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The Work of Art in the Age of Digital Reproduction

On the relationships between early twentieth century avant-garde movements and new media



In this article, which was presented as a paper at the Colloquium *Literature and Media* at Nagoya City University on June 16, 1998, I focused on the relationships between the early 20th century avant-garde movements and the new media. I provide some ideas on the influence of avant-garde aesthetics on today's media environment. The article stresses the new media's use of traditional avant-garde techniques such as collage on an internalized and functional basis. The computer is seen as a surrealist network. Art is performed as a bourgeois event. The Internet, which is often considered to be a world wide museum or library, builds a bourgeois institution, which controls the production as well as the reception of art.

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Allow me to begin with an example from my own experiences within our computerized new media world. Shortly after I started working with the computer I had a dream. One morning I woke up in a foreign, unfamiliar room. Lying on my back, I stared through a window in the ceiling. The clouds moved by, the sun moved by and suddenly I realized that I was moving my hand, and in the way my hand moved, the world outside the window changed. It was a disturbing image. Then I discovered that I was also able to replace the window by moving a finger (it was a subconscious movement).

The ceiling easily turned into a wall, and I was lying on my side, looking through the window, watching the changeable world outside. Then I got up and concurrently lost my balance. The window and the room started moving with me. There was no orientation; there were no fixed points. When I looked for the door, it turned out to be only a picture. I finally woke up and found myself in my own bed at home. I felt as if I had been a part of one of Magritte's or Max Ernst's surreal paintings (see figure 1).

Our reality has changed, but has our language changed with it? The ambiguity of reality can be seen best in the language, or where language becomes metaphorical. There is a phrase I noted for the first time since working with the computer: some people say they have to work on the computer, they no longer say what they are working on; they simply refer to the machine they are using. Or they say,



Figure 1. Max Ernst. *La Femme Chancelante*. 1923. Düsseldorf: Kunstsammlung Nordrhein-Westfalen, Germany.

that they have to go back to their computers instead of going back to work (but one may also say, that the workers in the age of the industrial revolution had to go back to their machines as well...), thereby the computer has become a symbol for work. Whereas no one would call a plantation worker of the nineteenth century an independent person, everyone believes that computers give us more independence. The better paid "work" is now computer-related work: programming, desktop publishing and managing the use of computers. At the same time, no one can give guarantees for a definition of certain work in our age of digital reproduction. A printer, for example, in today's language means mainly a computer controlled machine that prints files. Furthermore, we speak about a "printer" when we mean the symbol for printer software on a computer screen. Those icons, as well as pictures made of computer language, are broadcast codes; they are

shared by a mass audience and learned through experience.

Such overlapping of aesthetic frames can already be found in the early twentieth century avant-garde movements. Using letters or words only as icons, as the dadaists or cubists did, changed the medial character of language. Language from that point on was part of a communication process without necessarily transmitting any meaning. This may be best shown in Raoul Hausmann's advertisements of 1918, which consist only of meaningless letters (*see figure 2*).



Figure 2. Raoul Hausmann.
Advertisement printings. 1918.

The meaning of a word was no longer necessary for understanding. Instead words became symbols for something else. For the cubists, the newspaper shreds they used, stood only for the world of cafés or the reality represented in the picture itself.

The symbolic language within commercials is another indicator for such a gap of reference. Language more and more has become an icon. We can see this phenomenon in the use of English words within Japanese advertisements. They are symbols for another culture. However, these Roman letters as symbols do not represent the American culture as it is, but the world of commerce. That switch I would call a gap of reference (see figure 3).

When these techniques, originally used by the avant-garde, are now used in advertisements, how can we still define

works of avant-garde art? We are tempted to say, a commercial is only pseudo art. One problem of this definition is that pop artists, such as Andy Warhol, followed the same structure of advertisement. Thus, advertisements can be taken for art. Everything can be taken for art.

It is, of course, our misunderstanding of the old avant-garde. Their idea of presenting art as life, of overcoming the borders of reality and art work, has turned into an understanding of life as art based on a synonymy of style and fashion. Avant-gardist art is now so popular that art is

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北海道、東北でブレイク中の名曲、いよいよメジャー・リリース。

Maxi Single 「天使達の歌」

坂本サトル IN STORE NOW!!

COCA-50109 ¥1,260 (incl. TAX)

本日、全国テレビ朝日系「トゥナイト2」内にて出演予定。

Figure 3. The Yomiuri Shimibun. 5/26/99, 31.

not targeted to a limited audience any more. To use the terms of media theory: art was supposed to be a narrowcast code. To read a book once involved more deliberate learning. Now one can access literature over computer data bases. We can search for certain phrases, and we may pick up some scholarly background information, as well as read images. The linear system of writing and print has switched to a multi-dimensional system of language. On the World Wide Web, readers and writers can hardly be distinguished. Mike Sandbothe has, among others, analyzed the impact of the new media:

In hypertextual conditions writing and reading become pictorial operations. The writer develops a netlike framework, a rhizomatic image of her thoughts. This image is multiform and complex. It consists in a plurality of varying paths and references which the reader forms into new thought images resulting from the interplay between the text's open structure and the reader's interests and perspectives.

