"It is Interactive —but is it Art?"

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"The possibilities of egalitarian, more democratic, constructive forms offering new kinds of interaction, knowledge, and understanding may well be enhanced by the novel capabilities of the new technologies. They will, more than ever before, have to be struggled for."

— Andy Darley

The Myth of Interactivity

"Well, my next thing is going to be something interactive. . ." For some years now, this has been a stock answer in interviews with artists, and not only those who already work with electronic and digital technologies. Indeed, "interactive art" seems well on its way to becoming the art form of the 1990s. Yet one shouldn't let its present visibility delude oneself. Although contemporary interactive art may seem "groundbreaking," the ground had already been grubbed by such movements as Fluxus and E.A.T. (Experiments in Art and Technology) in the 1960s, as well as by a great variety of "postmodern" strategies, emphasizing recycling, deliberate confusion between "the original" and "the copy," and aiming at repositioning, sometimes to the point of reconstituting, the traditional art audience.

There seems to be more and more agreement that interactive art is the art form par excellence using the computer. Even though it was born before it, the introduction of the personal computer in the late 1970s certainly gave it a strong spark. But as interactive art is now proliferating, it must face new challenges. Doing "something interactive" with the computer may have been a sign of bold artistic innovation and on conformism ten years ago, but it certainly isn't it anymore. Since then, real-time visual computing has become commonplace and user interface design has undergone a dramatic development. An immense number of interactive systems from bank automats and game consoles to digital highways and sophisticated surveillance networks have been installed everywhere in the post-industrial society. Interfaces are, quite literally, inter more and more faces in daily life.

This pervasiveness of interactive system seems to have given rise to a process of mythicization of interactivity. There is a discrepancy between the ideological discourses surrounding and molding the concept, and the actual practices applying interactive technologies. The concept "interactivity" itself has become an empty signifier. It is used in vague and non-specified ways, lifted up from the actual historical processes of its becoming. It refers to a general cultural change, announcing the advent of a "society of interactivity." It is offered as a remedy against almost anything, from the relentless bombardment by the media industries to problems in education and personal psychology. The French critic Pierre Moeglin sees the discourses on interactivity as just another intellectual fashion. He ironizes the "trances of interactivity," the traces of which he perceives all around himself—in 'liberal' pedagogy, in sociology that emphasizes the role of informatics, and in the Lyotardian 'postmodern condition' of knowledge.

According to Moeglin, the idea of interaction, as manifested in our communication with different interactive systems, isn't equivalent to the idea of interactivity, which is a more abstract and general concept.[1] The fact that we engage in daily interactions with all kinds of mechanical and electronic devices isn't enough to prove that a change would have taken place in the basic quality of our lives. In other words, the existence of interactive systems doesn't automatically imply a democratic turn, a redistribution of power from "the producer" to "the consumer," or a reorganization of the information traffic. The concept of interactivity can be effectively used to disguise strategies for marketing, surveillance, and exercise of authority. This may be particularly effective, because it takes place in the name of the "individual initiative."

Interactive systems have, of course, "potential for change," but it has to be realized by the user. Unfortunately, most users easily submit themselves to the pre-defined modes of interaction imposed on them by system designers and marketing organizations. In most cases, these systems explicitly aim at automating the experience. This is reflected in the user interface design, which often has recourse to anthropomorphic and non-technological metaphors. The interaction has to take place as "naturally" as speaking, breathing, shaking hands, or making love. While this may offer possibilities for truly extending our sensory capabilities (à la McLuhan), it may also help to disguise the fact that the interactive system is never "innocent," free of ideological, political, and economical determinations.

Interactive Art in Two Worlds

Interactive art is in obvious danger of succumbing to these mythicizing tendencies. This becomes evident in pieces—I have see quite a few of them—that can, at most, be read as naive celebrations of technology. In such works the value of interactive technology is taken for granted, as creative and marvelous, and enough to justify the label of art. In other words, a system is displayed as art, and the technology itself becomes the attraction. Some critics have drawn parallels between the early history of cinema and the early history of digital systems.[2] In Lumiére brothers screenings their Cinemátographe was the main attraction; the "art" of the cinema, its syntax and vocabulary, developed only gradually. Similarly, many interactive works might be explained as representing a very early stage in the development of

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interactivity as an artistic medium. There is, however, already enough evidence of critical artistic approaches to the technology to counter such excuses.

