We now live in a global village ... a simultaneous happening' (McLuhan, 2001b, p.63)

New media operate so efficiently that time for contemplating information has largely vanished. Where perception is reduced to 'a mode of pattern recognition' (McLuhan, 2001b, p.63), action is replaced by reaction. Where people are denied time for reflection, information is merely registered, and this applies to written information in particular. 'Information pours upon us, instantaneously and constantly.' (McLuhan, 2001b, p.63) The acceleration in data transmission comes at the expense of the qualitative assessment of information. Aesthetic pleasure is undermined by time-pressure.

Typography generally aims to make reading easier. Modernist designers placed legibility high on their agenda. Post-modernists rebelled against such functionalist principles.¹ It is striking that postmodern typography became particularly popular when digital technologies were introduced to graphic design in the 1980s. Legibility was disputed particularly intensively during those years when computational developments promoted the acceleration of information transmission. Post-modernists often failed to develop a sufficient rationale though. Thus they often took refuge in fostering the notion of intuitive, and therefore inexplicable design practice.

Fuse magazine, founded by Neville Brody and Jon Wozencroft in 1990, managed to expose a number of interesting issues surrounding the motivation behind post-modern typography. It addressed various social, cultural, and technological phenomena including the 'Virtual' (Fuse No 5, 1992). But despite the fact that this issue discussed numerous problems relating to virtual realities in great detail, it failed to explain the significance of what constitutes virtually typographical information (i.e. typographic information that cannot be clearly determined as such) in the context of digital environments. The bridge between the typographic examples featured and virtual realities had (at least verbally) not been built. If the Fuse project has often been misinterpreted, as stated by Wozencroft himself (Wozencroft, 2005), then it is supposedly due to the fact that readers failed to bridge the visual components with the lateral content of the magazine's written parts.

My critique on Fuse aside, I must admit that I struggled to develop my academic argument having declared *virtual typography* my subject of interest. During the initial stages of my studies I temporarily changed the term to 'kinetic typography', an expression I was first introduced to during a design conference in Seoul. Here Professor Daniel Boyarski from the Carnegie Mellon University tried to bridge the areas of typography and digital interface design via the kinetic aspect. Here Boyarski also provided a basic notion of aesthetics in relation to kinetic typography. Based on the idea that aesthetic perception relies on the fact that information is being received by multiple senses at once, Boyarski claimed that kinetic typography may offer new ways of aesthetic expression. However, Boyarski's definition of aesthetic perception did not go far beyond the dictionary citations he used.

¹ Functionalism, from a pragmatic point of view represents the idea of purpose-led design. Functionalism is mostly associated with conservative attitudes which prioritise rational thinking over emotive expression. By highlighting the significance of emotional responses to aesthetic visual experiences, this thesis will critically reassess the purposes behind visual communication. If the viewer's emotive response to aesthetic objects can be considered as significant in respect to the viewer's attention level, aesthetic expression may be declared a para-communicative function.

kinetic typography

Kinetic typography would literally translate as *the art of print in motion*. This constitutes an interesting contradiction in terms. The printing of texts is a fixation of texts, be it onto paper, onto a wall, or onto an object. Obviously the carrying material or object may well be moving, be it a car or simply the pages of a book. Also the reader may be moving in relation to the text, when passing a billboard or a traffic sign for example. In each of those cases the text would be interpreted as being static rather than kinetic. Motion is generally perceived within its context of reference. Where a text moves in accordance with its surrounding, the movement is attributed to the surrounding context, not to the text itself.

motion typography

However, texts may well move when displayed on screen. They can move across the screen, left or right, up or down, the screen being the point of reference. The books edited by Matt Woolman and Jeff Bellantoni advocate a more liberal understanding of what is being referred to as 'motion typography', and 'type in motion'. Here it appears as if anything that changes over time can be considered as in motion, no matter whether a location change takes place or not. But even though the expression 'motion typography' may have entered the designer's common vocabulary, and despite the linguistic liaison to 'motion graphics', this thesis will refer to 'transitional typography' instead. This differentiation between 'kinetic typography' (motion typography in the strict sense) and 'transitional typography' (gradually changing typography) will allow a more precise argumentation.

temporal typography

Yin Yin Wong, who graduated with an MA at the MIT (Massachusetts Institute of Technology) in 1995, was likewise careful with the choice of her terminology. Her degree thesis was entitled as 'Temporal Typography' so to characterise typographic forms which change dynamically over time. Wong's thesis describes the potential of temporal typography to deliver messages in an expressive way. However, as with most MIT paper's, Wong's notion of expressiveness is channelled towards a computational argument that contributes to future concepts of software development, but not to aesthetic theories. The 'qualitative discussion' promised in the opening paragraph about the 'Motivation' falls short of a critical understanding of the nature of expression in the communicative sense. This would require a philosophical, qualitative approach, which would go well beyond Wong's technological, descriptive assessment. Wong explains for example, that Rapid Serial Visualisation (a method, where one or several words are presented in one location successively), allows temporal typography to be deciphered as quickly as static typography. My query from a cultural-philosophical point of view would be, whether or not it is at all beneficial to read at a fast pace. By relocating this question into a cognitive context, we may query for example, how the pace of reading relates to the memory function of the reader's brain. Wong's thesis does not suffice to respond to such queries.

In his book 'Improvisational Design' Suguru Ishizaki defines his terminology more rigorously than Yin Yin Wong. Ishizaki refers to 'dynamic design' where the 'design continuously adapts to the dynamic changes in information content and the information recipient's intention'. (Ishizaki, 2003, p.7) Ishizaki further explains that according to his understanding of dynamic design, the problem constitutes the

dynamic element, not the design solution. In his case there is no final design outcome, but a flexible solution which progressively adapts to a dynamic problem. Animations, including the typographic kind, consequently do not fall into this design category. Clearly dynamic typography according to Ishizaki's definition of 'dynamic design' would not be the kinetic form of text as seen by the passive viewer (who, as we will find out, is not quite as passive as it may seem at first glance). His thesis focuses on changeable contents leading to a flexible mode of software usage. My approach could therefore be seen in juxtaposition to Ishizaki's. I do not intend to create a descriptive assessment of computer content functionality. I am striving towards a critical, and consequently qualitative, assessment of the perception process triggered through typography that exceeds the viewer's technical control.

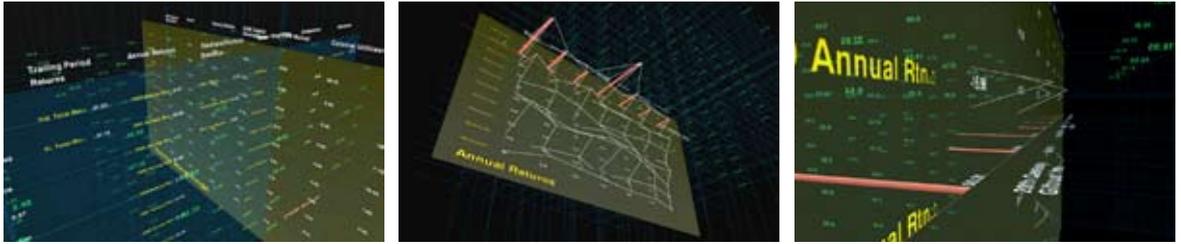
information landscapes



Figures 1.1-1.3 David Small, Massachusetts Institute of Technology, USA, 1996

A different concept of screen-related typography that also originates at the Massachusetts Institute of Technology, is the so-called 'information landscape'. [Figures 1.1-1.3] Following David Small's essay 'Navigating large bodies of text' in 1996, the text here is essentially static. It is the reader that moves, whilst virtually navigating through three-dimensional arrangements of blocks of texts. In his paper, Small shows how texts could possibly be explored within a three-dimensional environment. Like Wong's thesis, the paper discusses various cognitive issues in relation to the perception of texts within a digital environment. It specifies, for example, the possible confusion arising from the viewing of the reverse side of a block of text, as well as the technique of greeking, which allows replacing virtually distant lines of text through dimmed bars to improve the presentation of multi-dimensional typographic compositions.

moving through time and space



Figures 1.4-1.6 Financial Viewpoints by Lisa Strausfeld, Pentagram Design New York, USA



Figures 1.7-1.9 The Millennium Project by Lisa Strausfeld, Pentagram Design New York, USA

Whilst Small's essay describes a more or less abstract concept, Lisa Strausfeld demonstrates how the idea can take shape in a commercial context. Also a MIT graduate, Strausfeld joined the Pentagram New York as a partner in 2002. Two of her show reel projects provide a much clearer idea of the possible benefits of 'information landscapes': 'Financial Viewpoint' [Figures 1.4-1.6], and 'The Millennium Project'. [Figures 1.7-1.9] In the first case three-dimensionality is used to organise complex data relating to a variety of funds. The possibility of sectioning a three-dimensional database along diverse directions allows the user to gain multiple perspectives (each of which reveal two-dimensional information such as graphs and number charts) on the selected information. The characteristics of an information landscape becomes even more apparent in the second example. 'The Millennium Project' is a three-dimensional time line, which uses one direction as a time-scale, and the remaining two for geographical data. Via the location of the information, this system tells us not only what happened where and when, but also what happened around the same time. So the user can *virtually* travel through time and space, and access textual and image based information depending on the three-dimensional coordinates of his journey. The aim of such projects, I suspect, is summed up by Small's statement: 'By escaping the confines of the flat sheet of paper, we can arrange information into the meaningful landscapes that exhibit qualities of mystery, continuity, and visual delight.' (Small, 1996, p.516) But this statement contains a contradiction: continuity is predictable, and therefore by definition not mysterious. So does the 'visual delight' result from *mystery* or *continuity*?

visual delight

Knowingly or not, Small hints at a fundamental problem, which, I think, is being neglected in all the above studies. In each case the 'visual delight' is hoped to be achieved somehow through clarity, and ease of use. But in my view Wong's expressive typography, as well as Small's and Strausfeld's information landscapes, are visually intriguing due to their very strangeness. Any new kind of text presentation requires a new mode of deciphering, in other words a different search for meaning. At first glance an information landscape looks strange, and obscure. Where it was never seen before, it

requires the reader to orientate to find his way through. This process of orientation is what makes those concepts appear fascinating. If there can be a poetic quality to typography,¹ as suggested by Professor Boyarski, then we may expect to find it in a certain kind of *strangeness* in the form of representation.



Figures 1.10-1.11
Streams of Consciousness, by David Small and
Tom White, Massachusetts Institute of
Technology, USA , 1995

What appears obvious is, that, by aiming at the gradual uncovering of meanings, poetic expression requires a different mode of information transmission than that which is fostered by conventional hypertext today. This thesis will discuss how poetic modes of expression may exist over and above the literal message content. We may further assume that, in terms of visual poetics, such modes of expression can be seen as separate from the verbal communication contents. With their interactive installation entitled 'Streams of Consciousness' [Figure 1.10], David Small and Tom White 'hoped to evoke the fluid contents of conscious memory' (Small, White, 1998). This computational exercise used moving text elements simulating the flow of water. From a philosophical point of view it must appear rather strange that Small and White offered the user the interactive control of the 'Streams of Consciousness'. [Figure 1.11] Isn't it precisely the unpredictability that makes a natural flow of water so intriguing, if not to say *poetic*? Isn't it the fact that we do not fully understand the growth of a tree that makes it appear beautiful? We can only sense, or guess, that there may be an underlying logic to its shape and form. I suspect it is this moment of speculation that triggers our fascination and sustains our attention, be it in relation to nature, or to poetic means of communication. The title of Small's and White's work, in my view, hints at the dilemma surrounding current discussions about new media typography. The computational arguments focus on technological production on the one hand, and on conscious communication on the other. The unconscious, or pre-conscious, remains largely ignored. To develop an understanding for poetics in relation to typography, we need to look into the perception of the mysterious, the ambiguous, and uncover the way in which informational noise is anticipated to evolve into meaning.

¹ This thesis uses the term *poetic* to describe forms of typography which share certain characteristics with poetic writing (perceptually challenging, time-based, rhythmic etc.). Poetic forms of typographic expression distinguish themselves from typographic means of mass communication in similar ways to which poetic writing differs from prose. It is difficult to uncover, and therefore exclusive to those who commit themselves to reflect on the way words are communicated. When discussing visual poetry Stefan Themerson juxtaposes poetry with road signs to highlight the different purposes behind both means of communication. Poetic expression heightens the complexity in meaning, whilst road signs simplify the communication function. (Themerson, in: Spencer, *The Liberated Page*, 1987) The term poetic should, however, not be seen as a quality statement. It indicates a different, but not necessarily better form of communicating words.

virtual typography

In my interest in examining ambiguity in relation to time-based typography I decided to attribute the term virtual typography not to typography that is hard or impossible to read, but to information which is difficult to recognise as typographic. My ambition in relation to virtual typography is consequently not to explore the borderline of legibility along the lines of post-modern typography, but to challenge the viewer during the initial recognition stage. The word viewer, by the way, is chosen with care. The viewer turns into a reader precisely when typographic forms turn legible. This transitional stage, however, follows after the point in time where information is being identified as typographic. This moment of identification is the very instant, when I consider texts to be *virtually* typographical. Depending on the circumstances as well as on the perceptual capabilities of the individual observer, this instant can happen sooner or later. It can even occur, where non-typographical information is being perceived as typographical.

2. virtual typography the obvious and the mysterious

If we understand virtual typography as that which is *virtually* i.e. potentially typographical rather than relating it to virtual environments from the outset, then we may consider obscurity as one of its inherent characteristics. Typography that cannot be clearly categorised as such raises questions about its linguistic nature. Thus it appears as something mysterious to those who seek to make sense of what they see.

Lev Manovich describes the language of new media as a hybrid, which evolves from the fusion of various media within a digital environment. Texts and graphic images are used in combination with photography and time-based imagery to construct 'numerous new visual aesthetics'. (Manovich, 2006b) Manovich's position derives from a descriptive account of digital production processes involving the combination of an increasing number of software applications. Judging media developments exclusively based on the use of production methods, however, makes it impossible to develop a critical analytical understanding of the media's potentially new aesthetics. It is therefore not surprising that Manovich fails to offer us any answer as to how new media may stimulate the viewer's mind differently by comparison to conventional forms of visual language, such as printed typography. The assumption is simply that, if media contents are produced in a different fashion, and if they look different, they will be perceived in a different fashion. But what exactly causes the mode of perception to change? And in what way are people's senses being altered? To answer such questions we need investigate the perception of information rather than its production.

As it mediates the written word, typography may be seen as a medium in its own right. However, at the same time typography requires other media, be they physical or digital, to function. Following Marshall McLuhan we may conclude that 'the "content" of any medium is another medium' (McLuhan, 2001a, p. 8) and at the outset we have the word that mediates thought.¹ So thought is both the origin and purpose of meaning. Through writing we translate meaning into codes following the rules (syntax) given by the language system in which we chose to express ourselves. Such linguistic rules constitute formulae, without which written information can neither be created, nor understood. Information consists of signals, such as letters or digits, which remain meaningless data, or 'uncoded variety' (Wilden, 1987, p. 183), when seen individually. Only by structuring information in accordance with the applicable formula can meaning be transported successfully.

We see that the medium is not identical with the message as McLuhan famously claimed.² Meaning, or the message, *lives* exclusively in people's minds. Information transmitted via media constitute nothing but codes to be reassembled at the other end. However, information often changes shape when carried from one medium into another. It is transcoded. This is part of the reason why communication is not always successful. Where information is transcoded, the formula needed to decode the message changes, too. The definition of information, that derives from the relationship between code and formula, depends on the *modus operandi* of the media involved. As a consequence communication in a multi-media environment becomes considerably complex, and may appear confusing.

¹ It should be noted that according to the linguist philosopher Edward Sapire the word is believed to contribute to the formulation of thought as much as it mediates thought. This may well be the only moment in the course of the communication process where the medium is identical with the message.

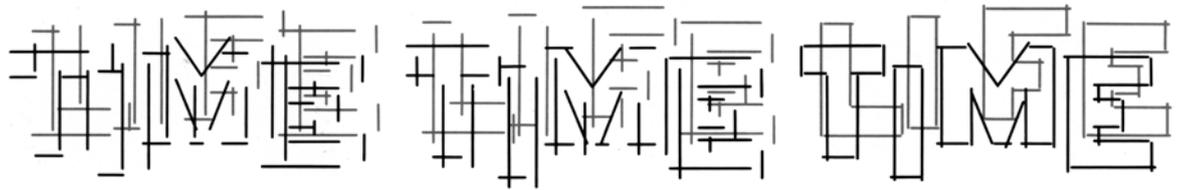
² Of course, people tend to say they watch TV, rather than watching a film or the news. They go to the cinema rather than they'd go and see a movie. But this is due to the fact that people have become oblivious to the true nature of information. The confusion between the media and the message is, in other words, the result of people's misconception.



Figure 2.1, the author, long exposure shot of the sky at night, Porto Heli, Greece, 1997

Despite my claim that messages reside exclusively in people's minds, I need to emphasise that meaning can be built around existing signals, i.e. signals (or data) which do not derive from human thought. Stars, for example, do not carry any meaning. But meaning can be attributed to their relative position, as well as their apparent motion over time. [Figure 2.1] Once a system had been established to determine constellations, stars provided vital information on the location of a ship at sea at night. Such systematic analysis of signals follows a formula that describes a relationship between its components (information units). By defining constellations, meaning is attributed to patterns of lights, which would otherwise appear as random. The difficulty relating to multimedia communication is to separate significant codes (information) from random signals.

One needs to bear in mind that information and meaning are by no means interchangeable terms. Information appears only meaningful to those who understand the formula(e) involved. This understanding rests in the knowledge of a coding structure. Codes are combinations of information units, the orderly structure of which defines meaning. But for detecting such orderly structure, or syntax, a code needs to undergo a process of recognition, and interpretation. 'Disorder does not necessarily mean randomness or chaos, only that it is not perceived or not perceivable as order.' (Wilden, 1987, p. 183) Presumably much information escapes people's perception, simply because there is not enough time for them to assess the nature of disorderly structures. Where this is the case, information remains random signals, in other words: meaningless.



Figures 2.2-2.4: Pentagram Design, the sketch of a sculpture in the window of London's *Time-Life* building appeared abstract except when seen from one view point, when it spelled *Time* and *Life*, Ideas on Design, London, 1986

In the context of virtual typography a typographic code appears gradually from an abstract and potentially random graphic pattern. [Figures 2.2-2.4] This means that the typographic nature remains initially hidden. The gradual reduction in disorder is slowed down to a degree, so that the recognition process happens progressively. Depending on the amount of time delay, and on the viewer's readiness to commit him- or herself to the perceptual process, this can lead to either the viewer's frustration, or to his-or her aesthetic pleasure. Contemporary media such as television confront people with information often faster than they can decode it. The struggle for immediacy of information transmission fostered by contemporary media is paradoxical. "Mediate", which used to be a common technical term, means "not immediate". (Wilden, 1987, p.160) With virtual typography the revelation of the coding structure used can be decelerated allowing the viewer to engage more intensively in the communication process.

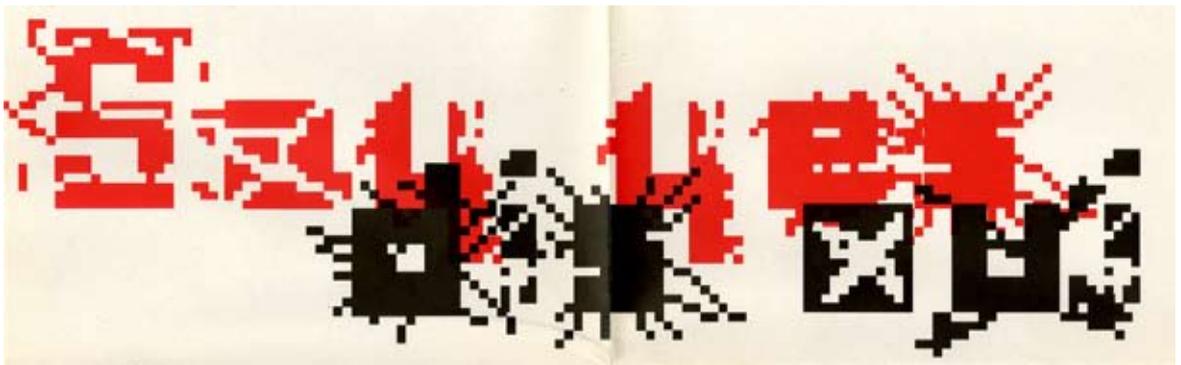


Figure 2.5: Scullio, *Scratched Out*, Fuse No 5, London, 1992

In the beginning of this chapter it was indicated that human perception in general follows the urge of contributing meaning to obscure, i.e. to potentially random signals. Recognition is arguably a process of guessing potential information. In cognitive terms this process is understood as hypothesis testing. 'True ambiguity results when no single solution is more likely than other solutions, leaving the brain with the only option left, of treating them all as equally likely.' (Zeki, 2004, p. 174) A code, such as a typographic message, that does not clearly expose itself, constitutes ambiguous information. [Figure 2.5] It can be interpreted both as a graphic pattern, or as a piece of text. Some neurologists suggest 'that we are only conscious of one of the interpretations at any given time.' (Zeki, 2004, p. 175) This can be experienced when looking at ambiguous images, where the visual impression flips between two possible states. The image in figure 2.6 can be interpreted as a rabbit, or as a duck, but not as both at once. The same applies to the well-known example of the vase-face flip image. [Figure 2.7] The kind of ambiguity that is inherent to virtual typography is, however, fundamentally different. Where the level of ambiguity changes over time, the guessing process is future orientated. The question *what is it?* is replaced by *what will it be?*. The result is a progressive interplay of recognition and interpretation.

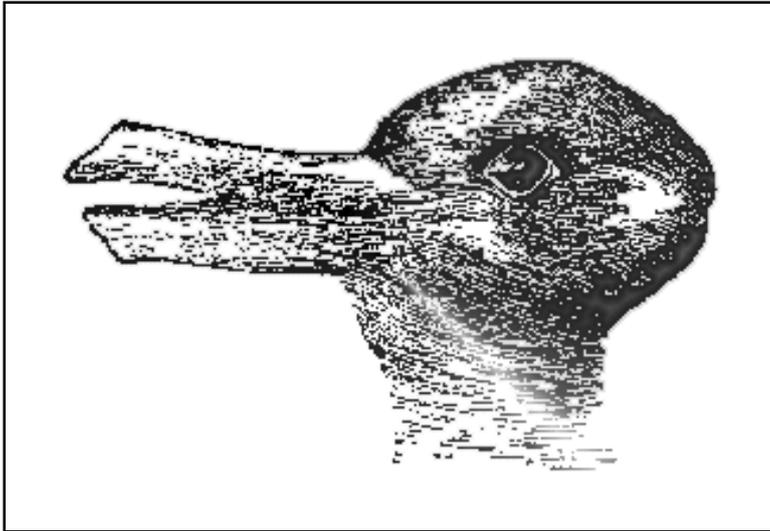


Figure 2.6

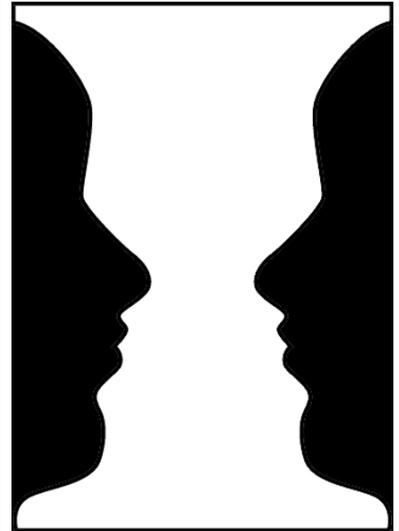


Figure 2.7



Figure 2.8 Pleix, Paris, 'Letters', TV advert for Audi UK, commissioned by BBH, London, 2004

An Audi TV advert launched in 2004 shows how virtual typography may affect the relationship between recognition and interpretation. All that can be seen initially is a diversity of unidentifiable metallic objects flying through an urban scene. [Figure 2.8] At this stage the information does not make any sense, as it does not represent a plausible real-life situation. This raises questions, and thus seduces the viewer to increase the level of attention. For a short moment some of the rotating elements appear as letters, when falling onto the ground. [Figure 2.9-2.14] As they bounce off, they rotate back into illegible metallic objects. Through this procedure the words 'Vorsprung'-'durch'-'Technik' are displayed one by one. Once aware of the typographic nature of the visual elements, the viewer will expect additional words to emerge. However, it cannot be determined at which point in time this will happen. Thus the viewer is kept in suspense. Tension is created, attention sustained. As soon as each of the three words have appeared, the plenitude of metal objects merge together to shape the latest model of an Audi A4. [Figure 2.15] This example of applying a progressive level of recognisability to typographic elements exemplifies how curiosity can be created through hinting at information.



Figure 2.9-2.14 Pleix, Paris, 'Letters', TV advert for Audi UK, commissioned by BBH, London, 2004



Figure 2.15 Pleix, Paris, 'Letters', TV advert for Audi UK, commissioned by BBH, London, 2004

The animation was created by the French artist collective Pleix, who had been commissioned by the British advertising agency BBH. When being sent a sample file of the animation, I was surprised to see that the beginning of the animation had been cut, before broadcasting the advert. The passage that was missing showed the car exploding into the metallic fragments. [Figure 2.16-2.18] Having withheld any information about the origin of the typographic components after shortening the sequence, BBH had in fact increased the perceptual challenge. Seeing the chaotic cloud of metallic fragments flying through space, without knowing their origin makes the whole sequence more ambiguous from the start.



Figure 2.16-.19 abandoned passage

Apart from exemplifying virtual typography, the Audi advert may be considered in support of Manovich's claim that 'a new hybrid visual language of moving images' (Manovich, 2006) emerges from digital animation facilities. But despite typographic elements becoming an increasingly integral part of images, or moving images, the structural decoding of texts remains fundamentally different from that of images. As long as people in the Western world are conditioned to write from left to right and from top to bottom, texts will be scanned accordingly. Changing the formal-aesthetic representation of texts won't change the fundamental characteristics of reading. The cognition of texts, i.e. the scanning pattern applied by the reader, could even be used to determine which sort of medium (text or image) is seen by the viewer. If we argue that virtual typography occurs exactly where the scanning activity changes from a random pattern to a horizontally orientated linear pattern, then virtual typography could be defined in relation to the time-based transition of information. However, the time factor is often neglected as a criterion for the assessment of information. Following the wide-spread ambition to deliver information as fast as possible, information is mostly seen in terms of instantly occurring data. Not only does this make it difficult, if not to say impossible, to defend virtual typography from a pragmatic point of view. It also raises questions about the effectiveness of rapid data transmission.

3. text in (no) time the consequence of immediacy

The ambition behind digital data transmission is to reduce time-delays as much as possible. Real-time in computational terms means to provide processing speeds to match people's real-life experience of temporal progression. One important point raised by Jessica Helfand is that time experience in real life does not necessarily mean immediacy: 'Real time implies no waiting—but in the real world, do we not occasionally wait for things?' (Helfand, 2001, p.3) For improving new media communications waiting does not need to be eliminated, but to be made pleasurable instead. Phenomenologically, it seems obvious that five minutes may pass more or less quickly depending on our state of mind. The degree to which we count the seconds depends on the individual experience, and on how it affects our state of mind. The crucial problem in relation to digital text communication is that by accelerating the transmission of texts, the experiential element is sacrificed. Where data pops-up immediately, no progression is possible, no experience can unfold. If Michael Heim is correct in claiming that 'Information is by nature time-bound' (Heim, 1993, p. 26), then communication is by definition a process. By saving on time, we lose out on the experiential characteristics of communication. Waiting is quite possibly a crucial component within the communication process.

In reference to hypertext, Michael Heim explains how 'we drive a technology that drives our verbal life faster and faster'. (Heim, 1993, p. 3) The purpose of quickly resolving legibility of texts on screen is the fastest possible transmission of written information. This may be efficient. But on the receiving end people are so busy collecting data, that they find little time to select information, let alone to attribute any meaning to it. This is where Wilden's notion of *noise* comes back into play. 'Organic and human open systems must constantly select particular patterns of information at particular levels at particular times.' (Wilden, 1987, p.183) Where this selection process is made impossible due to the elimination of time, information is bound to remain noise. Heim consequently suggests a reciprocal relationship between information density and perceived meaning. '... the more information accessed, the less significance is possible'. (Heim, 1993, p.10) Information that remains undecoded, or unreflected due to lack of time, constitutes meaningless noise. Meaningless information constitutes waste. Data pollution is the result.

