

Peter Weibel

The Medium Writing in the Age of the Turing Galaxy • *Writing in Search of New Carrier Media*

(1994)

1.81-86

With the invention of writing about 5.000 years ago the first and crucial communications revolution took place. It was with the help of the medium writing that for the first time an external memory for the storage of information was installed. External meaning that the function of memory was transferred from the brain, the nervous system, the sense organs, the human body to the outside, thus making writing the first technical or telematic medium of communication. Speaking was and still is an isochronic and isotopic form of communication. Speaking enables people who are in the same place at the same time to communicate "face to face". When before the range of communication was limited by that of the sense organs, writing allowed communication to go beyond this range, to overcome distances in terms of space and time. By means of writing remote or past events, events which took place in a different place at a different time, heterotopic and heterochronic events could be communicated to others. People who lived at different times in different places could communicate with people at points in space and time other than their own.

The medium writing when seen in a technical context is a type of apparatus (a mechanism), a formalism of the function of memory. The human ability for symbolization led to the invention of an apparatus of symbols, writing that is, with the help of which dislocation and distemporalization were overcome. The function of memory, externally stored in writing or transferred by man to an external storage means, represents a triumph over distances inherent in space and time. In this context writing is a "Language in Absence". The medium writing is thus a memory for the storage of information and symbols, accessible for anyone who is familiar with the code. A well known example for this function is the letter or the book.

As "Language of Absentees" (Sigmund Freud in "Civilization and its Discontents", 1930) writing means access to information (and thus to thoughts, emotions) which was written down by absent people about absent events. This was the beginning of polytopic and polychronic forms of communication.

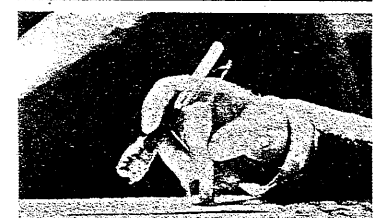
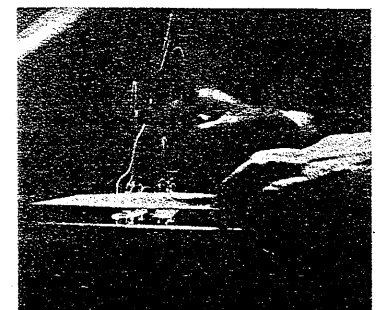
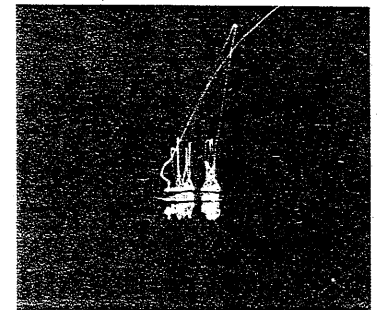
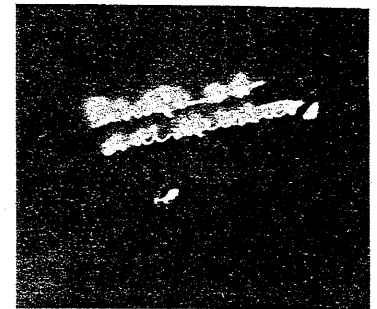
With the invention of printing about 500 years ago the second communications revolution took place. Writing which at first had been an achievement for individual communication, now became a carrier for mass communication. The function of memory of writing became generally available. The storage unit of writing became a mass storage unit. With the help of printing a larger amount of information than ever before could be compressed. But not only the speed of production was greatly increased but also the speed of distribution and consumption. Printing not only meant a much faster distribution of data but also the access to a far greater number of people. The revolution of speed and mass are thus implicit aspects of the information revolution which was initiated by the invention of printing. All of a sudden the mass of people had access to a code which until then was a privilege reserved for an elite of experts. Meanings of texts became accessible for interpretation by a social class other than that in power. The results were theological and social revolutions, the Bible for the People and eventually the Age of Enlightenment. Since printing communicated a far greater amount of data at a much faster speed than when texts were still copied by hand, the first information explosion took place. The book is the first mass medium of writing followed by the newspaper.

Still, the book could not yet be read simultaneously by many different people, but only many books could be read by many people. The technical limitations of the mass storage unit "book" became apparent. The progress from hand writing to printing, however marginal it may seem due to the fact that in both cases the medium applied is writing, represents a progress of very fundamental and significant implications. It shows that the essential feature of writing is not only its chain of symbols but its function as a technical carrier. It was the suspension of the hand as the production apparatus of writing by the art of printing which introduced a radical change and made writing the most successful and most dominant medium of our culture.