The problem here seems to be deeply intertwined with the definitions of art and the changes it has undergone during this century. As Martha Rosler and others have convincingly shown, "art" is not something eternal; it is conditioned by constantly changing discursive practices, particularly those originating in the "art world" (a loose system of museums, galleries, critics, dealers, art journals, collectors, and of course, artists).[3] Even though the old idea of art as a (collectable) object still has currency, there is now a wide agreement that art is really about contextualization, about creating conditions for perceiving something as art.

It is difficult to get a hold on interactive art, because it is split between different contexts, which, respectively, have different definitions for it. The two main camps are the art world and the "computer world," as exemplified by the SIGGRAPH conference. There is surprisingly little communication between them, either on a concrete or on a discursive level. A statement like the one by William Bricken, a leading virtual reality systems creator, "The 3D sound stuff at NASA is art. Myron's [Krueger] work is art. The code in the VEOS [Virtual Environment Authoring System] is art—that is, some coding style considerations are motivated by aesthetics," would hardly make sense in the art world—embracing everything is equal to nothing.[4] It does, however, make sense in the computer world, representing the flip side of corporate control, a "liberating" outlet in the midst of scientifically, functionally, and commercially oriented research.

The nature of art in the SIGGRAPH art show becomes really visible when contrasted with the trade show, the main commercial and technological focus on the conference. Art in the art show represents something which is not immediately functional. It is a kind of creative pastime, which is, however, close enough to the hard-core research to enjoy a certain respectability; it testifies to experimentation that could (and in some cases will) influence serious research and product development. Another characteristic is the treatment of technology as something value-free and neutral—only exceptionally have the pieces in the art show addressed questions about the ideological and political determinants of computer technology and of the institutions that support it. Whether this depends on the curatorial policy or on the works available, it is difficult to tell.

Against this background it is not surprising that Bricken mentions the work of Myron Krueger. While Krueger enjoys unquestionable authority as a great computer scientist, he himself has often stressed that his famous artwork-in-progress, VideoPlace, is without a practical purpose and meant to advance human creativity through the user's "playful" interactions with the system.[5] This means taking a stance, implying that the system could, but will not be, used for commercial and perhaps even for military purposes. Krueger's ethical stance is strengthened by his resistance to "totally immersive" systems, such as virtual reality. He is against "isolating people" and alienating them from "the other activities that take place in a work environment."[6] While all this is admirable, it also has contributed to making Krueger a somewhat marginal figure in the computer world.

Krueger's attitude contrasts with that of the Vivid Group, developer of the Mandala, another interactive "artificial reality" system, which bears remarkable similarities to VideoPlace (which precedes it by several years). Just as VideoPlace, Mandala has often been seen in the art context in the computer world. The basic differences in attitudes are reflected already on the hardware and software level: while Krueger painstakingly built his own hardware and software, the Mandala software was from the beginning meant to run on customary Amiga computers. While Krueger has stuck to constantly improving and demonstrating his system, Mandala has already been applied to several different purposes. Vivid Group's corporate videotape lists possible fields of application: video games, public installations, music video, education, corporate communications and training, teleconferencing, performance art.

Mandala is marketed as a master product that is able to accommodate all these different, sometimes ideologically conflicting, applications. In those art contexts where I have seen Mandala exhibited, the application hasn't, however, really been differentiated; the worlds interacted with have closest-resembled prototypes for video games.[7] The technology itself has clearly been the main attraction. The difference between "installation" and "demonstration" has been blurred. I have heard an explanation, according to which the "art" in the situation is not in the system itself, but in the activities it stimulates in the audience; this sounds like a vague echo from the happenings of the 1960s. Yet, it isn't very different from the pedagogical principles followed in the interactive displays in science museums. Of course, there is hope that some artists will adopt Mandala as their medium, and do something different with it. So far I have seen little that is convincing.

