



Siegfried Zielinski

Variations on Media Thinking



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Translated by Lauren K. Wolfe

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Introduction

Generators of Surprise

Diverse Media Thinking

Past centuries have provided us with plenty of those who prophesize and plenty of those who warn against the conquest of the last refugees of the *anthropos* by instruments and technical systems. Catholic mathematician Johann Zahn (1641–1707) believed the artificial eye (*oculus artificialis*) wielded such enormous power that the optical apparatus—a robust telescope with a projection chamber attached—could even extract impure spots from the supposedly pure and divine Sun, that it could, in other words, outwit astrophysical reality. Hegelian philosopher Ernst Kapp (1808–96) was urging as early as 1877 that culture itself be reconceived from a technological perspective as *organ projection* and that the structure of language was so intimately bound up with the nature of the state that the development of electronic communications networks and the kinematic concept of *disciplinary full-closure* represented the becoming-apparatus of the actual late nineteenth-century state. Friedrich Nietzsche (1844–1900) insisted toward the end of his life that the more his own psychophysical powers of handwriting deteriorated, the more his typewriter would become coauthor of his texts. His pencil was smarter than he was, Albert Einstein (1859–1955) is purported to have joked. Bertolt Brecht (1898–1956) knew already in the 1920s that art without technology was sheer absurdity. Walter Benjamin (1892–1940) assumed—if somewhat more serenely—that the typewriter would alienate the pen-holding hand of the litterateur only “once the precision of typographical forms were immediately assimilated into the conception of his books . . . and the innervations of the commanding fingers had replaced the familiar hand.”¹ Catholic iconoclast Marshall McLuhan (1911–80) wanted us to seek the agent of our sensibility and our understanding in the medium and nowhere else, though this first pop star in the global market of

media thinking largely left open what he actually meant by this mysterious portent, the *medium*. Friedrich Knilli (1930–), who was raised among the cutting and sewing machines of his uncle’s garment factory in the Austrian city of Graz and later studied mechanical engineering, came to understand the powerful materiality of the medial through the vibrating membranes of loudspeakers in Austria’s and Germany’s early radio studios and then developed from this his own psychophysical and aesthetic concept of the *total sound play* (*totales Schallspiel*). That was about the same time that Jacques Lacan (1901–81) began insisting emphatically that even the unconscious was structured like language. It was also at about this time that structure itself began to win the upper hand over the Subject in disciplines ranging from ethnology to history and literature and even early theories of cinema. No longer were we Subjects but *Projects* that in the ideal circumstance projected worlds of our own—as Vilém Flusser (1920–91) consistently emphasized in his own unique way. In an equally eschatological gesture, Friedrich Kittler (1943–2011) claimed, on the basis of his “technical a priori,” that all that was expressed and all that our eyes and ears received as symbolic material was first and foremost technology and that it always would remain technology, even at the vanishing point of its development.

Each of these diverse concerns, from prophetic and cautionary voices alike, has gained acceptance in various ways. What we refer to as our world is no longer thinkable without the medial. Mathematicians and physicists, medievalists, philologists of all kinds, theologians, philosophers, biologists, and art critics all know that they must deal with media—or at least with materials that are contingent on media—when they trawl through the containers, archives, and contemporaneous utterances that have been produced in their respective fields, in their endeavor to understand and to impart. All of them equally must learn to read, interpret, and calculate medial surfaces and materialities as well as the metaphysical messages intimately linked with these—messages that articulate and transport symbolic bodies and their networks.

The urgent question is, do these practices of *expanded hermeneutics* which technical objects and medial circumstances require of us demand in turn a separate academic discipline of their own? Must the heterogeneous, prismatic, aggregate phenomena of techno-aesthetic media be accommodated under a distinct and specialized system with delimited epistemic objectives and specific methods? Can we actually neatly organize the constant

transgression of limits that the thinking of medial circumstances requires? Or must such an endeavor necessarily break down into paradox, as it did for instance in Pier Paolo Pasolini's (1922–75) world of poetry and politics? Or again—with reference to a field adjacent to media thinking—has it ultimately proved to be good for the arts and the infinite diversity of our ways of seeing that we in the German-speaking humanities have established a unique compartment for them, one that now threatens to turn into the massive and highly ordered curio cabinet of a hegemonic regime of *visual studies* (*Bildwissenschaften*), in which the whole of our knowledge of what can be seen in objective form is filed, sorted, and archived?

