"Introduction," communication +1

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Introduction

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Under the impression of today's planetary crises, the rise of ecological thinking, as well as technologies of smart, ubiquitous systems and the impression of global interconnectedness, there appears a new desire to excavate the remnants of the past. To investigate the historical and epistemological foundations of current systems thinking promises to lead to an understanding of the current condition that we are in – and its technological groundings.

When system-oriented thinking emerged within biological contexts in the first half of the 20th Century, it came along with universal pretensions: the concepts of *ecosystems* (Tansley) and *general systems theory* (von Bertalanffy) were both immersed in longstanding struggles between materialism and holism. The introduction of principles like feedback (Wiener) and self-organization (Maturana/Varela/von Foerster/Luhmann) through cybernetics and neocybernetics after the Second World War seemed to offer an alternative to the futile opposition of mechanistic or atomistic perspectives on the one side and holistic, organicistic or vitalistic perspectives on the other side within system-oriented thought. But underlying the subsequent institutionalization of system-oriented thought were diverse models of the relationship between a system and its parts, and alongside with that a renaissance of holistic concepts, e.g. holocoen (Friedrichs), biosphere (Vernadsky), noosphere (de Chardin), synergetics (Fuller), or Gaia (Lovelock). In a certain sense, system oriented thinking never lost its universal pretense.

The nine articles of this issue ask how these debates and affective states survive, perhaps thrive, in today's discussions of media ecologies, environmentalism, object-oriented philosophies, computer simulations, performative art, music, bionics, and communication technologies. They take the renaissance of systems thinking in the early 21st century as an effect of various system crises and explore new media technologies as stabilizing 'cures' against the dystopian future scenarios that emerged after World War II. In this sense, this issue suggests that in order to understand the present challenges, we need to account the discourses of systems thinking that fostered their emergence, and that we cannot gain insight into the afterlives of systems without exploring their technologies.

Applying Aby Warburg's and Walter Benjamin's historiographical concept of *afterlife*, this issue of *communication+1* investigates such recurrences of systems thinking and respective technologies since the Second World War. It attempts to describe the transformations and iterations the concept of systems has traversed to become productive at specific moments in time. Though the term 'systems' of course is much older than the 20th century, it is obvious that it became a common denominator since the formulation of genuine systems theories in the 1920s. By contextualizing different approaches to systems with earlier formations from the interwar period, we want to draw the attention to some

aspects of systems thinking that remained unthought – and consequently returned as afterlives. While systems thinking in the 20th century and until today usually conceives itself as something new and innovative, this issue shows its historical groundedness.

For Warburg and Benjamin, an afterlife is more than the persistence of specific ideas, motives or concepts over a certain duration of time. As Warburg has shown for example in his famous picture atlas *Mnemosyne*, the cultural imaginary is haunted by anachronisms: ideas or images can return after long periods of 'slumber'.[1] Warburg is interested in the different layers of time such an afterlife has traversed: its origin in the past in which it was formed, its recurrence in a later time, at which it becomes plausible and productive again, and of course the present of the historian who connects these times.[2] As an anachronism of duration, the afterlife of a cultural object such as a concept, a picture, a model, etc. is more than a return of knowledge: it indicates the desires that lurk behind this knowledge and make it appear when the moment is ripe.

Historiographically, the concept of afterlife, in Warburgs and Benjamin's sense, traverses the order of narratives and times. Thus, as Georges Didi-Huberman has shown, the hybridity of every present becomes visible and the synchronous coherence of an epoch is questioned.[3] Histories become readable not only as propagations of knowledge, but as returns and losses, as layers of tensions between different pasts which are not directed towards the present in a teleological manner. Their visible surface constitutes the present. The aim of historians of afterlives is not to uncover an archetypal past that determines the present, but to continue a project of excavation and a sense for the singular. Such excavations of afterlives show, contrary to the usual perspective of the distant, invisible historian, the importance of his present for the constitution of the past.

Consequently, taking a specific idea, concept or motive – such as systems – for granted results in a loss of depth and all those disturbing effects are negated. In an afterlife, there is always something that cannot be transferred seamlessly into the present context. It always carries something that does not correspond to the current classification or even blows up its coherence. In this sense we understand this special issue of *communication+1* as a history of afterlives within modern media and communication theory.

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[1] Aby Warburg, *Der Bilderatlas MNEMOSYNE*. Edited by Martin Warnke and Claudia Brink. (Berlin: Akademie, 2000).

[2] See Thomas Brandstetter. "Vom Nachleben in der Wissenschaftsgeschichte," *Zeitschrift für Medienwissenschaft*, 1 (2009): 73–79.

[3] Georges Didi-Huberman, *L'image survivante: Histoire de l'art et temps des fantômes selon Aby Warburg* (Paris: Minuit, 2002).

The contributions of this issue are sorted into three sections. Following different conceptions of environments and ecologies, the first three articles broach topics like Bill Mollison's and David Holmgren's permaculture design, enviromental art of Alan Sonfist and the re-design of communication systems in the Canadian Arctic under seemingly post-colonial conditions.

The second perspective deals with simulations and takes up the technological impacts of systems analysis on computer games such as SimEarth and their correspondence to Gaia-theory, on the relation of ecological concepts and the algorithmic Game of Life by John Conway, and finally on the construction of nuclear power plants in Western Germany.

The final section investigates the psychic-cybernetic strata of second order cybernetics of Heinz von Foerster and systems theory in the United States as well as their relegation to biotechnical and bionic technologies in Germany before and after Second World War. The field report of a musicological archaeology introduces an autopoietic understanding of David Tudors electronic instruments.

Addressing diverse but interrelated topics, all these essays demonstrate not only how media histories today struggle with the double-bind of systems thinking which is part and parcel of the political agency within modern control societies (Deleuze) and biopolitical governmentality (Foucault), but also how they open a new vector for research and methods that promise to bridge the theory-practice divide in our scholarly lives and debates. With this issue we hope to keep this field open to a diversity of perspectives and interdisciplinary discourses, instead of flattening the surface of present systems thinking.

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