The Quest for Context

Timothy Druckrey provocatively writes in his review of SIGGRAPH '91 "it seems as if the field of computer imaging as a whole is constitutionally incapable of self-reflection," but his appeal comes straight to the point: "What is urgent but largely absent is an approach to the field that accounts for the contexts and consequences of image production."[8] While it would be too much to say that the interactive art originating from the art world would "as a whole" provide the answer, it unquestionably has some advantages. Even though it in most cases is dependent on public funding and technical expertise "from the outside," it is clearly less tempted to succumb to the views of the military-industrial complex.

While I don't want to lapse into a neo-totalitarian view of the latter—the "artist in residence" in a company- or a government-sponsored research center may enjoy a considerable amount of freedom to experiment—there seems to be a silent consensus about what is desirable and what is not. I am yet to see anything form that context that would match for example Jeffrey Shaw's interactive works in complexity and critical edge. Shaw, an Australian who has worked during most of his career in the Netherlands, has enjoyed funding from Dutch and French public resources, and is currently director of the Institute for Image Media at the ZKM (Zentrum für Kunst und Medientechnologie) at Karlsruhe, Germany.

Shaw's oeuvre is characterized by extreme coherence and density, and simultaneously by multilayered intertexturality. On one level, it can be interpreted as a continuing dialogue with the technologies of seeing, both from the present and from the past. In Shaw's work these technologies are always seen as inherently problematic, embedded in complex networks of political, economic, and social-psychological determinants. His series of "virtual voyaging" installations invites the participant on philosophical journeys, to explore and deconstruct these "machines of vision," and thus to question his/her own position as a viewing subject submitted to them.

A case in point is the unjustly neglected Inventer la terre (1986), a permanent installation commissioned by La Villette science center in Paris. The gilded steel column standing on a round black terrazzo pedestal invokes associations to ancient

cosmological monuments (à la Stonehenge). Simultaneously, it is a kind of periscope with an eyepiece for the viewer. S/he can turn the column around, revealing gradually a panoramic view of the surrounding science center. However, there is another panorama superimposed on this one; a string of computer-generated views, depicting different cultures' ideas about the origin of the earth is seen "floating in the air." By pressing the handles on both sides of the eyepiece, the users can animate these views, as if launching a torpedo.

In a characteristic way, Shaw has amassed a great wealth of associations in an impressive, remarkably condensed form. Numerous polarities can be detected: ancient and modern, myth and history, rational and mystic, real and virtual worlds. Technologies used for surveillance and destruction are foregrounded. Through a kind of détournement they are transformed into philosophical instruments, stimulating reflection on the relativity of the foundations of our world views. But Inventer la Terre can also be read as a very early contribution to the current discussion about the implications of virtual reality technology. The view from the eyepiece actually evokes Ivan Sutherland's pioneering "see-through" helmet from the late 1960s.

Metacommentaries

Jeffrey Shaw's work is an example of what I have elsewhere called metacommentaries on interactivity.[9] This concept refers to an activity that aims at continuously de-mythicizing and de-automating prevailing discourses. The point of reference is the Russian Formalist thinking about the functions of the poetic language; its relatedness to the ideology of constructivism seems particularly fit here, considering the nature of production in technology-based art. Shaw's installations are his metacommentaries; they are spatialized sets of statements that often find their basic inspiration from ideas "in the air," such as a "virtual museum." These ideas are then probed, modified, and re-contextualized in the process of interaction with the participant.

Likewise, Lynn Hershman's interactive videodisk installations Lorna (1983), Deep Contact (1990-92), and A Room of One's Own (1992-93) are an impressive series of metacommentaries around gender, technology, and power. Hershman has been particularly concerned with the ways in which (male) desire has been built into the pseudo-interactive strategies used by commercial television, erotic peep-shows, etc. Toshio Iwai's works have been appropriately called "another evolution of moving images."[10] It could also be characterized as an on-going media archaeological excavation project. Iwai is particularly obsessed with pre-cinematic devices, such as zoetropes and flip-books, which he then recreates in new contexts, using surprising technological solutions. The interrelations between past and present, between "poor" and "rich" technology belong to the basic ingredients of his art.[11]