Following the principles of etymology (the science of the origin of words) typography could be translated as *writing about striking or beating*, or as *a description of the mark of having been beaten or struck*. This may remind us of runes, which once were cut into wood, or perhaps typographic stone carving practised in ancient Rome. But in the context of screen-based communication we could attribute a new meaning to the word typography. In the world of hypertext it is no longer the medium that is struck. The force is redirected. It strikes the reader quite directly, and it does so through the immediacy with which its texts appear on screen. As Paul Virilio explains, where the critical distance is removed, it is no longer the physicality of things, but their speed, that is so threatening, and potentially damaging. No longer carefully crafted, typography nowadays is the text that strikes viewers when being thrown onto the screens, and into people's faces with the velocity of the immediate impact. When criticising new media technologies, Virilio declares user-friendliness to be 'just another metaphor for the subtle enslavement of the human being to "intelligent" machines'. (Virilio 1995, p. 135) This statement does not only question 'the statistical notion of information'. (Virilio 1995, p. 135) If transferred onto typography, it also raises doubts about the efficiency-based evaluation of legibility in the context of visual communication.

Virtual typography constitutes the transition between a seemingly random graphic pattern and a concise typographic message. As opposed to visual objects which can be represented in a fixed form, virtual typography exists exclusively within the process of transition from one form of visual

language to another. One could argue that as soon as transitional typography manifests itself, virtual typography ceases to be virtual in terms of *almost* typographical. In its disguising fashion virtual typography is most obviously inefficient, if not to say anti-efficient. The time-span covered by the unfolding message forces the viewer to repeatedly interpret the visual stimulant to assess its nature. This guessing of information precedes the actual reading process. Here virtual typography is subjected to the viewer's aesthetic judgement. Provided the fact that the perceptual experience is accompanied by a sense of pleasure, this process of assessment makes the viewer oblivious to the time passing. His time consciousness suspended, the information recipient is seduced to engage intensively with the available information. To what degree the suspension of time consciousness may intensify or weaken the reader's intellectual reflection is at this point difficult to judge. But by turning perception into a visual challenge, the aesthetic experience provided will have a lasting impression on the reader.



Figure 3.1



Figure 3.2



Figure 3.3

The possibility of using virtual typography depends on the particular situation within which it is perceived. We see printed media increasingly substituted for screens, in particular where the information contents need to change frequently. The check-in desks at the new terminal 4 at Munich airport are fitted with plasma screens throughout. [Figure 3.1] Even the advertising posters positioned next to the elevators at various London underground stations [Figure 3.2] are now often operated digitally. [Figure 3.3] In both cases the information content remains static. People are moving too rapidly through those locations to be able to grasp dynamic information. In places where people are free to choose their own pace, however, virtual typography may find its place.

Even though not using any digital display, the 'Source' is a digitally driven sculpture which communicates basic messages dynamically at the London Stock Exchange. [Figures 3.4-3.6] The messages are partly graphical, partly typographical. There is no place on earth where information is more urgent, or more (financially) valuable than at the Stock Exchange. The 'Source' provides an aesthetic response to the daily activities of international markets. It indicates the positive or negative trading results by moving 729 white glass spheres to gradually display graphic symbols such as arrows, or words. Traders are likely to get accustomed to the constant presence of the 'Source'. However, the 'Source' shows how routine communication processes can be aesthetically reinterpreted into an artistic comment that forces people to rethink information precisely due to its unconventional characteristics, and its visually irritating quality.



Figure 3.4-3.6: Greyworld, Source, London

The 'Source' shows that, provided the fact that the message can be brief, and that the viewer is ready to commit him- or herself to the visual challenge, movement may be used to captivate people's attention in order to reintroduce the experiential element to the communicative process. When discussing the underlying principles of writing, Heim speaks of a 'horizon of significance' (Heim, 1987, p. 23) that is affected by the mode of information distribution. Instead of declaring the media to be identical with the message, Heim claims that the media condition the way information is perceived. In the context of textual communication these conditions are 'intrinsic to the appearance of verbal symbols'. (Heim, 1987, p. 23) Where the conditions of typographic displays are subject to change, as is the case with the 'Source', information is experienced rather than simply registered. Heim argues that 'literacy serves not only as a functional skill [...]; it is also a model for certain psychic attitudes, for certain dispositions of the mind'. (Heim, 1987, p. 23) We may argue that transgressive information provision allows different ways of manipulating the information recipient's mind-set, or psyche, precisely because it constitutes a dynamic force.

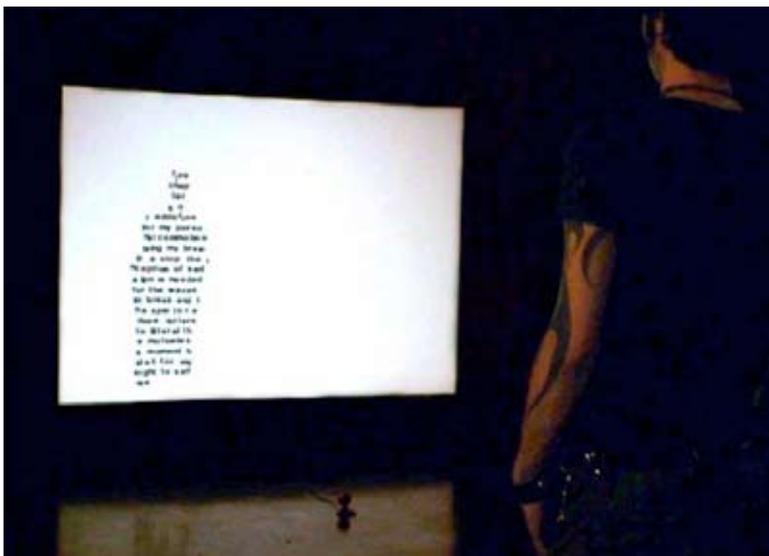


Figure 3.7
Jason Lewis and Bruno Nadeau:
Still Standing, Obx Laboratories
Canada, 2005

The possibilities of manipulating peoples' psyche have been explored in a particularly interesting way through Jason Lewis' and Bruno Nadeau's installation 'Still Standing'. [Figure 3.7] Here individual letters keep moving horizontally across the bottom of a projection screen. Their random movement can be disturbed by viewer interaction, better to be named *inter-inaction* with respect to Lewis' and

Nadeau's concept of *inter-inactivity*. As soon as a viewer stands in front of the screen, the typographic elements begin to take on the same shape as the silhouette of the viewer, provided the fact that the viewer keeps standing still. [Figure 3.8] Once the viewer moves, the text will fall apart, and the letters move back to the bottom of the screen. In contrast to commonly known interactive media, this installation induces people to not interact. The behaviour of information here contradicts the viewer's general experience of new media. Instead of encouraging peoples' urge to acquire information as quickly as possible through interactive user interfaces, 'Still Standing' forces the user to remain passive (not in the perceptual sense, of course). As such a situation stands in conflict with the viewer's expectation, a change in people's psyche is necessary for them to be able to explore 'Still Standing'. This means that the viewer's mind requires to be reset towards unexpected conditions. *Inter-inactivity* is a term that has been coined by Lewis and Nadeau in reaction to 'interactivity which typically requires to constantly and actively engage the work in order to experience it'. (Lewis, Nadeau, 2005, p.1) Lewis' and Nadeau's work is a reactionary—but most appropriate—response to the increasing information density, and the 'high-speed culture' (Lewis, Nadeau, 2005, p.1) we are living in. Lewis' and Nadeau's ambition is 'to find moments of quiet, or periods of stillness, that allow one to process and contemplate all of the information received'. (Lewis, Nadeau, 2005, p.1) One could, of course, question to what degree 'Still Standing' communicates textual contents. What it undoubtedly succeeds to do is to sustain people's attention and focus as anticipated by its creators.

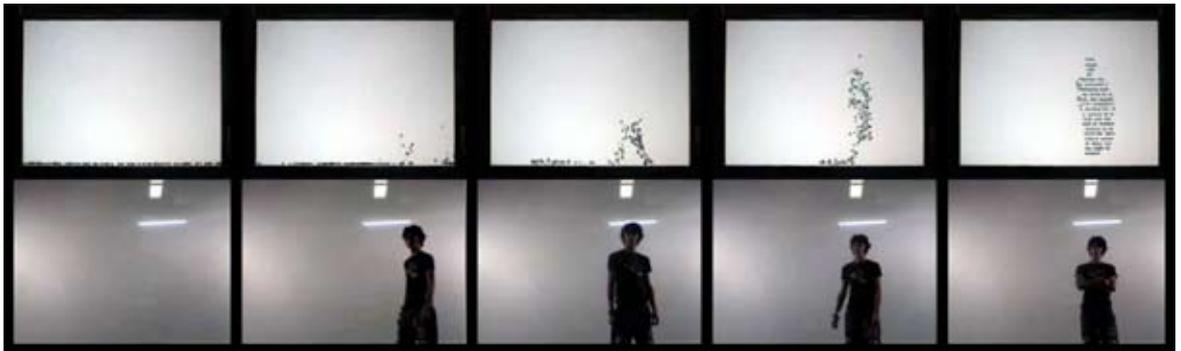


Figure 3.8: Still Standing, progression of interaction to *inter-inaction*

Dromos is the Greek word for speed. In 'Speed and Politics, An Essay on Dromology' Virilio discusses the significance of speed in relation to the art of warfare. In ancient and modern times battles were fought to cover geographical territories as fast as possible. In post-modern societies conflicts settle who is the fastest in covering information. Virilio describes this shift from territorial invasion to the imposition of time pressure by referring to the Cuban missile crisis in 1962. The installation of Russian rockets on Cuban grounds reduced warning times between the Russia and the USA from 15 minutes to 30 seconds. The so-called 'hot line', a direct telephone link between the two Heads of States was put in place to avoid any delay in negotiating the situation. Today we see *hotlines* exploited for commercial purposes. As much as the stock-market, any post-industrial market sector operates according to the *first come first serve* principle. The constant omnipresence of online information reinforces quick sale strategies, which put consumers under pressure. With its capacity to undermine this commercial battle against time, virtual typography may be considered as a kind of counter force, which seduces people to apply patience, and to spend more time on information. It does so by inducing sense of aesthetic pleasure. For applying virtual typography successfully we need to develop an understanding of the relationship between aesthetic pleasure and time delay.

4. communicating information the process of perception

Despite the fact that the creative industry tends to treat the terms information design and communication design as synonymous, the difference is crucial in assessing virtual typography. I suspect the misconception roots in the wide-spread emphasis on the creation, i.e. the production of information. When discussing 'The Language of New Media', Lev Manovich claims that due to 'the numerical encoding of media (principle 1) and the modular structure of the media object (principle 2) [...] human intentionality can be removed from the creative process' (Manovich, 2001, p. 32). This clearly shows a production-orientated position. Judged on the basis of the ambition behind visual design, the confusion between information and communication seems understandable: Information is produced for the purpose of communication. From a perceptual point of view the situation is less straight forward, though. Not all information communicates. The reconstruction of information by the viewer is a complex process. The probability of information transmission to communicate meaning in accordance with the sender's intention is limited.

Before analysing the perception of typography, we need to acknowledge the fact that typographic communication covers more than just perceptual issues. It also involves intellectual interpretation, emotive responses, and, of course, the reader's ability to memorise information. As part of the perception process we can differentiate between: 1. the recognition of information, 2. its classification, and 3. the process of decoding.



Figure 4.1 the author, long exposure shot from within a car, Stuttgart, Germany, 1994

Information first of all requires to be identified as such. It needs to be isolated from random, irrelevant signals. During this initial recognition stage, signals which appear as potential information are selected for closer consideration. A focus of attention is established. This stage is particularly interesting in the context of transitional information, such as motion typography. Where the time-span for perceiving information is limited, the viewer needs to set, and possibly reset, the preferences quickly. The scenario of watching transitional information can be compared to driving through a city at night. Here the driver is confronted with a plenitude of signals such as road signs, traffic lights, and

other vehicles. The image 4.1 illustrates the visual data gathered by a camera over a few seconds. The speed at which one has to select the relevant information, forces the driver to try to ignore particular kinds of data such as advertorial neon lights, or illuminated windows. Here we realise that: 1. a lot of information does not communicate, and 2. which information communicates, and which doesn't, much depends on the intentions of the information recipient. If designers seek to do justice to the expectation of their target audience, they need to take the viewer's intentions into account, as these contribute to the direction of the viewer's focus of attention.

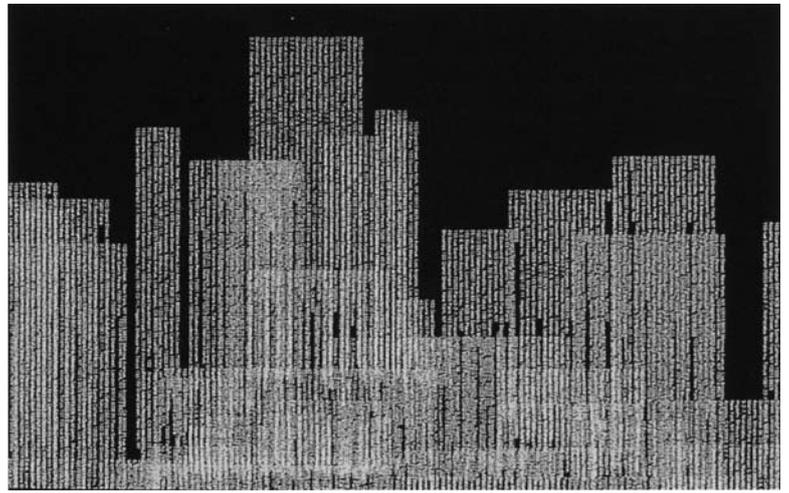


left: Figure 4.2-4.5, Moross, Kate, animated typography, London, 2004

Once the viewer is aware of the presence of information, a process of classification begins. This is when a viewer separates typographic from graphic or photographic information. One further determines which language a piece of text has been written in, and what aesthetic means of expression have been used to create it. In short: the appropriate code(s) for the acquisition of information content is (are) determined. Apart from disguising its textual nature, which makes it difficult to be recognised as information, virtual typography also turns the classification into a perceptual challenge. Kate Moross, a London based design student, created an example of moving graphics, which uphold a very consistent ambiguity between moving image and moving type. [Figure 4.2-4.5] Even the trained eye keeps struggling to determine the typographic symbolism amongst the constellation of various rotating circle sections. It seems to me that one is constantly inclined to think that some of the circles will not convey any letters. This repeatedly turns out to be a misjudgment. Moross' example further shows a different aspect of virtual typography: Due to the level of visual abstraction the typographic nature of the information cannot be determined on the basis of individual frames. [Figure 4.2-4.5] Only the succession of several frames allows the viewer to correctly categorise the information [Figure 4.6].



Figure 4.6



left: Figure 4.7, Müller, Rolf, poster, Kieler Woche, Munich, 1972

above: Figure 4.8, Saville, Peter, advertising poster, London, 1994

Once certain of the presence as well as of the nature of the information, the recipient can begin decoding, or—in the case of texts—deciphering the information. Obviously the question whether one is looking at a code or a cypher needs to be resolved first of all. In anticipation of Lev Manovich's claim that new media are hybrids between various conventional media such as cinematography, animation, graphic design and typography, we need to acknowledge first of all that typography is a hybrid between text (explicit) and graphic image (implicit). From a design point of view a typographic message is composed rather than written. The arrangement of words, sentences and blocks of text adds a (meta-linguistic) sculptural element to the linguistic coding structure. [Figure 4.7 and 4.8] Typography is therefore to some degree scanned as well as it is being read. Barely legible typography forces the reader to scan a piece of text repeatedly. [Figure 4.9] Yet with static information the difference between text and image is constantly close at hand. [Figure 4.10] What can technically not transform, can epistemologically not be expected to change. Ornamental, modern, or post-modern typography may make reading a difficult task. It may even impair the classification of information. But, in contrast to transitional information, it cannot repeatedly modify the identification of signals.



Figure 4.9: Ott, Nicolaus, Stein, Bernard, Wohnraum Europa poster, Germany, 1988



Figure 4.10, Abedini, Reza, Polish Film Week, poster, Iran, 2000

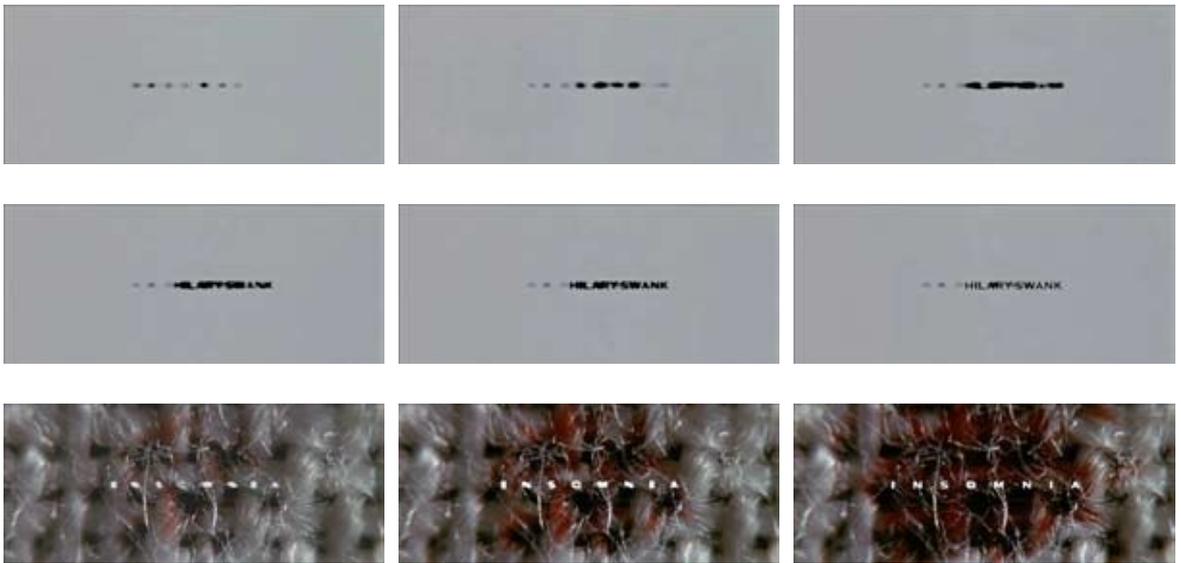
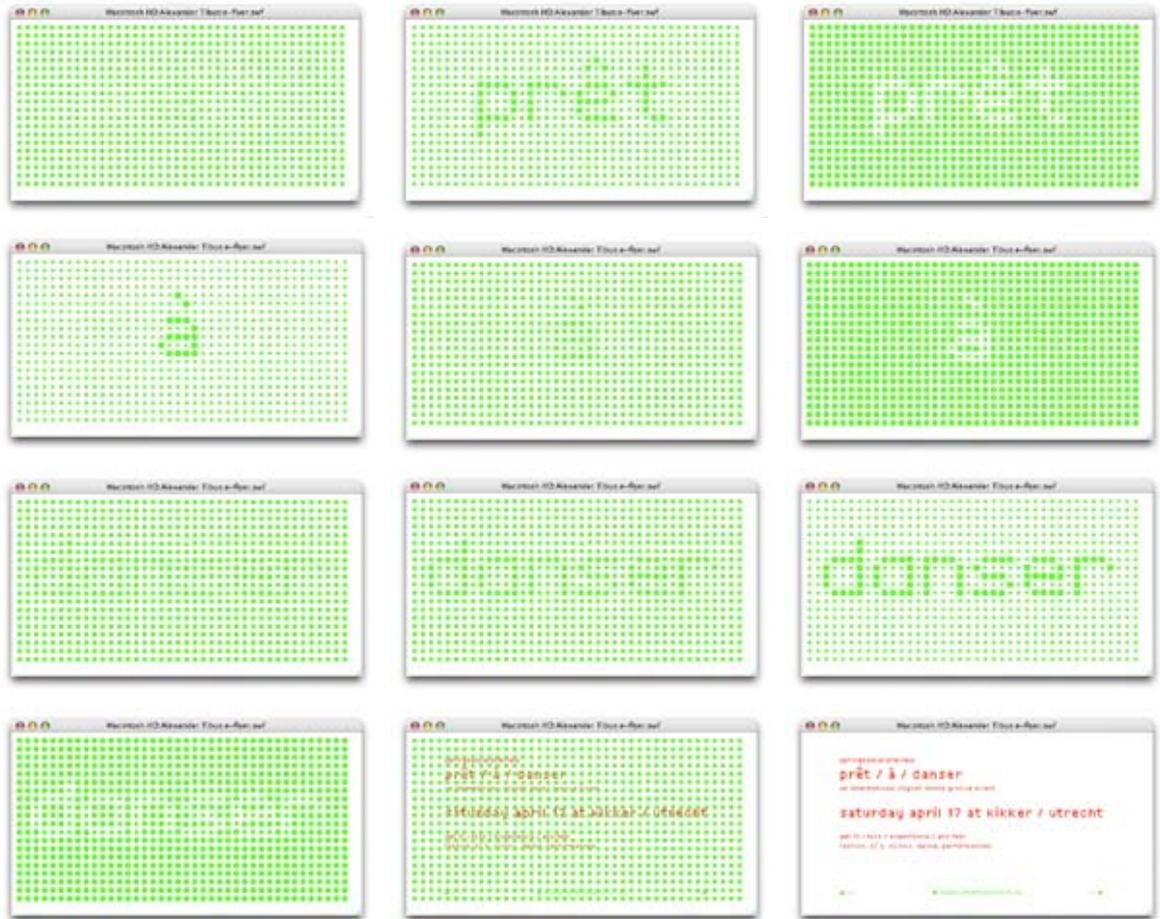


Figure 4.11-4.19: *Insomnia*, film title sequence, 2002

When looking at time-based media, viewers cannot be certain about what they are going to be presented. Yet, where graphic elements are used to hint at potential information, expectations arise from this moment of uncertainty. The title sequence for the movie ‘*Insomnia*’ illustrates this particular characteristic of virtual typography. Little black dots morph into letters, respectively words, on a light grey background through a decreasing intensity of blurriness. [Figures 4.11-4.16] Eventually the title ‘*Insomnia*’ reverses gradually out from an emerging background image. [Figures 4.17-4.19] The delay in recognising, classifying, and decoding the information here may be minimal. Nevertheless we can sense the teasing quality in this time-based graphic. The aesthetic relationship between the lines of dots and the legible words is constantly dynamic. What first appears as potential information transforms first into an abstract code, then into a written word, and finally the process is reversed. Bruno Munari, an Italian designer whose early work was much influenced by Futurist art, demonstrates how typographic recognition can be challenged through printed information. His poster ‘*Immagine*’ [Figure 4.20] shows a word, which emerges from a seemingly random dot pattern. Like the title sequence mentioned, this poster communicates on the borderline of image and text. But, as this graphic composition remains static, the effect on the viewer is quite different compared to that of the film title. Where information does not undergo any transformation the viewer’s expectation cannot change.



Figure 4.20 Munari, *Immagine*, poster, 1965



Figures 4.21-4.32, Tibus, Alexander, e-flyer

Alexander Tibus' animated e-flyer may look rather different compared to the film title discussed. But in its modus operandi it is very similar. Tibus, a German design student from Berlin, who graduated in 2005, uses a fluctuating level of contrast between text and background to display the words 'prêt-à-danser' in succession to advertise a music event. The changes in contrast are achieved by gradually changing the size of the dots belonging to a rectangular dot-pattern. The dots, which transform into letters become first larger, then smaller than the surrounding dots, which change size in reverse fashion. The figure-ground-relationship is continuously dynamic, and therefore seduces the viewer into an informational guessing game. It seems the mind is always reaching slightly further than what the eyes register. As opposed to Moross' work here stills can be extracted, which show the text more or less clearly. However, when perceived in motion, the typographic transition provokes an aesthetic response different from that achieved through the series of screen grabs shown above. [Figures 4.21-4.32] The sense of continuously changing relationships between visual elements, i.e. the progressive nature of information, appears to modify the viewer's mode of expectation over time. This is why motion graphics draw on a different kind of dynamic tension than still images. Deleuze claims: 'Through movement the whole is divided into objects, and objects are re-united in the whole, and indeed between the two "the whole" changes.' (Deleuze, 2001, p. 11) The continuous interpretation, respectively reinterpretation of transitional information is an essential aspect in the aesthetic perception of virtual typography, as it affects the level of attention paid in the course of the information display.

What exactly produces the difference between perceiving dynamic and static text information, remains difficult to determine. Is it 'the whole' of the object that changes, as proposed by Deleuze in his introductory comments on Bergson? (Deleuze, 2001, pp.8-11) Or does the viewer's mind-set change? How does one relate to the other?¹ What we can say for certain is that to resolve the question, the differentiation between information and communication, and between recognition and perception is critical. It follows that the evaluation of typography is not simply a matter of legibility. Typographic quality likewise depends on the informational recognisability, the role of which will be examined further within this thesis.

Scientific investigations in the field of cognitive neurology support the assumption that reading cannot be reduced to the conscious decoding of information. The paper 'Seeing is not perceiving' (Rees, 2001) by Geraint Rees, an expert in the field of consciousness studies at the UCL (University College London), explains how 'words may activate the reading system without reaching awareness'. This is to say that words, which are masked, i.e. disfigured in a way that they cannot be consciously read, understood, and remembered, stimulate the visual cortex in the human brain to trigger an unconscious visual experience that is considered as adequate in relation to the meaning of the word presented. This experience precedes the conscious recognition process described in the beginning of this chapter. An unconscious² response preceding information recognition could help explaining, why transitional information affect our mode of perception differently from static information. Rees assumes that the human mind may be primed through the unconscious registration of visual data. This raises the question whether or not the progressive unveiling of information may function as a process of aesthetic preconditioning, which prepares the viewer for incoming signals.

By allowing for the time-based fluctuation of the recognisability of information, virtual typography demands a redefinition of the balance between visual noise and typographic information. Over a period of time it plays with the question, whether or not information is of a textual origin. Thus it forces the viewer into a process of partly pre-conscious speculation that is required to determine whether or not graphic elements will evolve into typographic patterns. To unveil this speculative activity, further investigations will be needed, be they scientific, or psychological, or psycho-analytical.

¹ Deleuze explains that 'If one had to define the whole, it would be defined by Relation' (Deleuze, 2001, p.10), which constitutes an entity that exists in between objects. Where such relations undergo changes, 'the whole is transformed or changes qualitatively'. In reference to Bergson Deleuze further describes 'the whole' as an 'a mobile section of duration'. Following Deleuze we could therefore assume that changes of 'the whole' induce changes in the viewer's time consciousness. The whole remains unchanged when viewing static typographic forms, because the relations between the objects, or typographic elements, remain consistent. We may assume that dynamic typography affects the viewer's time consciousness in a different fashion than static typography. To be discussed further in chapter 9.

² The unconscious is here defined not as the subjective construct in a Freudian or Lacanian sense, of course. Instead it is seen as information that has been cognitively registered without entering a person's awareness. Such a scientific definition of consciousness stands in conflict with philosophical concepts, which do not rely on any evidence of brain activity. This thesis does not seek to prioritise scientific perspectives over philosophical positions. Yet, by highlighting coherences between both, it seeks to shed new light into the perception of transitional information.