The culture of writing has dominated our culture ever since the art of printing redefined writing to a technical mass medium. Nature and effect of the symbol apparatus "writing" is fundamentally dependent on the technical carrier medium of writing. This is the real teaching of the Gutenberg revolution. When until then the hand, the quill-pen and the paper formed the technical carrier of writing, it was now this new combination of printing press, letterset printing and paper which for the symbol apparatus writing presented a tremendous increase in productive capacity. Thus, the decisive factor is the change in carrier medium. The root of the communications and cultural revolution was therefore a revolution of the technical carrier medium writing.

A third communications and cultural revolution as a result of a technical revolution is taking place today. The productive capacity of writing was and still is inhibited by previous technical media. Be it hand writing or book, both carriers of information were still in need of transport means. Information still had to be distributed by other means—the soldier, writing, the carrier pigeon, the vehicle. Even though, when compared to the sense organs, the range of information had been extended tremendously, it was still limited in terms of the range and speed capacity of transport and distribution means or devices. The information held in a letter did not reach the addressee until weeks later. The object was therefore to invent a technical carrier of writing which was to increase range and speed and was thus to make better use of the most essential features of writing.

Peter Weibel, Writing is Architecture/light text



This object could be best achieved by making the technical carrier itself as incorporeal or immaterial as possible. This separation of character and body, of information and carrier material, of message and messenger was achieved around the first half of the 19th century. The human body began to separate itself from the communication devices and became a component which since then has been peripheral and terminal only. The separation of body and message, of material and code formed the prerequisite that a message could travel without the body of the messenger, the code without the carrier material, the news without the physical body, something that became possible with the invention of telegraphy and the telephone. The message became immaterial, characters for the first time travelled without a body.

Writing as the first medium to overcome space and time initially still required a body for real "transmissions". It was connected to a carrier body, e.g. paper, or to a production body, e.g. the hand, and finally to a transport body such as the horseman or the ship. With the wireless telegraph, however, the character let go of the body to travel with the help of waves and with electronic speed. If "writing is the language of absentees" (S. Freud) then with each technical communications revolution this is further confirmed.

The third telematic communications revolution is therefore the beginning of a radical revolution of the carrier medium "writing", the object of which is to disembody and immaterialize. This digital carrier medium changes from a natural body into a technical prosthesis and eventually dispenses of the body altogether. The symbolization of messages through electromagnetic fields, which became the new carrier medium of writing and was a result of the invention of the telegraph in 1833-1835 by the mathematician C.F. Gauß and the physicist W.E. Weber, enabled the "bodiless" or incorporeal production and distribution of information. Characters travelling

with electronic speed were able to shift information in space and time optionally fast, instantaneous and ubiquitous. With the new technical carrier provided by electromagnetic waves the storage unit writing further increased the possibilities of writing and speaking. Networks consisting of computers, telephones, telegraphs, telex installations and satellites all of which form the basis of our entire communications system represent an orbital shell without which civilization would collapse. The progressing disembodiment of messages through electronic characters and the resulting acceleration of the range and speed of communication characterize the third electronic communications revolution on which our contemporary computer culture is based upon.

Writing and technics are both a product of man's ability for symbolization. In this context technics, as was already observed by Freud, continue the work of writing as the language of the absentee. Technics as the language of the absentee on the other hand enable writing to enhance and sublimate its work as language of absence. Writing and technics are therefore covariant and mutually dependent on each other in their development since they share a common origin. Writing in itself is already a technical medium. Transformations of the technical medium at the same time change the function of writing.

The picture has been continually changing its technical carrier medium for approximately 500 years. At first the idea of the picture was embodied in the medium oil paint. Around 1840 the picture became materialized in the chemical medium photography, around 1900 in the medium film, around 1955 in the magnetic medium video and eventually in the digital medium computer. The idea of the picture has therefore for hundreds of years jumped from one picture medium to the next, from one technical carrier to the next. The consequences were tremendous aesthetic revolutions. In the course of 500 years writing too, has jumped from one technical carrier to the next, from the art of printing to the CD-ROM. These jumps have, however, not entered our conscious mind to the same extent as those of the picture, al-

though hand writing and the page of a book or the book itself have been considered artistic for approximately 150 years—ever since their becoming obsolete as a result of the third communications revolution. Evidence for this is the entry of visual components into texts since Mallarmé and of the text into pictures since the cubists.

As a result of the third communications revolution and dematerialization, the carrier code became more universal. Electromagnetic waves are capable of carrying both pictures and letters. The third communications revolution therefore increasingly transforms our writing culture into a picture culture. Writing as a medium is threatened by advanced picture technologies. The medium of writing still hesitates whether to leave book and page and thus the Gutenberg galaxy and to emigrate to the Turing galaxy, onto the display and into computers and the digital, telematic networks. But in order to save writing our only option is to affirm new technical carrier media such as hyper and multi media carriers, digitalization and the conversion of "writing" from a letter code to a numeric code.

*Translated by Jacqueline Csuss*