Foreword: Media Effects

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This issue of *Cybernetics & Human Knowing* is based on five articles—that Steffen Roth and I requested—around the central theme of media effects. The idea is to offer media theory a variety of perspectives on such effects that derive from social theory. While these perspectives are certainly valuable in order to counterbalance a theory of media effects that continues to take the message as its starting point and examines the conditions under which media may produce effects on individuals (Bryant & Zillmann, 1989; Potter, 2012; Valkenburg, Peter, & Walther, 2016)—for instance by looking at how media create the individual, that is, its "secondary need for self-schematizations" (Luhmann, 2000, p. 113) in the first place—they are necessary for a far more foundational reason; as commonplace as the observation and the critique of media effects is, media theory has not managed to develop a consistent concept of what presumably causes these effects—the medium. Because of this, we have in fact been looking at a variety of different media theories in lieu of media theory proper; and as one result, the relationship between the concept of communication and the concept of medium has yet to be clearly articulated (as pointed out by Behringer, 2006). It may well be that the abstract media concept offered here, introduced by Heider (1959) and generalized by Luhmann (2012), using Spencer-Brown's *Laws of Form* (2008), is able to meet this demand.

The issue commences with a text by Urs Stäheli, who finds the effectiveness of media in potentiality itself. While Stäheli initially retells the story of the dematerialization of the media concept of systems theory, he takes this perspective to pose the question of the form—or, respectively, formlessness—of media, which asserts its own intrinsic value above and beyond any observation. In this sense, his text can be understood as providing an interface with the new materialism debate, which offers to treat the question of materiality as a question of form (Barad, 2007; Latour, 2007; Bennett, 2010). Stäheli questions the intrinsic value of looseness, positivizes it and, thereby, as he says himself, takes it seriously.

Yet, how can looseness register in society? How does something that is by definition not a form assume form? The remarkable aspect of his text is the discovery that a kind of latent ethics of media is concealed within Heider's concept. Accordingly, Stäheli demands that we provide space for looseness to unfold, and therefore—to state it paradoxically—that we force the strict coupling of the loose. According to Stäheli, this is precisely the demand expressed in Weick's organization theory, not only with respect to its socio-theoretical relevance, but also in terms of its allowance for the possibility of a normatively oriented theory that can draw

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instructions for action from abstract concepts. As it is well known, the greatest deficit of a theory committed to observation arises when it prefers to formalize the provision of operating procedures over actually providing them in practice. It is conceivable, of course, that this could be followed by a systems theoretical research program that pursues similar political latencies to our theory design, which has until now been unilaterally interpreted along the lines of an affirmative *social technology* (Habermas). Stäheli's text itself is thereby evidence of the proposition that looseness and modularity can serve as a fruitful composition principle, as is demonstrated by his successful coupling of Heider's, Luhmann's, and Weick's theory modules.

The contribution of Dirk Baecker begins with reference to the issue of the counter-concept of form, which—at least when form is not conceived as relational and, therefore, not as operational—can block the potential of a media concept. Baecker manages to embed this concept within older philosophical traditions, and it is this reaching back towards a rich intellectual tradition along with providing sound assurance of the foundations for systems theoretical reasoning that can be seen as a sort of leitmotif in his most recent work (see for instance Baecker, 2017).

Baecker takes as his starting point the observation that science has long been blind to the invisibility of media, which he traces to a stage in the history of knowledge wherein the responsibility for questions of invisibility fell under the jurisdiction of religion. As media are invisible anyway, he suggests that they be regarded through a different sense: not by sight, but by hearing. In taking such a stance, he consciously aligns himself with Marshall McLuhan, who held that, thanks to electronic media, "we enter the tribal and acoustic world once more" (McLuhan, 1994, p. 300). His suggestion also resonates with the spiritual texts of the likes of Meister Eckhart (2009, p. 44): "Hearing draws in more, but seeing rather leads outward … For the act of hearing the eternal Word is within me, but the act of seeing goes forth from me: in hearing, I am passive, but in seeing I am active." Hearing or listening to media, from this perspective, seems to satisfy the demands that the media themselves place on us. However, in contrast to McLuhan, master Baecker's concern is neither to attain more wisdom nor to discover in the roaring sounds of media the joyful message of an electrical unification of mankind. To him, hearing does not—to use the words of St. Paul—grant us access to God; instead, hearing grants us access to the media.

By following his own advice, Baecker discovers a fourth type of medium alongside the three standard types (media of perception, success media and dissemination media): media of composition. This fourth type, therefore, requires us to listen closely when the composer—no longer the observer—describes such media as responsible for the communication of ideas about objects, events, and narratives. This new type of media can, in its loosely coupled elements, help its observers to compose—or, in other words, identify, differentiate, and investigate—their forms. Baecker not only assigns causality to this type of media, but also rationality, intentionality, and complexity. And he takes one further step in offering an alternative narrative of media history, which, when told from the perspective of composition

media, substitutes the dominant dissemination media of script, printing, and computer, and instead links the media of composition to the different media epochs.

In a long overdue determination, Achim Broszwieski's offer takes up the distinction between technology and media in order to develop a concept of digitality as a medium. The text is also an indication of the wealth of a theory that can itself be observed as a medium. In Broszwieski's text, we encounter diverse epochs of the concept of media, as a result of which the concepts of code and medium no longer maintain an orderly matching relationship with one another. One possible reaction to this is to speak only of codes with reference to function systems, and only as a form that can be observed in symbolically generalized communications media. However, Broszwieski chooses a different approach: he maintains that communications media differentiate themselves through the coding of perception media. In fact, one could categorize this decision as his solution to the Heider controversy over coded/uncoded media.