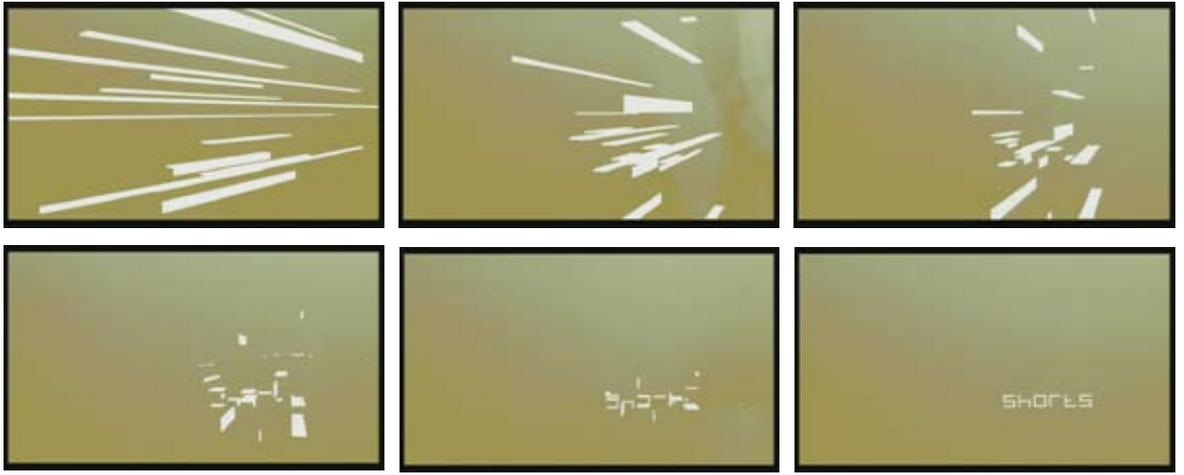
5. motion graphics the moving image of a text

'Of what value are typographic choices—bold and italics, for example—when words can dance across the screen, dissolve or disappear altogether?' (Helfand, 2001, p. 107) Helfand is supposedly right claiming that 'the vocabulary of signifiers and signifieds' is as insufficient for developing an understanding for the transitional characteristics of motion typography, as is Derrida's method of deconstruction. 'We need to look at screen based typography as a new language, with its own grammar, its own syntax, and its own rules. What we need are new and better models, models that go beyond language or typography per se, and reinforce rather than restrict our understanding of what it is to design with electronic media.' (Helfand, 2001, p. 107)

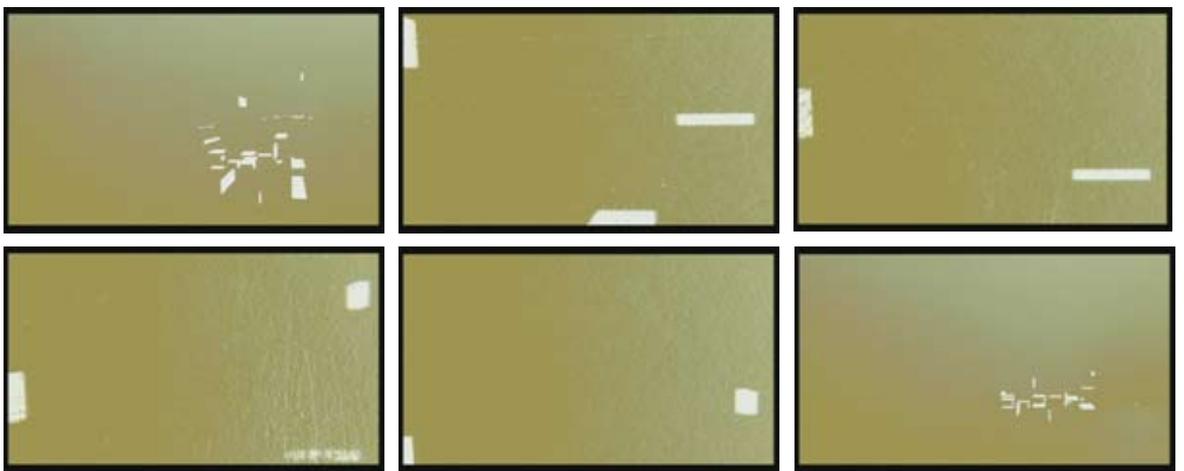
Despite her appropriate critique, Helfand offers little guidance as to where to look for 'better models'. In which context are they supposed to operate? What purpose will they have? And how can their quality be assessed? To establish a focus for analysis, we have already distinguished between digital typography in general and virtual typography. What seems to separate virtual typography from conventional print or screen typography is: 1. time, i.e. the deliberate delay in its communicative function, and 2: its image function, i.e. its temporary disguise as abstract imagery.

1. As we have learned in the previous chapter, time is inherent to any communicative activity. Yet, virtual typography delays transitions in excess of the time required for information acquisition. Similarly to Barthes' 'text of bliss', virtual typography 'imposes a state of loss'. (Barthes, 1973, p. 14) Thus virtual typography acts in a disturbing fashion. If we may attribute a syntax to virtual typography, we must assume an evolving, i.e. time-based structural rule, that is initially unknown to the viewer. The novelty value of this coding structure provokes discomfort, and tension. This tension, however, is of an aesthetic nature, which stands in opposition to stress caused by information overload. The stretching of transitional processes, which the viewer requires for determining the syntax, causes a decompression of time. Whilst the eye traces the continuity of motion, the mind aspires to detect its function. As opposed to hypertext that fragments not only the meaning of texts, but also temporal progression, virtual typography reinforces the sense of temporal continuity, of duration.

Matthew Rudd's introductory sequence to a television series entitled as 'Shorts' appears to play with the conflicting relationship between continuity and fragmentation. The word 'shorts' evolves from elongated lines which fuse into the word shorts by gradually turning ninety degrees. The figures 5.1 to 5.6 show a preliminary version of the work. In his assumption that the consistency in transition would not offer enough visual stimulation (Interview with Matthew Rudd, May 2004), Rudd inserted a close-up section to disrupt the continuity of change [Figures 5.7 to 5.12], and to increase the level of confusion. It appears to me that he covered the very moment where the word becomes recognisable as a typographic piece of information. The abstract motion image has thus been separated from the typographic phase. The temporal continuity is here replaced with the notion of a succession of events. The continuity of transition is abandoned at what would seem to me the most interesting moment in time. Even though I believe that this additional disruption makes us want to review the animation to mentally reconstruct the missing moment, I am uncertain, if it improves or weakens the generally interesting piece of work.



Figures 5.1 - 5.6, Rudd Studio, Shorts, TV title sequence, first version



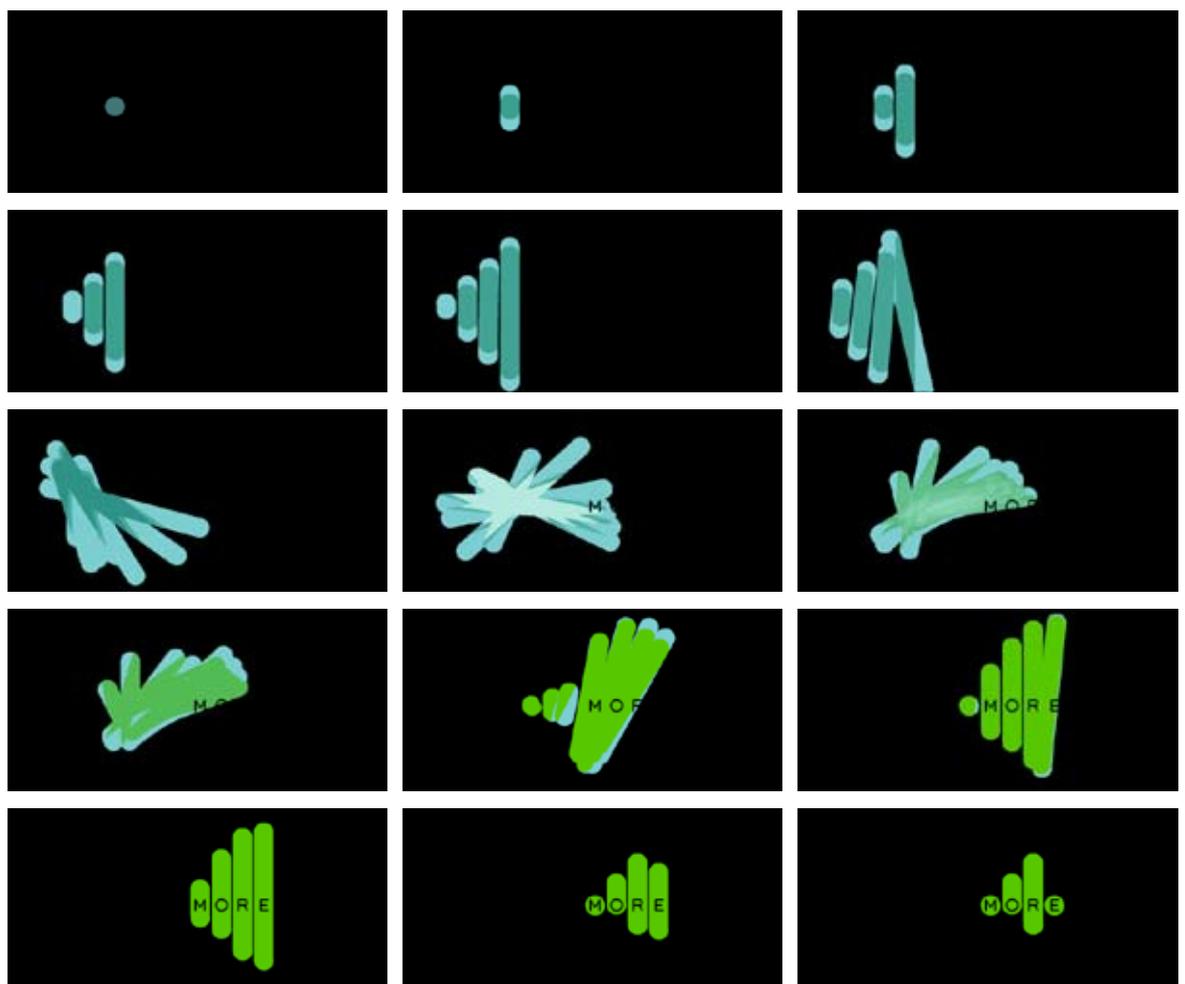
Figures 5.7 - 5.12, Rudd Studio, Shorts, TV title sequence, extract from final version



Figures 5.13 to 5.21, Variations in the Channel4 TV campaign in 2005

The Channel4 TV branding is by comparison much more rigorous. Not only does the pace of motion remain perfectly constant throughout, by shaping the typographic elements as real-life objects (pylons, neon signs, hedges etc.), the viewer's chances of missing *the point* are further increased. Judging by my own experience, I suppose most people will be able to read the logo only when viewing the animation a second or a third time. As soon as the hidden code has been unveiled, however, following repetitions weaken the effect of the animation. Little surprise may be expected when watching any of the Channel4 sequences a fourth or a fifth time. As a consequence Channel4 had to produce a considerable number of variations using a different theme each time. [Figures 5.13 to 5.21] To allow the typographic treatment to remain consistent, the image attribution had to change.

2. As explained in the previous chapter an image-like quality is inherent to typography of any kind. The difference between static and kinetic typography is that in the latter case the image component can be defined as dynamic. If we look at typography as an amalgam of concrete text and (more or less) abstract image, then the dominance between the two forms of expression may shift from one to the other. Rather than simply changing the spacial arrangement, i.e. the typographic composition over time, virtual typography derives from a change in the nature of information. It is not the image aspect of a typographic arrangement that changes, i.e. it is not text that simply moves across the screen. Instead it is the text that evolves directly from an image. In other words: Virtual typography results from changing the formal representation of meaning itself rather than from a changing the location of meaning representatives such as images, words, or individual letters.



Figures 5.22-5.36, 4More TV ident, UK, 2005

The Channel4 campaign uses a concrete image scenario for embedding the typographic elements. To draw a line between the perception of image and type becomes even more difficult, where the imagery is already of an abstract nature. The 4More campaign, which was likewise art directed by Bred Foraker from Channel4, uses exclusively digital elements to construct a logo over time. [Figures 5.22-5.36] It is striking how the minimalist composition of the 4More logo lends itself to extensive variations in its graphic animation. Again the level of ambiguity is here taken to extremes. The number four is somewhat difficult to recognise, even when its graphic components come to a halt. [Figure 5.27] In the process of its transition the word 'MORE' appears bit by bit within the shape of the number 4 through a process of degressive masking. This method of gradually unmasking words was previously seen in Balsmeyer & Everett's film title sequence for Cronenberg's movie Naked Lunch. [Figures 5.28-5.30] The latter example indicates that virtual typography is not a product brought about through electronic media. The phenomenon of gradually evolving type existed long before the introduction of digital mass media in the 1980's. The question to be investigated is not to what degree digital technologies may enable or improve the creation of virtual typography. Conversely we need to query how the characteristics of virtual typography may help to compensate the deficiencies that are inherent to digital communication.



Figures 5.28-5.30, Balsmeyer & Everett, Title sequence for Naked Lunch, 1991

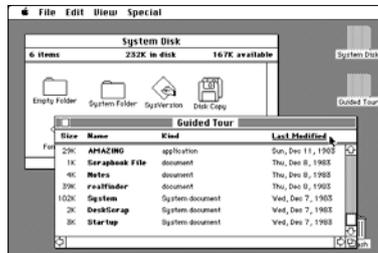
6. digital typography seen it all before?

This chapter constitutes a small overview over past developments in the field of digital typography. By discussing the diverse ambitions behind digital layout, typesetting, and programming-based typography it will point towards the contemporary lack of a common understanding of the problems and possible benefits of new media typography.

'... the new digital tools remove typography from the exclusive domain of the specialist—whether type designer, typefoundry or typesetting company—and place it (not always firmly) in the hands of the ordinary designer.' (Rick Poyner, 1991, p. 7) Desktop publishing led to the fusion of a diversity of production related tasks in the field of visual design. The works of the type designer, the layout artist, the illustrator, the productionist were now often done by a single operator in front of a computer screen. As a result the significance of the graphic designer has changed dramatically. On the one hand the designer could now cover a larger range of tasks, on the other his professional status became increasingly threatened by anyone who could master the necessary software applications.



above: Figure 6.1, Apple Lisa



above: Figure 6.2
the first GUI in history
developed for Apple Lisa



above: Figure 6.3
the first Apple Macintosh

This digital era in design began in 1983, when Apple introduced the Apple Lisa [Figure 6.1], the first desktop computer using a graphical user interface. [Figure 6.2] This enabled users to operate computers intuitively with the help of pop-up windows and drop down menus. Apple Lisa was followed by the release of the first Apple Macintosh in 1984 [Figure 6.3], the sales of which were much improved in the following year, when the Apple LaserWriter, the first laser printer (sold in the US in 1985 at \$6,995), and Aldus Pagemaker entered the market. Aesthetically, however, the digitally created artwork suffered an initial set-back. The memory capacities of the first Apple computers were very limited (128Kbytes), and the size of the monochrome display was restricted to nine inches (512 x 342 pixels). Even though Apple licensed Adobe's PostScript (a code that enables vector-based outlines to rasterise effectively) as early as 1985, it was not until 1989 that PostScript was distributed internationally and recognised as an industry standard. Therefore many designers had to rely on dot matrix printers, which did not offer any satisfying output. Considering the technical limitations during the beginning stages of digital typography, it may seem a mystery what had sparked the enthusiasm about computer technologies. Photography in combination with the drawing board certainly allowed more control over the aesthetic outcome. But control was not necessarily what all designers were after. The new generation of typographers sought new means of expression, which reflected the rebellious spirit of the time.

Those new means of expression, which were often attributed to the new technology, were, however, neither truly new, nor due to the computer. Phototypesetting, letterpress technology, photography, and the photocopier had already been thoroughly exploited for the production of experimental graphics. Brownjohn, Chermayeff, and Geismar's magazine advert for Transitron Electronics, for example, was created using the fragmenting effect of a photographic lens that had been placed on top of the writing. [Figure 6.4] An advert for a Typesetting House in New York [Figure 6.5], as well as an identity created for Hampshire Press [Figure 6.6] show how the design group had explored means of texturing and distortion to force viewers into unconventional modes of perception. The ambition to break with conventions had existed since the beginning of the century, and pre-digital technologies had sufficiently lent themselves to the creation of unexpected results. Due to the largely unknown characteristics of computer technology, the experimental (if not to say accidental) outcome was now simply closer at hand.



Figure 6.4
Brownjohn, Chermayeff, and Geismar, New York

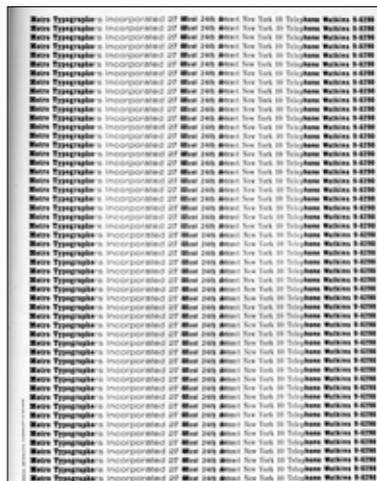


Figure 6.5
Brownjohn, Chermayeff, and Geismar, full page advert New York



Figure 6.6
Brownjohn, Chermayeff, and Geismar, New York

Despite the critique of modernists who feared a decline in typographic standards, computers were embraced by many designers with an unprecedented degree of enthusiasm. A sometimes joyful, but mostly harsh representation of contents was the result. Pixel patterns and geometric angles aside, the first examples of digital artwork were in their playfulness similar to punk graphics. Punk was, not unlike Dadaism, a kind of *anti-art*, an opposition of the aesthetic principles of the time. [Figure 6.7] Postmodern typographers, too, broke with the established principles. They expressed their rebellious attitude through breaking up the rectangular grid, and through prioritising individualistic expression over legibility, and clarity.



Figure 6.7
Suttle, poster, 1981

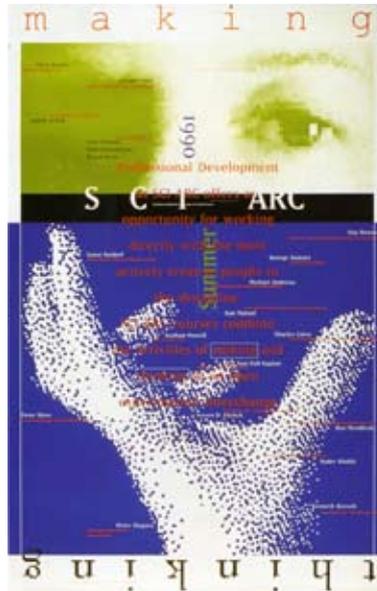


Figure 6.8
April Greiman, poster, USA, 1990

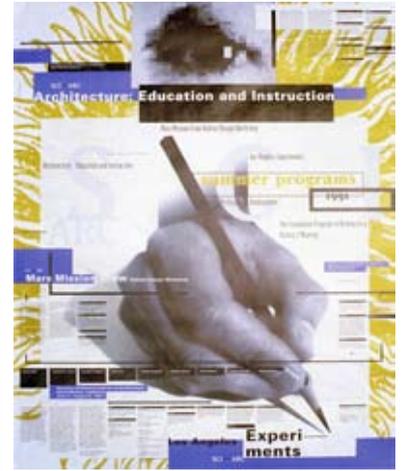


Figure 6.9
April Greiman, poster, USA, 1991

Pacific Wave, which is a derivative of Swiss Punk, describes postmodern typography at the West coast of the US. To a large degree the origin of this stylistic approach is attributed to April Greiman, a pioneer in computer graphics and self-acclaimed 'Queen of Chance' (Greiman 1998, p.8). Greiman had been trained by Weingart at the Kunstgewerbeschule in Basle. Unsurprisingly her notion of punk has never carried any of the socio-political critical notion of the original punk movement. All that was left was a relentless rejection of aesthetic conventions. Greiman further coined the term 'hybrid imagery' for her multi-faceted digital compositions. [Figures 6.8 / 6.9] Her fusion of text and image has produced vibrant collage-like layouts. Greiman's defiance to use the rectangle, reminds us of the futurist collages of the early 1920s. But it was not the pace of life of the industrial age that was on display here. What was showcased were simply the possibilities of the digital technologies of the time.



Figure 6.10
Zuzanna Licko, Matrix,
USA, 1986



Figure 6.11
Zuzanna Licko, diverse fonts,
USA, 1985

As indicated before, those possibilities had not always been quite as generous as postmodernist typography suggests in retrospect. These graphics were often the results of a battle against the much restricted processing power of the first generations of Macintosh computers. Some type designs such as Zuzanna Licko's Matrix from 1986 [Figure 6.10] showed how the design of PostScript fonts could be tailored to the low memory capacities of the early 128K Macs. Other fonts including Licko's Oakland, Emigre, and Emperor from 1985 [Figure 6.11] could be seen as a tribute to the technological

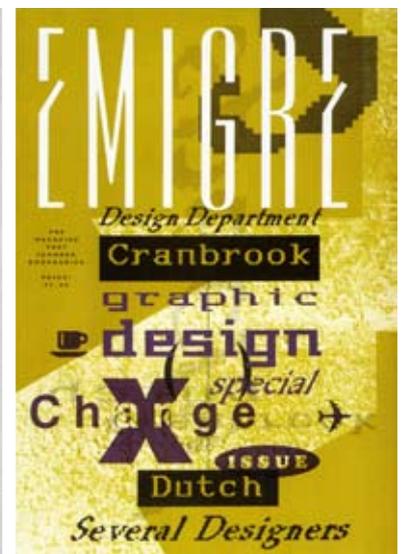
limitations of the early stages of digital typography. Here Licko defined the shape of the individual letters according to the amount of pixels used vertically by the upper case letters. This resulted in a variety of typesize-dependant versions for each font, which were even named according to their pixel resolution. The evolving coarse resolution lead on to stylistic forms [Figure 6.12], which at times resembled de Stijl, and Constructivist forms. [Figure 6.13] However, the aesthetics, which once formed the foundation stone for modern functionalism,¹ were now utilised to oppose functionalist attitudes. 'With the introduction of PostScript outlines, bitmap fonts became technically obsolete, although their designs were still valid.' (VanderLans, Licko, 1993, p. 34) Since 1983 Licko has been married to Rudy Vanderlans, who founded *Émigré* magazine in 1984. [Figure 6.14] The publication was subtitled as 'The magazine that ignores boundaries'. But rather than ignoring the boundaries or limits of digital technologies, *Émigré* moved them into the centre of attention. By combining conventional methods of reproduction, such as Xerox, and letterpress technology with computer graphics and digital typography, *Émigré* showcased the limitation in possibilities of the early Macintosh computers. At the same time the magazine reinforced the fascination about the potential future significance of digital technologies.



above: Figure 6.12
Max Kisman, Tegentonen,
The Netherlands, 1988-1990



above: Figure 6.13
Van Doesburg, alphabet, 1919



above: Figure 6.14
Émigré Graphics, *Émigré*,
magazine cover, USA, 1988

In their ambition to establish more clarity about the implications of digital typography, the London design group 8vo published the first of a total of eight issues of the typographic journal *Octavo* in 1986. [Figure 6.15] *Octavo* was a platform for debate supported by contributions by typographers including April Greiman, Wolfgang Weingart, and Wim Crowel. The book 'Typo' describes the magazine as 'an organ against fashionable and decorative design'. (Typo, 1998, p. 416) However, the design of *Octavo* was far from minimalist, and much inspired by Weingart's teaching. Weingart's principles, by then, had come a long way from the 'cool Swiss Modernist approach' (Triggs, 2003, p.13), which Teal Triggs referred to in order to describe the aesthetics of the magazine. Fashionable

¹ Modernists understood functionalism in the conventional, pragmatic sense. The purpose behind typography was to deliver information quickly, i.e. efficiently. The aspect of aesthetic pleasure was usually considered to be secondary. The potential of visually challenging design solutions was limited, as they were often declared as artistic. The emphasis on visual clarity and communicative efficiency led to the rejection of emotive expression. This thesis seeks to raise awareness for the significance of the emotive characteristics of typographic expression with respect to the effect typographic information has on the information recipient.

or not, with their magazine 8vo managed to introduce a number of interesting assumptions to the typographic discussion. It claimed, for example, that a text which is easy to read 'bypasses the visual potential of the message'. (Octavo, 1990) It further pointed out that the separation between text and image lead to a 'negative interrelationship' between the two (Octavo, 1990). But neither did it offer us a definition of 'the visual potential of the message', nor did it answer the question, in what way the fusion between text and image could lead to a positive relationship between both components. The 8th and last issue of the magazine, that came in form of an interactive CD-rom, made us wonder, what would be the future of typography in the context of digital communication? The fact this question remains largely unanswered fifteen years after being raised, allows Wozencroft to speculate that 'digital technologies are never around for long enough for us to build a true understanding of their nature'. (Wozencroft, 2005)

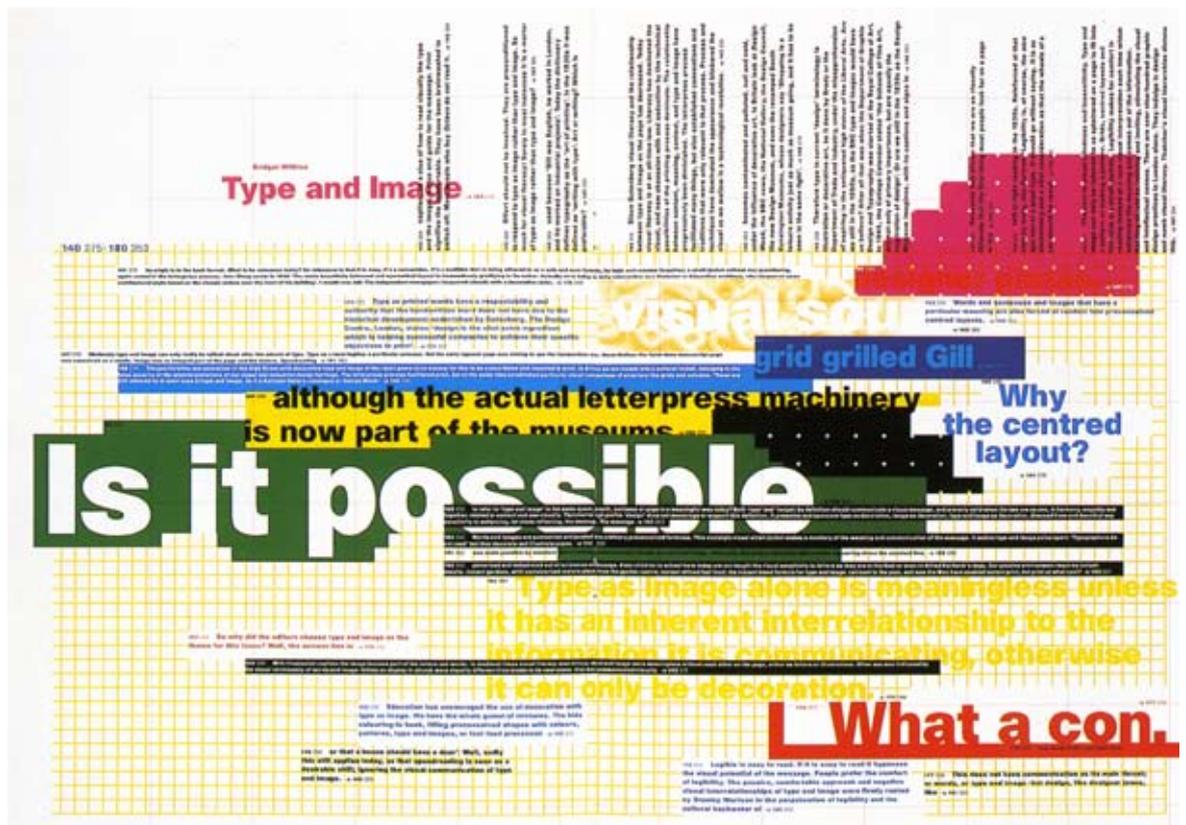


Figure 6.15
8vo, Octavo, magazine spread, UK, 1990

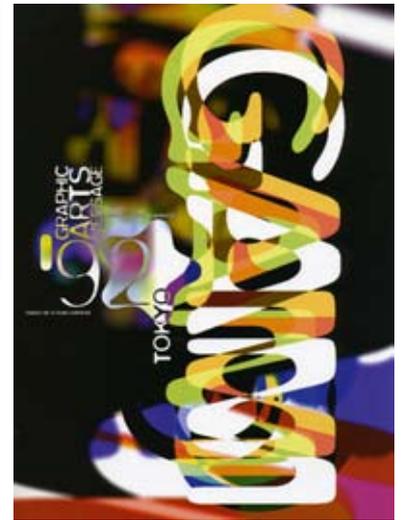
Through writing the texts for Fuse Jon Wozencroft much contributed to the discussion surrounding digital typography. Fuse was a magazine that tried to widen the context within which typography was discussed in the early 1990s. The contents of the eighteen different Fuse issues had been arranged in a systematic order to discuss the cultural and technological progression of linguistic forms. To achieve a conclusive judgement on the relevance of typography it is generally insufficient to discuss the Zeitgeist, the spirit of the age, of a particular point in time. To tackle this problem Fuse discussed typography in terms of a dynamic cultural product, that responds to as much as it evolves from social, cultural, and technological developments. Various Fuse issues indicated that the subject of virtual typography is by no means restricted to postmodernist styles or technological achievements. Virtual typography may likewise be related to the very roots of writing, such as hieroglyphs, or runes, as well as to transcodes of the Latin alphabet, such as Braille, the morse code or other cyphers as explained in Fuse 06 Codes.



above: Figure 6.16
Neville Brody, Fuse1, 1991



above: Figure 6.17
Cornel Windlin, Moonbase Alpha



above: Figure 6.18
Neville Brody, poster, 1992

Nevertheless the design of Fuse took much benefit from the computer's technological improvements in the early 1990s. [Figure 6.16] After fonts and layouts had suffered from the technological restrictions of the first generations of Macintosh computers as well as from the early version of design and font editing software, the pixel aesthetics of low resolution computer graphics could now be challenged by typographers. Cornel Windlin's MoonbaseAlpha [Figure 6.17], which he created for Fuse 03 in 1992, responded to the rough-edged looks of early computer graphics by softening the contours of the pixel-based letter shapes. The low resolution rendering of a font in Photoshop followed by the increase in image size proved to be a reliable means to introduce a more organic feel to digital typography. In this respect Brody's own design changed significantly towards the early 1990s. No longer dominated by intersecting graphic shapes, Brody's designs became softer, contours blurred and overlapping elements became part-transparent. [Figure 6.18] Brody's font Blur [Figure 6.19] reflects this change towards more atmospheric solutions both in terms of shape and name. Fuse drew attention to the relationship between typography and the *virtual* with issue number five. Brody's font FF Virtual which was used to advertise this publication, exemplifies par excellence how typography challenges the viewer's perception on the borderline of legibility. [Figure 6.20] Brody took such explorations further by reversing his font Blur to create FF Autosuggestion for Fuse number 9. [Figure 6.21] Here reading is turned into a guessing game even for the visually trained eye. The same applies to Brody's work created for Dialogue, a CD-ROM publisher, in 1993. This computer processed font defies the clarity of its original. Each individual letter appears as an abstract liquid shape. [Figure 6.22] Only when seen next to other letters, can the shapes be recognised as a typographic symbols. [Figure 6.23]



above: Figure 6.19, Neville Brody, Blur, 1991



Figure 6.20: Neville Brody, FF Virtual



Figure 6.21: Neville Brody, FF Autosuggestion

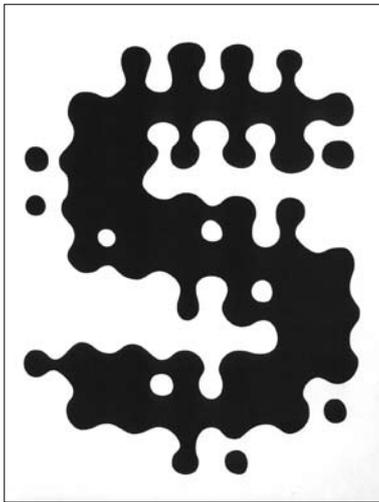
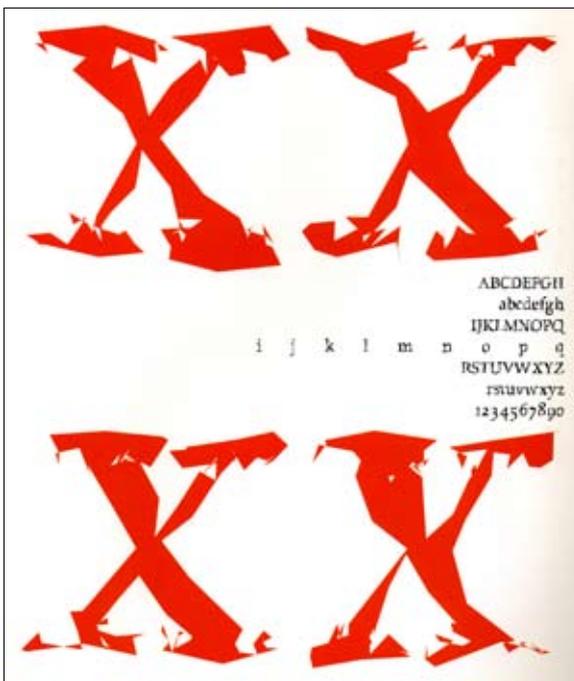


Figure 6.22
Neville Brody, Digitalogue



Figure 6.23
Neville Brody, Digitalogue

Together with Stuart Jensen, Neville Brody founded FontWorks UK in 1990. FontWorks joined forces with FontShop that had been founded by Joan and Erik Spiekermann, when FontShop in Berlin in 1989 as one of the first international mail order type foundries. As a result FontShop International (FSI) emerged. FSI quickly grew by linking smaller type foundries in different countries across the globe. One of the first contributions to FontShop came from the Netherlands. LettError was the title of a typographic joint project between Erik van Bokland and Just van Rossum, who worked for Metadesign in Berlin at the time. The Dutch design duo understood programming sufficiently to make deliberate use of pre-programmed computational errors for aesthetic purposes. Their typeface Beowolf from 1989 [Figure 6.24] uses a noise filter to alter its shape each time a letter is pressed. This computational inconsistency defied the digital perfectionism even more than Trixie [Figure 6.25], a font that had been created in 1991 on the basis of the type of an old typewriter.