Perhaps it is too soon to answer such questions with any certainty. It is, however, not too soon to pose them resolutely. For the tendency toward the establishment of media theory (in Germany, this has even been immoderately propagated as “media science” [*Medienwissenschaft*]) as its own discipline with its own laws, hierarchies, canons, power structures, conceptualities, and clearly defined origins, is quite strong. The disastrous consequence of such a circumscription, for instruction and increasingly also for research, is that the loops of self-reflectivity embarked upon by both apprenticed and established media experts assume ever more audacious forms and contents. Students now earnestly believe that the only legitimate content of media can be nothing but other media, and they write and act accordingly. Ever since critical thinking was cast out from the humanities, the medial has been confirmed and celebrated—and decelerated—as *the* communicative potential: for control and correction but also for culture. The *difference engine* has become an engine of management and design, even an engine of careers. To posit that nothing anymore can exist and thrive independently of mediation-machines tends to inflate those very machines into all-powerful, self-sufficient centrifuges positioned right at the center of what journalists still blithely refer to as society, where they whirl away, organizing their own academic circles around themselves.

Interdiscursivity implemented in experimental practice requires prismatic ways of seeing, judicious but always moveable viewpoints, artful variants as well as the development of elegant, multiperspectival narratives. Freestyle thinking—as I attempted to formulate that of Vilém Flusser²—without banisters to offer provisional support can become, in the long run, the movement of a prescriptive regulating-machine.

Elaborated media thinking needs in its immediate vicinity the depths

and gravity of other modes of thought that are not oriented toward medial phenomena, with which it may periodically connect, by which it may be stimulated, urged on, occasionally reined in, and reminded of its place. The study of medial sensations and structures is not an end in itself, or else it would devolve into the very paradox in the void which Baudrillard never tired of criticizing. Ultimately, technical means of communication only serve to make encounter impossible. It is the imaginary that saves us in the ongoing acid test between the real and the symbolic; yet it punishes us at the same time, given its semblant character. It was Jacques Lacan, borrowing an exceptional media concept from Lucretius,³ who so admirably formulated this in a number of variants.

Let's dwell for a moment, then, with this ancient thinker who has been so tremendously important in my own intellectual passages through medial phenomena. The *clinamen* is "the smallest deviation possible" that may take place "we know not when, we know not where," as Louis Althusser puts it, citing *De rerum naturae*, that incomparable natural-historical poem written by Lucretius in the last century prior to the Common Era. The *clinamen* causes an atom to "swerve" from its vertical plunge into the void, where "there occurs an encounter between one atom and another, and this event becomes *advent* on condition of the parallelism of the atoms, for it is this parallelism which, violated on just one occasion, induces the gigantic pile-up and collision-interlocking of an infinite number of atoms, from which a world is born"—a world, in other words, as an aggregate of atoms that is created through a chain reaction set off by the first swerve and the first encounter.⁴ Althusser, along with ancient Greek natural philosopher Epicurus, was convinced that the origin of any world, thus any reality and any meaning, is due to a deviation, that deviation and not reason is the cause of the origin of the world.⁵

Considered from the perspective of deep time, my own media research has at its core been powerfully shaped by those thinkers, poets, and naturalists known to the histories of science as Atomists. Before Socrates, and of course beyond the great dividers, Plato and Aristotle, the Atomists conceive of the world fundamentally as turmoil, a ceaselessly streaming exchange of the smallest particles, energies, and signals, a world that does not yet require such severings as that between subject and object, active and passive, matter and mind, between the receiver on one side and the sender on the other. Anaxagoras, Anaximander, Democritus, Empedocles, Epicurus,

