

Toward an Archaeology of Hearing and Seeing by Technical Means

SIEGFRIED ZIELINSKI

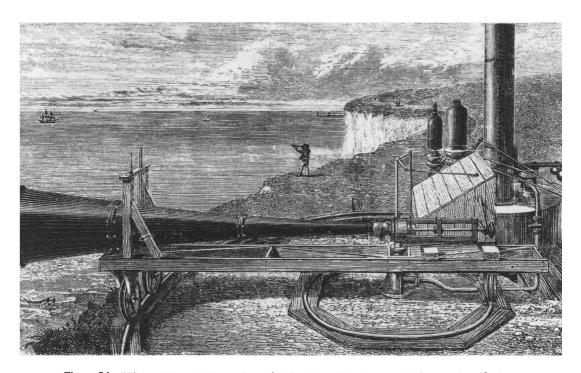
## Deep Time of the Media

# Toward an Archaeology of Hearing and Seeing by Technical Means

Siegfried Zielinski

TRANSLATED BY GLORIA CUSTANCE

The MIT Press
Cambridge, Massachusetts
London, England



**Figure I.i** "The problem: At times, when a fact is thrown into the smoothly flowing river of scientific development that completely contradicts earlier conceptions, one of the strangest transformations takes place. What is slightly new is either dissolved and assimilated or, if it is too deviant in the present situation, it sinks to the bottom as a foreign body where the deposits of time cover it—it either has an effect much later or never at all. That which is significantly new, however, rapidly has a conspicuous influence on the entire state [of things]. A violent perturbation of ideas about and over this commences. . . ." (Text: Ostwald 1896, p. 1f; illustration: Tyndall, 1883, frontispiece)

### **Foreword**

The sense of present which we live each day, as a conflict between the representatives of ideas having different systematic ages and all competing for possession of the future, can be grafted upon the most inexpressive archaeological record. Every shred mutely testifies to the presence of the same conflicts. Each material remnant is like the reminder of the lost causes whose only record is the successful outcome among simultaneous sequences.

-GEORGE KUBLER, THE SHAPE OF TIME

An anemic and evolutionary model has come to dominate many studies in the so-called media. Trapped in progressive trajectories, their evidence so often retrieves a technological past already incorporated into the staging of the contemporary as the mere outcome of history. These awkward histories have reinforced teleologies that simplify historical research and attempt to expound an evolutionary model unhinged from much more than vague (or eccentric) readings of either the available canon or its most obvious examples. Anecdotal, reflexive, idiosyncratic, synthetic, the equilibrium supported by lazy linearity has comfortably subsumed the media by cataloguing its forms, its apparatuses, its predictability, its necessity. Ingrained in this model is a flawed notion of survivability of the fittest, the slow assimilation of the most efficient mutation, the perfectibility of the unadapted, and perhaps, a reactionary avant-gardism. In this model there is less failure than dopey momentum and fewer ruptures than can be easily accounted for. As a historiography it provides an orthodox

itinerary uncluttered by speculation or dissent, unfertered by difference, disconnected from the archive, averse to heterogeneity.

This laissez-faire historiography dominates American writing concerned with the histories of media and has fueled both oversimplification and imprecision. History is, after all, not merely the accumulation of fact, but an active revisioning, a necessary corrective discourse, and fundamentally an act of interrogation—not just of the facts, but of the displaced, the forgotten, the disregarded.

For some in the media, "archaeology" has come to supplant basic history, replacing it with a form of material retrieval—as if the preservation of materiality was tantamount to preserving history itself. This has led to an archaeology (really more a mere cataloging) of the apparatus itself, rather than an investigation of the scenes in which the apparatus found its way into the spheres of tresearch and experience.

Michel Foucault's The Archaeology of Knowledge is defiant in distinguishing archaeology from other forms of historiography. Archaeology is "the systematic description of a discourse-object," (139) it "tries to establish the system of transformations that constitute change." (173), it "does not have a unifying, but a diversifying effect," (160) it "is not supposed to carry any suggestion of anticipation." (206)

It is the analysis of silent births, or distant correspondences, of permanences that profit from the innumerable blind complicities.... Genesis, continuity, totalization: these are the themes of the history of ideas.