While Iwai belongs to a younger generation, it is important to note that both Shaw's and Hershman's art is deeply rooted in the artistic ideas and sensibilities of the 1960s. Their involvement with interactivity started long before they turned to digital technology. Also, it embraced many different media and approaches, from Shaw's wor with inflatable structures and expanded cinema to Hershman's involvement in life art and performances in public spaces. In both cases the continuities between works using different media are much more important than discontinuities; omething to think about for those who are all too keen to identify phenomena like interactivity with the appearance of certain technologies. What's more, Jeffrey Shaw's early work shows quite clearly that artists may anticipate technologies that are still in their infancy.

Even though it is extremely important that artists get personally involved in software and hardware development, it is equally importan t at their involvement doesn't stop there. There remains a need to make a distinction between a creative computer scientist and an artist, however difficult it may be. Interactivity is still primarily a mental and intellectual, and only secondarily a technological activity.

This applies also to the user/participant. However, it is important to counter arguments that state that interactivity is really only between the observer's ears; according to this view it doesn't matter if one is observing a painting or navigating the virtual world of Matt Mullican's "VR-painting" Five Into One, if one possesses an open mind and average mental capabilities.[12] It does matter, of course, but much depends on the challenges posed by the application in question. Interactive systems may quite well excel in promoting intellectual laziness. A simple stimulus-response model can advance business or provide entertaining pastime, but it is hardly enough for the higher goals of promoting "[t]he possibilities of egalitarian, more democratic, constructive forms offering new kinds of interaction, knowledge and understanding."[13]

Notes

1. Pierre Moeglin: "Les Transes de 1 'Interactivité," Les Transinteractifs, redigée par Derrick de Kerckhove et Christian Sevette, Paris 1990, 105-106.
2. For a critical treatment of this theme, see Andy Darley: "Big Screen, Little Screen: The Archaelogy of Technology," Ten.8: Digital Dialogues, Vol. 2, No. 2 (Autumn 1991), pp. 78-87.
3. See: Martha Rosler: "Lookers, Buyers, Dealers, and Makers: Thoughts on Audience," Art After Modernism: Rethinking Representation, New York: The New Museum of Contemporary Art and David R. Codine publishers, 1984.
4. cit., Brenda Laurel: "Artistic Frontiers in Virtual Reality," SIGGRAPH '92 Visual Proceedings, edited by John Grimes and Gray Lorig, New York: ACM, 1992, 60.
5. Most recently I heard him talk about this in his presentation at the TISEA conference, Sydney, November 1992.
6. Myron W. Krueger: "Videoplace and the Interface of the future," The Art of Human-Computer Interface Design, op.cit., p. 420; Myron W. Krueger: Artificial Reality II, Reading, Massachusetts: Addison-Wesley Publishing Company, 1991.
7. For example, Ars Electronica (1990), SIGGRAPH (Tomorrow's Realities, 1991, and G-Tech, 1992), MuuMediaFestival (1992), TISEA (1992).
8. Timothy Druckrey: "SIGGRAPH '91: Gambling on Empty," Af terimage, Vol. 19, No. 8 (March 1992), p. 2.
9. Erkki Huhtamo: "Commentaries on Metacommentaries on Interactivity," Cultural Diversity in the Global Village, The Third International Symposium on Electronic Art, Edited by Alessio Cavallaro et al., Sydney: The Australian Network for Art and Technology, 1992, pp. 93-98.
10. In a reportage about Iwai's work in the TV program, "What's Next," TV-Asahi, Japan, March 10, 1991. Toshio Iwai kindly provided me with this source.
11. Iwai partly finances his artistic production by creating technically innovative television programs for Japanese commercial television companies, such as Fuji TV. In Japan this is often, beside teaching, the only survival strategy for a media artist.
12. I am referring here to the debate raised in Finland by my publication, Virtuaalimatkailijan käsikirja [The Handbook of the Virtual Voyager], Turku: Lähikuva, 1991.
13. Darley, op. cit., p. 87.

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