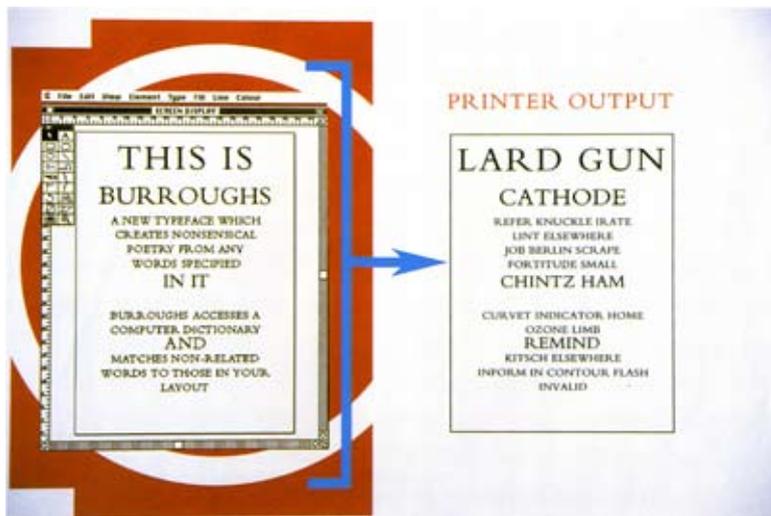


above: Figure 6.24
LettError, Beowolf, The Netherlands / Germany, 1990



Figure 6.25
LettError, Trixe, The Netherlands, 1991

Both those fonts could be seen as a reaction against the clinical perfection of computer technology. Jonathan Barnbrook did not restrict his means to the aesthetic output, when designing his Burroughs.¹ Looking perfectly fine on screen, Burroughs translates texts into unintelligible strings of letters when sent to print. [Figure 6.26] Here digital perfection as it was (and in fact still is) so often taken for granted, had been turned upside down. Postmodernist typography is frequently associated with the use of computers. Barnbrook's design education was paralleled by the media hype around 1990, which may be one of the reasons for him to distance himself from the notion of technology-driven typography. Despite the technical sophistication of his own work, Barnbrook expressed his critical attitude towards computer technologies in a stone carving he created in 1990. [Figure 6.27]



above: Figure 7.26: Jon Barnbrook, Burroughs, UK, 1991



above: Figure 7.27: Jon Barnbrook, Stone Carving, UK, 1990

Regardless of all criticism the international distribution of Fontographer (a typesetting software originally developed by Altsys in 1985) around 1990 led to a boom in typeface design. Thanks to software developments, and technologies allowing the online distribution of fonts, the DIY attitude, that had been seen during the 1970s punk period, was re-introduced to typography. The ease at which fonts could be copied without licensing, led to a situation where designers often ended up with huge collections of fonts.

Even though he hardly ever designed a font himself—his amusingly simplistic FF Fingers being the only exception [Figure 6.28]—the increasing popularity of David Carson further nourished the belief of many that anyone could become a typographer. Having never had a formal design education, David Carson's work shook the world of visual communication. After a three-week graphics workshop in Switzerland in 1983, Carson tried his hand on the design of a number of magazines including 'Beach Culture'. [Figure 6.29] But it was not until his work for 'RayGun' in 1992-1995 [Figure 6.30], that Carson managed to leave his mark on typography. Once again the spirit of punk graphics had returned, if only aesthetically. Carson's socio-cultural interest was rooted in his surfing career, and his training as a sociology teacher. But Carson's grunchy, generation-x-based subcultural agitation seemed devoid of any message or agenda. As much as Dadaism was an *anti-art*, Carson's version

¹ Barnbrook's chosen name is a tribute to William S. Burroughs, the author of the book 'Naked Lunch'. This book is considered as the first example of the so-called cut-up technique in literature. It was supposedly inspired by Dadaists who explored the random cutting and pasting of newspaper texts to unveil the unconscious.

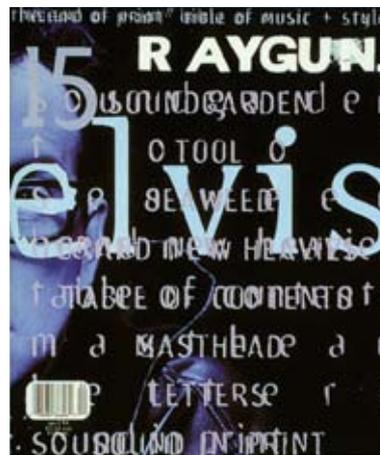
of postmodern typography was a kind of anti-design, an empty message to ridicule the design establishment. Even where designers were not forced to sacrifice their stylistic ambitions to the demands of the mainstream market, postmodernism had been absorbed by the industries by the mid 1990s. All that was left by then, was the debate which juxtaposed the slogans ‘form follows fun’ versus ‘form follows function’.



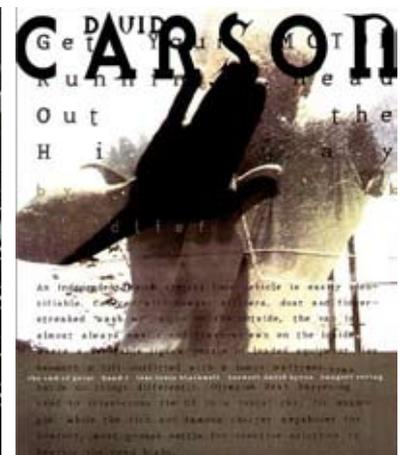
Figure 4.28: David Carson, FF Fingers, Fuse 07 Crash



above: Figure 4.29,
David Carson, Beach Culture

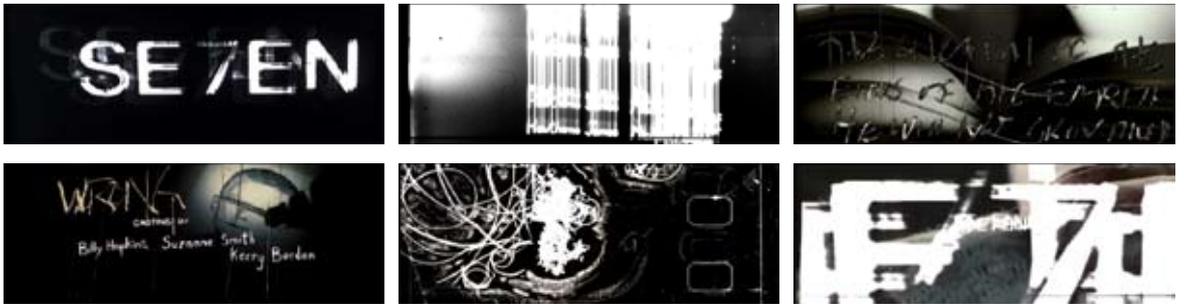


above: Figure 4.30,
David Carson, RayGun, 1994



above: Figure 4.31:
David Carson, The End of Print

But Carson had sparked what Jessica Helfand named the ‘Cult of the Scratchy’, the second trend to raise questions about the relevance of legibility in relation to typographic forms of expression. Unfortunately Carson’s approach did not follow any rationale. In order to escape an intellectual argumentation, Kerrie Jacobs took quick refuge by referring to intuitive design practice, when introducing Carson’s second book ‘2nd Sight’. [Figure 6.31] But is it so unthinkable to analytically assess the role of intuition in the context of communication? Nelson Goodman suggestions that ‘in aesthetic experience *emotions function cognitively*’ (Nelson, 1969, p.248) could have helped to introduce the aspect of emotive response to the functional argument. But critical discourse was supposedly not *fun* enough to survive throughout the 1990s. Towards the middle of the decade discussions began to run in circles, and the digital revolution in typography started to run out of steam.



Figures 6.32-6.37: Kyle Cooper, Imaginary Forces, Se7en, title sequence, USA 1995

However, there was enough momentum left to influence a different genre. With his title sequence for *Se7en*, Kyle Cooper introduced the ‘Cult of the Scratchy’ to motion graphics in 1995. [Figures 6.32-6.37] Cooper drew text information directly onto the film material. On the celluloid the ink could easily be manipulated. By pasting the results on top of a seemingly random collage of background imagery, Cooper gave the title sequence a scrappy, hand-made look. Cooper had, however, not been the first to explore the technique of drawing onto film. Stan Brakhage had exploited this technique thoroughly for his experimental short film ‘Anticipation of the Night’ in 1962. [Figures 6.38-6.40] Brakhage’s title was not predominantly typographic. But Pablo Ferro’s title for ‘Dr. Strangelove’ (1964) was. [Figures 6.41-6.43] The main differences between Ferro’s hand-drawn title, and Cooper’s was that Ferro used the text as a static layer that hovered above a calmly and consistently moving imagery. With the technique being the same, the fundamental difference between both titles was the pace at which the visual elements were changed.



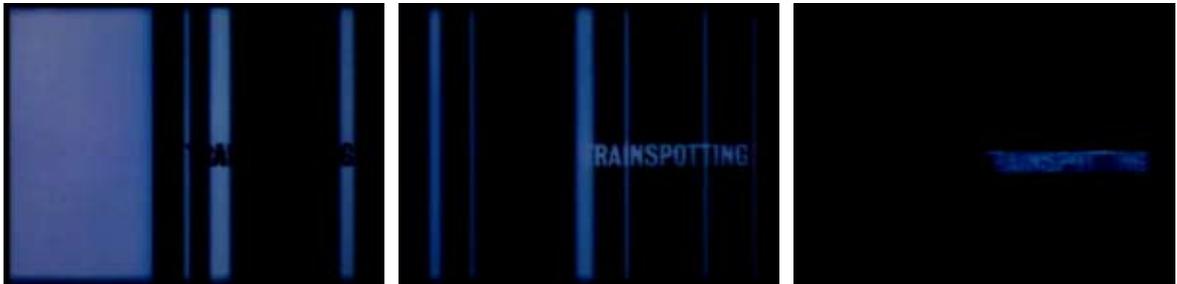
Figures 6.38-6.40: Brakhage, Anticipation of the Night, experimental short film, 1962



Figures 6.41-6.43: Pablo Ferro, Dr. Strangelove, title sequence, USA, 1963



Figures 6.44-6.46: Kyle Cooper, *The Island of Dr. Moreau*, title sequence, USA, 1996



Figures 6.47-6.49: Tomato, *Trainspotting*, title sequence, UK 1996



Figures 6.50-6.52: *Bullet*, title sequence, USA, 1968

Cooper left Greenberg Associates, one of the largest film promotion companies, to work independently from 1996 onwards. Cooper managed to draw attention to the genre of film title design as no-one else since Saul Bass in the 1950s, and Pablo Ferro in the 1960s. Whilst Cooper carried on producing *scratchy* title sequences such as the one for 'The Island of Dr. Moreau' (1996) [Figures 6.44-6.46], other graphic designers managed to enter the genre, including the design group Tomato. Tomato created the title and closing sequence for *Trainspotting* in 1996. Using the moving textures of lines which supported by the sound reminds the viewer of passing coaches, helped to obscure the title of the film. [Figures 6.47-6.49] This example is particularly interesting in relation to this investigation, as it attempts to use the consecutive perception of different parts of the text to deliver the text content. It appears, however, that Tomato were required to blend in the complete title at one point to avoid an overly subtle solution. The temporary display of the static text was used similarly in the title sequence of *Bullet* in 1968. [Figures 6.50-6.52] For a short moment the text in both titles is presented in a perfectly legible form to interrupt the continuity in the typographic transformation.

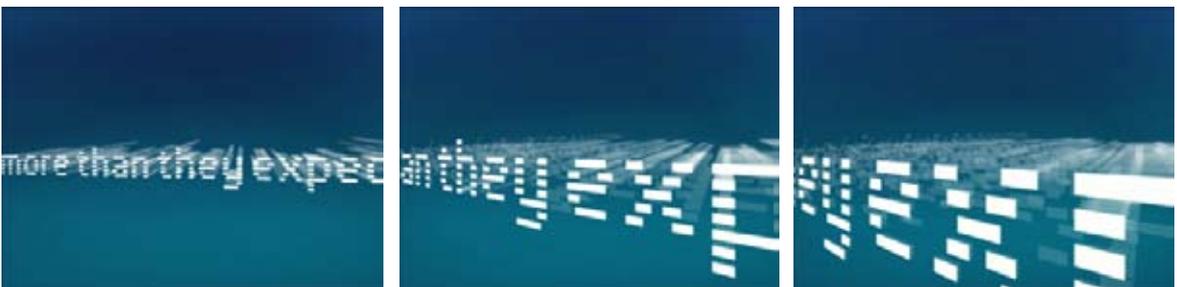


Figures 6.68-6.70: Why Not Associates, Profile, BBC2, title sequence, UK, 2002

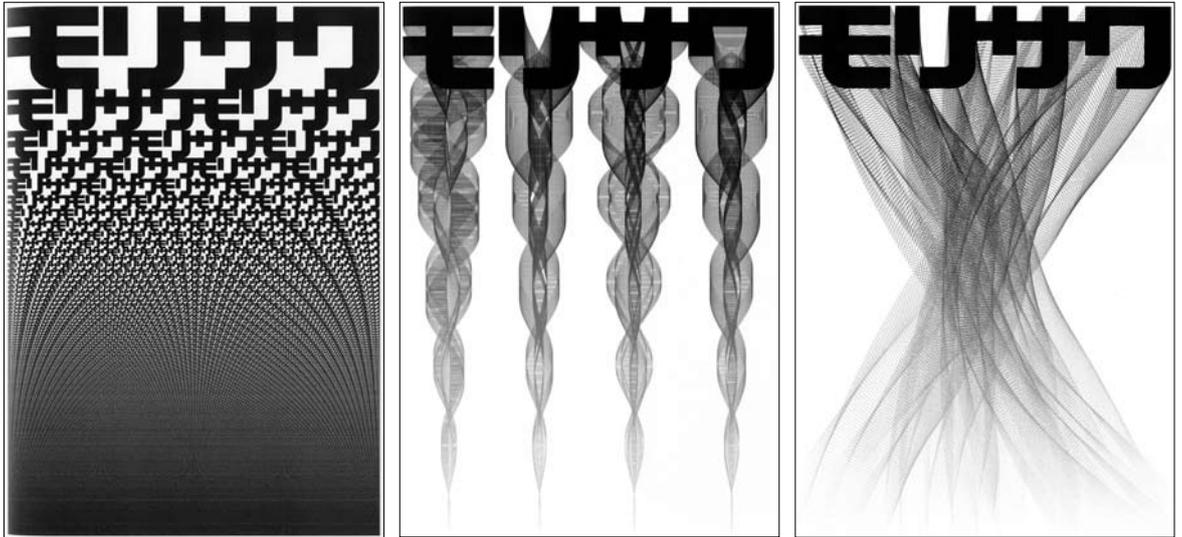
Televised information, too, is increasingly subjected to discontinuous time progression. The more information is required to suit the concept of time-space-compression to remain economically viable, the less room there seems to be for gradually unfolding forms of typographic expression. The area of TV identities is probably the most likely to accommodate time-based typography, as here the TV channels are free to decide on their own time slots. The time suspension necessary to allow for speculative activities becomes apparent in Why Not Associates' TV title sequence 'Profile'. [Figures 6.68-6.70] This animation uses the rotary motion of typographic fragments to achieve its visually intriguing effect. The time-based dispositioning of typographic elements had been developed by using a filter in Adobe After Effects. Visual effects, which are based on the use of pre-programmed software, are restricted by the number of parameters the software application has to offer. The typographic animation created by Peter Cho for IBM shows visual effects similar to those used by Why Not Associates for the 'Profiles' animation. Here, too, rotating typographic elements merge over a period of time to turn into words. [Figures 6.71-6.73] But, as opposed to Why Not Associates, Cho had coded his solution based on Open GL and C++. This allowed him a far greater flexibility in the variation of the typographic transitions. [Figure 4.41a-c] Whereas graphic designers are often still worried about becoming 'slaves of their tools' (Triggs, 2003, p. 9) when using pre-defined software features, the masters seem to develop their tools from scratch.



Figures 6.71-6.73: Peter Cho, Imaginary Forces, IBM promo, USA



Figures 6.74-6.76: Peter Cho, Imaginary Forces, IBM promo, USA



Figures 6.77-6.79: John Maeda, Morisawa, poster series, USA

Whilst most graphic designers could do little else than expand on the growing number of Photoshop layers, or on the 3D plugins of their illustration software by the mid 1990s, John Maeda, Professor of Media Arts and Sciences at MIT (Massachusetts Institute of Technology), promoted the concept of creating typographic solutions on the basis of hard coding (programming without pre-programmed software involved). Maeda's designs for Morisawa, a Japanese type foundry, demonstrate the versatility of such a programming-based approach. [Figures 6.77-6.79] But despite such innovative ideas and concepts the MIT generally failed to reveal why new forms of expression would be needed for communicating within digital environments. New design methods were examined on the basis of technical possibilities, not in response to communicative necessities. To further clarify the latter, we will examine the perception of textual contents more closely in the course of the following chapters.

7. a phenomenology of reading

'To define is to kill, To suggest is to create' Stéphane Mallarmé, 1886 (quoted by Levinson, 1999, p.28)

Having discussed the perception of information in general (see chapters 1 and 3), we need to now look at the cognitive aspect of reading in order to search for common features between the perception of information (recognisability), the process of reading (legibility), and the uncovering of meaning (intelligibility).

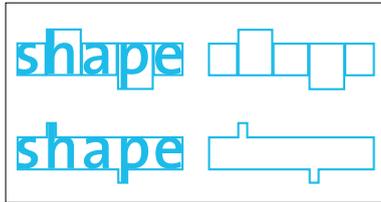


Figure 7.1
Bouma shapes based on ascending and descending letters (top), and on the word envelop (bottom)

target word:	test	error rate
consistent word shape:	tesf	13%
inconsistent word shape:	tesc	7%

Figure 7.2

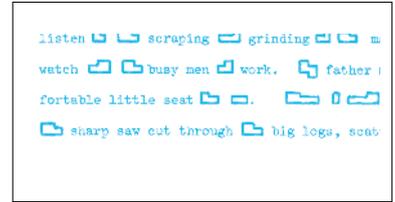


Figure 7.3

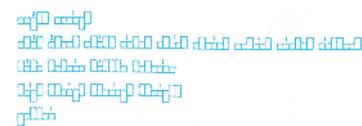


Figure 7.4

chart	identical word (control)	210 ms
chovt	similar word shape some letters in common	240 ms
chyft	dissimilar word shape some letters in common	280 ms
ebovf	similar word shape No letters in common	300 ms

Figure 7.5

Relative speed of boundary study

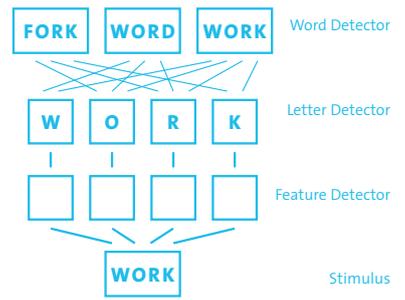


Figure 7.6

Parallel Letter Recognition

Various hypotheses have been developed to clarify how exactly written texts are perceived. The so-called Bouma model¹ assumes that textual information is perceived word by word, whereby each word constitutes a cluster of letters. [Figure 7.1] This model is supported by the fact that spelling mistakes are missed significantly more often, where the shape of the incorrect word is consistent with that of the correct word. [Figure 7.2] The idea of reading words on the basis of either their outlines, or their rhythm of ascending and descending letters has raised doubts, however, as these word characteristics on their own seem insufficient for the determination of textual contents. [Figure 7.3 and 7.4] Hrant Papzian on the other hand explains that the Bouma model further draws on other criteria such as word boundaries (determined by the blank space between words), word frequency, linguistic structure of phrases etc. (Typo, January 2005, p.18). Considering that word recognition may operate in conjunction with other cognitive models, the hypothesis retains some of

¹ The Bouma theory evolved based on evidence gathered in the field of cognitive psychology during the past 20 years. Contemporary psychologists use the word 'Bouma' synonymously with 'word shape' in tribute to Herman Bouma who discussed the concept in his paper 'Visual Interference in the Parafoveal Recognition of Initial and Final Letters of Words' in 1973. James Cattell is considered to be the first psychologist to propose a model of word recognition in 1886.

its former credibility. Another theory is the Serial Letter Recognition, according to which all the letters of a word are read individually starting with the one furthest left. This model is supported by the fact that long words take longer to be recognised than short ones. This theory, that emerged in the early 1970's, was, however, short-lived. It failed due to the so-called Word Superiority Effect which revealed that letters are more easily identified as part of a word than in isolation. [Figure 7.5] The model that is most recent, and that remains the most popular is called Parallel Letter Recognition. This assumes that all the letters of a word are registered simultaneously, and analysed in conjunction to be recognised as a word. [Figure 7.6] The ability of perceiving various letters simultaneously is supposed to be aided by the foveal recognition. Foveal recognition means that objects, which are just outside people's optical focus point, are still registered, even though not as clearly as the object in focus.



Figure 7.7 Saccadic eye movements

Both the Bouma hypothesis as well as the Parallel Letter Recognition are supported by the discovery of the saccadic eye movement. The fact that texts are not scanned smoothly by the human eye has been known for over 100 years. (Larson, in: Typo, January 2005, p.4) But precise evidence could only be established thanks to the increasing accuracy of eye tracking technologies. We now know that the human eye jumps from word to word rather than from letter to letter. Whilst words are fixated¹ for 200-250 ms, the jumps take only about 20-35 ms. (Typo, January 2005, p.4) If the Bouma model deserves more credibility than the Parallel Letter Recognition, or vice-versa, or if a combination of both models would be most appropriate, remains a highly contentious issue. What matters in relation to this thesis most is that texts are generally read word by word. The fact that words are not necessarily fixated in order of their occurrence suggests that 'reading is based on intelligent guesswork'. (Typo, January 2005, p.16) According to Kevin Larson 10-15% of all saccades are regressive, i.e. backwards orientated. (Typo, January 2005, p.4) Equally important is the fact that some of the forward saccades skip one or several words. [Figure 7.7] This again indicates that reading is a matter of hypothesis testing, as is the perception of information in general (see chapter 1). In other words: Readers appear to make assumption about the textual contents in order to skip certain words, so to read more quickly. The regressive saccades indicate the reader's need to verify those assumptions by double-checking the meaning of individual words within context. [Figure 7.7]

¹ The fixation period is the time-span during which the eyes do not move. This constitutes an interruption of the scanning process. Fixation spans provide important evidence on how texts are perceived.

Peter Enneson claims that 'A full understanding of reading goes well beyond its perceptual processing dimension.' (Typo, January 2005, p.20) Unfortunately Enneson's paper does not. Wolfgang Iser's book 'The Act of Reading', however, does. Iser extends the principle of saccadic perception from the cognitive to the interpretative capacity of the reader. As opposed to images, the meaning of texts, their intelligibility, does not rest on the surface. Whilst the image of a word suggests meaning, it is its literal content that defines it. But how rigid is this definition? Wolfgang Iser disputes the idea of reading being a passive one-way process. (Iser, 1978, p.107) Instead Iser suggests reading to be the result of a 'dynamic interaction between text and reader'. (Iser, 1978, p.107) 'The Act of Reading' according to Iser is not exclusively controlled by the way the author defines a piece of text. Instead the reader is required to use his or her imagination to reconstruct the meaning of texts. In doing so the reader contributes to the mediation of meaning. Interestingly Iser believes the joy of reading to be rooted precisely in this productive, if not to say pro-active, contribution of the reader. (Iser, 1978, p.108) One may here be reminded of Barthes' claim that 'what pleasure wants is the site of a loss, the seam, the cut, the deflation, the *dissolve* which seizes the subject in the midst of bliss'. (Barthes, 1980, p.7) With his argument Iser proposes a departure from a logocentric semiological paradigm. Where the reader takes on an active role in the determination of the significance of a message, and be it just to some degree, the *governing* role of the text is clearly challenged. Information exchange becomes subjective, or, at least, inter-subjective. In reference to Laurence Sterne Iser further points out the author's ability to tailor his writing towards the reader's imagination, 'to leave him something to imagine'. (Iser quoting Sterne, 1978, p.108) So reading and writing become 'two interdependent acts'. (Iser, 1978, p.108) According to Iser's concept of 'the wandering viewpoint' (Iser, 1978, p.108-118) reading differs from the perception of given objects, because 'the whole text can never be perceived at anyone time'. (Iser, 1978, p.108) Thus the perception of texts differs from that of images which, according to Vilém Flusser, can be viewed at a glance.¹

'The "object" of the text', so Iser, 'can only be imagined by different consecutive phases of reading'. (Iser, 1978, p.108f) This idea regarding mental perception seems similar to the principle of the saccadic eye movement, only that it exceeds the individual sentence structure.

In reference to Roman Ingarden, Iser subsequently returns to a quasi-semantic, if not to say meta-semantic position, when defining the 'intentional correlates of a sentence' as the conjunction of diverse sentences, which form 'semantic units of a higher order'. (Iser, 1978, p.110) This is to say that the meaning conveyed by a text does not solely reside within its sentence structure, but also in the way the diversity of sentences correlate. It is the challenge for the reader to re-compose this complex of meaning. Following Iser it is precisely this challenge that makes a reader enjoy literature. 'The fulfillment [...] takes place, not in the text, but in the reader, who must "activate" the interplay of the correlates pre-structured by the sequence of sentences.' (Iser, 1978, p.110) Iser here shifts his emphasis from the determinist function of the text to the interpretative capacity of the reader, which indicates a departure from structuralist linguistics. The aesthetic object as defined by the author manifests itself as a correlative in the mind of the reader.