Lucretius, and others thought the world as perpetually colliding objects, as the billiard-reality of interobjectivity, two and a half thousand years before this concept again acquired effective power under the banner of things becoming independent, interobjective; they thought chaos, its complex regularities and its incalculabilities; they thought the world as comprising porous objects that articulate themselves and thus reveal themselves to our perception, just as much as we in turn are realized for them, become ecstatic for them and step out of ourselves. It was Martin Heidegger who rediscovered this world in the twentieth century and ontologically fundamentalized it with unnecessary severity. And for French philosophers of becoming and of energetic dialogue, too—from Gilles Deleuze to Félix Guattari and, in a different form, from Alain Badiou via Jean-Luc Nancy to Jacques Rancière, with whom I had the pleasure of teaching on the same faculty for a number of years⁶—this world full of motion and events is the only thinkable one, or better, the only attractive one with respect to a basic idea: that the world which is known to us has only a single *raison d'être*, which consists in the fact that it is changeable and that it is constantly changing.

Michel Foucault was a master of the kind of writing that makes us operatively conscious of where what we call our civilization comes from, why and how we have evolved into powerful beings; and he managed to pose these questions in such a way that we are able to critically examine what we call history even as we write it. Deriving it from an antihistorical concept developed by Nietzsche, Foucault designates this process as *genealogy*. It enables us to understand developments as labyrinthine, as movements associated with digressions and impasses, and it assumes a many-eyed seeing and a many-tongued writing.

After Nietzsche, Foucault expended enormous energy in an attempt to uncover how a scattered world is assembled to produce a specific world. In so doing, he increasingly substituted genealogical tactics for the meta-methods of archaeology, with their utopian and teleological promises. Genealogy “does not seek out and describe the ‘things’ that phenomenology holds to be the world, but rather delineates the *manner* in which the ‘things’ are ‘made’ into ‘facts’”⁷—a variant of early ecological thinking that seeks to represent relation simultaneous with substance. Nietzsche had himself already proposed a methodological principle by means of which just such a genealogical representation could be realized. “Main proposition: no

regressive hypotheses! . . . And as many individual observations as possible.” “Task: to see things as they are! Means: to look on them from a hundred eyes, from many persons.”⁸

As media researchers who think materiologically, we opt—in the event that we must choose—for the particulars we can experience and not the all-binding general which can only be thought. This I learned first and most profoundly from Friedrich Knilli, the machine builder. This choice we make is deeply connected with respect for the artifact, for the technical, biological, and cultural other, with respect for that which is not identical with us.

We do not need a new ontology, neither subject nor object oriented, to play together, critically and productively, with the things, facts, and circumstances, the words and concepts, that have to do with media or that are constituted and produced through media. Just as Nietzsche wished to provoke the dull, entrenched, and encrusted mentality of parochial philosophers and historians at the end of the nineteenth century, and like the clique surrounding Foucault also attempted to do in the last half of the twentieth, now at the start of the twenty-first century, we need another *move into the open*.⁹ This is the title of Berlin-based philosopher Dietmar Kamper’s invitation to unabashed exchange among architects, artists, musicians, philosophers, and media specialists—an invitation to a debate that need not lead to resolutions but to an intellectual adventure, that may not necessarily rule out academic chairmanships but that ultimately may not need them.

I have in my arsenal of language no better phrase for describing what the project toward a genealogy of media thinking is really about. The avant-garde is nothing but the reinterpretation of bygone presents, and genealogy proves above all to be an operation with a lofty aim, namely, to reopen the windows and doors onto that nervous, heterotopic space of possibilities that the thinking of media once occupied, and organize passages through the boredom that has taken root there, and recall the *gardens*¹⁰ that poachers from the most disparate disciplines and schools of thought have in passing laid out there and cultivated.

