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Interaction Design State of the Art and Future Developments. An argument for information design

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This article first appeared in

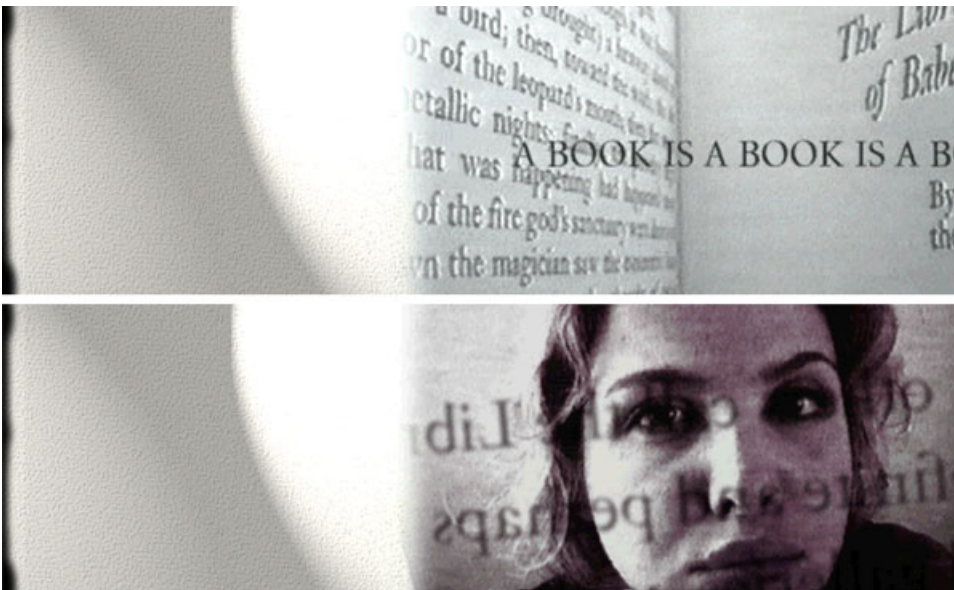
Multimedia Graphics. The international sourcebook of interactive screen design. /
Edited by Willem Velthoven and Jorinde Seijdel. Amsterdam: BIS Publishers, 1996.
(US: Chronicle Books; Germany: Friedrich Schmidt Mainz; rest of the World: Thames
and Hudson)

Interaction Design

State of the Art and Future Developments.

An argument for information design

Everybody is complaining about an epidemic of information overload, but people don't seem to realize that the resulting information fatigue is largely a functional design problem. To wit: good design makes information visible and manageable, but we are still at a very early stage in our understanding of information design. We are all whining about crude screen designs, hierarchical menus, and maze-like hypermedia structures, whereas we need to start by addressing the general question of dynamic information design. In this paper, I argue that interface design and computer graphics should transmute into a discipline I would refer to as 'information design'. Good information design will offer us the means to manage both new media and new paradigms of communication.



Georges Méliès shot his theatre pieces with a static camera in 1895 from an external point of view. By adding camera motion, the operator of the camera enters the virtual space of the film. New media are capable of entering the space of the printed book and showing us the world through the text.. (Discussion with Sarah Hahn, 1995: Books form Inside and Outside.

It is not the quantity of available data that has triggered the electronic gold rush on the Internet, but rather the enhanced accessibility of the system through the World Wide Web. The Web is more than simply a new representation of information on-line. While much of the information was out there for years, most people couldn't access it in a practical and attractive way. It was the advent of the Web's browsing systems and their graphic representation that transformed the Internet from a pipeline of academic data

into the much over-hyped Information Superhighway. And while pioneers on the last frontier register their claim in Cyberspace, designers are asked to turn the free flow of information into selected media for specific purposes.

These new forms in turn will create new types of media, dramatically different from what we call new media or multimedia today. These media will be driven by the information they convey and no longer by the technology they use. They will also be far more diversified than 'multimedia'.

THE DESIGN FALLACY

Today the field of Design is widely conceived of as 'graphic' design of the surface and – in the case of new media – the interface. The interface is seen to be the gate through which the content within the new medium can be accessed. Thus, the interface becomes the target of our design efforts. This separation leads to a break between the superficial design and the functional definition of the object. While this is an accepted situation with transportation designs - cars are physical objects, after all - industrial design for virtual objects needs to be delineated. As new media have no actual, physical presence in the world, the creative impulse is thus required to design the invisible. In turn, a new understanding of the communicative is needed.

HOW NEW IS THE NEW MEDIUM?

In 1959, Jean Cocteau wrote: *'Vive la jeune muse cinéma, car elle possède le mystère du rêve et permet de rendre l'irréalité réaliste.'* Film had finally become accepted as art, collected for its design and its narrative. After the 100-year reign of film, we seem to be back on the frontier, pioneering the aesthetics of multimedia. But, again, what we call the New Multimedia are neither new nor media—they are a conglomeration of technologies (hence multi-) used to define new communication channels. Yet, these channels lack the necessary paradigms of informational flow and audience involvement of traditional media.