Iser moves his point of view more thoroughly towards phenomenology, when referring to Husserl's concept of 'protensions' to describe the anticipation that fulfils the reader in respect of the meaning that is expected to evolve. Iser speaks of 'semantic pointers' (Iser, 1978, p.111), which we may understand as indications, which trigger expectations as to what will happen within the sentences

¹ Flusser claims: 'The significance of images is on the surface. One can take them at a single glance yet this remains superficial.' (Flusser, 2000, p.8) Flusser's description of the gaze 'wandering over the surface of the image' (Flusser, 2000, p.8f) could be seen as in line with Iser's concept of a 'wandering viewpoint' that relates to reading. But even though different consecutive phases of scanning are possible, 'If one wishes to deepen the significance, i.e. to reconstruct the abstracted dimensions' (Flusser, 2000, p.8f), they are not necessary as they are in reading. The decoding of texts on the other hand relies inevitably on the consecutive perception of information fragments.

to come. Iser further claims that such prefiguration of 'a particular horizon' (Iser, 1978, p.111) is inherent to each individual sentence. Whereas to some degree one sentence may fulfil the expectation of the previous one, it also points towards the next to come. Consequently, so Iser claims, protensions in the context of literature mostly do not lead to fulfilment, but to a succession of protensions. This results in a constantly upheld tension which causes what Iser defines as 'the wandering viewpoint'. (Iser, 1978, p.111)

Where the 'new correlate' confirms the previously provoked expectations within the reader, it reduces the range of possible semantic horizons. (Iser, 1978, p.111) Depending on the sequential structure of the sentences, however, new contexts can be evoked, and the reader's perspective changed. Thus even previously read sentences are being reinterpreted. The reader's 'memory undergoes a transformation'. (Iser, 1978, p.111) Due to this 'continual interplay between modified expectations and transformed memories' (Iser, 1978, p.111), protensions and retentions remain in a dialectical relationship that is crucial to the way a reader may enjoy a piece of text.

Virtual typography exists prior to the manifestation of a linguistic code. It is therefore unable to transport any literal meaning. Nevertheless the stimulation of viewer expectations towards graphic (or seemingly typographic) elements may well operate along similar lines to the way textual contents are interpreted according to Iser. By transferring Iser's concept of literal communication to visual communication we can argue that the aesthetic definition of transitional graphic patterns can be employed to uphold the visual-aesthetic tension, and to keep the viewer's mind at suspense. Iser invites such a line of argument by claiming that '... successful communication must ultimately depend on the reader's creative activity'. (Iser, 1978, p.112) Perceptual creativity, or imagination, is not triggered through the precise definition, but through the mere suggestion of contents. The recipient's mind needs to be aesthetically stimulated, be it through literal contents, or via their visual representation so that an interplay of protensions and retentions can evolve. Only through providing perceptual challenges can we alter people's sense of a temporal progression, and to make them oblivious to the amount of time passing by.

please note that the illustrations used in this chapter were re-drawn following the examples published in *Typo*, January 2005

8. time consciousness

In his book 'Stealing the Mona Lisa', Darian Leader, a psycho-analyst, discusses how aesthetic stimulation depends on the information withheld rather than on any statement made by the artist. (Leader, 2002, p.111) Leader suggests that the fascination for art derives from the questions art raises rather than from any possible answers it may provide. In reference to Freud Leader claims that, '... if painting or work of art can evoke for us the idea of something hidden, we will be even more interested'. (Leader, 2002, p.81) He further describes the surface of art objects as 'a veil, evoking a beyond yet withholding it'. (Leader, 2002, p.82)

But is virtual typography a kind of art, or is it simply information that does not communicate efficiently? Bearing in mind that 'Information is not inherently distinct from noise' (Wilden, 1987, p. 183) i.e. random stimuli, we may argue that information is not necessarily explicit, let alone meaningful. On the other hand art per se constitutes information, and from a phenomenological point of view the dialectical differentiation between design and art cannot be upheld. So what is it that turns the perception of information into an aesthetic experience? Following Leader's argument one may claim that it is the sustained ambiguity which lends virtual typography its aesthetic quality. It is the non-explicitness that seduces viewers to contemplate, and to speculate upon its potential significance. Whether or not this makes typography appear as a piece of art, or a piece of design, may here be left to the discretion of the viewer(s). In the least we may claim that virtual typography shares some characteristics with art in general.

Following Bergson, art 'aims at impressing feelings on us rather than expressing them'. (Bergson, 2001, p.16) Where art stimulates the observer emotionally, it does so non-explicitly. Bergson further argues 'that every feeling experienced by us will assume an aesthetic character, provided that it has been *suggested*, and not *caused*.' (Bergson, 2001, p.16f) This confirms the assumption that aesthetic qualities of an art object are by definition linked directly to its ambiguous qualities.

We have seen earlier that ambiguity challenges people's minds to establish certainty over a period of time (see chapter 1). How exactly the mind-set is changing had to be left unexplained. Bergson hypothesises that 'There are distinct phases in the progress of an aesthetic feeling, as in the state of hypnosis; and these phases correspond less to variations of degree than to differences of state or nature.' (Bergson, 2001, p.17) As regards virtual typography we may consequently assume that the changes in the nature of information occurring during the transition from an image pattern to a piece of text, induce a change people's state of mind. This reconfiguration of the viewer's mode of perception is what makes virtual typography appear intriguing. Its aesthetic quality is not measurable, precisely because it progressively changes the viewer's mind-set, which is the basis for the viewer's judgement. Rather than simply increasing one's focus of attention, the attention per se changes to a different kind. The intensity of aesthetic experiences can consequently not be measured or quantified. They can only be expressed by comparing successive states of mind in relation to one another.

It is this what makes the aesthetic quality of an art object difficult, if not impossible, to judge objectively. The same applies to virtual typography. Here the qualitative changes become particularly obvious as its communicative characteristics change from that of an image pattern to that of a typographic pattern. Conventional typography, too, can be seen as art. It does not, however, offer any possibility of changing the viewer's expectations towards the future. The level of ambiguity here remains consistent, and so does the mode of perception. The viewer's experience of time cannot be altered in the course of the perception process.

Where there the viewer is challenged to pro-actively give meaning to an art object, or indeed to virtually typographical patterns, 'The successive intensities of the aesthetic feeling [...] correspond to changes of state occurring in us.' (Bergson, 2001, p.18) Emotions are, according to Bergson, experienced in different magnitudes, i.e. in terms of intensity rather than extensity. The confusion between intensity and extensity occurs, where we try to attribute a degree, i.e. a numerical measure, to phenomena such as emotions. Fundamentally we can differentiate only between different kinds of emotions. But even though we can compare emotional states in terms of intensity to one another, it seems impossible to attribute a specific, or absolute degree to their intensity, or quality.

The same applies to the way we experience time. Even though we may measure time in terms of seconds, minutes, hours and so forth, such descriptive quantification does by no means represent people's true inner sense of time. The latter manifests itself in qualitative terms. It is, in other words, determined by the intensity with which time is sensed. Following Bergson this '... inner duration, perceived by consciousness, is nothing else but the melting of states of consciousness into one another...'. (Bergson, 2001, p.107) If we may follow Bergson to this point, we can conclude that our a sense of duration is produced through qualitative changes in the viewer's state of mind (consciousness). As this makes time appear intensive rather than extensive, the assessment of time in accordance to the succession of events becomes impossible. And so does the quantification of time in terms of seconds, minutes, and so on.

Even though Bergson rejects the measuring of time as a common misconception, we cannot deny the fact that we structure our lives and daily activities according to temporal modules (days, hours, minutes etc.). When distinguishing between time in terms of succession (quantity), and time in terms of duration (quality), we need to acknowledge the existence of both from an epistemological point of view. Judging empirically we may further position both kinds of time in dialectical juxtaposition to one another. This is to say that the more intensively time is *felt*, the less conscious we are of the succession of time (hours, minutes etc.), and vice versa. Phenomenologically we may further argue that people's perspective on time is directed either towards the future or the past. This direction fluctuates periodically as we perceive the succession of external events. Visual as well as literal ambiguity directs our attention more intensively towards the future. They provoke, in other words, a protentive state of mind.

We may further assume that the more intense time feels, the more our sense of succession is weakened. This is to say that, the more intensively we are immersed in upcoming events (protension), or the more intensively we reflect on past events (retension), the less aware we are of the *pace* of time passing by. This is when quantity is replaced by quality. The purpose of virtual typography, or in fact of visual information in general, ought to be to capture people's attention in a way that induces them to lose the concept of *real time* progression (see chapter 2), which, according to Bergson tends to subvert people's sense of *real duration* (*durée*). This is why artists and designers need to aim for providing information in form of an ingressive, and intriguing visual experience, to express themselves aesthetically. In this respect the suggestive characteristics of virtual typography may be thought of as a means to promote people's 'inner states as living things, constantly *becoming*, as states not amenable to measure, which permeate one another'. (Bergson, 2001, p.231)

9. the dialectics of transition

Bergson leaves us with a dilemma. He succeeds in making us understand that quantity and quality constitute non-interchangeable entities, as do succession and duration (see chapter 8). But how exactly the misconception of time in terms of an extensive force manifests itself consistently in people's minds, we do not know. All that we do know is that time can be perceived qualitatively, i.e. as being more or less intensive (time as *durée*), or it can be (mis-)perceived as more or less extensive (time as succession).

Bergson refers to the rhythm of poetic writing to exemplify how aesthetic experiences may shift people's sense of time towards the qualitative notion of time. When stating that 'The poet is he with whom feelings develop into images, and the images themselves into words which translate them while obeying the laws of rhythm' (Bergson, 2001, p.14f), Bergson indicates that the shift in time consciousness relates directly to a change in people's emotional state of mind. The mind of the poetry reader is constantly torn between the formal aesthetic certainty of poetic rhyme and rhythm on the one hand, and the suggestive quality of literal contents, which demand intellectual speculation, on the other. The same, we may assume, needs to be the case if we want to attribute a poetic quality to typographic work. Interestingly the dialectical tension between word and image mentioned by Bergson was first explored visually, when calligrammes emerged at the beginning of the twentieth century (see appendix 1), only few years before Bergson published his first thesis on time consciousness. If we consider the paradoxical relationship between the suggestive (images) and the explicit (word) as the basis for aesthetic stimulation, then virtual typography is by definition an aesthetic phenomenon. It's aesthetic quality, however, depends much on the viewer's individual mind-set, which in turn depends on his or her perceptual capabilities, level of interest, as well as on the surrounding context and conditions.

Aesthetic perception is an emotional response to a paradoxical situation, which provokes a sense of *durée*, in a way that makes people unaware of the quantitative succession of events. In other words, people become oblivious to the *amount* of time passing by, when they are immersed into an experience of aesthetic perception. Our concept of time as a measurable entity is then undermined through the uncertainty which aesthetic experiences provoke in us.

Elliott Jaques, an American psychologist, treats the dialectical opposites of *durée* (here paraphrased as *kairos*) and temporal succession (which Jaques defines as *chronos*) differently from Bergson. Rather than declaring one time concept as the misinterpretation of the other, Jaques acknowledges the co-existence of both in dialectical juxtaposition to one another. This is to say that time in terms of extensity is not a misperception, but simply a different aspect of time that comes to dominate people's awareness. Time in the sense of *durée* alternatively governs human consciousness periodically depending on the circumstances of unfolding experiences. This means that, according to Jaques, people's sense of time oscillates constantly between an analytical notion of time (time as succession) and a felt sense of temporal continuity (*durée*).

In so far Jaques' and Bergson's positions do not conflict. The failure of Jaques' hypothesis becomes apparent, however, where he tries to visualise his concept. Here he suggests time awareness to depend exclusively on the way time is organised. [Figure 9.1-9.3] But, if time in terms of intensity defies any absolute, i.e. numerical evaluation, then how can it possibly be organised? And, if Jaques was correct in claiming that time evolves exclusively around people's individual intent and the prospective succession of time, then where do we position the past? At close examination Jaques' approach turns out to be purely pragmatic. It thus stands in conflict with Bergson's

phenomenological position. Jaques' claim that time in terms of *durée* can be quantified, let alone organised according to people's individual intent, is simply unconvincing. Jaques' theory may be a useful tool for the purpose of time management. But from a philosophical perspective it appears ill-defined.

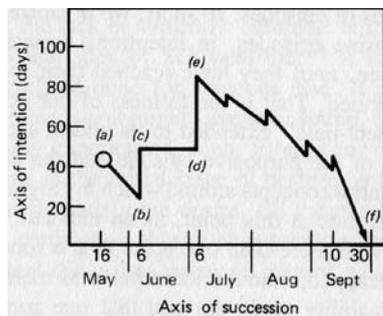


Figure 9.1

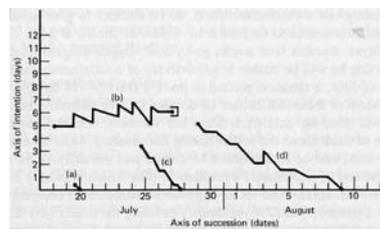


Figure 9.2

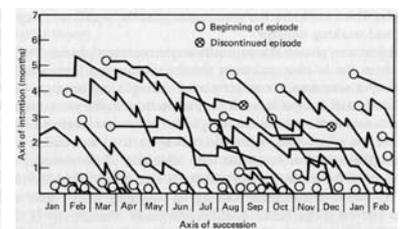


Figure 9.3

Despite the conceptual deficiencies, Jaques' notion of an oscillating relationship between two different aspects of time is inspirational. Instead of defining the changes in time-consciousness in terms of intent and succession, however, we need to return to Bergson's definition of *durée* (time intensity), and succession (time extensity). Whilst external events can be thought of as consistently progressive and objectively quantifiable, we may consider the felt time intensity as a different entity, which operates within another dimension. [Figure 9.4] This means that, whilst external events succeed one another, our individual sense of time fluctuates in terms of intensity, which makes us sometimes more, and sometimes less aware of the *amount* of time passing. If we are for example mentally pre-occupied with past events, as we are in nostalgic reflection, we will be less aware of the *amount* of time passing by, than, if we are waiting at a bus stop where thoughts are unlikely to divert our attention from the present moment. The same applies where our sense of time is affected by the immanent or remote future, as, for example, when we are confronted with a perceptual challenge concerning transitional information. As discussed in the previous chapter our time consciousness is the result of a constant interchange between a perceptual future (protension), and a perceptual past (retension). We can further assume that the more intensively we focus on either the future, or the past, the less conscious we are of the quantifiable progression of time. This can be graphically symbolised, by illustrating time two-dimensionally with time as succession in one direction, and time intensity in another. The more intense the vertical oscillation (intensity) is as opposed to the horizontal progression, the less dominant time extensity (succession) will be. [Figure 9.5]

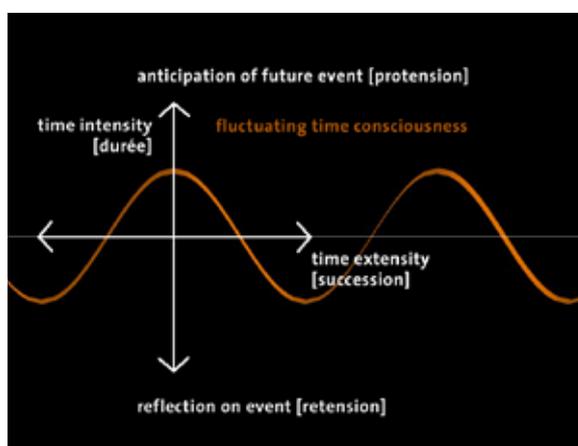


Figure 9.4

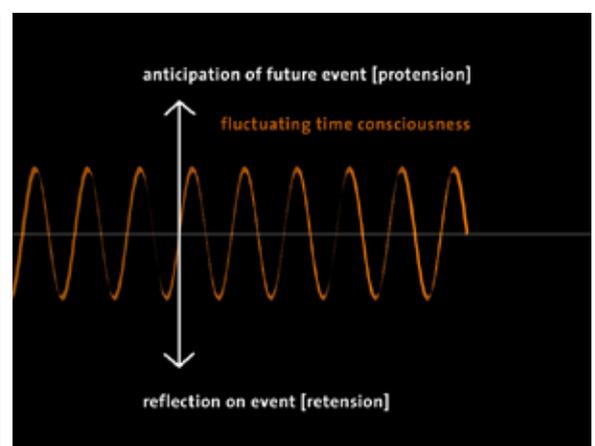


Figure 9.5

The ambiguous characteristics of graphic constellations in the case of virtual typography alongside the continuity of their compositional transformation lead to a conflicting sense of time. As with poetry, which provokes a feeling of unease alongside a sense of rhythm and continuity, virtual typography is both calming (due to the continuity in its transformation), as well as irritating (due to its suggestive characteristics). Like poetry, and music, virtual typography thus causes a shift in time consciousness, as it imposes a state of confusion. Whilst the continuity of transformation makes viewers concentrate towards the future (when trying to predict the emerging shape of the anticipated information), it requires the constant re-evaluation of the present data based on the viewer's existing experience (does any of the data resemble anything ever seen before?). This means the aesthetic experience of virtual typography forces the viewer's attention to fluctuate rapidly between past and future (retension and protension). As a consequence the viewer's awareness of time as a measurable entity will be suspended. Time is experienced as intensive rather than as extensive.



Figure 9.6-9.8, Channel4, TV identity, 'Diner', UK, 2004



Figure 9.9-9.15, Peter Cho, Imaginary Forces, IBM promo, USA

If examined at a slightly larger scale, virtual typography shows another peculiarity, one which separates it from any other kind of transitional imagery. If seen as a means to constantly transform images into texts and vice versa, virtual typography exceeds the horizon of Bergson's 'immediate data of consciousness'. The ambiguity between image and text pattern is not necessarily momentary. The example of the Channel4 TV campaign mentioned in chapter 5 shows how virtual typography may constitute a singular event. [Figure 9.6-9.8] Virtual typography can also operate rhythmically, where the transition between image and text patterns are repeated systematically. This is the case with Cho's IBM advert that was discussed in chapter 5. [Figure 9.9-9.15] Here virtual typography stimulates the viewer's mind not merely due to its transitional characteristics, but also due to the expectation

of recurring patterns. Whilst words take shape, are read and reflected upon, new words emerge. The intellectual reflection, which follows the cognitive phase, is then accompanied by the next phase of transition, whereby a new word emerges. [Figure 9.16] The reflection upon contents means that the reader's focus of attention is directed towards the past. [Figure 9.17] At the same time, however, the emergence of the following word demands the viewer to speculate towards the future. [Figure 9.18] Here again the reader experiences a conflicting time perspective. The explicit meaning of the word that has been read requires reflection, whilst the suggestive quality of emerging words, make the viewer speculate towards the future. Torn between past and future events, the sense of temporal succession is again undermined.

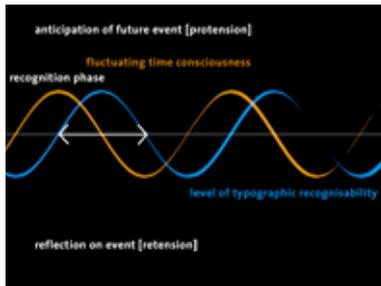


Figure 9.16

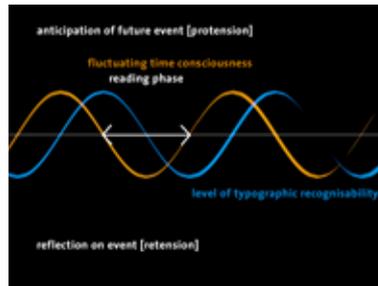


Figure 9.17

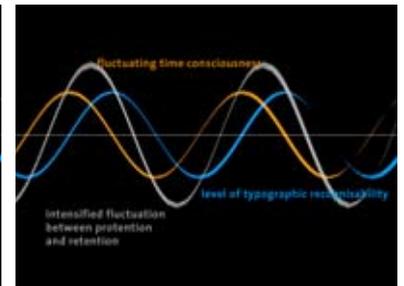


Figure 9.18

If we consider the perception of emerging forms of typography in terms of consecutive phases of information recognition, classification, decoding, and interpretation (see chapter 3), then the timing of emerging words or sentences can be used to uphold the aesthetic tension, which according to Bergson leads to the experience of time in terms of quality. This experience of time as a non-fragmented flowing entity helps to capture people's attention, and to keep their minds occupied.

10. ambiguity and memory

'art puts to sleep our active and resistant powers and makes us responsive to suggestion.'
(Bergson, 2001, p. 14)

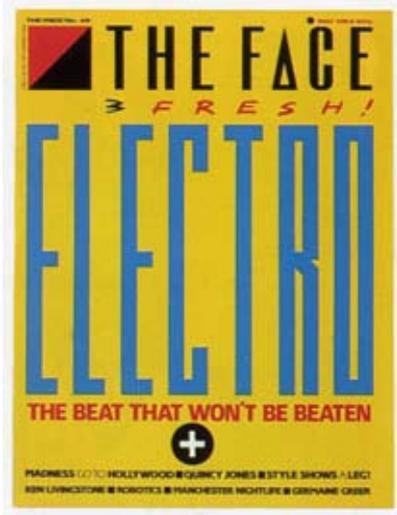


Figure 10.1: Neville Brody,
The Face, UK, 1984

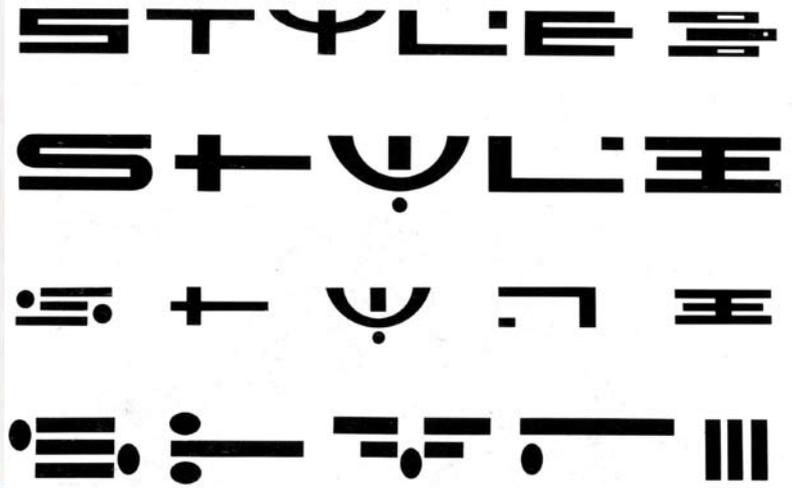


Figure 10.2-10.5: Neville Brody, Style logo as it 'degenerated'
over four issues of The Face, Nos. 49, 51, 52, 53, 1984

When art directing The Face [Figure 10.1] Neville Brody created aesthetic tension not by letting typographic elements emerge, but by allowing them to dissolve, or to 'degenerate' (Wozencroft, 1994, p. 32) into abstract shapes. In summer 1984 the title of the magazine's 'styles' section [Figure 10.2-10.5], as well as the 'contents' logo [Figure 10.6-10.11] became increasingly unreadable from one issue to the next. Typography was transformed step by step into a hermetic code that remained decipherable only for those who had followed the process of graphic abstraction from the beginning. This again draws our attention to the subjectivity of perception, as well as to the relevance of the context within which information is perceived. The 'contents' logo differed from the styles logo in that its various glyphs (e.g. letters or cyphers) bore little graphical coherence, and eventually merged into one another. The elements of the styles logo on the other hand sustained their visual integrity throughout the different stages of transition. As a result even the most unreadable version of 'styles' remains recognisable as a linguistic code. The end-result of the contents transformation must have appeared as a random pattern to anyone unfamiliar with the overall concept of transmutation.

The fact that the perception of ambiguous visual stimuli is subject to the recipient's individual horizon of experience is emphasised by the British neurologist Semir Zeki:

'One of the functions of the brain [...] is to instil meaning into this world, into the signals that it receives. Instilling meaning amounts to finding a solution. But the brain commonly finds itself in conditions where this is not easy, because it is confronted with several meanings of equal validity. Where one solution is not obviously better than the others, the only option is to allow of several interpretations, all of equal validity. [...] These interpretations must all involve memory and experience.' (Zeki, 2004, p. 188f)

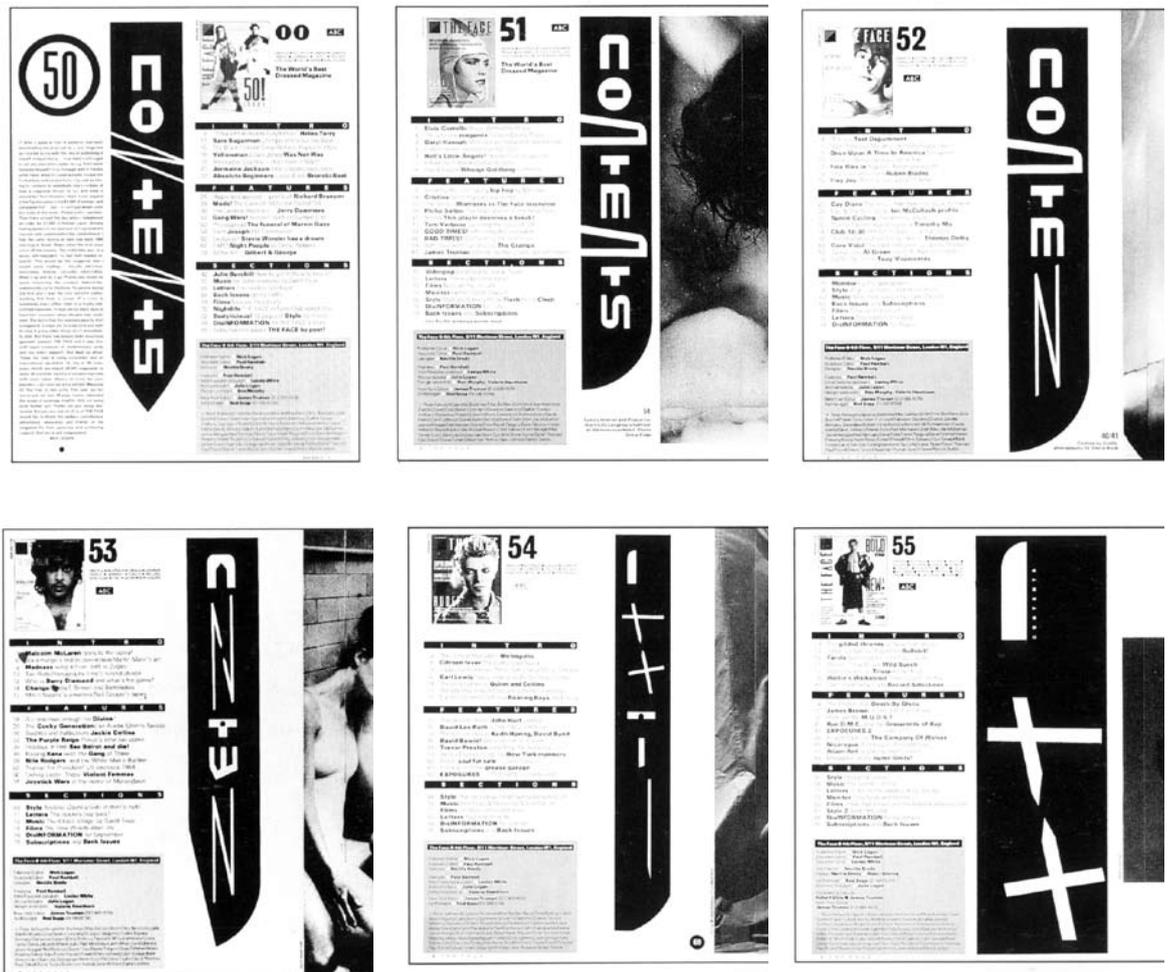


Figure 10.6-10.11: Neville Brody, Contents pages from The Face, Nos. 50 to 55, UK, 1984

The construction of meaning, i.e. the attribution of significance to visual signals, becomes more difficult, where the stimuli are transitional and abstract. Deleuze's claim 'that movement presupposes a difference of potential, and aims to fill it' (Deleuze, 2001, p.8) hints at the fact that the process of visual transformation allows for infinite possibilities of evolving forms (or events). The viewer's suspicion that virtually typographic forms evolve into actual typographic information may prove simply right or wrong. Which message it will reveal, and which typographic shape it will take on, offers more than two options. We may indeed argue that virtual typography shares its ambiguous characteristics to some degree with works of art, which often allow for numerous interpretations. Jaron Lanier argues that "Art", as opposed to design, should be understood as a meta-process, in which the conscious mind engages the unconscious to multiply, embellish the state spaces of whichever of the many varied stages of cognition can be so accessed.' (Lanier, 1999, p. 66) We could query here, however, why designs should not be understood as a meta-process, and—more importantly—why the unconscious should be ignored in relation to visual communication. Isn't it after all their aesthetic quality that relates designs to works of art? 'In aesthetic objects, the use or purpose is suspended for the sake of the conceptual role. The mentality in the object is retained by an incomplete objectification.' (Brown, 1999, p. 157) It seems that the aesthetic impact of incompleteness is too much neglected (or too little understood?) in the field of design, thus compromising the captivating potential of visual designs in favour of its communicative efficiency. If designers seek to sustain the attention of their target audience through aesthetic stimulation, they might want to learn from the ambiguity that is inherent to works of art. 'Because there is no correct solution, the

work of art itself becomes a problem that engages the mind.’ (Zeki, 2004, p. 189) What is virtually typographical engages the viewer so intensively due to the variety of possible interpretations. Where information supports the provocation of a diversity of possible interpretations ‘The brain must entertain them all and try to find the correct solution [...]’ (Zeki, 2004, p. 189) ‘It is not ambiguity itself, therefore, that is aesthetically pleasing [...]. It is rather the capacity of multiple experiences, even though we are conscious of only one at anyone given moment, that a stimulus can provide.’ (Zeki, 2004, p. 192)¹ The successive verification of the variety of memorised experiences requires the viewer to invest time. But with the mind occupied by reflections upon different possible solutions, the amount of time passing remains unnoticeable. ‘Faced with the beautiful, analytical reflection restores the *temps duré*e through the medium of its antithesis. Analysis terminates in beauty.’ (Adorno, 1984, p. 103) This is to say that time ceases to be a measurable entity. Instead it becomes an object of felt intensity.