In his book *Experimentalsysteme und die epistemischen Dinge* (Experimental systems and epistemic things, 2001), Hans-Jörg Rheinberger, a biologist, philosopher, and historian of science, uses the term *Überraschungsgenerator*, or “generators of surprise,” to describe the most important function of the experiment in scientific laboratory activity. The term originates in the work of molecular biologist Mahlon Hoagland (1980) and characterizes the

epistemic goal of a *cultura experimentalis* as I would like to see it. It is a great privilege to be able to write and publish. Use of this privilege is justified only if the works that we bring into the open, to the public sphere, are at least approximately capable of calling forth or recalling the peculiar quality contained in the moment of surprise. To consider texts as generators of surprise is likely a reliable formulation for the astonishment that one must never unlearn, neither in the sciences nor in media thinking.

I am extremely grateful to the University of Minnesota Press, and to Cary Wolfe in particular, for this opportunity to have created the present compilation from a diversity of my own writings. Thanks are due with respect not only to the latitude I've had in assembling these thematically heterogeneous genealogies and catalyzers of thought but a German-speaking author also may not take for granted that texts he wrote more than four decades ago will be disseminated within contemporary Anglo-Saxon discourse. Yet, when such a thing does occur, one hopes it will enable a reader to reconstruct a considerable stretch along the evolutionary arc of media thinking.

As early as 1965, Kurt W. Marek, using the anagrammatic pseudonym Ceram, published almost simultaneously in both Germany and the United States his explicit *Archaeology of the Cinema*. Around this same time, a number of art-historical and culture-historical texts were also operating with a distinctly archaeological gesture, such as Jurgis Baltrušaitis's fantastical writings on anamorphic art and the mirror¹¹ or Gustav René Hocke's superb 1957 work on mannerism in European art, *Die Welt als Labyrinth* (The world as labyrinth).¹² But archaeology first emerges as a notable thematic and methodological paradigm in the humanities as a discourse effect of the work of historian, sociologist, and philosopher Michel Foucault. *The Birth of the Clinic: An Archaeology of Medical Perception* (1963), *The Order of Things: An Archaeology of Human Sciences* (1966), and *The Archaeology of Knowledge* (1969) led a variety of disciplines, some with notable hesitation, to conduct analyses of historical phenomena that sought to interweave aspects of the political, the cultural, the technical, and the social—to conduct, in other words, *interdiscursive* analyses. At the Technical University of Berlin, where I studied, new research projects were being articulated on topics as diverse as the history of female labor (as in Karin Hausen's 1978 social history of the sewing machine), the intellectual and social history of mathematics, and the history of computing machines (as in Herbert Mertens's and Hartmut

Petzold's early studies). The periodical *Wechselwirkung* (Interaction), founded in 1979 in Berlin, provided a unique platform for this particularly active interdiscursivity between science and humanities. Such diverse archaeologies and genealogies evolved as academic attempts to intervene on the often encrusted systems of knowledge and organization in the established disciplines and to aggravate and alter these by means of critical, transdisciplinary reflection.

My first media critical publications emerged from just such a milieu, as did my early writings on the history of medial attractions like the Arbeiter-Radio-Bewegung (Workers' Radio Movement) of the interwar period. In today's terms, historicized in relation to hegemonic media apparatuses, one might deem this as one of the first hacker movements, vested in an aura similar to that which surrounded the self-styled Guerrilla Television of the electronic avant-garde of the late 1960s and early 1970s.¹³ The epic gesture of intervening action that we had learned to extrapolate above all from Bertolt Brecht and his radio heuristic, but also from the hopeful potential in the writings of Walter Benjamin, was just as important to us as work on the utopian possibilities we saw in a collectivity in which, as a rule, there would be no exclusions and no hegemonic hierarchies in the exchanges among its members. Jürgen Habermas was as much on our minds as were the protagonists of critical theory, returned from their exile in the United States.