But archaeological description is precisely such an abandonment of the history of

ideas, a systematic rejection of its postulates and procedures . . . (Foucault, 138)

As such, archaeology is not a substitute for "the history of ideas," not a proxy for iconography, not an alternative for eccentric discovery or collecting, not a surrogate for rigorous research. With this in mind, it seems imperative to delineate an approach to "media archaeology" that, on the one hand, avoids idiosynctasies or subjectivities, and, on the other, doesn't lull itself into isolating media history as a specialized discipline insulated from its discursive historical tole.

There's little doubt that the multithreaded developments of media have numerous unresolved histories and that an enormous task of retrieval and conceptualization has yet to be achieved. How a media archaeology can constitute itself

against self-legitimation or self-reflexivity is crucial if it is to circumvent the reinvention of unifying, progressive, cyclical, or "anticipatory" history—even as it is challenged to constitute these very vague histories as an antidote to the gaping lapses in traditional historiography. Indeed it is this very problem that afflicts media archaeology. The mere rediscovery of the forgotten, the establishment of oddball paleontologies, of idiosyncratic genealogies, uncertain lineages, the excavation of antique technologies or images, the account of erratic technical developments, are, in themselves, insufficient to the building of a

coherent discursive methodology.

In this sense the notion of resurrecting dead media could prove farcical, futile, or more hopefully, deeply fertile. A broad accounting of the evolution of the apparatus, of the media image, of the history of the media effect, of excavating the embedded intellectual history, and so on, is surely the precursor of what will be an invaluable reconfiguration of a history largely focused on the device and its illusory images. Similarly, the rediscovery of uncommon or singular apparatuses, novel and fantastic as they might be, is neither decisive nor fully adequate to formulate an inclusive approach that distinguishes it from connoisseurship, or worse, antiquarianism. Metely reconstituting or retrofitting "old" media into at worse, antiquarianism, in this sense, only emerge as techno-retro-kitsch. "new" contexts could, in this sense, only emerge as techno-retro-kitsch.

What is most necessary for the field of media archaeology is to both distinguish it as a nascent discipline and to set some boundaries in order to avoid its trivialization. Archaeology, as Foucault writes, "is not a return to the innermost secret of the origin," rather it "describes discourses as practices specified in the element of the archive" (p. 138 from same source.) Without evolving coherences that are neither reductive nor dogmatic, media archaeology faces numerous issues: to evolve histories of technologies, apparatuses, effects, images, iconogranues; and so forth, within a larger scheme of reintegration in order to expand a largely ignored aspect of conventional history.

Already some useful examples of this exist, from Siegfried Giedion's Mechanization Takes Command or E. J. Dijksterhuis's Mechanization of the World Picture to Friedrich Kittler's Gramophone, Film, Typeuriter or Wolfgang Schivelbusch's Railway Journey or Disenchanted Night: The Industrialization of Light in the 19th Art of Light and Shadow: Archaeology of the Cinema, Norman Klein's The Vatican to Vegas: A History of Special Effects. Each tackles the apparatus (or its "effects") as integral to the substantive changes they wrought as modernity emerged. Not under the spell of linearity, these books stand as guidebooks (among many under the spell of linearity, these books stand as guidebooks (among many

others), for the establishment of diversified approaches to a media history and, more specifically, a media archaeology that stands as a decisive field if it can develop forms that extrapolate more than missing links.

Siegfried Zielinski's Deep Time of the Media intensifies and extends these studies with a wide range of scholarship from Stephen Jay Gould's "punctuated equilibrium" to Georges Bataille's "general economy," and, more deeply, into the original volumes of Athanasius Kitcher, Giovan Battista della Potta, and Giuseppe Mazzolati. Instead of tracking the reverberations, Deep Time of the Media situates the effect in the midst of its own milieu. Though particular approaches may represent harbingers, augurs, precursors, they are purposefully proaches may represent harbingers, augurs, precursors, they are purposefully

rooted and serve particular goals. It is in this context that Zielinski's Deep Time of the Media comes as a pivotal