The computer—especially the personal computer—has served as an important step towards a unified communication paradigm, but it was never conceived of as a communication technology, nor, even more importantly, as a platform to convey ideas. We therefore have had to take considerable effort to turn the calculating machine first into a typewriter, and then into a communication device. After many detours, we may feel that things have sorted themselves out. But, by stepping back and taking an overall view, we can quickly spot the sore points and acknowledge that the current state of multimedia technology is intermediate at best.¹

As we implement them today, dynamic media on the computer are no more conceptually advanced than film was in 1903. At that point, film had moved away from the static recording of theatre pieces to the first development of real filmic narratives. Film was still very limited in technology, both conceptually and in terms of its integration into the social structure. In the earliest cinemas, the camera was still a multi-purpose tool: you shot the film with it, and you projected with the same machine. The projector and the films themselves were limited in size by the power of the lamp as well as time by the

length of the celluloid. With the exception of the fact that the recording as well as the projection was hand-cranked, all limitations apply—mutatis mutandis—to the development of dynamic media on the computer.

There is a fundamental duality to new media: the computer is both a tool of creation and a delivery platform. In many ways, the field of ‘computer graphics’ suffers from a split personality: the term covers all sorts of application and media. While the usage of the computer to define a graphic representation is a dramatic step away from classic graphic design, the use of the computer as a tool says little about the necessities of conceptual design of an interactive piece. For this, we require a new branch of object design: we need to devise an immaterial architecture for the virtual information environments.

How this immaterial architecture manifests itself technically, and in what medium it does so, is not as major an issue as it appears. The availability of the material does not define the medium, much as the physical object of paper no longer defines the conceptual category of ‘book’, ‘periodical’ or even a ‘daily newspaper’ [sic]. The decision regarding the delivery platform (paper or electronic or both) strongly influences the work, but the medium is defined by the communicative concept in conjunction with the delivery technology.

Design is always also a grounding process that relates the object to the world we live in. The task of designing the ungraspable has gained in importance throughout the history of representational technologies: from photography to the cinema and television, and now with computer-generated media. New media address a Gestalt that is different from other media while drawing from the functional experiences of the media types they rely on. One would expect that what we call new media should be called modern media but the media



in question are far less defined by their theoretical approach than by the newness of the technology involved. Therefore we see electronic books, digital film, sampled sound, but not a fully co-ordinated new communication paradigm. To develop this, we need to address the centrality of the field of information design. And as design is already relying heavily in many fields on computers, software development influences the way things look and, to an even greater extent, the way things work. But design is not only about the graphic surface—in our case, the screen interface—but about the underlying structure. The Bauhaus legacy ‘*Form follows Function*’ can be implemented in a new way by creating the design of the function on the same platform as the design of the form. The strange metaphors of the button and the switch as triggering elements, derived from a physical object that itself is barely 100 years old, can serve as an icon for the current state of functional interface design. One is tempted to think of the huge soft

plugs and switches designed by Claes Oldenburg when considering the physical quality of such objects. Yet we need to examine these metaphors on the base level: Light switches are bad enough on the wall, why would I need them on my screen? Perhaps we have to admit that even now, the new media are not so new after all, but rather a digital replication of a mechanical environment. The representation of information within such a system will always be limited and we need to go beyond these constraints to set a new standard for an artificial memory, as this is what we are really looking for.²

THE DIGITAL CATCH

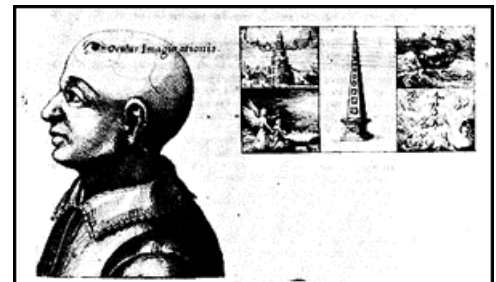
New media perforce demand the constant redesign of interfaces. While ‘old’ media did not have such an interface and could speak for themselves, electronic new media have a structure that stands between them and the user. Accordingly, digital media do not age well. While you can almost watch the design getting outdated and old-fashioned, the piece itself in no way builds up a patina, but due to its praised digital quality remains ever new. Even the new orange leatherette of the sixties eventually cracked. Digital pieces, on the other hand, will always be new—they cannot be stone-washed and will never have the broken-in look of a good and well-used Chesterfield sofa.

Eventually, a history of digital media will develop and we will see organic developments. For now, we don’t even know how to preserve and collect these pieces (another situation we have encountered with film). The definition of a future requires a past and we can already see a temporal development of different representations of dynamic media.

New media are only new until they are no longer new - and old in this context always means accepted and established. Therefore, we see a continuous process of rejuvenation and the new media are those that almost work. So new media have this Dorian Grey-like quality: they never age. Being described and re-described in more or less professional periodicals in the field of technology and design, they need to be ‘cutting edge’ and ‘state-of-the-art’.³ New media become outdated very fast and with this continuous retiring process of the technology, the design that accompanies them becomes old-fashioned with equal speed.