The opposite of this—the concentration of all power in relations of communication through ideology, stupefaction, hate, and envy—we knew too well from fascism. We were also able to observe, again and at close range, how the language of propaganda functioned in other manifestations in East Berlin. Critical engagement with one particular television event—a U.S. import called “Holocaust,” as it appears here in one essay—was a central component of a comprehensive teaching and research project on the media of the Nazi machinery of murder and stupefaction which kept us busy for more than five years (1978–82) and from which three books resulted.

In my own development, I underwent an interim phase in this meta-methodological shift away from the study of media history toward the (an)archaeology and genealogy of media. As is so often recounted in the biographies of professional intellectuals, it was in the course of working on my dissertation that a whole new range of diverse research possibilities opened up for me. While still very much shaped by the philological tradition of the humanities faculty at my alma mater, and driven by a powerful curiosity about the world of apparatuses, physics, electrotechnology, and

machine construction, I devoted myself, in a manuscript of more than six hundred pages, to a single artifact that I attempted to read and comprehend at the intersection of media-materiological, technical, temporal-philosophical, economic, and cultural perspectives. Today, I would describe a methodological endeavor like this as *expanded hermeneutics*, coupled with a particular philology: an almost exact philology of almost precise things.¹⁴ The object of my investigation was an apparatus that could record audio and visual signals on an electromagnetically laminated tape so as to immediately reproduce them: the video recorder. The artifact and the technical system in which it was integrated fascinated me as an early *audiovisual time machine*. With this apparatus, it was not only possible to submit filmic and televisual programs to an analytical reading just like one would read a book but one could also intervene in their temporal structures and change them. Deeply influenced by the materialist variants of the Birmingham School of Cultural Studies, on one hand, and by German systems theorists and historians of technology like Günther Ropohl, on the other, in the closing chapter of my history of the video recorder (*Zur Geschichte des Videorecorders*, 1985) I termed this ensemble of machines and potential for action *Kulturtechnik*—or “cultural technique.”

My own explicit (an)archaeologies of media began in close proximity with experimental practice and expanded hermeneutics. In the early 1990s, the University of Salzburg in Austria provided me with the wonderful opportunity to teach and research as a professor of *audiovisions*, which was the original title of a book I published in 1989. This context resulted in 1991 in the project we called “One Hundred—20 Short Films on the Archaeology of Audiovision,” which was our contribution to a celebration of the first one hundred years of cinema history. In tandem with this, I prepared essays in the form of theses for the Austrian magazine *Eikon*, one of which is presented here for the first time in American English.

As these early media-archaeological miniatures began to appear, with the usual interval between completion and publication, the new, large-format technological project of establishing comprehensive telematic communications via the internet and the World Wide Web was well under way. Our writing was racing with the machines, as they rotated faster and faster. During the time I spent as founding rector of the Academy of Media Arts in Cologne (1993–2000), I began to publish more and more essays on the arts and artists that were engaging with these new circumstances, flanked by short manifestos or proclamations, provocations.

In the extreme rush of networked bustle, which also incorporated critique, I began to discover, in an indispensable countermovement, ever more of that dimension of the medial that I would go on to tamper with intensively for a good twenty years to come, much to my great intellectual pleasure: the deep time of the nexus of art, science, and technology. In *Variantology*, I came up with a new thinking and playing field, one in which I was able to investigate this exhilarating context as a unique poetics of relations.

The concept of variantology is a neologism that is ill suited to the purposes of standardization. There is clearly a paradox contained in it, one we are familiar with from other semantic iterations like Georges Bataille's "heterology" or the "heterotopias" of Michel Foucault. These too are indebted to a logic of diversity, of multiplicity. Contrary, divergent, mutually conflicting, or even mutually repellent phenomena that as a rule evade unification are gathered under a provisional roof in such a way that they may nevertheless drift apart again as needed. Variantology has to do with compounds or mixtures of a kind whose unmixing always remains within the realm of imagination. The invocation of the *logos* in the concept serves less to produce a closed systematic relationship than it does to perpetually irritate the concept's inventor and those who engage themselves with it. The international conferences on variantology that took place in Cologne, Berlin, and Naples between 2004 and 2008 were simply an invitation to a kind of collaboration in which there were no contracts to sign or programs to subscribe to; they represented an offer of hospitality that obliged the guests to nothing but an increased presence of mind in their actual physical presence.¹⁵