The fact that the level of ambiguity of virtual typography is degressive, suggests that it could be assessed in dialectical juxtaposition to the concept of ‘degenerative typography’ mentioned above. One would assume that an increasing level in ambiguity as we associate it with Brody’s series of logotypes for example, should be impaired by the viewer’s capability to memorise the meaning of the words. Yet knowing the significance of information does apparently not reduce the confusing effect ambiguity has on the viewer.

‘Adding a number of features to the figure, to force the brain to interpret it in one way only, is never successful. The brain retains the option of interpreting it in two ways. This suggests that the brain does not have much choice in the multi-interpretations that its organization makes possible. *The ambiguity, in other words, is stable.*’ (Zeki, 2004, p. 187)

This means that virtual typography and degenerative typography share their potential to communicate ‘*the certainty of many, equally plausible interpretations.*’ (Zeki, 2004, p. 175) In other words: The dissolution of typographic patterns in the context of motion graphics is equally stimulating as is their emergence. It follows that we could attribute the term virtual typography not only to the process of letting typographic shapes emerge, but also to their gradual disappearance or degeneration, provided the fact that a moment of uncertainty is involved during the process of transformation.

¹ It needs to be pointed out that Zeki’s reference to ambiguity relates primarily to static information. Neurological means of investigation such as EEG (Electroencephalogram) and fMRI (functional Magnetic Reference Imaging) do not lend themselves to the measuring the neural response to dynamic stimuli. EEGs are reliable in relation to the time of brain activities. However, they do not allow to locate neural activities precisely. fMRI scans allow to locate changes in the blood flow within the brain, which is considered to be an indication of neural activities. But fMRI requires scanning the brain in diverse layers successively. The time delays involved make it impossible to locate changes in neural activity precisely on a time scale. It remains therefore a mystery, how exactly the brain responds to visual information the level of ambiguity of which changes over time. Transferring Zeki’s point of view onto virtual typography should not be considered as scientific evidence in support of this hypothesis.



Figures 10.12-10.17: Imaginary Forces, Sphere, title sequence, USA, 1998

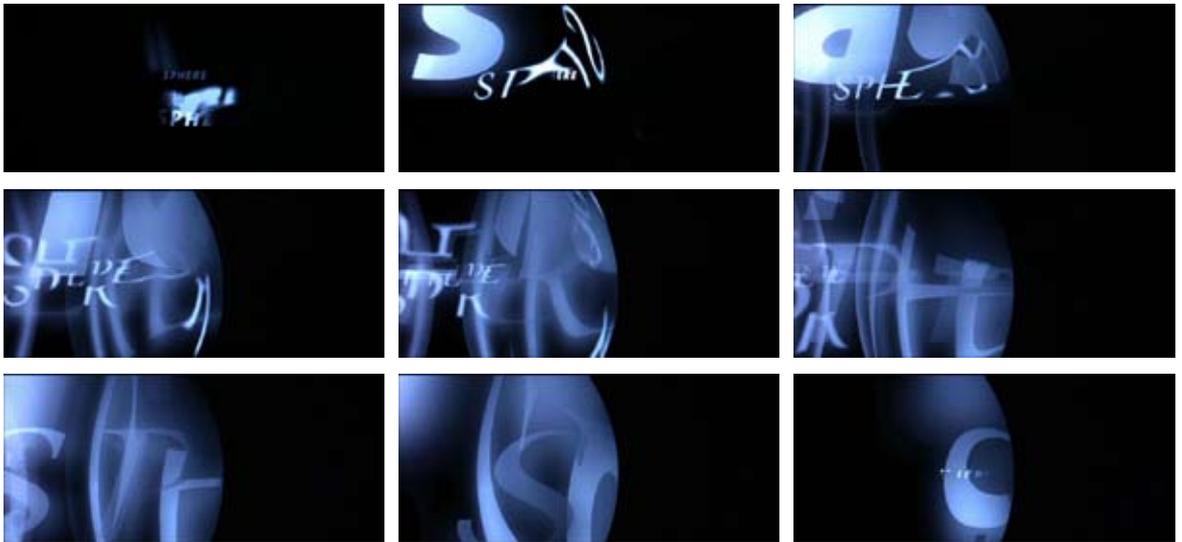


Figures 10.18-10.23: Imaginary Forces, Sphere, title sequence, USA, 1998



Figures 10.24-10.29: Imaginary Forces, Sphere, title sequence, USA, 1998

The stability of visual ambiguity is particularly important as it allows for the repetition of typographic transformations. We may assume that the aesthetically stimulating effect of virtual typography does not wear off, where typographic transfigurations repeat systematically. The title sequence for the movie Sphere which was created by Imaginary Forces in 1998 relies on the repetition and variation of one particular type treatment. Here the typographic abstractions derive from the spherical distortion of words and individual letters. [Figures 10.12-10.17] In this film title names and words dissolve repeatedly into abstract spherical distortions. [Figures 10.18-10.23] These disappearances seem equally intriguing as the passages where type evolves from distorted patterns. [Figures 10.24-10.29] Even though all the distortions follow the same spherical shape, their appearances vary depending on the way the invisible sphere moves across diverse words and names. [Figures 10.30-10.38] These variations suggest to the viewer that there is constantly something new to discover. The visual tension remains upheld from beginning to end.



Figures 10.30-10.38: Imaginary Forces, Sphere, title sequence, USA, 1998

The possibility of using virtual typography repetitively points to an affinity with the rhythmic characteristics of both music and poetry. When comparing both those artistic means of expression, Bergson claims that ‘... the rhythm and measure suspend the normal flow of our sensations and ideas by causing our attention to swing to and fro between fixed points’. (Bergson, 2001, p. 14f) As virtual typography forces the information on display to shift between abstract imagery and (more or less) explicit text information, we may expect the viewer to experience similar rhythmic sensations, where typographic transformations repeat. Teemu Ikonen claims that ‘the analysis of textual motion should free itself [...] from the model of *Vorstellung* in which motion is seen as happening *in front of* the stationary beholder.’ (Ikonen, 2003) Generally I would like to agree with Ikonen’s point of view. However, I need to emphasise that the German term *Vorstellung* holds two meanings. *Vorstellung* does not only translate as *presentation* as Ikonen’s argument suggests. It also translates as *imagination*. If we split the word into *Vor* (as in *bevor*, which translates as before) and *Stellung* (position or constellation), we can further argue that *Vorstellung* is the kind of imagination that attempts to predict the future position or constellation of objects. We could therefore attribute the term *Vorstellung* quite literally to the attempted prediction of typographic constellations in the context of motion graphics. As the experience of a rhythm relies on recurring sensations, the information recipient’s visual imagination (or *Vorstellung*) can be directed through virtual typography in similar ways as the verbal imagination of a poetry reader. We may conclude that ‘the model of *Vorstellung*’ should not be replaced, but re-interpreted, to allow for an appropriate analysis of visual poetics.

11. from poetry to poetics

'Poetry shouldn't be explained. It de-mystifies the poem, and leaves the words redundant.'
Simon Taylor, Tomato, in: Graphic Poetry, 2005

I wonder, if Simon Taylor's statement might indicate the reason why contemporary discussions surrounding poetry in conjunction with new media communication technologies provide so little insight on what precisely makes poetry appear or sound poetic. Poetry is a literary genre, and the more closely a piece of art relates to this genre, the more poetic it is often considered to be. The problem arises where one seeks to attribute a poetic quality to non-lingual artistic expression, such as music, dance or motion in general. The conceptual relationship between poetics and aesthetics remains largely unresolved.

Recent publications such as the book 'poes1s' from 2004, as well as the 'New Media Poetics' issue published by the Leonardo Electronic Almanac in September/October 2006, clarify in great detail how poetic writing can be created and distributed in an innovative way using new media technologies. But what exactly turns writing *poetic*, and how the *poetic* quality of writing can be altered through the use of digital technologies remains a mystery. The following three passages seek to establish aesthetic links between poetry and virtual typography. Thus they may be seen as points of reference for the qualitative assessment of typographic transformations.

1. Poetic expression is bound to concepts of time and rhythm

Poetry is time-based in the sense that a metre structures the literal composition alongside the grammar of the language used. The phonetic component of verbal language, is re-arranged to allow words to *flow* harmoniously, or indeed, in deliberate discord to one another. 'The poet is he with who feelings develop into images, and the images themselves into words which translate them while obeying the laws of rhythm.' (Bergson, 2001, p.15) We can judge the quality of a poem to some extent on the basis of its time-based harmony, i.e. on how its temporal structure falls in line with its literal significance. We can similarly judge the quality of virtual typography according to when (timing), where (location) and how (animation) its typographic elements appear in relation to the words conveyed. Following Bergson we may further assume that the time-based element, as it is inherent to both poetry and virtual typography, affects the way time per se is perceived by the information recipient. Reading poetry, as much as observing virtual typography forces the information recipient to focus on the perception process itself in a way that restrains him or her from thinking analytically about the progression of time. '... the desire for the new represses duration.' (Adorno, 1984, p.41)

2. Poetic means of communication raise people's attention to the way words are mediated

This shift in focus of attention leads to the second characteristic shared between virtual typography and poetic writing. Both means of communicating textual contents draw people's attention to the way words are mediated. Friedrich W. Block, a German curator and editor, states that '... one very interesting mission of poetry is to put forward investigations of textuality'. (Block et al., 2004, p. 63) As much as poetry seduces people to reflect on the process of reading, virtual typography heightens the viewer's awareness of the temporal disposition of words, as well as of the time-based characteristics of visual perception in general. The fact that the visual perception of words is put into question constitutes a complication in the acquisition of information. Neither poetry,

nor virtual typography facilitate the perception of information. In the contrary, communication is made deliberately (and from a pragmatic point of view unnecessarily) difficult. But it is precisely the mastery of the difficulties involved in extracting meaning from aesthetic compositions—be they literal, visual, or both—that gives rise to a sense of pleasure. It is ‘the verticality of language’ (Barthes, 1980, p. 12) that creates a sense of a void, ‘the hole, the gap’, (Barthes, 1980, p. 12), which seeks to be filled. The reader’s, respectively viewer’s mind is engaged, because of the indefinite meaning to which he or she is exposed. ‘Poetry requires a sharpened attention to the multiplicity of meaning carried by individual words and multiplied even further by their combination.’ (Lewis, 1996, p.24) As much as the meaning of words is put into question through poetic writing, their temporal relationship alongside their very identity are questioned through the use of virtual typography.

3. The poetic quality of virtual typography is subjective

In the book ‘Graphic Poetry’ the writer Luis Cabalquinto states: ‘It’s not easy for me to assign a single meaning to any of my poems. From my experience, a poem can have one or several meanings which shift from reader to reader.’ (Cabalquinto, in: Graphic Poetry, 2005, p.148) The difficulties involved in reading poetry, and in depicting virtual typography, suggest that both means of communication are exclusive to those who are willing to invest the time and effort necessary to explore the obscure. The primary purpose of poetics is not to support the transmission of meaning, but to captivate the information recipients mind through ‘the layering of significance’. (Barthes, 1980, p. 12) The challenge of unveiling such multiple, i.e. ambiguous, meanings demands concentration and imagination. ‘Pure immediacy is not enough to generate aesthetic perception. Besides spontaneity, will and mental concentration are needed as well’. (Adorno, 1984, p. 103) But it is not only time and effort that is required. As ‘memory, experience, learning and much else besides can influence what is perceived...’ (Zeki, 2004, p.189), poetic qualities are subjected to people’s individual aesthetic judgement. What one will describe as simplistic, may deter others due to its complexity. What appears challenging to some, on the other hand, may be boring for others. This means that the degree to which virtual typography, or indeed poetry, may challenge people’s perceptual capacity varies depending on the information recipient’s mind-set.

The virtual and the digital

This last criterion leaves us with a dilemma. On the one hand the viewer’s mind can be captivated through visual challenges. But, where the viewer is not able to meet the challenge—be it due to the circumstances or due to a lack of perceptual capabilities—virtual typography fails its purpose of decelerating the communication process. Where no interpretation of the visual stimuli takes place, communication fails altogether. Therefore the perceptual challenge needs to be set to a degree that is appropriate for the individual viewer. At the same time the perception of virtual typography relies on a focus of attention, which can be affected through surrounding distractions.

Where we refer to digital communication, however, we may assume a focus of attention to be conditional. Digital outputs in the context of visual communication are usually screen-based. Even though screens can be found in numerous contexts—hand-held devices, advertorial displays or desktop computer systems—they are never perceived as ambient media. Screens focus people’s attention, and, much like windows, raise expectations towards the information enclosed. Virtual typography undermines those expectations, as its imperfect definition, its incompleteness, stands in

conflict with the fundamental concepts of digital systems. The concept of a *digit* defies any notion of transition. The *digital* as opposed to the *analogue* means simply *yes* or *no*, *on* or *off*, *true* or *false* etc. Digital systems impose absolute measures onto relative values. In their quantitative perfection digital communication technologies do not allow for any qualitative grey zones. These grey zones—or stages of transition—are precisely what we anticipate to re-instate when producing virtual typography.

Unsurprisingly Teemu Ikonen lays his emphasis on aspects of transition, when discussing ‘Moving text in avant-garde poetry’. According to him ‘the challenge should be taken to develop means of analyzing and describing the transitional stages between recognizable letters (e.g. in the mode of “t-becoming-k”) or between a void or a background and a textual unit’. (Ikonen, 2003) He proposes a ‘traversal function’ to be one of the main advances in new media poetry, as it allows the written content to change over time. However, this ‘traversal function’ which Ikonen extracted from Espen Aarseth’s book ‘Cybertext’ remains largely undefined. And despite his speculation that ‘textual motion’ (maybe better to be rephrased as textual transition) ‘can be seen as repetitive narration and analyzed in terms of frequency’ (Ikonen, 2003), Ikonen admits having ‘treated textual *time* almost as something self-evident’. (Ikonen, 2003)

This thesis proposes the aspect of time perception to be a critical aspect in the qualitative assessment of digital communication. If the degree to which a viewer is oblivious to the progression of time can be seen as an indication of his aesthetic appreciation of visual experiences, then we can assess the aesthetic quality of virtual typography on the basis of the viewer’s time consciousness. Various studies in the field of science and philosophy indicate that ambiguity as inherent to virtual typography constitutes the basis for an aesthetically pleasant visual experiences. This thesis is not meant to be an exhaustive analysis of the aesthetic qualities of virtually typographic information. But it is meant to encourage the thought that the poetic characteristics of transitional typography can be deployed in order to induce a sense of timelessness within the viewer. Depending on the viewer’s readiness to make a commitment this would allow for communication processes to be decelerated and intensified.

12. conclusion the need for temporal decompression

'in haste there is error' Chinese proverb

Digital technologies foster the ongoing acceleration of information transmission. But where information density exceeds that which can be effectively acquired by the information recipient, communication fails to take place. If communication processes cannot be decompressed, the growing information overload will continue to increasingly impair the dissemination of knowledge and understanding within society. To reinstate a temporal element necessary for perceiving and contemplating information, strategies must be found. Virtual typography may be considered to be one possible solution for the problem. Since visual perception is generally the result of a so-called hypothesis testing, the careful definition of perceptual challenges through virtual typography may help to decelerate perception processes.

The intellectual interpretation of textual contents requires an interplay of reflection, i.e. an analysis of what has been read, and the prospective assessment of upcoming contents. From a phenomenological point of view we may attribute the terms protension to the future orientated mind, and retension to the reflective processes. Reading itself may hereby be considered as a creative activity. Rather than passively acquiring meaning, reading is a process of actively reconstructing meaning. Meaning is conveyed not only through texts, but potentially through any kind of information including figurative or abstract image material. Where textual patterns emerge gradually from abstract imagery, the viewer is forced into a process of guessing the potential significance of the diverse visual elements. Where such changes happen continuously over a period of time, the viewer is required to constantly predict the continuation of transitions on the basis of motion perceived in the immediate past. Such a judgemental process means assessing the immediate future on the basis of the immediate past, so that the mind is torn between that which just happened, and that, which is yet to come.

The rapid fluctuation of people's temporal awareness, i.e. the constant interplay of protensions and retensions, leads to a confusion of people's time consciousness. This results in the suspension of people's concern about temporal progression, and induces a sense of *durée*. The viewer, or reader is then immersed into the perceptual experience, so that temporal measures can no longer operate in a restrictive manner.

The previous journey of discovery draws on some basics of information and communication theory, on various aspects in the history of typography and new media, as well as on cognitive studies. However, the main argument has been built on philosophical concepts, which have been established in the field of phenomenology. The argument, that is admittedly hypothetical to some extent, leads away from the pragmatism as it has been cultivated by designers and industries alike over the past decades. It is important to emphasise that the principles of legibility and usability are by no means to be considered as obsolete. This thesis claims, however, that communication should not be reduced to functional aspects alone. Aesthetic perception can be seen as para-communicative. Thus it reveals the potentially poetic quality of information. It is hoped that this investigation may help to provide grounds to critically assess functionalist principles on the basis of aesthetic concepts, and to establish phenomenology as a paradigm, not in the place of, but in addition to semiotics, semantics, and pragmatism.

13. appendix 1: a brief history of typography—from visual poetry to virtual typography

Que mon
Flacon
Me semble bon!
Sans lui
L'enduï
Me nuit,
Me nuit.
Je sens
Mes sens
Mourants,
Pesants.
Quand je la tiens,
Dieux! que je suis bien!
Que son aspect est agréable!
Que je fais cas de ses divins présents!
C'est de son sein fécond, c'est de ses heureux flancs
Que coule ce nectar si doux, si délectable,
Qui rend tous les esprits, tous les cœurs satisfaits.
Cher objet de mes vœux, tu fais toute ma gloire.
Tant que mon cœur vivra, de tes charmans bienfaits
Il saura conserver la fidèle mémoire.
Ma muse à te louer se consacre à jamais,
Tantôt dans un caveau, tantôt sous une treille,
Ma lyre, de ma voix accompagnant le son,
Répétera cent fois cette aimable chanson:
'Règne sans fin, ma charmante bouteille;
Règne sans cesse, mon flacon.'

Figure 13.1, 'Rabelais Bottle'
Charles Francois Panard
(1674-1765)

AUSSI BIEN QUE LES CIGALES

gens du midi ne savez pas
gens du mi creuser que
di vous n' vous ne sa
avez donc vez pas vous savez
pas regard déclairer ni encore
de les cigas voir Que vous boire com le jour
les que vous manque-t-il me les ci de gloire
done pour gales ô se
voit aus gens du mi e ra
si bien di gens du reuses ce
que les soleil gens qui voyez bu lui
ciga devriez savoir vez pissez on
les creuser et voir comme vous
aussi bien pour le les ciga sau
moins aussi bien les rez
que les cigales les creu
Eh quoi! vous savez gens du Midi il faut
boire et ne savez creuser voir boire pour
plus pissez utile pissez aussi bien que bien
ment comme les les cigales sor
cigales LA JOIE pour chan
ADORABLE ter com
DE LA PAIX au
SOLAIRE me elles so
teit

Figure 13.2,
Guillaume Apollinaire,
'Aussi bien que les cigales', 1924

AUSSI BIEN QUE LES CIGALES

gens du midi ne savez pas
gens du mi creuser que
di vous n' vous ne sa
avez donc vez pas vous savez
pas regard déclairer ni encore
de les cigas voir Que vous boire com le jour
les que vous manque-t-il me les ci de gloire
done pour gales ô se
voit aus gens du mi e ra
si bien di gens du reuses ce
que les soleil gens qui voyez bu lui
ciga devriez savoir vez pissez on
les creuser et voir comme vous
aussi bien pour le les ciga sau
moins aussi bien les rez
que les cigales les creu
Eh quoi! vous savez gens du Midi il faut
boire et ne savez creuser voir boire pour
plus pissez utile pissez aussi bien que bien
ment comme les les cigales sor
cigales LA JOIE pour chan
ADORABLE ter com
DE LA PAIX au
SOLAIRE me elles so
teit

Et j'en ai adoré
de la june solaire

Figure 13.3,
Guillaume Apollinaire,
'Aussi bien que les cigales', sketch

Prior to modern and post-modern typography, visual poetry broke with the conventions of classic typography. In retrospect, one may even wonder whether or not designers would have ever managed to overcome what modernists later labelled *traditional typography* without the inspirational intervention of visual poets. Even though there are much earlier examples of the pictorial representation of texts [Figure 13.1], the beginnings of the movement are usually attributed to Stéphane Mallarmé and Guillaume Apollinaire. Their rebellion against the mechanisation of reading led them to return to the use of pencil and paper. The mechanical characteristics of reading are closely related to the mechanisation of writing, which was much reinforced by Gutenberg's invention of the manual cast for movable type in the mid fifteenth century. Apollinaire frequently relied on letterpress technology for having his poems printed. [Figure 13.2] They were, however, initially drawn (or written) by hand. [Figure 13.3] As they were composed without any technological constraints, Apollinaire's idéogrammes escaped the conventions of linear writing, and forced readers into a perceptual struggle. Not knowing if one is looking at an image-like text, or at a text-like image, a visual poem confronts the reader with an initially confusing piece of information. Visual poetry thus undermines Saussure's early 20th century theory of a structural relationship between people's mental concept of an object (image) and the word used to name the object (linguistic sign). Whereas according to Saussure the word constitutes the second order semiological system, the *image* of an object constitutes the first order semiological system. [Figure 13.4] In accordance with Willem Bohn, one would argue that visual poetry reverses this constellation by translating the written word back into an image. The written word then becomes the first order signifying system, and the image becomes the second order signifying system. [Figure 13.5] This is why we may consider visual poetry as a truly revolutionary step in the context of visual communication.



Figure 13.4, Ferdinand de Saussure:
Language as a second-order signifying system



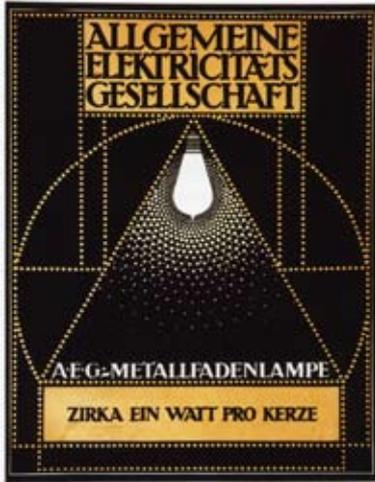
Figure 13.5, Willard Bohn: Visual poetry
as a second-order signifying system



Figure 13.6
Will H. Bradley, poster, 1895

The revolutionary quality of visual poetry appears particularly obvious considering the cultural context of the time. By the end of the 19th century the industrial revolution had become the driving force of modern society. Methods of mass production began to dictate the rhythm of factory work, and the introduction of electric light restructured people's rhythm of life in general. Soon after Edison's invention of the light bulb in 1879, people's daily routine was no longer dependant on the need for natural light. Even though the Art Nouveau movement was still promoting the idea of natural harmony by fostering aesthetics based on natural forms, and organic shapes at the turn of the 19th century [Figure 13.6], industrial progress soon demanded more functionalist approaches to visual communication.

Informative Functionalism



left: Figure 13.7
Peter Behrens,
Visual Identity for AEG,
1907 - 1914

It seems somewhat symbolic that this change from artistic expression towards information design was much helped by the advertorial efforts of an electricity company. Having turned his back on Art Nouveau around 1900, Peter Behrens was commissioned to develop the entire corporate identity for AEG (Allgemeine Elektrizitäts Gesellschaft). Behrens, who is considered to be the first industrial designer in history, developed not only the company's logotype and publicity material [Figure 13.7], but also the workers' housing estates. Behrens' change in orientation was one of the first steps towards concepts of uniformity and functionalism.

Dada



Figure 13.8, Kurt Schwitters, 1920



Figure 13.9, Kurt Schwitters, 1920



Figure 13.10, Theo van Doesburg,
1922

But before functionalism came to dominate the graphic and typographic arena of modern Europe, the Dada movement emerged from anarchist and sociopolitical initiatives in Zurich in 1915. Here the political neutrality of Switzerland towards World War I had led to a 'claustrophobic and tense atmosphere' (Richter, 1965, p.12). Dada, constituted a seemingly anti-functional approach to typography. As it was often devoid of any literal content, typography had been reduced to a visual form of expression that ironically did not always resolve in the revelation of meaningful

art into a less literal a form of expression, Futurists eventually escaped the contextual constraints of poetic writing. Visual poetry became visual poetics. Futurism was an expressive response to industrialisation. Machines became the focal point of attention, and the praise of speed the underlying agenda. Even though it originated in Italy, Futurism had a widespread influence on art-forms elsewhere in Europe. Whereas the 'First Futuristic Manifesto' appeared in Milan in 1909, the 'First Almanac of Futuristic Poetry' was issued in Warsaw in 1920. In the meantime Filippo Tommaso Marinetti, the leader of the Futurists in Milan, had travelled to St. Petersburg in 1910 and 1914 to present a series of lectures spreading the influence eastwards.

Constructivism



Figure 13.12
Alexander Rodchenko, 1923



Figure 13.13
Alexander Rodchenko, 1923

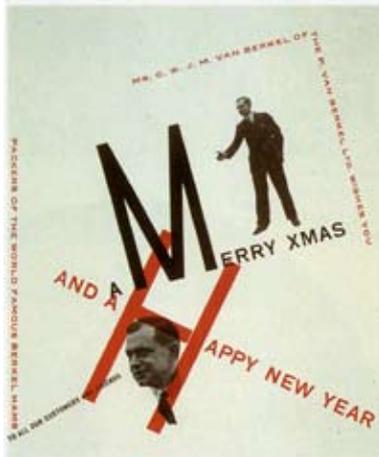


Figure 13.14
Alexander Rodchenko, 1919

Following the example of futurist principles Constructivism formed as a movement in post-revolutionary Russia in 1921. Even though artists in other parts of Europe thought along similar lines, it was here that art was announced 'dead' by Alexei Gan, one of the leaders of the movement. According to Gan 'practical construction' was to replace 'the artist's speculative activity'. (Spencer ed., 1987, p.179) Instead of being art for the sake of art, Constructivism, at times also called 'production-art', was meant to serve the Proletariat. It rejected individual stylistic ambitions in favour of the usefulness of the art or design object. El Lissitzky, an architect trained in Darmstadt, Germany, who, after returning to Russia, changed to graphic design, expressed this point of view quite vehemently, when claiming that '... for the modern exponent of form the individual element (the artist's "own touch") is of absolutely no consequence'. (Spencer ed, 1987, p.145) As opposed to the Western world, where public education had been made compulsory during the 19th century, there was still a high level of illiteracy in Russia in the 1920s. It was believed that graphic design based on geometric principles and a simplification of the Cyrillic script would be more accessible for Russia's public community. Paradoxically this anti-stylistic functionalism was radical to a degree that Constructivism became undeniably an artistic style in its own right. As opposed Futurism, Constructivism was not restricted to visual art, it formed a basis for painting, product design, architecture, film and so on. The range of Alexander Rodchenko's work reflects the diversity of Constructivist disciplines [Figure 13.12 - 13.14] on the one hand, and the ambition to collectively support the new society on the other.

Rodchenko's contribution to constructivist typography was only brief, however significant in relation to what Tschichold later labelled 'The New Typography'. Rodchenko had moved from fine art to design in 1923, when he started to collaborate with the poet Mayakovsky on advertising posters for diverse governmental trading organisations, and worked for cultural institutions. He returned to painting in the late 1930s.