Equally, in the hypertext medium the writer is no longer in a position of omniscience.

Whereas the traditional author is responsible alone for sketching out the closed system of the book or essay he writes, hypertextual writing and thinking can take place in immediate interaction with other people's writing and thinking.¹

Thus, the Internet is often described as a worldwide museum or library, easily accessible for everyone. It is so easy that we sometimes forget that we depend on search engines. Often when looking for a book on a real bookshelf, the book next to it turns out to be the better one. What I discovered serendipitously, is nothing less than an accident. Everyone knows that a library is only as good as the librarian. A good librarian can not be replaced by a search engine on the computer, which is more of a gatekeeper than a librarian. It hides information by leading one to too many different and unordered sources. It is, as interactive as it looks, not an intelligent system at all; it is more comparable to a nonsense play or an event of art.² It reminds me of the sur-realist word games, reflected best in the surrealist papillon: "Surrealism that is the negation of literature."³ On the other hand, a search engine is more creative than a librarian. In an odd way it is creative since it demonstrates the process of searching instead of fulfilling its meaning. It is searching as a movement, and it makes one believe

that the loss of a librarian makes a better library. It is mathematics without a final sense and surrealist art without an artist (see figure 4).

The Internet is the first museum or library that is not one. It makes one believe that the loss of a library or a museum can still be taken for a library or a museum.⁴ Hans Magnus Enzensberger once pointed out that the German newspaper *Bild*⁵ was the first newspaper which sold the loss of news as news (see figure 5).

It was also the first newspaper that presented a media switch in German Newspaper printing history: from word to picture. One can take those switches for better or for worse. The fact is that on the Internet a newspaper is not a newspaper, and a broadcast is not a broadcast. The same applies to the arts, including literature.

Lets look back again to the cubist aesthetics. The newspaper within a collage was not a newspaper any more. A cubist portrait was not a portrait at all. For the Russian Futurists, especially Vladimir Chlebnikow, the words were not words within a system of grammar. They worked with language more as material. In 1913 they claimed that grammar did not count, that letters were only traffic signs for the words.⁶ The network of meaning was deconstructed. The flow of information was purposely interrupted to shock the audience. However, today's flow of information is an ongoing interruption. Walter Benjamin's definition that shocks can be cushioned by a heightened presence of mind seems to be ridiculous, when we look at the shock waves of our new media age. Whereas in Benjamin's time the shock could be seen as a single interruption, it is now a flow of interruptions. The shock has become part of our media culture. We even talk about a cultural



Figure 4. From *La Révolution Surréaliste*. 1926.

shock when we define the process of assimilating to a new culture. The paradox, that we do not mean what we say, continues in our everyday life.

Let me explain this paradox with an excursus to the history of avant-garde.

Since I focus on the relationship between literature and media, it seems that my argumentation has become a dialectical approach between two opponents: the old narrow and the new broad code of signs; the art of avant-garde and its overcoming in the mass media. The differences, nevertheless, are evident. After the turn of the century, when many European artistic and linguistic circles rediscovered the materialistic and medial side of language, the metaphor network became useful to analyze the structure of language itself.⁷ The bourgeois idea of being rational — in the sense of linear thinking — was totally rejected. It was a protest against a cultural tradition that had used the body

as a medium for the mind. In opposition to this, the mind should have been used as a medium of the body. Parallel to it, glorification of the soul was frowned on by the avant-garde. A new body cult, including the new dance movement, led to the idea of a more sensual life style. But such an understanding simply turned the old ideas upside down. Here we can find one reason for the paradox of the avant-garde as a sub-bourgeois movement. The idealist notion of being a forerunner is the reverse side of a bourgeois society that believes in a development of its culture. Therefore the avant-garde has always been a part of bourgeois life style. In its rejection of tradition, it followed tradition.⁸ In other words: a bourgeois society needs a certain number of outsiders to define and constantly redefine itself. The perfect bourgeois society would perhaps be built by a mass of outsiders who are all using the same medium.

The Internet, with its myth of a virtual community,⁹ is a bourgeois institution



Figure 5. *Bild*. Online Title. August 1998.

that includes anti-bourgeois ideals as well. Avant-garde freedom and bourgeois ubiquity are only provided within the framework of a wired society.¹⁰ The Internet, exactly defined by its metaphors, is a more powerful medium than Benjamin could have imagined. That power has often been described by the term multi-media. It includes not only one medium, but a combination of all media as well as the possibility to switch between them. In consequence the single media can not be distinguished any more. In the beginning, the Internet had been seen as a new medium for an anti-bourgeois sub-culture, as the old avant-garde had been presented itself. But the myth of new media is nothing less than the old myth of the avant-garde as an anti-bourgeois movement. The future of multi-media, which is represented by a single, all purpose medium unfortunately provides not more freedom, but less.¹¹ The individuum does not get more powerful, but less.