In contrast to the heterogeneous, with its heavy inflections of ontology and biology, the *variant* is more interesting, in methodological and epistemological respects, as a mode of lightness and movement. As such, the variant is equally at home in experimental science as it is in diverse artistic practices,¹⁶ most forcefully in music. Variation, versioning, digression—in playing and interpretation—are an obvious part of the vocabulary as well as the everyday practice of composers and interpreters alike. In a narrower sense, the variant designates a modulation, say, from minor to major tonal series, brought about by a change in the interval.

The semantic field that I am trying to open by means of this concept has a primarily positive connotation. To be different, to diverge, to shift, to alternate, are themselves alternative translations for the Latin verb *variare*. Its

connotation topples over into the negative only when used by the speaking subject as a means of exclusion and discrimination—which the word itself does not actually abide. To vary something that is present is an alternative to its destruction, an aesthetic strategy that played a remarkably sustaining role in the diverse avant-gardes of the twentieth century, in politics as well as art. And, of course, an attractive medial format also inheres in the concept, a format one relates to as one would to a sensation. Long before the cinema, the variety show was experimenting with combining diverse stage practices into a colorful whole that would come together only in the time of a given performance.

The heterogeneity of variantological research among various concepts of modernity, between the Occident and the Orient and among the multiplicity of forms of European culture, expresses itself in this volume in a series of individual genealogies: of seeing and of visual perception, of sound and of musical mood, of the electric theologians and of “Allah’s automata.” These are the earliest texts from this collection. Research into variantology is ongoing.

In a flat temporal dimension¹⁷—which is by now rather alien to the activities of those who think deep time—the evolution of concepts of media thinking has been under way for hardly more than a century. It has only been since the end of the Second World War, in other words, about seven decades, that scientific, theoretical, philosophical, semiological, and philological engagements with and through media have been articulated and processed as a distinct discursive field of their own—albeit ever more unmistakably and increasingly louder.

I have attempted a thought experiment in operationally grouping past and present media researchers and protagonists by generation—not least in order to temporally locate my own position in the context of this still fledgling genealogy of our field of intellectual energies. I have started from the presumption that we are presently well into the seventh generation of *explicit* media thinkers.¹⁸ Given the accelerated development of the inter-discursive field in the second half of the twentieth century, I decided to scale the shift in generations following decade markers. The generational groupings are not determined by the age of the thinker but rather on the basis of important differences each one has individually contributed to this heterogeneous field of knowledge. I have paid special attention to intelligible

discourse effects that have been observed in Europe and that have also had an intelligible impact in Germany, for instance.

Early thinkers through the end of World War II: Theodor W. Adorno, Rudolf Arnheim, W. Ross Ashby, André Bazin, Walter Benjamin, Henri Bergson, Bertolt Brecht, Karl Bühler, Claude Cahun, Ernst Cassirer, Germain Du-lac, Sergei Eisenstein, Gisèle Freund, René Fülöp-Miller, Aleksei Gastev, Siegfried Giedion, Fritz Heider, Max Horkheimer, Harold Innis, Ernst Kapp, Siegfried Kracauer, Lev Kuleshov, Harold Lasswell, Kazimir Malevich, Filippo T. Marinetti, Solomon Nikritin, John von Neumann, Charles S. Peirce, Luigi Russolo, Ferdinand de Saussure, Hermann Scherchen, Claude Shannon, Wilbur Schramm, Alan Turing, Dziga Vertov, Paul Watzlawick, Hermann Weyl, Fritz Winckel . . .

First mid- and postwar generation (explicitly active since the 1940s and 1950s): Günther Anders, Peter Bächlin, Roland Barthes, Max Bense, John Berger, Maya Deren, Jean-Luc Godard, Richard Hoggart, Danièle Huillet, E. Katz/J. G. Blumler, Harry Kramer, Marshall McLuhan, Werner Meyer-Eppler, Abraham Moles, Raymond Queneau, Gilbert Simondon, Hans Heinz Stuckenschmidt, Wolf Vostell, Roman Wajdowicz, the Whitney Brothers, Norbert Wiener, Iannis Xenakis . . .