SO WHAT WILL THE FUTURE BRING?

The dynamic representation of information on a screen will no longer be new media, and the interface paradigm will disappear. Bob Stein, the co-founder of the Voyager Company, argued for this point in an on-line discussion about electronic books. ‘Perhaps the biggest problem with predicting the trajectory of a given technology is that it resides within a broader social context. It might be easy to imagine how the Internet could help “break down the traditional power relationship between author and reader” or vastly expand the number of authors relative to the number of readers.



The classic *Art of Memory* assumed that a visual representation of the outside world could be stored in a real environment and later recalled by offering rules for places and rules for images

What is hard to predict is whether society will encourage or discourage such developments.⁴ The future of design will be the design of information instead of the design of interfaces, inserted between the user and the information.

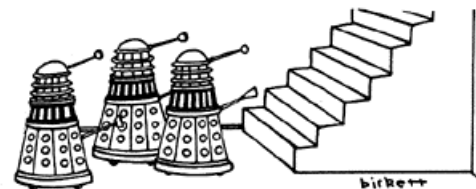
NEW MEDIA - NEW INTERACTION - NEW DESIGN

While we discuss the interactivity of the so-called new media, we forget to observe their relation to classic media, many of them equally dynamic. Books have been and are still the most interactive medium to communicate concepts. Books are now and have always been uniquely suited to be containers of ideas. Ancient traditions structure the way we create and utilise the technology of the book. The *Ars Memorativa* of the Romans assigned places to images, created maps to reconstruct the structure and content of narrative. The book followed suit, creating a storehouse of picture and story, bound between covers.

The German media theorist Norbert Bolz is convinced that *the information processing system 'book' is clearly no longer up to the complexity of our social systems. The New Media unfold the grey environment of text into the spectral colours of sensuous knowledge.*⁵ The common experience that the film was not as good as the book proves that the colours in the mind of the reader can be far more seductive than the best Technicolor. The amount of data gathered for digestion is definitely larger but this is a design problem we have to solve soon, not a book problem. The book will move from the paper page to the dynamic electronic medium as it moved from papyrus to paper.

Bolz argues that the meaning of an electronic text is its use in the respective reading matter, a fact that holds true in all aspects for language across media.⁶ And the computer spawns the electronic text, a volatile form that paradoxically returns the text to our heads while at the same time enmeshing it in an even more sophisticated apparatus. Through its digitalisation, it no longer rests in the universe of original and reproduction but transcends to a state

where every reproduction is an original. Thus the user of the PC becomes the third of the series of operators described by Walter Benjamin⁷ in 1936: the film camera operator and the operating surgeon. Both enter deep into the tissue of reality when doing the work, while the magical healer and the painter both keep a distance from their objects. Bolz concedes that true hypertext is a rhizome which requires a self-assertive user, but it remains unclear if this true hypertext can come up to all the expectations to solve the omnipresent information overload.



"Well, this certainly buggers our plans to conquer the Universe."

Well, this certainly buggers our plans to conquer the universe

CONCLUSION

We can no longer tolerate boundaries in the field of graphic design. Today, 'information design' must begin to absorb different disciplines. As it moves from the beautification of screen layouts to the definition of communicative concepts, the field of design gains a new position in the definition of media. What we call new media are not so much new media, nor even new technology. Instead, they are a new way to use a technology as a means of communication. But as the newness wears off, new media as an entity will give way to different forms of dynamic communication. In the discourse over the independence of

these first truly invisible media, we need to address the basic notion of what it means to communicate when physical representation is in no way related to the shaping of information. The dynamic medium we see emerging today is neither 'multi' nor 'new', but the next step in the definition of our memory and the way we perceive the world. At the different levels on which design is involved in the creation of this dynamic medium, it must address both its surface as well as its functionality as a means of communication.

¹ In the twenties, record players were connected to film projectors by flexible shafts to assure synchronous projection of image and sound, a technology that did not prevail. Looking at my standard multimedia set-up, I have similar feelings; there is still a direct relation between the complexity of multimedia and the amount of cables needed to connect the parts.

² Yates, Frances, *The Art of Memory*, Harmondsworth, Penguin, 1978, p. 22.

³ A term coined by the hi-fi industry in the sixties to describe this phenomenon of 'as new - i.e., as good - as it can get'.

⁴ Bob Stein in Page vs. Pixel, dialogue at FEED, July 1995

<http://www.feedmag.com/95.05dialog1.html>

⁵ Bolz, Norbert, *The Deluge of Sense*, speech at Doors of Perception, Amsterdam 1993. Transcribed on the DopRom CD-ROM, Mediamatic, Amsterdam, 1994.

⁶ Wittgenstein, Ludwig, *Philosophical Investigations*.

⁷ Benjamin, Walter, *The work of art in the age of mechanical reproduction*. In *Illuminations*, New York, Schocken. 1969. First published in *Zeitschrift für Sozialforschung*. V. 1, 1936.