Bauhaus and De Stijl



far left: Figure 13.15
Paul Schuitema, 1928



left: Figure 13.16
Piet Zwart, 1925

Futurism was not the only inspiration for Constructivism. The Dutch avant-garde movement de Stijl evolved around Theo van Doesburg's de Stijl magazine, and was helped by Piet Mondrian's contribution. Much like visual poetry, de Stijl was in a sense self-motivated, inspired only by the work of contemporary painters. But whilst visual poetry rejected mechanisation, de Stijl embraced it. The geometric compositions used helped to develop rigorous guidelines for both product, and visual design. Design had been stripped of any decorative elements. With its very controlled approach de Stijl provided a kind of taming, and anti-emotional influence on Constructivism. Compared to the dynamic, expressive compositions of Futurist art, de Stijl appeared rather calm and organised, dominated by the clarity of geometric forms. [Figure 13.15 - Figure 13.16] The formal aesthetics applied here showed a profound understanding of the dynamic relationship between compositional elements. Whilst Futurism was an art form that reflected on industrialism, de Stijl became an industrialised form of art. As such it had not only a crucial influence on Russian Constructivism, but also on the agenda of the Bauhaus school in Germany in the early 1920s. Van Doesburg first visited the Bauhaus in 1920. Only a few months later he moved to Weimar hoping for a teaching position at the Bauhaus. Here his influence helped to overcome the expressionist phase that dominated the beginning stage of the Bauhaus movement. With van Doesburg's growing influence the interest of Bauhaus in Constructivist approaches rose, too, and so did the ambition to turn art into *production-art*. With László Moholy-Nagy on his side, Walter Gropius established the Bauhaus school as a functionalist design institution. Herbert Bayer's *Universalschrift* from 1926 indicates the modernist ambition to find a pragmatic, universal concept of aesthetic expression. [Figure 13.17] In 1928 both Gropius and Moholy-Nagy left the Bauhaus claiming that the Bauhaus was now sufficiently established.



left: Figure 13.17
Herbert Bayer, Universalschrift,
1925

The New Typography



left: Figure 13.18
Jan Tschichold,
invitation card, 1927

Also in 1928 Jan Tschichold published his book 'Die Neue Typographie'. With this publication Tschichold, who was at the time teaching at the German Master Printers' School in Munich, praised the modernist rejection of traditionalist typographic principles. Even though intended as a guidebook for printers and publishers, *Die Neue Typographie* became a kind of manifesto for modernists. It strongly promoted the asymmetric compositions [Figure 13.18], which Tschichold had been inspired by, when visiting a Bauhaus exhibition in 1923. With his contribution to design culture Tschichold discussed, explained, and exemplified radical modernist principles in the context of typography. Despite its cultural context Tschichold's publication was so far ahead of its time that its second edition was not to be published until 1987. In line with Constructivist ideologies Tschichold had placed his 'emphasis on the social, the collective, rather than the individual; on the impersonal and factual rather than the romantically indefinite'. He further claimed that 'human liberation can come through the standardization of material artefacts, through equality of provision'. (Robin Kinross, Introduction to 'The New Typography', Tschichold, 1998, p.XX)

Merz



Figure 13.19
Kurt Schwitters



Figure 13.20
Kurt Schwitters, 1928

The commercial potential of modern typography became particularly apparent when Kurt Schwitters opened his design agency Merz in 1924 [Figure 13.19]. The name was an abbreviation of the German word *Kommerz*, which clearly indicated the ambition behind the initiative. Three years after entering the world of advertising, Schwitters cofounded the 'Ring Neuer Werbegestalter' (Circle of New Advertising Designers), to build a collective to promote the commercial potential of radically modern typography. Despite its modernist qualities, the commercial application of the new typography meant to re-interpret the avant-garde design principles of de Stijl and Constructivism in a more mainstream fashion. The conservative nature of commercial design practice demanded a more moderate, practical approach to typography. A restriction in the choice of fonts was the result, as well as the idea of avoiding the use of uppercase lettering, to streamline the design process. Standards further emerged in relation to paper sizes, layout grids, and choice of colours. Even though a lot of those shared principles had already been part of Tschichold's publication from 1928, the book 'Gefesselter Blick' promoted the ambitions of the Ring more explicitly. [Figure 13.20]



left: Figure 13.21
Iwao Yamawaki, collage, 1932

Following the spark of Italian Futurism, the constant exchange of ideas between de Stijl, Constructivism, and the Bauhaus helped to promote typography as an essential means of visual expression. After the debate surrounding the diverse ideologies found its focal point in the Bauhaus school in Germany in the course of the 1920s, cultural progress was here brought to a halt by political changes. Having moved from Weimar to Dessau in 1925, and finally to Berlin in 1932, the Bauhaus school was confronted with an increasing National Socialist majority. Gropius had tried from the start to sustain a political neutrality for the school by instructing students and staff to stay away from political activism, and by selecting visiting lecturers carefully. But the influence of Russian Constructivists could never be denied. In April 1933 the school was finally forced to close. With the Nazis entering government, modernist designers were threatened to leave the country, be it due to their nationality, due to their Jewish background, or simply due to the fact that they were modernists. Despite initial considerations to brand modernism as an achievement of the German nation, and to promote Bauhaus as 'Staatskunst' (Droste, 1998, p.230), modernism was discriminated as 'Ungerman' or 'Bolshevik' from 1934 onwards. [Figure 13.21] Consequently not only artists and designers associated with the Bauhaus School were affected. Many other modernists including Tschichold and Schwitters had to flee the regime. The term 'Entartete Kunst' (degenerate art) was attributed to all abstract modern art. Even though the term suggests a lack of sophistication, the Nazi's were in fact afraid of modern art being too sophisticated—too complex to understand for the masses, and too difficult to restrain for the National Socialist leadership. Art was feared as a possible means of communication that could be utilised for undermining the authorities' control over people's beliefs, and ideologies.

'Swiss Style Typography' and 'The New Bauhaus'

To escape Germany's fascist regime many artists and designers such as Anton Stankowski, and Max Bill emigrated to the politically neutral Switzerland, where they contributed to what became later known as 'Swiss Style Typography'. Others, including Walter Gropius, Moholy-Nagy, and Mies van der Rohe went to the United States. Here the modernist design principles were much welcomed by the advertising industry which began to flourish once the economy had recovered from the depression following the Wall Street Crash in 1929. The modernist ideas were now passed on to a second generation of modernist designers. Whilst Swiss Style Typography converted ideas into more or less rigorous norms, overseas the modern heritage suffered from a rather too liberal interpretation. The idealistic, if not to say utopian approach practiced by the Bauhaus did not prevail for long. The 'New Bauhaus', opened in Chicago under the direction of Moholy-Nagy in 1937, closed only one year later.

Robert Brownjohn

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Figure 13.22 Experimental
 Typography Booklet, Brownjohn,
 Chermayeff & Geismar, 1962

Figure 13.23, Robert Brownjohn (Art Director),
 cinema advert for Midland Bank, late 1960s

Following the closure of the New Bauhaus, Moholy-Nagy founded Chicago's School of Design in 1939, which later came to be Chicago's Institute of Design. Here Robert Brownjohn began to study design under Moholy-Nagy's supervision in 1944. Moholy-Nagy passed away in 1946, and was succeeded by the architect Serge Chermayeff. Like his predecessor, Chermayeff had difficulties in protecting the Bauhaus legacy against commercial forces in the US. He left the institution in 1951. Moholy-Nagy's as well as Chermayeff's teaching had nourished Robert Brownjohn's non-pragmatic curiosity about typography. Brownjohn's love for Jazz music may have inspired him further to explore typographic means beyond the existing conventions. In 1951 Brownjohn moved to New York, where, five years later, he started a partnership with Ivan Chermayeff, the son of his former mentor. In the following year Thomas Geismar joined in, and the design consultancy Brownjohn, Chermayeff & Geismar Associates was born. Together with Ivan Chermayeff and Thomas Geismar, Brownjohn explored much of the semantic potential of typographic expression [Figure 13.22], a knowledge Brownjohn managed to exploit when creating a cinema advert for Midland Bank in the 1960s. [Figure 13.23] By then Brownjohn had left New York for London. Typographical errors spotted in London's urban environment [Figure 13.24], enabled Brownjohn to develop most unusual typographic treatments.

[Figure 13.25] Whilst observing the distorted projection of film credits caused by a cinema audience leaving the show early, Brownjohn realised that the visual effect could be used for animating typographic information. By dancing in front of text projections Brownjohn managed to convince the producers of the second Bond movie, 'From Russia with Love' [Figure 13.26], that he could do a better job than Maurice Binder, who had developed the title for the first Bond movie, 'Dr. No'. Motion typography was once again reinvented when Brownjohn designed the title sequence for the promotional film produced by Pirelli in 1966. In accordance with the content of this short film, Brownjohn had the individual elements of the credits pasted onto industrial vehicles, which quite literally moved the texts across the screen. [Figure 13.27] In the context of visual poetics it appears difficult to attribute a poetic quality to Brownjohn's title work for the Pirelli movie, much in contrast to his title sequence for 'From Russia with Love'. The aesthetic difference in both titles raises questions about what kind of visual treatment one would declare as *poetic*. Even though the title for the Pirelli short film conveys a humorous quality, the text elements here appear with a good degree of immediacy. The title elements in 'From Russia with Love' are exposed more mysteriously (due to the light atmosphere), ambiguously (due to the figure-ground relationship), and gradually (due to the time-delay caused by changing levels of blur). Some of Brownjohn's typographic work was semantically innovative, some of it aesthetically. It seems that—even though aesthetic and semantic qualities are not necessarily antagonist—they constitute two entirely separate quality criteria in relation to visual communication.

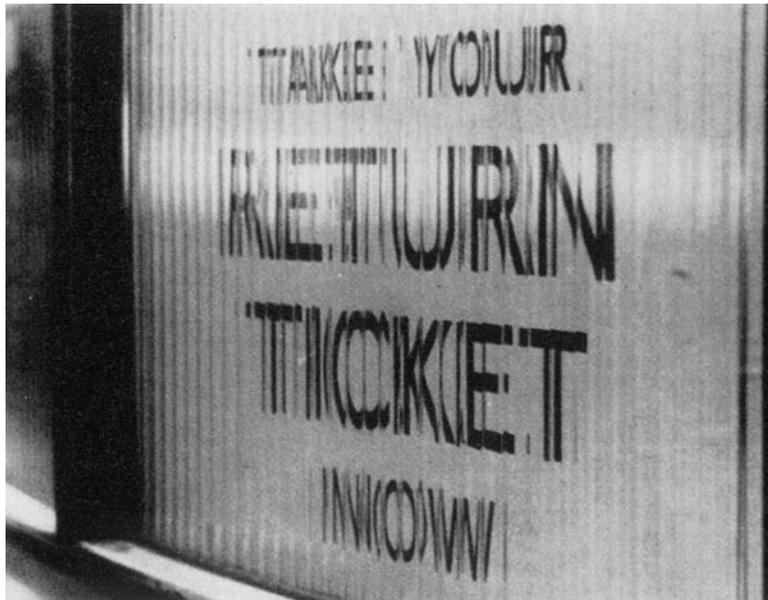


Figure 13.24
Picture Essay, Robert Brownjohn,
in: *Typographica*, 1961

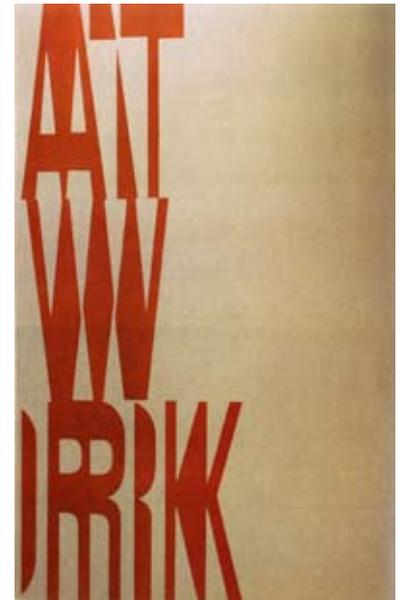


Figure 13.25
Experimental Typography
Booklet, Robert Brownjohn,
Chermayeff & Geismar, 1959



Figure 13.26, Robert Brownjohn, title sequence for 'From Russia with Love', 1962

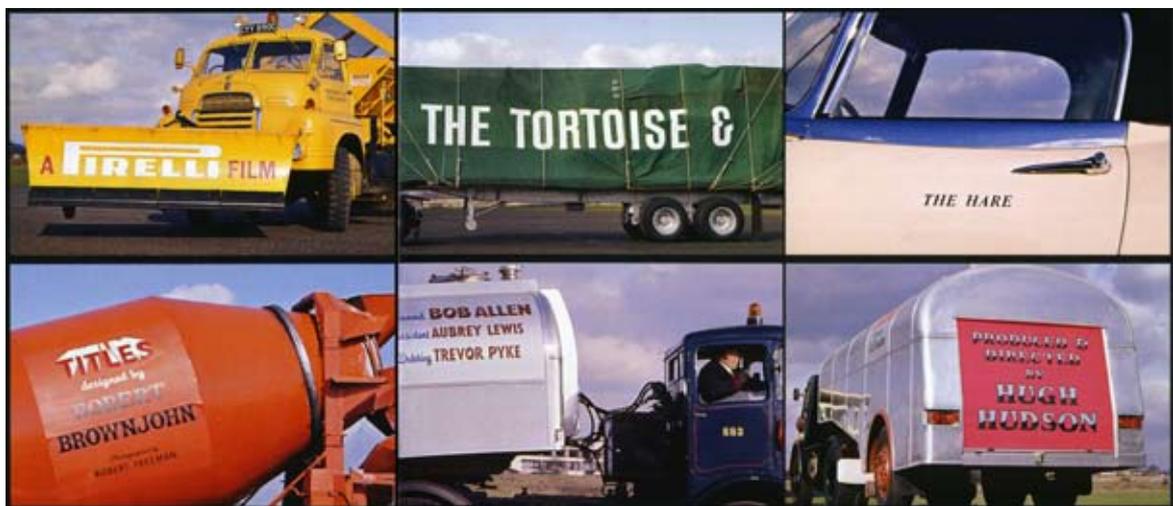


Figure 13.27, Robert Brownjohn, title for 'The Tortoise and the Hare', 1966

Saul Bass

Brownjohn was, of course, not the first graphic designer to take on the challenge of creating film titles. Saul Bass designed his first title sequence for Otto Preminger's movie 'Carmen Jones' as early as 1954. With his visual identity work for United Airlines and Minolta, Bass had already become a well-established designer in Los Angeles by the time he embarked on film titles. What makes Bass' work stand out—in fact until this day—is his quasi-corporate, and unusually graphic approach to packaging films. Instead of simply focusing on the motion graphics preceding the movie, Bass created iconic symbols, which would work on posters and adverts equally well. This becomes particularly apparent in his promotional material for Preminger's movie 'The Man with a Golden Arm' from 1959. [Figure 13.28 and 13.29] Bass' working relationship with Preminger was followed by his contribution to Hitchcock's productions. Bass' title for 'Psycho' from 1960 seems particularly interesting in the context of motion typography. [Figure 13.30] As one of the first typographic animations in the field of film titles, the movement of text elements appears irritatingly fast—almost rushed—giving the motion a slightly clumsy appearance. On the other hand, this aesthetically discomforting pace contributes well to the tension, which prepares the viewer for the dramatic story that is being introduced. The typographic decomposition of words (in my respect for Derrida I may avoid the

term *deconstruction* here), may be considered as an early example of virtual typography, because the textual pattern becomes apparent over a period of time. By comparison to 'Psycho', Bass' animated typography used for the movie 'North by Northwest' (1959) flows much more harmonically with the surrounding graphic elements. [Figure 13.31] The graphic elements move like the counter-weights of the lifts, which some viewers may be reminded of, when looking at the moving text elements. The transition between abstract graphics and concrete imagery further contributes to the interpretation of the kinetic characteristics of the typography. But even though the typographic elements appear aesthetically well (and in a sense virtually) embedded into the photographic imagery, I would not categorise this work as virtual typography. At no point in time do any of the text elements leave any doubt about their typographic nature. Typography, it seems, can be poetic without being *virtually* typographical. However, one may argue conversely that the transgressive characteristics of virtual typography do in any case contribute to the poetic quality of typographic expression, as they engage the viewer in a process of aesthetic speculation. Bass' last title sequence, created for Scorsese's movie 'Casino' [Figure 13.32], enforces such perceptual speculation by eliminating any explicit components from the background footage. The background imagery consists here of close-up shots of neon signs. The layering of various shots and their correlative motion reduces signs to moving patterns, which can be seen as a symbolic reference to the dubious world of gambling that is controlled by obscure forces. Only few traces hint at the typographic origin of the information displayed. But it is precisely the non-explicability that captures the viewer's attention. By withholding any information about the origin and context of the lights, Bass allows the sequence to appear atmospheric and intriguing. At the end of the title sequence flames take place of the artificial lights. This transition from controllable artificial light to the destructive force of natural fire indicates the ending of the film. Here human nature leads to the failure of the criminal activities of those who sought to control Las Vegas' underworld in the movie. Like his title sequence for 'Psycho' Bass' introduction to 'Casino' constitutes a typographic narrative that symbolically sums up the story that is to follow.

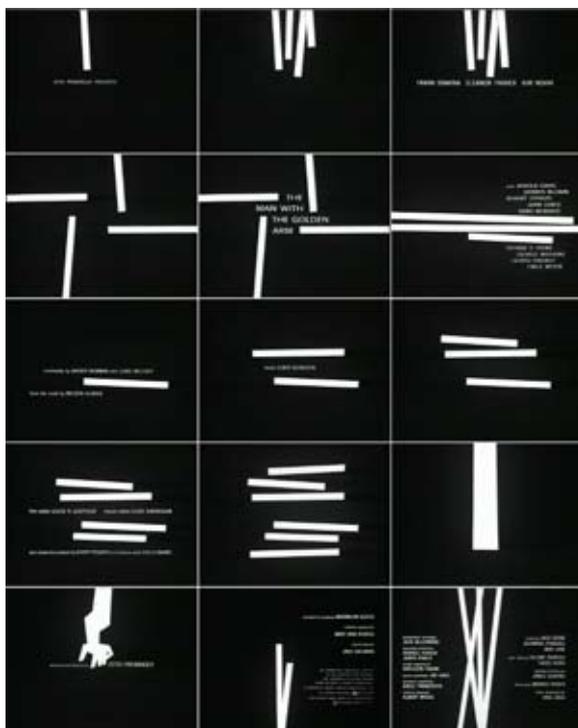


Figure 13.28, Saul Bass, title sequence, The Man with the Golden Arm, 1955

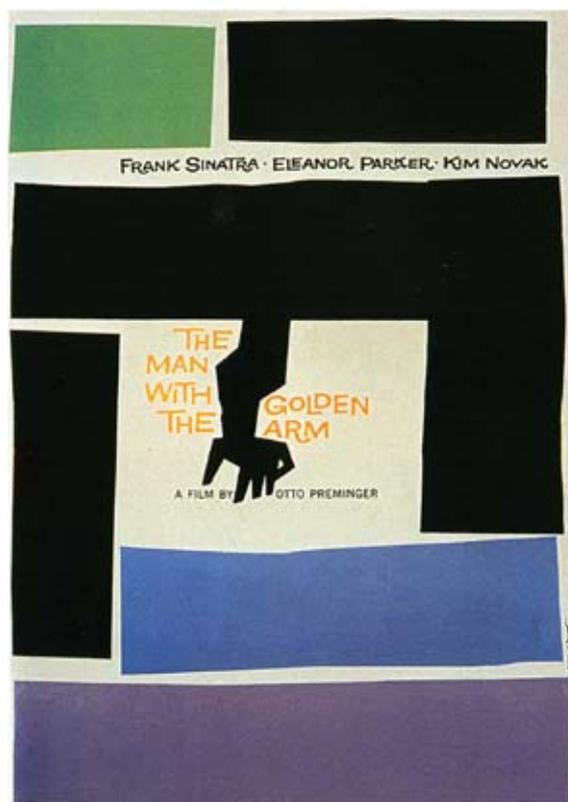


Figure 13.29, Saul Bass, poster, The Man with the Golden Arm, 1955

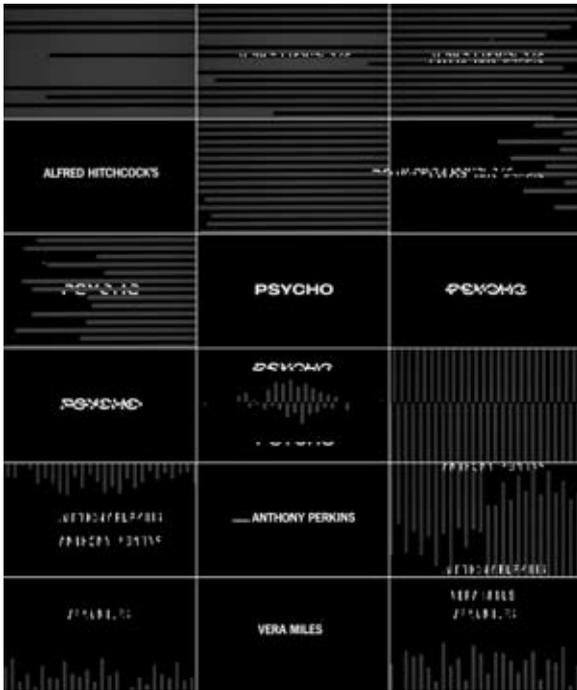


Figure 13.30, Saul Bass, title sequence, Psycho, 1960



Figure 13.31, Saul Bass, title sequence, North by Northwest, 1959

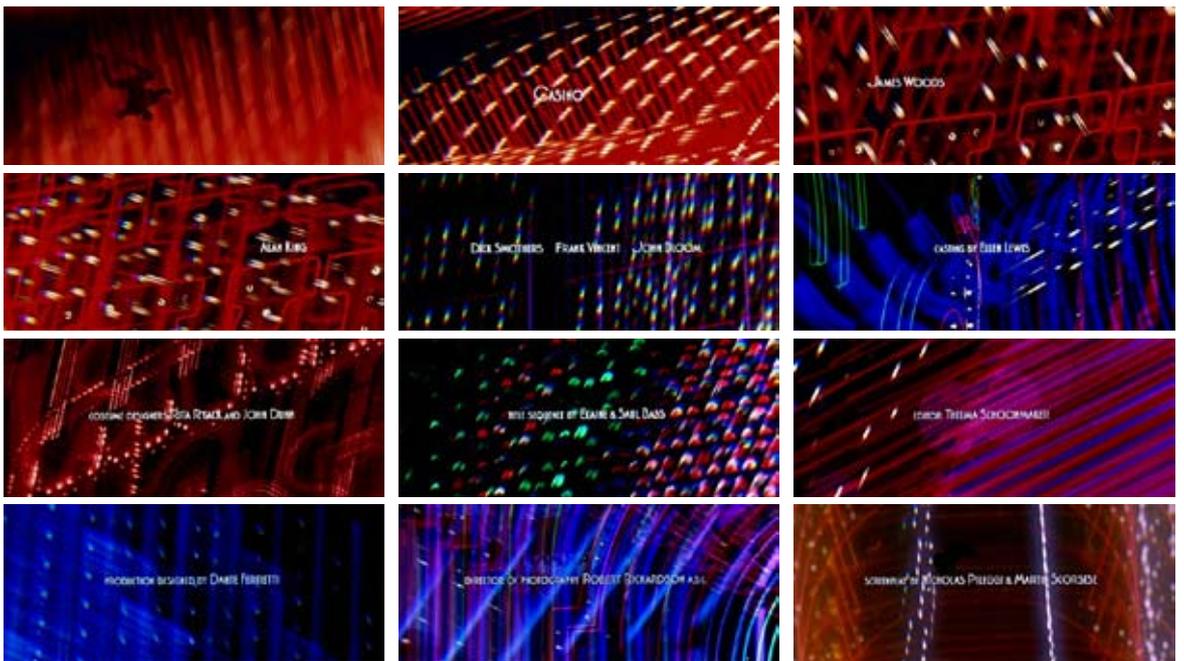
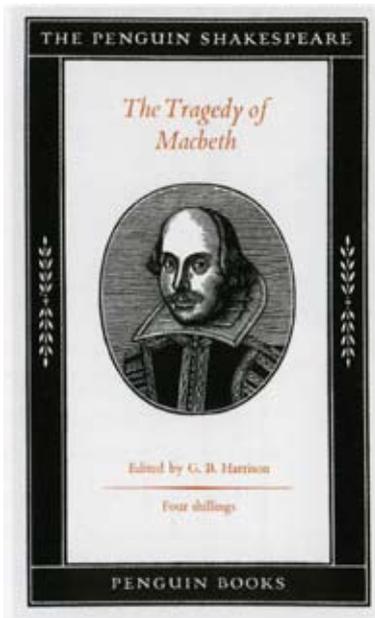


Figure 13.32, Saul Bass, title sequence, Casino, 1991

The New Traditionalism



left: Figure 13.33
Jan Tschichold, design for Penguin Books,
1946 - 1949

By comparison to its European counterpart late modern typography in the US was generally playful, illustrative, and much less dogmatic. But in Europe, too, typography had changed. A growing diversification of design attitudes and agendas meant that unifying movements dissolved into a market oriented mainstream in the years following World War II. The heritage of the New Typography was now mainly found in Switzerland. But even here former hardliners including Tschichold himself, applied a much more moderate approach to typography. To meet the demands of his client Penguin Publishing in London from 1946 to 1949, Tschichold defined what he called 'the new traditionalism'. [Figure 13.33] This alternative option for typographers, that allowed for the use of serif fonts and centered text alignment, was considered necessary to do justice to the commercial demands of clients.

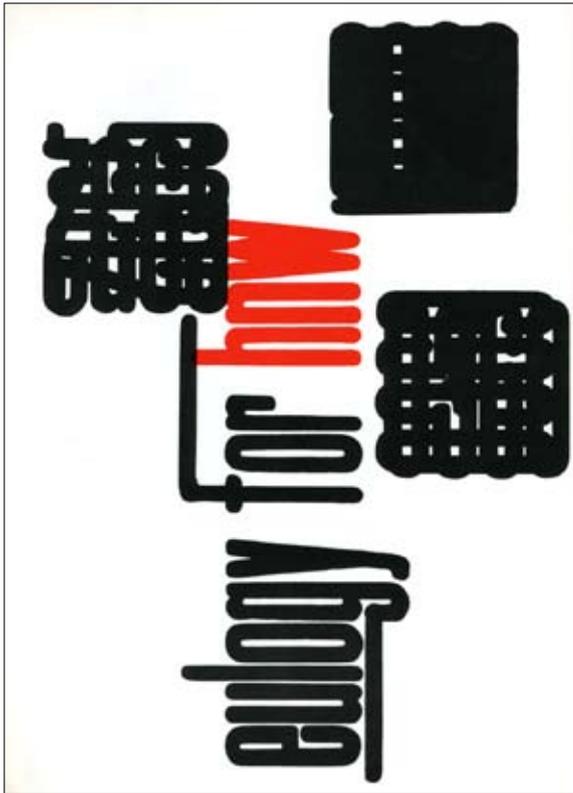


Figure 13.34
Joshua Reichert, 'Eulogy for NHW'
(Hendrik Nicolaas Werkman)

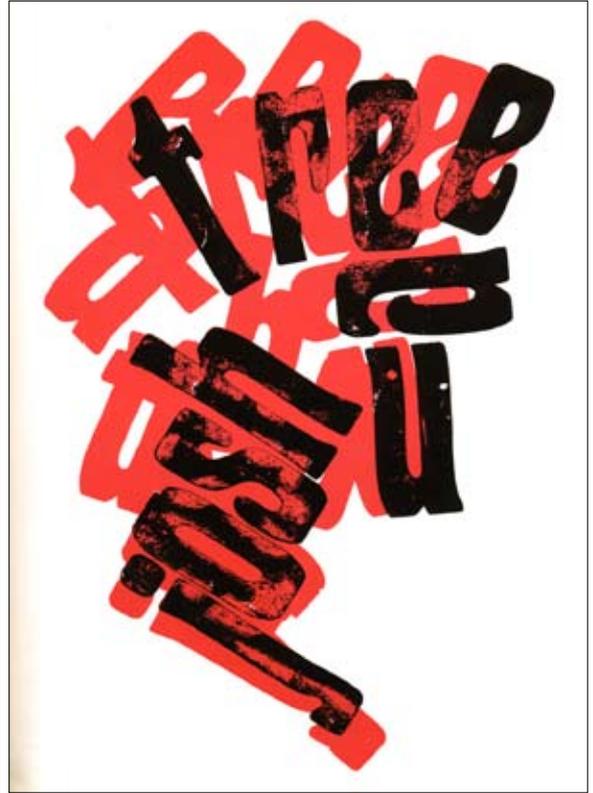


Figure 13.35
Joshua Reichert, 'Joshua Tree', 1963

Whilst the diverse interpretations of modernist design principles sooner or later fell victim to the conservative constraints of the commercial world, poetry allowed various typographers to escape commercial constraints.