In *The Japan Times* of June 24, 1998, an article by Bill Gates appeared, in which he discusses the future of the Internet. He begins with the question "Content or discontent?" then compares the development of the Internet with the television revolution, and ends with the statement:

"The Web content business will really get exciting when you're able to carry an inexpensive electronic tablet with you that connects wirelessly to the Internet. You'll be able to look up everything."¹² The myth, Bill Gates uses, is obviously a bourgeois one. The old ideal of enlightenment continues in the idea of a medium that can provide every content we may ever need. Furthermore, Bill Gates is not the only one, who believes that the organization of content in the form of digital reproduction is the best possible way for everyone to easily access information. When both of the large computer companies Macintosh and Microsoft started their 1997 promotion campaigns, they showed us pictures from the world of education. They wanted us to believe that we or our children are able to easily gain knowledge only with a computer. I do not know whether this is the truth about today's education or not, but the campaigns reminded me of someone who

tries to teach language with only a picture book. The Microsoft campaign presented a lot of pictures, pictures of course, one might also have found in a dictionary, and I asked myself: why would it be easier to access those pictures over the computer instead of opening a book?

It is an old myth that a new medium helps us educate people better. Walter Benjamin believed in this myth as well. When radio as well as film took the first steps as mass media, Benjamin wrote his well-known essay *The Work of Art in the Age of Mechanical Reproduction*.¹³ He believed that the new mass media would help raise the audience to a more active and more political level. Literally, he wrote that the distinction between author and public was about to lose its basic character. He wanted the readers to become authors. He did not know about the Internet, of course, but I am certain, that in this sense he would have welcomed this kind of

mass communication as a perfectly practical solution for his theory. On the Internet, a mass audience itself creates an art medium. It seems that Benjamin's *interactive* understanding of the arts has made his theory fruitful for today's media analysts. However, the question remains, who is the director of this reality play and who is the consumer?

The key to answering this question is the perception of reality. Natan Altman, a Russian futurist painter, already claimed in 1918, that a futurist painting exists as a collective life.¹⁴ Some media analysts argue that there is a similarity between watching television and perceiving everyday reality, since reality is in itself a complex system of signs interpreted by members of a culture in exactly the same way. I would like to add that the distinction between author and reader, that Benjamin was referring to when he was describing the audience's reaction to new media, has meanwhile changed to a relationship between those who *provide* a new medium and those who *use* it. We have learned that the author is no longer only a person who writes a web page or creates a movie or a radio play. There is a new reader behind this old-fashioned type of author. This new reader is even more

powerful, since he is setting the frames for the medium; he is the one who uses the programs that others have written. The new authors and readers of the new media age are consumers or pseudo authors (to follow Adorno's definition of a pseudo artist).¹⁵

Let us look at this issue from another point of view: The artists, from Horaz to Mozart to Zappa always had to go where the money was. This is not a secret at all. Where is the money today? As a matter of fact, the computer industry seems to take control of the arts, the educational system and the sciences. It is going to change the status of independent authors and readers into the status of a mass of dependent consumers. When sources become transformed, it might be important to ask who is doing it and why. We can neither "think different," as the Apple slogan suggests, nor think faster than Bill Gates (as I recently read in an Internet article). We also will not "inform ourselves to death" (Neil Postman's prediction),¹⁶ but we can try to be as smart as they are. In 1914 the American Futurist Mina Loy wrote an aphorism, which illustrates the need to deconstruct the old myth of the new media: "IN pressing the material to derive its essence, matter becomes de-

formed."¹⁷ We are now at the beginning point of moving outside this electronic black box, called the computer, to deconstruct its aesthetics and to write a media theory that analyzes programming language as well as its products.¹⁸

When we talk against the market strategies of the media world, are we, at the same time, talking against avant-garde aesthetics? Or when we are glorifying the new media world, are we — at the same time — repeating old Futurist arguments? What if our position is the same, and could be explained by the same determination of a bourgeois code? One can say that the dadaists, for example, preserved the old idea of an idealistic art instead of creating anything new. To educate people by throwing meaningless phrases at them must have reminded the audience more of what had not been presented, than what was presented during a dadaist performance. In the end, dada had become

bourgeois, a problematic development, which was discussed by the avant-gardists at the end of their international movement.¹⁹ In 1920, it was not the nonsense art of the Berlin dadaist exhibition, which was accused by the German justice, but the brutal and realistic drawings of the military by George Grosz (see figure 6).²⁰