work challenging the field in a number of ways. In rebridging (perhaps demolishing) the widening gulf between telebnos and opistems, Deep Time of the Media refuses the mere instrumentalization of technology as meticulously as it integrates the responsibilities of knowledge. Riding through the stratifications has retoward a rethinking of the bleak search for origins by imagining (exposing) intricate topologies that link movement and coincidence, failure and possibility, obscurity and tevelation. This move through and across the "tectonic" flows suggests a sweeping temapping of the hitherto centralized nodes of learning and that traces the decentralized currents of time, space, and communication as a kind of historical formation in which routes replace nodes and in which east centric canon just don't hold and not does a singular rationalistic scientific logor. In its "case studies" Deep Time of the Media provides both a rigorous methodology as a secondary and a reconceptualisation of the media provides both a rigorous methodology and a seconceptualisation of the media provides both a rigorous methodology and a reconceptualisation of the media provides both a rigorous methodology and a reconceptualisation of the media provides both a rigorous methodology and a reconceptualisation of the media provides both a rigorous methodology and a reconceptualisation of the media provides both a rigorous methodology and a reconceptualisation of the media provides both a rigorous methodology and a reconceptualisation of the media provides both a rigorous methodology and a reconceptualisation of the media studies. Both a rigorous methodology and a reconceptualisation of the media studies and in which a rigorous methodology and a reconceptualisation of the media and in a rigorous methodology and a rigorous and rigorous methodology and a rigorous methodology and a rigorou

ology and a reconceptualization of media studies. For Zielinski only full primary sources provide adequate evidence. So in tandem with a rigotous and dedicated teaching and lecturing schedule, his peripatetic research has taken him on the nomadic circuits of his subjects. Here he constructs the new cartography, seizes on the crossed path, the forgotten archive. His lectures, always laden with the trade-mark overhead projector, always trace an adventure into some new facet of the journey—with an obscure archive a decisive discovery.

Abandoning historical convention in favor of historical acuity, Deep Time of the Media travels into deep time and discovers not just more remains, but instead neglected constellations. Within these are towering figures of scientific and philosophical investigation—della Porta, Kircher, Ritter, Hutton, Lombroso,

among many others. These bold personalities demand our attention not because they outdid their times, but rather because they embodied them.

With them come the shifting objects of study—less and less material—light and shadow, electricity and conduction, sound and transmission, magic and illusion, vision and stimuli—in short, conditional phenomena. Fleeting and contingent, the phenomenal world was lured into visibility by instruments whose ingenuity often eclipsed their discoveries. At least we had been convinced that this is so. Zielinski proves us wrong. Through their instruments the sphere of representation exploded. Its fragments resonate in every future media apparatus. Through their instruments the interface emerged, through their instruments a fragile imaginary was brought to light, through their instruments time, sound, reflex, could be seen, through their instruments the world was no longer a paltry given, it was a moving target, a dynamic presence, it was, to put it bluntly, alive.

Ever since, our machines have aspired to the "real" and, luckily, have fallen short of their phony virtual utopias. This surely explains why the last chapter of *Deep Time* focuses on the "artistic, scientific, technical, and magical challenges" that persist in contemporary media praxis. Zielinski's tenacious role as a historian has never restrained his enormous commitment to colleagues and students. His unyielding charge is to relentlessly cultivate "dramaturgies of difference," to "intervene" into the omnivorous systems from the periphery, to refuse centralization, to seize the imagination back from its grim and superfluous engineers, and to construct an art worthy of its "deep time." As Deleuze writes:

It is not enough to disturb the sensory-motor connections. It is necessary to combine the optical-sound image with the enormous forces that are not those of simply intellectual consciousness, nor of the social one, but of a profound, vital intuition.

-Timothy Druckrey

### **Acknowledgments**

My grateful thanks are due to Gloria Custance for her untiring and exceptional work in translating this book. She also translated all quotations from the German, unless noted otherwise.

Nils Röller read the greater part of the original manuscript and I thank him for the many fruitful discussions and constructive suggestions, including in the earlier years of our collaboration. I am indebted to Timothy Druckrey, Keith Griffiths, Dietmar Kamper, Anthony Moore, Miklós Peternàk, The Brothers Quay, and Otto E. Roessler for their generous intellectual support and encouragement, which played an essential role in the realization of the project. Werner Nekes I thank for his hospitality and the many visits to his unique archive. Wolfgang Ernst, Thomas Hensel, Angela Huemer, Christine Karralus, Friedrich Kittler, Jürgen Klauke, David Link, Alla Mitrofanova, Morgane, Peter Pancke, Hans Ulrich Reck, Elisabeth von Samsonow, Silvia Wagnermaier, and Sigrid Weigel listened patiently to my expedition reports and provided invaluable aid in the form of material, questions, commentaries, and suggestions. Nadine Minkwitz and Juan Orozco gave generously of her time for the digital processing of illustrations, and I am grateful to Heiko Diekmeier and Claudia Trekel for their skill with reproductions. For his great help with the texts in Latin, I thank Franz Fischer; for translations, Angela Huemer and Rosa Barba (Italian), Peter Frucht and Adèle Eisenstein (Hungarian), Lioudmila Voropai (Russian), and Gloria Custance (English and French), whose assistance with the German edition was, in many respects, completely indispensable. Anke Simon, Daniela Behne, Uschi Buechel, Andrea Lindner, and Birgit Trogemann were