Second generation (explicitly active since the 1960s): Dieter Baacke, Nanni Balestrini, Gianfranco Baruchello, Konrad Bayer, Gilbert Cohen-Séat, Guy Debord, Umberto Eco, Vilém Flusser (in Brazil), Otto F. Gmelin, Jürgen Habermas, Helmut Heißenbüttel, Walter Höllerer, Friedrich Knilli, Ferdinand Kriwet, Gerhard Maletzke, Denis McQuail, Christian Metz, Franz Mon, Frieder Nake, Georg Nees, Ted Nelson, Nam June Paik, Pier Paolo Pasolini, Wolfgang Ramsbott, Jasia Reichardt, Gerhard Rühm, Marc Vernet, Paul Virilio, Peter Weibel, Oswald Wiener, Raymond Williams . . .

Third generation (explicitly active since the 1970s): Jean-Louis Baudry, Hans Belting, René Berger, Gábor Bódy, Jean-Louis Comolli, Gilles Deleuze, Mary Ann Doane, Franz Dröge, Hermann Klaus Ehmer, Thomas Elsaesser, Hans Magnus Enzensberger, VALIE EXPORT, Friede Grafe, Félix Guattari, Hans Ulrich Gumbrecht, Stuart Hall, Stephen Heath, Knut HICKETHIER, Horst Holzer, Stuart Hood, Eberhard Knödler-Bunte, Gerhard Lischka, Laura Mulvey, Friederike Pezold, Marcelin Pleynet, Hans Posner, Erwin Reiss, Michel Serres, Kristin Thompson, Sven Windahl, Peter Wollen . . .

Fourth generation (explicitly active since the 1980s): Jean Baudrillard, Peter Bexte, Teresa de Lauretis, Anne-Marie Duguet, Vilém Flusser (in Europe),

Dietmar Kamper, Friedrich Kittler, Sybille Krämer, Arthur and Marilouise Kroker, Werner Künzel, Pierre Lévy, Jean-François Lyotard, Joachim Paech, Miklòs Peternák, Hartmut Petzold, Hans-Ulrich Reck, Irit Rogoff, Avital Ronell, Florian Rötzer, Allucquère Rosanne Stone, Georg Christoph Tholen, Gerburg Treusch-Dieter, Christina von Braun, Michael Wetzel, Hartmut Winkler, Siegfried Zielinski . . .

Fifth generation (explicitly active since the 1990s): Marie-Luise Angerer, Peter Berz, Manuel Castells, Régis Debray, Manuel DeLanda, Bernhard Dotzler, Timothy Druckrey, Lorenz Engell, Wolfgang Ernst, Matthew Fuller, Ulrike Gabriel, Miriam Hansen, Donna Haraway, N. Katherine Hayles, Hans-Christian von Herrmann, Erkki Huhtamo, Brenda Laurel, Thomas Y. Levin, Geert Lovink, Lev Manovich, Dieter Mersch, Brian Massumi, Alla Mitrofanova, Claus Pias, Nils Röllner, Henning Schmidgen, Bernhard Siegert, Andrey Smirnov . . .

Sixth generation (explicitly active in the 2000s and beyond): Arianna Borrelli, Knut Ebeling, Alexander Galloway, Mark B. N. Hansen, Erich Hörl, Ute Holl, Yuk Hui, David Link, Mara Mills, Jussi Parikka, Matteo Pasquinelli, Patricia Pisters, Gao Shiming, Hito Steyerl, Frederik Stjernfelt, Eugene Thacker, Tiqqun, Joanna Zylińska, et al.