One other argument, which young people often have against the criticism of their pop culture today, is an old dadaist one: to make one's own experience!²¹ The early avant-garde, as we know, has also been described as a mode, a trend, a life style.²² The Internet, with its dadaistic web pages and its surrealist search engines, with its cubist network and its futurist technique is — like the avant-garde was — only the reverse side of our bourgeois society. A computer is not a new medium, and a hypertext is not a new language. The new media work with the same structure of metaphors and

myths. We still read the words and look at the pictures, singularly and consecutively. The aesthetics of the multi-media culture were first presented in the art of the early twentieth century avant-garde movements. The computer is neither a higher nor a more communicative medium in media history. In HTML programming, there is no difference between the old footnote and the hyperlink. There is also a coincidence between the surrealists' reality of a dream and what Walter Benjamin called the second reality ("*doppelte Realität*"). The idea of a virtual reality was described best by the Italian Futurist avant-garde movement.²³ In their *Technical Manifesto* of 1910 the futurist painters pronounced: "We shall henceforward put the spectator in the center of the picture."²⁴ Reality and virtuality were combined in a holistic manner. The difference between the old avant-gardists and the new media seems to be marginal. There is only a difference in how to create a surreal reality. The painter and author Max Ernst used to cover his head with a



Figure 6. First International DADA-Fair: Berlin 1920.

blanket for several hours, not sleeping but daydreaming, before he started working on his art. Magritte's paintings often show overlapping windows and canvas. Today, when we use a computer, a mouse, a screen and an operating system called Windows, we are constantly working with this surreal aesthetic (see figure 7).

The avant-garde utopia of a "machine man" is now reality. "The arts are like any sciences, a discipline of mathematics," wrote the Russian futurist Rodtschenko in 1921.²⁵ The Italian futurists also used the phrase an "electric heart." A cardiologist would agree with this terminology,

but not from an aesthetic point of view. What the futurists and dadaists understood as an aesthetic concept of life, has become real in a completely different way (see figure 8).

The Italian futurists would have loved today's computerized world, but they would have had problems to define themselves as artists, too. Magritte or Max Ernst would have taken advantage of the new media and created many surrealist pictures, but they would have had problems in obtaining the same attention as they received in their life-time.²⁶ What I want to point out is that we are using the avant-gardist's aesthetics on an internalized basis. We are consumers and so are the artists of the new media age. There is no difference any more. Who is still able to distinguish between an artist and a pseudo artist? We are not necessarily aware of the techniques that we are using every day, techniques that have been developed by avant-garde artists: collage, the art of

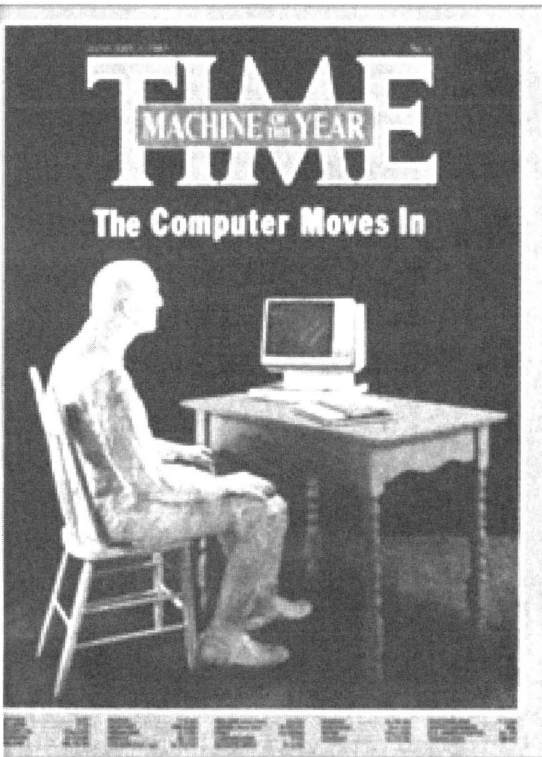


Figure 7. *Time Magazine*. Title with sculpture by Segal. January 1983. The "Man of the Year" is the Computer.

noise, word art, the exquisite cadaver, automatic writing, etc.²⁷ We live within a surrealist picture. When we work with a modern text program on the computer, our text is a collage and so is the draft. And almost every advertisement shows us the perfect use of original avant-garde techniques. When the cubists used parts of a newspaper as material for their collages, they wanted us to become

defamiliarized with our bourgeois concept of art and life. Today, within the world of advertisement, as well as on the Internet, we have become familiar with those techniques of defamiliarization (see figure 9).²⁸

If we want to search for a definition of artwork in the age of digital reproduction, we need to ask if those techniques of defamiliarization still work. The surrealists already depended on an art market which had mixed up innovation and event. For Lyotard, the less meaning found in a work of art, the more it is considered to be avant-garde. Art as event can be seen as the negation of content.²⁹ Stephen Foster defines events of art in a more sociological way:

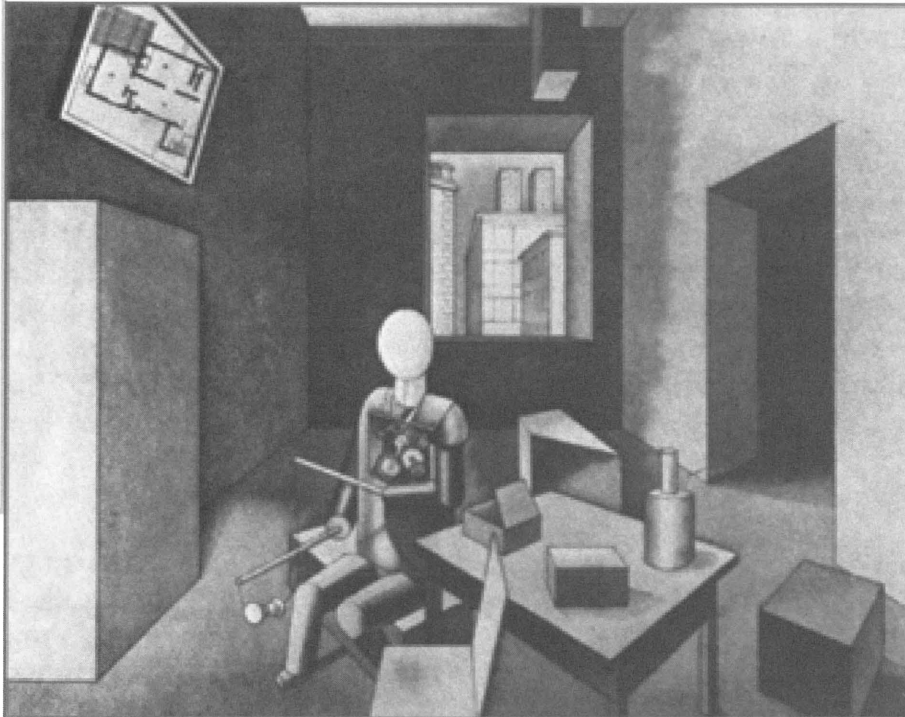


Figure 8. George Grosz. *Diabolo player*. Aquarell 1920. Privately owned.

That the historical concept of the event coincides with the intentions of the avant-garde is no accident. This concept of the event [...] is fundamental to the avant-garde's concept of itself and to its concept of the facilitation of change. Here, events are postulates or propositions about relationships between the past, present and future. Yet, notwithstanding what they are about, they are conceptually never more nor less than acts in the present. [...] Cultural patterns and processes are nothing if they are not perceived as such. The event, as part of the chain of events, is recognized as a pattern and employed as a process. This is the case whether perceived internally (by the 'agent') or externally (by the observer) or in hindsight (by the historian).³⁰

The process of digital reproduction does not necessarily change the avant-gardist definition of artwork, but it changes the reception of art. On the Internet, the chain of events continues. Today we have in a very traditional way what the avant-garde movements once proclaimed as a new art. Our way of perceiving reality changed in the first half of the twentieth century: digitalization is only a result of

that change. The Internet or network as metaphor is the transformation of the old avant-garde idea of secessionism. It is the idea of building a net between different arts and artists. Since they already understood art as multimedia art, do we live in a world of art yet? Has our media age fulfilled the imagined world of the constructivist and futurist avant-gardists of the twenties? Or is the futurist aesthetic close to today's reality? The Italian futurists were mainly influenced by the technical inventions of the late nineteenth and early twentieth century. One

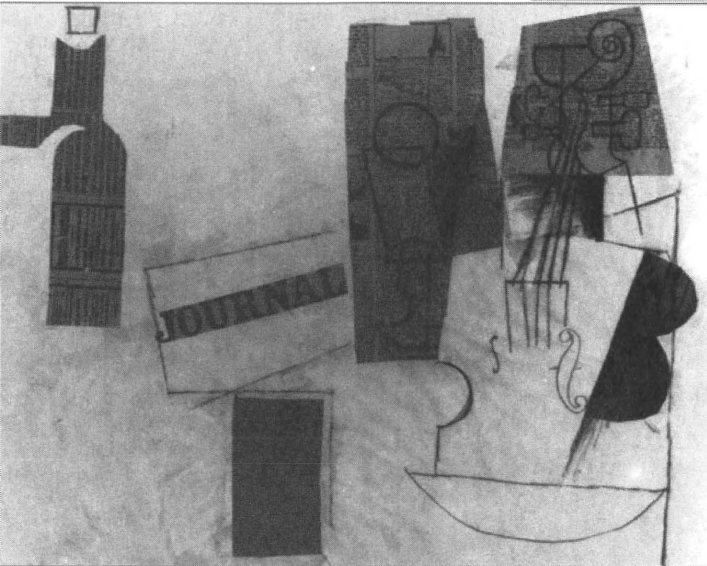


Figure 9. Picasso. *Bottle, Glas and Violine*. Collage 1912/13. Stockholm: Nationalmuseum.

of their goals was to renew human sensibility. Marinetti thought the human psyche was influenced by the telegraph, the telephone, the gramophone, the train, the bike, the car and other ways of communication, transportation and information — he was, interestingly enough, literally talking about communication in that way!³¹ When we compare those statements with some common models of communication theory, we find a similarity in the use of technical metaphors (see figure 10).