Following the example of Marinetti, who 'turned the written sign into a pictorial image' (Spencer ed., 1987, p. 23), Joshua Reichert created visual poems by pressing old wooden type onto sheets of paper simply laid out onto the floor. Reichert also designed typographic information material such as posters and announcements. But, when working with poetry, Reichert could challenge the functional aspects of typography to the extreme. [Figure 13.34 - Figure 13.35] By focusing on the connotation of words, Reichert's aesthetic representation of words became a 'counterpart to their meaning'. (Spencer ed., 1987, p. 23)

Whilst visual poets challenged the semantics (meaning) of words, concrete poets such as Eugen Gomringer interpreted their syntax (structural order). Gomringer was Max Bill's secretary at the Hochschule für Gestaltung in Ulm from 1954-58, but founded his own press in 1960 to publish visual and concrete poetry. [Figure 13.36 - Figure 13.37] Using methodical structural processes to alter the arrangement of letters or words on a page, concrete poets relied on the experience of reading to convey a second level of meaning. As basic as the messages sometimes were, concrete poetry allowed readers to experience the process of reading per se, and exposed reading as a highly commodified activity.

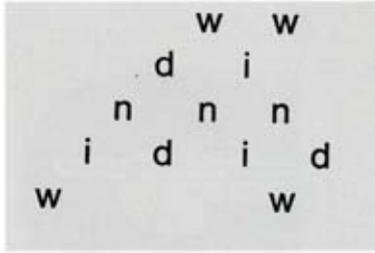


Figure 13.36
Eugen Gomringer, 1969

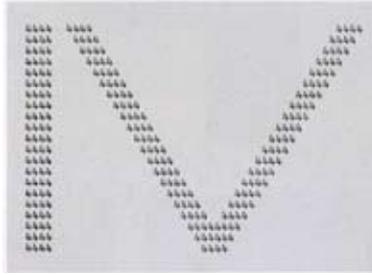


Figure 13.37
Eugen Gomringer, 1968

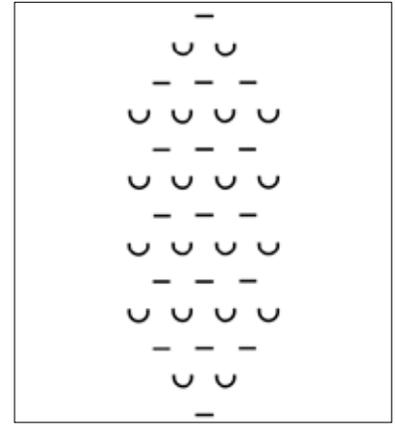


Figure 13.38
Christian Morgenstern,
'Fisches Nachtgesang', 1905

Some poetry such as Christian Morgenstern's 'Fisches Nachtgesang' from 1905 [Figure 13.38] went beyond both the semantically, and syntactically challenging approach of visual and concrete poetry. Can a poem that does not convey any linguistic components actually be considered as a poem? As much as digital coding structures which define software applications today, 'Fisches Nachtgesang' is pure syntax. There appears no meaning beyond structure. Where the level of abstraction is taken to such extremes that typographic signs can hardly be identified as such, it seems more appropriate to speak of poetic expression, or of poetics, rather than of poetry.

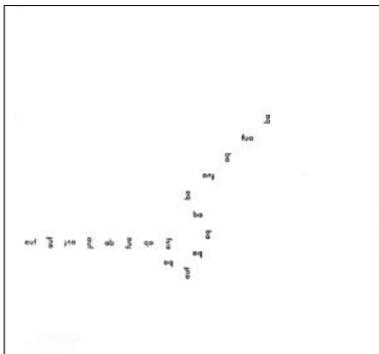


Figure 13.39
Diter Rot, ideogram
from 'Diter Rot bok', 1956 - 1959



Figure 13.40
Diter Rot, sheet from 'Bok h'
date unknown

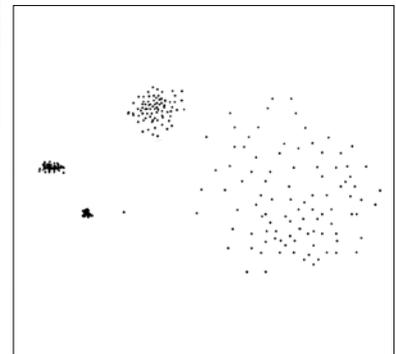


Figure 13.41
Diter Rot, ideogram,
1958

Some of Diter Rot's ideograms resemble concrete poetry. [Figure 13.39] But much of his work is not obviously typographical. [Figure 13.40 - Figure 13.41] 'For the first time we find the roles reversed: an evidently typographic mind ordering type into a poetry rather than the essential poet wrenching the printer's form into art.' (Spencer ed., 1987, p. 37) According to Spencer type here became 'a medium of high art'. Where the poetic quality of a piece of work speaks for itself, poetry becomes poetics. No longer attached to the linguistic nature of the word, the aesthetic quality prevails as a para-communicative function.

This CD contains a number of typographic animations, which require Mac OSX and Apple Quicktime Player to run.

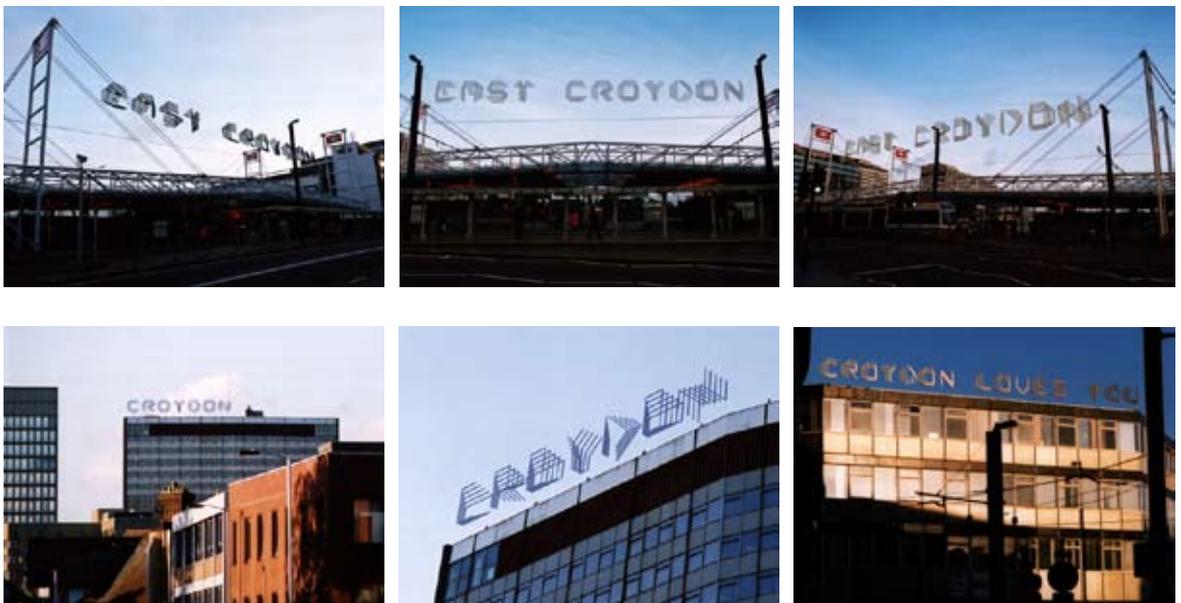
Animations in the 'Virtual Poetry' section cover the entire screen. They are set to run infinitely in loops. To return to the menu, simply click onto the movie. Most of the loops are 1 minute long. 'Into the future' loops every 3 minutes, 'The other self' every 1.5 minutes. 'Certainty' loops every 60 seconds. Here, however, the transitions vary each time. A script selects randomly from 7 different animations. So you may want to spend a little more time on this piece of work.

15. appendix 3: virtual typography revisited—description of project work

The following text is not a positivistic answer to the issues raised in the written part of this study. Instead it ought to be considered as a parallel project-based inquiry that evolved around similar lines. It has been laid out in chronological order to give an impression of the journey made over the period of two and a half years.

Between my MA studies, and my academic research, I spent several years working in the industry. Alongside my professional practice as a graphic designer I began to explore the possibility of using three-dimensionally constructed fonts for animation purposes. But, as soon as four or five different fonts had emerged, my working methods had turned into a more or less stereotypical formula. My interest in investigating virtual typography was rooted in my hope to establish clarity about the benefits and limitations of multi-dimensional typography.

sculptural typography



Figures 15.1-15.5: The Future of Croydon, 2004

above: Figure 15.6

One of the first projects I embarked upon was a contribution to the 'Future of Croydon' exhibition in 2004. I developed a signage concept involving a series of typographic sculptures which were proposed to be spread throughout the city of Croydon in South-East England. I intended to create a sense of identity through the consistent use of one particularly unusual font, that was later named wire-frame. The intention was to seduce Croydon's residents and visitors to engage with the textual sculptures. The ambiguous and intriguing appearance of the typographic objects [Figures 15.1-15.5] was meant to disrupt people's restless flow of daily activities, and to induce them to take their time for exploring the typographic objects from different angles. By positioning the sculptures at various locations, I hoped to promote the idea of a visual unity, which Croydon's architectural environment did not provide. In retrospect it struck me, however, that the deceleration of activities in urban surroundings would probably fail due to the complexity of the situations. It might be inappropriate to add visual stimulants to an environment which in itself appears overly dense. [Figure 15.6] Rather than providing time to breathe, my typographic sculptures might have increased the already existing stress and emotional tension. The way virtual typography operates depends on its surrounding conditions.

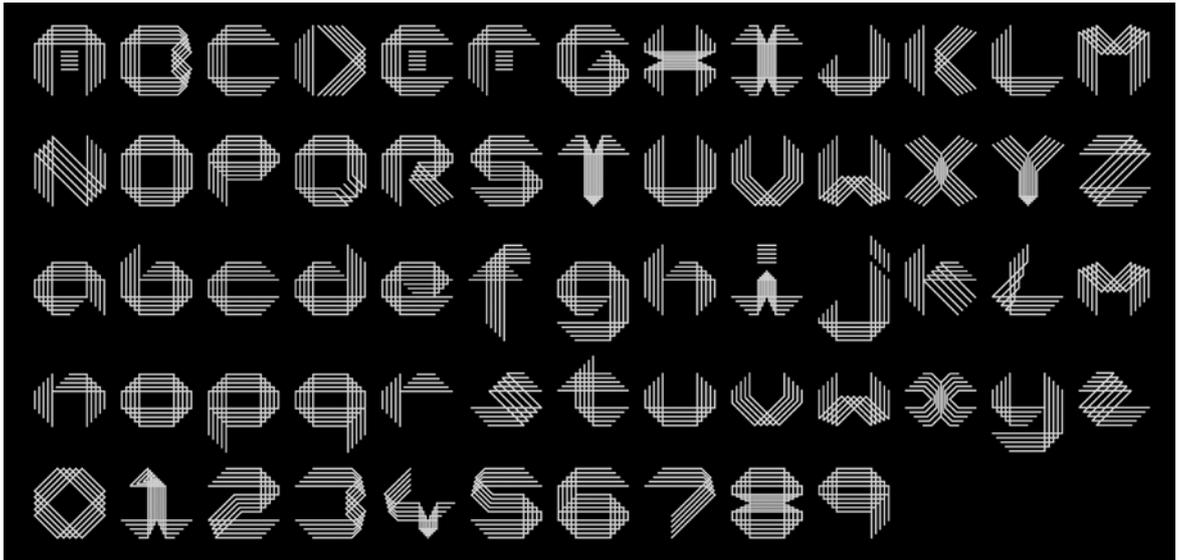


Figure 15.7 wireframe

Following a feature of my ‘Future of Croydon’ project in the December issue of the design magazine ‘Grafik’, a different publisher, the Berlin based magazine ‘o32c’, approached me to inquire, whether or not they could use my wireframe for one of their issues. Having realised that I had no lower-case version of wireframe to offer, I quickly completed the font. [Figure 15.7] I approached the idea of using my three-dimensional fonts for two-dimensional media rather sceptically. I became particularly concerned when I realised that my wireframe was intended to be used for body text. Eventually I was quite glad to find out that the plans to use my font for the magazine had been abandoned. In some respect I considered this decision as a confirmation of my assumption that virtual typography comprises typographic forms of expression the essence of which resides in its transformational quality. Once fixed on paper the qualities of virtual typography cannot prevail. No matter how difficult a printed typeface may be to read—once the code has been uncovered, the perceptual tension is removed. The tension produced through the process of transition operates along different lines. Here the chance is given that emerging forms contradict the viewer’s expectation at any given moment. The process of transition allows for a discontinuity that can hardly be comprised by fixed forms.¹

¹ If we compare, for example, Letterror’s Beowulf font with Brody’s Virtual (both discussed in Chapter 7), we realise that the Beowulf is by far more legible than the Virtual. Yet the latter as opposed to the former does not change its appearance where letters repeat. In that sense the Virtual is more predictable. On the other hand Beowulf’s high level of recognisability as a typographic piece of information limits the experience of aesthetic unpredictability. Virtual typography, it seems, requires both: a considerable level of unrecognisability in combination with an unpredictable—and therefore time-based—aesthetic.

lenticular printing

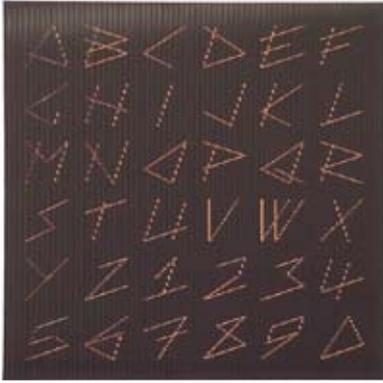


Figure 15.8: sculptura



Figure 15.9: oblivion

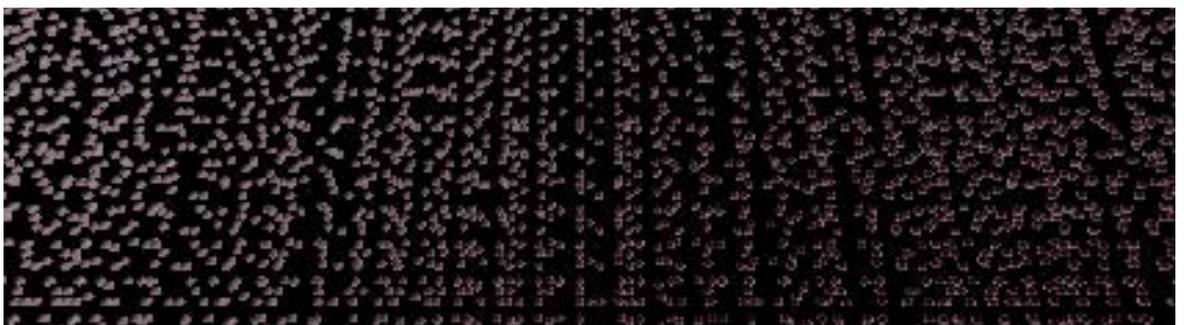


Figure 15.10: cubico

The failure of my wireframe in the context of printing spurred me on to look into different ways of printing transitional forms of typography. In order to participate at a flooring design competition, I had three of my fonts printed and mounted onto lenticular lenses. [Figures 15.8-15.10] Lenticulars are digital prints combining several images within one surface. A computer program cuts the diverse images systematically into thin (vertical or horizontal) stripes. During the production the stripes of the diverse images are re-assembled on the printout as to form an intersecting pattern. After the printing a plastic lens is mounted onto the image composite. As the lens refracts light it recombines each of the images at a time depending on the viewing angle. Using 3D rendering methods I created 5 different images, each showing one and the same typographic constellation from one particular perspective. If a viewer walked past the lenticular print, it would transform from an abstract graphic pattern into a typographic image, and eventually evolve into an abstract pattern on the other side. [Figures 15.11-15.15]



Figures 15.11-15.15



Figures 15.16

Despite the fact that I succeeded in creating a floor pattern that makes the word *reflect* appear as if in motion [Figures 13.16], I did not know how to make best use of the technology. I first thought of signage systems which could reveal information from one particular angle and conceal it from other perspectives. However, the Croydon project had already shown, that gradually emerging information does not improve communication within busy environments. As signage systems are usually aimed at reducing ambiguity, they seem to leave little room for virtual typography.

When I subsequently studied the historical roots of modern typography, visual poems created by Stéphane Mallarmé and Guillaume Apollinaire made me wonder if the best way of applying virtual typography might be to create messages of poetic expression. I studied the concrete poetry of Eugen Gomringer from the 1960s next to calligrammes from the early 20th century to reflect on the forms visual poetry could take on today.

horizons: a tribute to visual poetry



top left: Figure 15.17

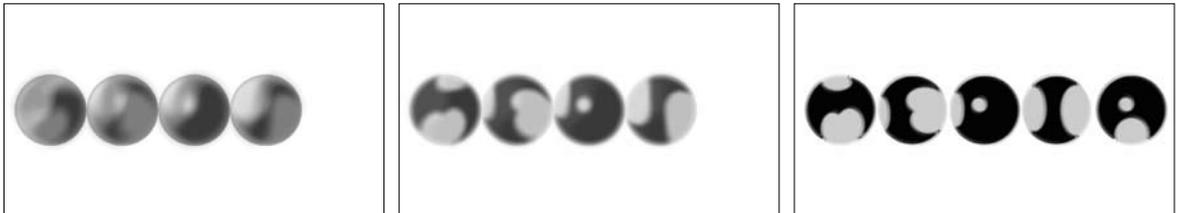
top centre to bottom right: Figures 15.18-15.23

background image: detail of 'La Grande Arche', La Défense, France

I decided to typographically interpret a photograph I once took in the French district La Défense just outside Paris. La Défense is an accumulation of skyscrapers, the surfaces of which re-direct one's focus of attention upwards. As soon as one gets used to this change in perspective, a new artificial world unfolds. The vertical planes appear like landscapes in their own right. They move into the far distance where their edges give shape to a virtual horizon. [Figure 15.17] In their urban surrounding people seem to find little time for contemplating time's true nature. Life in the city follows a rhythm of its own. Here a sense of artificial speed governs one's idea of progression. The notion of clock time covers people's temporal consciousness like a matrix that segments any concept of continuity into increasingly small fragments. For this piece of work, that I entitled ironically as 'Open Sky' in reference to Paul Virilio's equitular book, I placed the text that translates as: 'I watch the clouds passing by, changing shape and overtake, as a separate layer on top of the image.' Through its transitional appearance the typographic layer disrupts the viewer from scanning the static photographic background. [Figures 15.18-15.23] The typographic representation of the text that reflects on the motion of clouds as a symbol for natural time progression, is intended to hint at the way people's time perception has been undermined by mechanical processes. 'We expect to access everything NOW, instantly and simultaneously.' (Heim, 1999, p. 10)

motion and meaning

Following Michael Heim the increase in pace of information transmission as well as the fragmentation of information contents in the context of digital communication result in a reduction of meaning: 'the more information accessed, the less significance is possible.' (Heim, 1993, p.10) With the typographic animation entitled as 'meaningless motion' I tried to test Heim's argument by displaying a sequence of words one after another. Each word emerges gradually [Figures 15.24-15.26], and it does so slightly faster than the previous one. Towards the end words are flickering on the screen faster than they can possibly be read. Finally the animation turns into an irritating mess of unrecognisable information fragments. Where there is not time to reflect, information remains data devoid of any significance.



Figures 15.24-15.26

Through my literature reviews, case studies and project work I came to the conclusion that poetic expression can be related to the pace and rhythm at which information is disclosed. In poetry the decelerated pace of reading alongside the syntactical harmony lead to a anticipatory mode of perception. Such provocation of a speculative mind-set, I thought, could likewise be used in the context of time-based typography to attract and secure people's attention. '... the perception of ease in motion passes over into the pleasure of mastering the flow of time and of holding the future within the present.' (Bergson 2001, p.12) This sensation of pleasure I believe is critical the amount of time people are ready to spend on acquiring information.

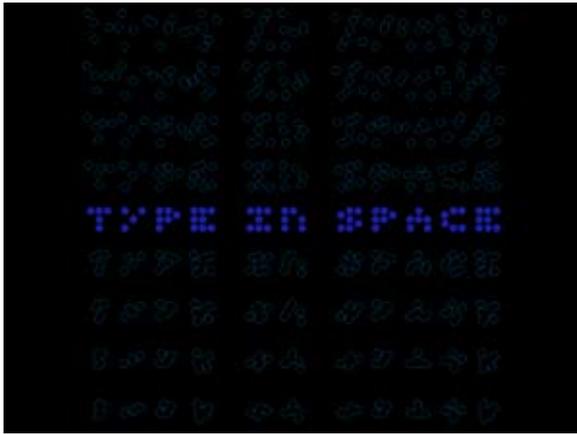


Figure 15.27



Figure 15.28

To explore the relationship between the pace of transition, the guessing of meaning and people's time consciousness, I decided to develop a series of digital typographic animations, which I refer to as *virtual poems*. I chose this term presuming that the works could be considered as poetic, even though they are not poems in the conventional sense. I hoped they would share a poetic quality with conventional poems in that they challenge the viewer to continuously re-adjust the mode of perception. The typographic transformations have been defined in accordance with the message contents. To allow for comparisons between the different animations I used one font through-out. Inspired by Zuzanna Licko, who considered the later versions of her pixel fonts as a tribute to the early days of digital typography, I chose my font in reference to the wider context of my research. My font Gravita is a dot matrix font, each letter of which consisted of a small number of spherical element [Figure 15.27] I chose this font hoping to remind people of the dot matrix fonts used in lifts, as well as of the information displays seen at bus stops and train stations. [Figure 15.28] Thus Gravita can be associated with the idea of spatial and temporal transition.

less is more



Figures 15.29-15.31



Figures 15.32-15.34: close-up views of the images above

Each of the virtual poems deals with time-related issues. The first one ‘less is more’ is a personal reflection on the relationship between my daughter and myself. I usually get to meet Aiyana once or twice a week. I began to work on ‘less is more’, when one day our weekly reunion failed to take place for unexpected reasons. The sudden pain felt made me aware of how distance may reinforce desire. Considering how spacial distance relates to temporal delay (in this case the delay in seeing each other), I was reminded of Baudrillard’s claim that ‘Desire [...] is sustained only by want’. (Baudrillard, 1990, p. 5) Only that which is beyond reach is able to nourish one’s desire. To illustrate the idea that seduction is closely related to temporal, respectively spatial remoteness, I wrote the words ‘the less I got to see you, the more I came to love you’. I incorporated these words into a typographic animation, which reveals only one passage of the sentence at a time. The word *less* transforms into the word *hopeless* and eventually into *love* as the individual letters rotate. [Figures 15.29-15.31] Linking the words *less hope* and *hopeless* visually creates a separate layer of meaning that stands in contradiction to the general meaning of the sentence. Curiously the transition failed to have its aesthetically challenging effect until I slowed the transition down to one minute. This reduction in pace decelerated the motion of dots to a degree that some of them occasionally appear to be standing still. As with all other virtual poems, here the movement is set to a looping action, which lends the graphic work an ambient quality.

certainty



Figures 15.35-15.37



Figures 15.38-15.40: variations

My second virtual poem illustrates the sentence ‘continuous change is the only certainty’¹. In relation to interactive communication systems such a point of view could, of course, be rejected. Interactive media do after all process changes digitally, and usually within a fraction of a second—in ‘real time’ as it were. I therefore decided to use this sentence to play with the dialectical tension between continuity and surprise. Whilst the major part of the sentence changes slowly and gradually [Figures 15.35-15.37], the transformation of the word *change* varies with each transitional loop. [Figures 15.38-15.40] After each loop a random script selects the subsequent transformation from a preset of seven different variations. This produces a contradictory relationship between the literal content, and the formal-aesthetic transition which relies on an element of chance.

¹ A Tai Chi teacher, who I met in 2003 claims this phrase to be a Chinese proverb. It could also be seen as a paraphrase of Heraclit’s famously quoted words: ‘Everything changes but change itself’. Interestingly the Chinese saying emphasises the idea of continuity, a notion that frequently escapes Western thinking.

into the future

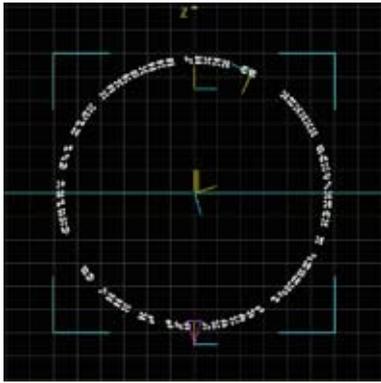


Figure 15.41



Figure 15.42



Figure 15.43

My third virtual poem illustrates a statement made by the American philosopher Marshall McLuhan: 'We look at the present moment through a rear-view mirror. We march backwards into the future.' (McLuhan quoted by Levinson, 1999, p.173) McLuhan's position expresses his critical attitude towards people's perspective on technological developments. According to his point of view the newness of technological advancements can only be described and understood within the conceptual framework of existing technologies. I chose to work with this statement not due to its technological relevance, but due to a much more general meaning that, I believe, can be attributed to McLuhan's statement. The idea of the rear-view mirror in relation to the perception of future events reminded me of Edmund Husserl's definition of a relationship of retentions and protensions. According to Husserl the future can only be anticipated through the projection of past events, and the notion of the present moment evolves from the dialectical tension between the conceptual future and the immediate past. My typographical response to this concept of time perception was to arrange the letters in a circle [Figure 15.41], which is moving within three dimensions in such a way that the distant part of the sentence appears always in reversed order. [Figure 15.42] The closer section of the circle moves in the correct direction. However, this part of the animation shows only one or two letters at a time, which makes reading words very difficult. [Figure 15.43] Furthermore the individual letters in the foreground are barely legible due to their close distance. The diverse spheres belonging to one letter are positioned at slightly different viewing distances, which at such close range makes it very difficult to detect the letter shapes. The remote passage of the text, that moves in the background in reversed direction, also shows only few letters at a time. But here the greater viewing distance facilitates the recognisability. The distance passages of the sentence which appear mirrored allow for reading the text, whereas the disfigured letter shapes in the foreground raises questions about the text passages which are yet to come.

the meaning of time



Figure 15.44



Figure 15.45



Figure 15.46

'The meaning of time' references the Heideggerian notion that *death gives time a meaning*. Heidegger's point of view made me wonder if the acceleration of daily activities may derive partly from people's awareness that death is inevitable. Surely this is not a new discovery of mankind. But for many people religion no longer provides the hope that life may continue beyond death. Even though technologies cannot enable people to live forever, they allow them to make life more eventful. By making events happen faster, we are able to accumulate more experiences within the time-frame given to us by nature. Whether or not this makes individual events, or life in general more pleasurable is a different question though. The word *time* within the animated sentence is the only one that moves too fast to be possibly read. It is split into two segments which are constantly moving up and down in opposite directions. [Figure 15.44] The word becomes recognisable during the brief moment when the two segments meet at the centre of the screen. [Figure 15.45] As this happens only for one thirtieth of a second, there is never enough *time* to depict the word. The surrounding part of the sentence moves slowly and gradually in horizontal directions. [Figure 15.46] The words here are not split into separate parts, which is why their transformation is more predictable, and allows for reading at one point. The animation tries to express the possibility that cultural acceleration might root in people's need to remain oblivious to the fact that phenomenologically all temporal progression ends in death.



Figure 15.47



Figure 15.48



Figure 15.49

The last piece contains a reference to Hegel's 'Phenomenology of the Spirit'. Here the sentence 'self-consciousness attains its satisfaction only through another self-consciousness' (Hegel, 1999, p.139) into three elements. After separating the first half of the sentence from the second, I eliminated a number of dots from each letter. In other words: I transcoded the letters into illegible symbols. I then used an amount of dots equal to the missing dots to let them move up and down between the two halves of the sentence. Whenever the dots arrive at the top or bottom of the screen they complete the static dots to form the legible part of the phrase. [Figure 15.47 - 15.48] However, they do so only for a fraction of a second. As the dots cross the screen their constellation changes which enables them to complete the missing halves of both text passages, which are obviously different from one another. The dots are bouncing up and down at an increasing pace. [Figure 15.49] The acceleration factor is defined by reversing the Fibonacci series. So the last phase is 3 frames long, the one before 5, the one preceding that contains 8 frames, and so on. This allows for a systematic change in pace, which starts with an excessively slow motion and ends with a stressfully rapid motion, before switching back to the initial slowness. By confronting the extremely rapid transition directly with its slowest counterpart at the end of each loop, I hoped to expose the emotional effect that pace itself has on the viewer.

The ambition behind my project work was to illustrate how speed of motion in itself fulfils a communicative function. The pace of transitional information affects significantly the aesthetic impact of information. The direct relationship between the pace of transition, and the poetic quality of expression suggests that the harmonious timing of motion may provoke a sense of pleasure that captivates people's attention. Like the rhythm of poetry the pace and timing of visual transitions constitute a para-communicative function, which can be deployed to seduce people to attribute more of their time to the communication process.

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