tireless in their efforts to procure all the books and media I required. Patricia Nocera I thank for generously giving me access to the treasures of the Biblioteca Nazionale di Napoli and guiding me through its labyrinth. In the Herzogin Anna Amalia library in Weimar, Katrin Lehmann provided exceptional assistance for my research. The Staatsbibliothek Berlin and the university libraries in Cologne and Salzburg were very helpful in connection with work on Dee, Fludd, Kircher, Llull, Porta, and Schott. For their help in matters of organization, I thank Suse Pachale and Heidrun Hertell.

Many thanks to Roger Conover for preparing and overseeing this edition for MIT Press and to Lisa Reeve for her editorial support.

My research and the writing of the original text were possible within such a short time period only because the Ministry of Science, North Rhine-Westphalia, granted me an additional sabbatical semester. My special thanks go to Burkhard König at Rowohlt for his faith in the project, and his constant and unfailing support for my endeavors.

## **Deep Time of the Media**

#### ELECTRONIC CULTURE: HISTORY, THEORY, AND PRACTICE

Ars Electronica: Facing the Future: A Survey of Two Decades edited by Timothy Druckrey net\_condition: art and global media edited by Peter Weibel and Timothy Druckrey

Dark Fiber: Tracking Critical Internet Culture by Geert Lovink

Future Cinema: The Cinematic Imaginary after Film edited by Jeffrey Shaw and Peter Weibel

Stelarc: The Monograph edited by Marquard Smith

Deep Time of the Media: Toward an Archaeology of Hearing and Seeing by Technical Means by

Siegfried Zielinski

#### © 2006 Massachusetts Institute of Technology

Originally published as Archäologie der Medien: Zur Tiefenzeit des technischen Hörens und Sehens, © Rowohlt Taschenbuch Verlag, Reinbek bei Hamburg, 2002

The publication of this work was supported by a grant from the Goethe-Institut.

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the publisher.

I have made every effort to provide proper credits and trace the copyright holders of images and texts included in this work, but if I have inadvertently overlooked any, I would be happy to make the necessary adjustments at the first opportunity.—The author

MIT Press books may be purchased at special quantity discounts for business or sales promotional use. For information, please e-mail special\_sales@mitpress.mit.edu or write to Special Sales Department, The MIT Press, 55 Hayward Street, Cambridge, MA 02142.

This book was set in Bell Gothic and Garamond 3 by Graphic Composition, Inc., Athens, Georgia. Printed and bound in the United States of America.

Library of Congress Cataloging-in-Publication Data Zielinski, Siegfried.

[Archäologie der Medien. English]

Deep time of the media: toward an archaeology of hearing and seeing by technical means / Siegfried Zielinski; translated by Gloria Custance.

p. cm.—(Electronic culture—history, theory, practice)

Includes bibliographical references and index.

ISBN 978-0-262-24049-9 (hardcover: alk. paper), 978-0-262-74032-6 (paperback)