Based on avant-garde aesthetics, we can understand signs more abstractly, and we do this on a highly advanced level. Although Mondrian's pictures perfectly presented this abstract aesthetic, in 1965 a hundred people at Bell Labs compared a computer generated composition to one of Mondrian's compositions ("Composition in lines"). They had to decide which was the original.³² Fifty-nine percent made the wrong decision. The randomness of the

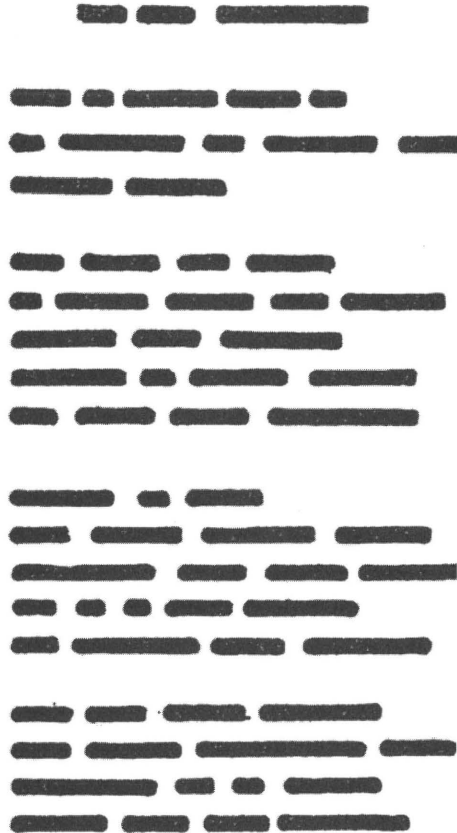


Figure 10. Man Ray. *Poem of Sounds*. 1924.

computer composition seemed to be more creative than the orderly structure of Mondrian's lines. I surmise that an audience of 1917, when the original was created, would have made the opposite decision, not because they would have known Mondrian's art better, but they had a different understanding of art. One goal of modern aesthetics was randomness. We are now so familiar with the avant-gardist's old techniques of defamiliarization, that we can take a computer's work for art. Our understanding of creativity can be fulfilled by a computer program as well as by man. We are satisfied with a computer program, which has built in enough randomness so that we consider it to be creative. How a work of art is made has become more important than its content. We do not need an author or an artist, but we do need programmers and consumers.

However, when the computer is a surrealist art network itself and the Internet is the institutionalization of avant-garde events, art or literature on the computer cannot be art or literature in the traditional definition. Art within the new media is a paradox: it is a mass product, a product of the mass and for the mass. It is art

without a real audience and without an author in the original meaning of the word. It is neither folk art nor high art. It is exactly what Walter Benjamin called tendency art, though he understood this term politically. In the age of digital reproduction, the audience as a critical factor does not matter. Art on the computer is art within its own medium. Benjamin did not know that there would be a medium that could be neither controlled by a single author nor by an omnipotent collective. The traditional avant-gardist movements had a critical understanding within their aesthetics of fragmentation. They were mostly anti-movements against the old bourgeois art and their institutions. And they often claimed a political intent. They wanted to change the aesthetics of mimesis to an energetic concept of art, which forces the observer or the audience to change their point of view.

Today's mass culture uses avant-garde aesthetics rather affirmatively. The news on television is a collage; the cutting is often dictated by the number of shocks that can be provided (not to mention the Hollywood film industry). The quality of shock has switched back to a quantity of shocks. Benjamin was right when he wrote that the film, as a new media of entertainment, was a chance to change the passive role of the audience to an active one. His idea of a "mobilization of the masses" was the desire for a more political and critical thinking audience. Art can be seen as a political forerunner: today the media play this part by using the aesthetics of avant-garde. So what could possibly be the politics of an Internet society? Though there are now first attempts at defining the prospective politics of an Internet society in synergy with the developments of bourgeois society, the hope

that political-economical power and public interests do not merge is, nevertheless, small.³³

Niklas Luhman, defining power as a medium of communication, said that the concentration of different media into one changes the different and symbolic character of each single media.³⁴ Equivalent to this, the individual is losing its power. If we need criteria for a definition of mass or multimedia culture, we can find it in the aesthetics of dada. The Berlin "dada manifest" of 1918 stated:

The word Dada symbolizes the most primitive relation to the real environment, with Dadaism a new reality takes place. Life appears as a simultaneous mixture of noises, colors and spiritual rhythms; it is transformed in Dadaist art with all sensational proclaiming and longing of the risky psyche of every day life, and with all its brutal reality.³⁵

If we take this as an early definition of multimedia culture (MTV, Reality TV, etc.), we will obviously discover that the medium became more important than the message. The dada movement was probably the first avant-garde group which had a mass audience. It was art only to be understood through experience and without any educational preparation. The

different narrowcast codes of the old media (music, language, painting, etc.) were forged together into a single broadcast code. However, dada had no choice in becoming just another movement in literary history. Later film or radio easily and in a more productive way integrated noises or words as acoustic material. The experimental character of dada's avant-garde aesthetic soon became another common realistic element.

If we want to know about the future of artwork in the age of digital reproduction, we may have to consider that our perception of reality is influenced by the historic avant-garde and their dependence on a bourgeois society. Digitalization, understood as a result of fragmentation and defamiliarization, is perhaps the only way to perform avant-gardist artwork as a bourgeois event — it might turn out to be the perfect way to institutionalize subcultures within a so-called global society.