Translated by Lauren K. Wolfe

Notes

- 1 Walter Benjamin, "Lehrmittel. Prinzipien der Wälzer oder die Kunst, dicke Bücher zu machen" [Teaching aids: The principles of tomes, or the art of making thick books]. *Gesammelte Werke* 4, no. 1 (1991): 105. Translation LKW.
- 2 See Vilém Flusser, *Flusseriana: An Intellectual Toolbox*, ed. Siegfried Zielinski, Peter Weibel, and Daniel Irrgang (Minneapolis: University of Minnesota Press/Univocal, 2015), 17. The book is a trilingual publication (English, German, Portuguese).
- 3 Nam si abest quod ames, praesto simulacra tamen sunt (For if what you love is distant, its images are present). Titus Lucretius Carus, *De rerum naturae* (*On the Nature of Things*).
- 4 Louis Althusser, "The Underground Current of the Materialism of the Encounter," in *Philosophy of the Encounter: Later Writings, 1978–87*, ed. François Matheron and Oliver Corpet, trans. G. M. Goshgarian (London: Verso, 2006).
- 5 Althusser.
- 6 I am referring here to the European Graduate School (EGS) in Saas-Fee, Switzerland.
- 7 Tracy B. Strong, *Friedrich Nietzsche and the Politics of Transfiguration* (Urbana: University of Illinois Press, 2000), 54.
- 8 Friedrich Nietzsche, *Kritische Studienausgabe* (Berlin: de Gruyter, 1980), 170. Translation LKW.
- 9 *Umzug ins Offene* is the title of a volume edited by Tom Fecht and Dietmar Kamper: *Umzug ins Offene: Vier Versuche über den Raum* [Move into the open: Four experiments about space] (Berlin: Springer, 2000).
- 10 "They see an entanglement of spaces that emerges as it would were we somewhere like a cinema auditorium. But the oldest example of a heterotopia may well be the garden." Michel Foucault, *Les hétérotopies/Le corps utopique* [Heterotopias/The Utopian Body] (Paris: INA, 2004).
- 11 See Jurgis Baltrušaitis, *Anamorphoses, ou magie artificielle des effets merveilleux* (Paris: Olivier Perrin, 1955), English translation *Anamorphic Art*, trans. W. J. Strachan (New York: Henry N. Abrams, 1977); and Baltrušaitis, *Le miroir: Essai sur une légende scientifique: révélations, science-fiction et fallacies* [The mirror: Essay on a scientific legend—Revelations, science fiction and fallacies] (Paris: Éditions du Seuil, 1978).
- 12 Gustav René Hocke, *Die Welt als Labyrinth: Manier und Manie in der europäischen Kunst—Beiträge zur Ikonographie und Formgeschichte der europäischen Kunst von 1520 bis 1650 und der Gegenwart* [The world as labyrinth: Manner and mania in European art. Contributions to the iconography and

formal history of European art from 1520 to 1650 and the present] (Reinbek, Germany: Rowohlt, 1957).

- 13 See the part history, part instruction manual by Michael Schamberg and Raindance Corporation, *Guerrilla Television* (New York: Holt, Rinehart, and Winston, 1971).
- 14 There is a chapter dedicated to this in my book [... *After the Media*]: *News from the Slow-Fading Twentieth Century* (Minneapolis: University of Minnesota Press/Univocal, 2013), 173ff.
- 15 This resulted in the five volumes of *Variantology* that I was able to publish through Walther König in Cologne between 2005 and 2011, in collaboration with a rotating pool of editors and on the basis of a worldwide economy of friendship with the contributing authors.
- 16 For a powerful contemporary example in the visual arts, see Allen Ruppersberg, *One of Many: Origins and Variants* (Cologne: Walther König, 2005).
- 17 We have elsewhere dealt extensively with the dimensions of deep time. See, e.g., *Deep Time of the Media* (Cambridge, Mass.: MIT Press, 2006); the German original was published in 2002.
- 18 For the distinction between explicit and implicit media thinkers, see Zielinski, [... *After the Media*], esp. chapter 3, 173ff. Implicit media thinkers are not contained in the list.