1. Mass media—Historiography. 2. Mass media—Philosophy. I. Title. II. Series.

P91.Z53813 302.23'0722—dc22 2005047856

10 9 8 7 6 5 4 3 2

### Contents

FOR	REWORD BY TIMOTHY DRUCKREY	vii
ACK	KNOWLEDGMENTS	xiii
1	INTRODUCTION: THE IDEA OF A DEEP TIME OF THE MEDIA	1
2	FORTUITOUS FINDS INSTEAD OF SEARCHING IN VAIN:	
	METHODOLOGICAL BORROWINGS AND AFFINITIES FOR AN	
	ANARCHAEOLOGY OF SEEING AND HEARING BY TECHNICAL	
	MEANS	13
3	ATTRACTION AND REPULSION: EMPEDOCLES	39
4	MAGIC AND EXPERIMENT: GIOVAN BATTISTA DELLA PORTA	57
5	LIGHT AND SHADOW — CONSONANCE AND DISSONANCE:	
	ATHANASIUS KIRCHER	101
6	ELECTRIFICATION, TELE-WRITING, SEEING CLOSE UP:	
	JOHANN WILHELM RITTER, JOSEPH CHUDY, AND JAN	
	evangelista purkyně	159
7	THE DISCOVERY OF A PIT, A CAMERA OBSCURA OF INIQUITY:	
	CESARE LOMBROSO	205
8	THE ECONOMY OF TIME: ALEKSEJ KAPITANOVICH GASTEV	227
9	CONCLUSIONS: INCLUDING A PROPOSAL FOR THE	
	CARTOGRAPHY OF MEDIA ANARCHAEOLOGY	255
NO.	res	281
BIBLIOGRAPHY		
CRE	EDITS	363
INDEX		365

# Introduction: The Idea of a Deep Time of the Media

Our sexuality . . . belongs to a different stage of evolution than our state of mind.

—BRUNO SCHULZ, "AN WITOLD GOMBROWICZ." IN: DIE REPUBLIK DER TRÄUME

In the early 1980s, the Texan science-fiction author Bruce Sterling invented the phenomenon of cyberpunk, together with the sci-fi writers William Gibson from Canada and Samuel R. Delany of New York, an ex-boxer and professor of literature. Their creation married clean high-tech and dirty rubbish, order and anarchy, eternal artificial life and decomposing matter. Techno- and necroromanticism came together to create a new *Lebensgefühl*. The inspired collaboration of Ridley Scott, film director, and Douglas Trumball, designer and set decorator, translated this feeling into cinema in the brilliant *Bladerunner* (1982). The Matrix (1999), directed by Andy and Larry Wachowski, fulfilled a similar function at the end of the 1990s for the now computer-literate fans of cyberculture, who by then were all linked via worldwide data networks. The horror that stalks the film Matrix is no longer an individual, amoral machine that operates locally and has taken on human form, as in Bladerunner, but, instead, is a data network that spans the entire globe and controls each and every action, emotion, and expression.

When one generation of computer hardware and software began to follow the next at ever shorter intervals, Sterling initiated "The Dead Media Project." There, he exchanged his wanderings through an imaginary everyday life in the future for an energetic movement that traversed the past to arrive in the present. Together with like-minded people, in 1995 he started a mailing list (at that time, still an attractive option on the Internet) to collect obsolete software. This list was soon expanded to include dead ideas or discarded artifacts and systems from the history of technical media: inventions that appeared suddenly and disappeared just as quickly, which dead-ended and were never developed further; models that never left the drawing board; or actual products that were bought and used and subsequently vanished into thin air. Sterling's project confronted burgeoning fantasies about the immortality of machines with the simple facticity of a continuously growing list of things that have become defunct. Machines can die. Once again, romantic notions of technology and of death were closely intertwined in "The Dead Media Project."

Media are special cases within the history of civilization. They have contributed their share to the gigantic rubbish heaps that cover the face of our planet or to the mobile junk that zips through outer space. While the USSR was falling apart, the cameraman of Tarkovsky's legendary Solaris, Vadim Yusov, was teaching astronauts from the MIR space station to take pictures of Earth for Andrei Ujica's Out of the Present (1995). The 35mm camera they used is probably still orbiting up there over our heads. After the rolls of film had been shot and stunning pictures of the blue planet were in the can, the camera was simply thrown out of the escape hatch. Taking it back to Earth would have been too expensive, and it was not considered worthwhile to develop a special program just to destroy a few kilograms of media technology.

The stories and histories that have been written on the evolution of media had the opportunity—at least theoretically—to do some recycling, in line with the rubbish theory proposed by Michael Thompson:3 they might have searched through the heaps of refuse and uncovered some shining jewels from what has been discarded or forgotten. Nothing endures in the culture of technology; however, we do have the ability to influence how long ideas and concepts retain their radiance and luminescence. Up to now, media historians have neglected to do anything of the kind, mainly on ideological grounds, and this has also had methodological repercussions. In the extensive literature on the genealogies of telematics (from antiquity's metal speaking-tube to the telephone; from Aeneas's water telegraph to the Integrated Service Data Network [ISDN]), or cinema archaeology (from the cave paintings of Lascaux to the immersive IMAX), or the history of computers (from Wilhelm Schickard's mechanical calculating apparatus to the universal Turing machine), one thing above all others is refined