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¹ "Interactivity - Hypertextuality - Transversality: A media-philosophical analysis of the Internet." 1996-1998. Internet resource: www.uni-jena.de/ms/tele/e_top.html

² The media scientist Hartmut Winkler compares it with the structure of language itself: "Suchmaschinen: Metamedien im Internet?" In Becker, Barbara and Michael Paetau, editors. 1997. *Virtualisierung des Sozialen*. Frankfurt: Campus, 185-202. Internet source: www.rz.uni-frankfurt.de/~winkler/suchmasc.html

³ "Surrealistische Papillons." In Barck, Karlheinz, editor. 1990. *Surrealismus in Paris, 1919-1939*. Leipzig: Reclam, 212.

⁴ The project of an imaginary library, maintained by the University of Hildesheim, Germany, reflects this dialectic: "Die imaginäre Bibliothek." Internet resource: www.uni-hildesheim.de/ami/pool/

⁵ "Bild" means picture and describes the content of this newspaper which is also available online at www.bild.de/

⁶ "Richterteich." In Asholt, Wolfgang and Walter Fähnders, editors. 1995. *Manifeste und Proklamationen der europäischen Avantgarde (1909-1938)*. Stuttgart, Weimar: Metzler, 71.

⁷ Winkler, Hartmut. 1997. *Docuverse - Zur Medientheorie der Computer*. Munich: Boer, chapter 1. Internet resource: www.rz.uni-frankfurt.de/~winkler/h-1kap.html

⁸ Jürgen Habermas' thoughts on the philosophical discourse of the modern age reflect this as "aporias of a theory of power": "Jede Gegenmacht bewegt sich schon im Horizont der Macht, die sie bekämpft, und verwandelt sich, sobald sie siegreich ist, in einen Machtkomplex, der eine andere Gegenmacht provoziert. [...] Wer die theoretische Avantgarde von heute besiegt und die bestehende Hierarchisierung des Wissens überwindet, stellt selbst die theoretische Avantgarde von morgen, errichtet selbst eine neue Hierarchie des Wissens." *Zwölf Vorlesungen*. 1985. *Der philosophische Diskurs der Moderne*. Frankfurt a.M.: Suhrkamp, 300.

⁹ "Virtual communities are social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace." This definition is taken from an online introduction by Howard Rheingold to his 1993 book *The Virtual Community*. Cambridge, Massachusetts: Touchstone Books. Internet source: www.rheingold.com/vc/bookintro.html

¹⁰ See Bernhard Debatin's discussion of "Allwissenheit und Grenzenlosigkeit: Mythen um Computernetze," paper presented at Jahrestagung der DGPK at Mainz, 1998. Internet source: www.uni-leipzig.de/~debatin/German/CompMyth.htm#5

¹¹ Bernhard Debatin, in "Metaphern und Mythen des Internet: Demokratie, Öffentlichkeit und Identität im Sog der vernetzten Datenkommunikation," 1997, talks about a new imperialistic, marketing based "Frontism," which undergoes the idea of freedom. Internet source: www.uni-leipzig.de/~debatin/German/NetMet.htm#11

¹² Gates, Bill. 1998. "The Internet, circa 1998: Content or discontent?" *The Japan Times*, July 24, 14.

¹³ Benjamin, Walter. 1935. "The Work of Art in the Age of Mechanical Reproduction." Frankfurt a.M.: Suhrkamp, 1974. Internet source: www.aber.ac.uk/~ednwww/Undgrad/ED10510/benjamin.html

¹⁴ Altman, Natan. 1918. "Futurismus und proletarische Kunst: Programmatischer Artikel." *Manifeste und Proklamationen*, 160-162.

¹⁵ For an analysis of Adorno's position see Kausch, Michael. 1988. *Kulturindustrie und Populärkultur. Kritische Theorie der Massenmedien*. Frankfurt a.M.: Fischer.

¹⁶ Postman, Neil. 1990. "Informing Ourselves to Death." Speech at German Informatics Society, October 11, 1990. Stuttgart, Germany. Internet source: www.interact.uoregon.edu/MediaLit/FA/MLArticleFolder/informpost.html

¹⁷ Loy, Mina 1914. "Aphorisms on Futurism." *Camera Work*, 45: 13-15. See also, Conover, Roger L., editor. 1996. *Last Lunar Baedeker*. New York: Farrar, Straus and Giroux, 272-275. Susan E. Dunn maintains an excellent webpage on Mina Loy: www.shc.stanford.edu/sed/Mina.Loy.html

¹⁸ Hartmut Winkler expressed this opinion in an interview with Geert Lovink. "The Computer: Medium or Calculating Machine?" *Convergence* 3:2. Internet source: www.rz.uni-frankfurt.de/~winkler/lovink16.html

¹⁹ "Everything in our age is dada, except the dadaists. [...] Art is dada. Politics: dada. Philosophy: dada. Revolution: dada. War: dada. Peace: dada. Dada is our age! Poincaré: dada. The German emperor: dada! Dada can not be defined. But everyone knows what dada is, since he lives in Dada." [Author translation] Doesburg, von Theo. "Charakteristik des Dadaismus." *Manifeste und Proklamationen*, 295.

²⁰ Tucholsky, Kurt. 1920. "Dada-Prozeß." In Riha, Karl, editor. 1977. *Dada Berlin: Texte, Manifeste, Aktionen*. Stuttgart: Reclam, 127-129.

²¹ "Dada ist der Schrei der Jugend." Aleksiz, Daragan. 1921. "Dadaismus." *Manifeste und Proklamationen*, 246.

²² Böhlinger, Hannes. 1978. "Avantgarde - Geschichte einer Metapher." *Archiv für Begriffsgeschichte* 22, 90-114.

²³ When "virtual reality" was introduced, "[w]ith just a few words they have invoked the traditions of art and representation, psychology and metaphysics, ontological philosophy, discovery, colonization and the frontier." For a further discussion see Chesher, Chris. 1994. "Colonizing Virtual Reality: Construction of the Discourse of Virtual Reality, 1984-1992." *Cultronix* 1:1. Internet source: www.eserver.org/cultronix.chesher

²⁴ Boccioni, Umberto, Carlo Carrà, Luigi Russolo, Giacomo Balla and Gino Severini. 1910. "Technical Manifesto of Futurist Painting," *Poesia*, April 11. Internet resource: www.shoga.wwa.com/~sluggo/futurism/painters.html

²⁵ Rodtschenko, Alexander. 1921. "Losungen." *Manifeste und Proklamationen*, 229. For information on Rodtschenko see Susan M. Hansen's webpage. www.artcon.rutgers.edu/projects/typography/hansen/default.html

²⁶ The most used picture on webmasters' homepages is probably Magritte's pipe, "The Betrayal of Images" (1929), which "is neither a singular nor a definitive work." As Jeffrey T. Schapp points out, it has become the most popular "modernist signature object" and therefore "a distinctive object of and instrument for modern desires." "Art/Lit Combines; or, When a Pipe Is Only a Pipe." *Profession, MLA*, 37-50.

²⁷ The exquisite cadaver has become an excellent example for art on the computer. Internet source: www.pharmdec.wustl.edu/juju/surr/games/ExCad.html

²⁸ Bernhard Debatin points out that the understanding of author, text and authenticity has become similar to the structure of "dadaist text collages": "Die in Newsgroups und Mailing-Lists übliche Form der Kombination von Texten verschiedener Autoren, bei der die zitierten Bezugstexte in meist zerstückelter und dekontextualisierter Form in die jeweilige Antwort eingefügt werden, erzeugt einen neuartigen Typus von Text, bei dem mitunter dadaistisch anmutende Textcollagen entstehen. Eine solche elektronische Textcollage hat keinen klar bestimmbar Autor, sondern eher eine Vielzahl von Editoren, die immer neue und andere Versionen eines sich gleichsam automatisch fortschreibenden Textes kopieren und transformieren. Damit wird die Wahrheitsfrage hier höchst prekär, zumindest solange man die Wahrheit von Aussagen mit auf Subjekte zurechenbaren Geltungsansprüchen verbindet. In "Ethik und Internet: Überlegungen zur normativen Problematik von hochvernetzter Computerkommunikation." Internet source: www.uni-leipzig.de/~debatin/German/Netzethik.htm

²⁹ Lyotard, Jean-François. 1983. "The Sublime and the Avant-Garde." In Benjamin, Andrew, editor. 1989. *The Lyotard Reader*. Oxford: Blackwell, 196-211.

³⁰ Foster, Stephen C. 1988. *Event Structures and Art Situations. Event Arts and Art Events*. Ann Arbor, Michigan: UMI Research Press, 7.

³¹ Marinetti. "Destruction of Syntax." Internet source: www.shoga.wva.com/~sluggo/futurism/destruction.html

³² This example was taken from Susanne Acker's online teaching materials, which includes the pictures of Mondrian and Noll. Internet resource: www.ikm.his.se/ikm/~susanne/TwentiethCentury/TwentiethCentury3.html

³³ See, with reference to Habermas' *Discourse of Modernity*. Debatin, Bernhard. 1996. "Elektronische Öffentlichkeiten: Über Informationsselektion und Identität in virtuellen Gemeinschaften." FIFF. Kommunikation, Computer und Demokratie 4, 23-26. Internet resource: www.uni-leipzig.de/~debatin.english/Articles/FIFF.htm#Absch2

³⁴ Luhmann, Niklas. 1988. *Macht*. Stuttgart: Enke, 102. His definition of media is broader than mine as used here.

³⁵ Hülsenbeck, Richard et al. 1918. "dadaistisches manifest." *Dada Berlin*, 23. [Author translation] Internet source: www.peak.org/~dadaist/English/Nav/dadamanifest.html