According to Broszwieski, the medium of digitality is redundancy, and the form of digitality can be characterized as clear redundancy (designated) / ambivalent redundancy (undesignated). The left side of the distinction can be expressed in a fully defined, mathematically and technically precise selection for finite calculations (algorithms); the right side of the calculus is a selection defined by contingency, dependent on decisions, and therefore interminable. Redundancy for Broszwieski does not originate from the (endless) world of information theory; it primarily flows through the system of mass media, but is also produced by all organization systems. Redundancy, therefore, appears as a social medium in which digitality registers either clear or ambivalent forms.

Just like Stäheli, Broszwieski also positions organizations at the center of his reflections—as if how fundamentally important this social system is for a theory of society somehow still remained to be proven. For Broszwieski, it is not persons, but rather organizations that are assigned the *first addresses* processed by digitality; and this can be understood as a rhetorical response to the conventional literature on digitalization, and a move against the omnipresent theme of an increasingly technological lifeworld within it.

If it can be said that Dirk Baecker composes, then Peter Fuchs conjures—if only in the sense that in his investigation of media effects, he counters the (Weberian) narrative of modernity as a project of rationalization (i.e., of a demystification of the world). For Luhmann, present-day superstition was no longer located in the sphere of causal magic, but in the sphere of creativity. For Fuchs, on the other hand, it is in fact the old technology of magic making that is resurrected in digital reality of the 21st century. Digital media, says Fuchs, bewitch us, because we can use them to perform magic. Ultimately, we do not understand what takes place in the depths, or in the submerged program level of the computer, or what processes are accessed via touch screen. Instead, signs appear on the surface of the screen—signs for something located in the depths, which remains hidden there. As computer users, we make use of our unequivocal two-dimensionality (sheer surfaces), which consists in a reduction of the

three-dimensionality of our bodies to two dimensions, which has turned us into *flatlanders* (Abbott, 1884). Moreover, we are now capable of manipulating apparent objects with just the tips of our fingers, effortlessly; we click and swipe. In the wake of the printing press, the depreciation of the senses—especially the eyes—was played off against the invisible interior (i.e., the soul or the heart); for Fuchs, this has now, at least to a certain extent, been reversed. Fuchs also hints at the possibility of the further development of magical technologies, like the efficiency of neuronal triggering devices that has lately been highlighted in the mass media. Even though still quite a distance from telepathy, the present technology is already sufficient to read the muscles in one's larynx, jaw, and face (Hardesty, 2018)—something that Fuchs (2010) addresses in his theory of the psyche as *Innensprechen* (inside speaking), picking up a tradition that has been carried to the extreme by Jacques Derrida (1967): no consciousness without a voice. The effect of such a telepathy technology would be a collapse of the forms of social order, as communication rests on the intransparency of our psyches; if people would have been able to read each other's minds, the communication process would begin and end with the very first selection.

In addition to all the authors represented in this issue who come from the field of systems theory, we are also pleased to welcome a representative of network theory—a close relative, so to speak. Jan Fuhse's essay closes this special issue, as it frames the recent discussions on media effects at the same time as it sums them up. His text investigates media effects linking three key concepts: networks, culture and communication; and by doing that, he recommends an interpretation based on network theory that is also compatible with fundamental assumptions of systems theory. His contribution proceeds from the paradigm of the Communications Revolution (see Albion, 1932; Seldes, 1960; Schonberger, 1971; John, 1994; Cairncross, 1997; Behringer, 2006), but, despite his interest in agency, he does not see media as perpetrators, or initiators. Instead, they are merely facilitators of probable outcomes, or—to use his wonderfully dry formulation—simply factors "rendering things more likely," the conceptualization of which charts out the possibility of connecting dissemination media and success media. In this respect, one could also consider Qvortrup's determination of the Internet as a combination of effect and dissemination (Qvortrup, 2003). With regard to the theory of evolution, one might even speak of a mutual pressure of adaptation that exists between forms of differentiation and communication media (Fuhse: technologies).

Each of the contributions to a sociology of media effects presented in this issue comprises an experiment in a difficult, highly complex theoretical terrain. They all offer different, surprising, as well as perplexing perspectives. As varied as their proposals may be, they are all united in an anti-ideology and an anti-humanism that resists the all-too-quickly-nailed-down, conventional morality and monocausality of most theories of media effects. As much as their answers to the question of these effects may differ in detail, all of the approaches presented here are nevertheless in agreement that this question can only be conclusively answered by focusing on the observer, and that the concept of the human being or person provides no further

assistance in solving the problem. This permits theory to set itself as contingent; instead of rejecting the legacy of modernity, it simply adopts it.

"Beginning is easy," Luhmann (1995, p. 131) says in regard to the autocataclysm of social systems; a sentence that can be also understood as a light-handed rejection of the usual complaints that arise when dealing with new situations and challenges. Beyond its explicit message, however, his inversion of a German proverb compels us to take the mediality of media seriously by decoupling strictures (supposed certainties) and then re-coupling them. Instead of getting lost in yet another re-reading and re-organizing of the classics, it invites us to begin anew.

Of course, there is still much work to be done in order to meet the demands of a consistent theoretical design in the field of media effects. And as everywhere else, empirical and theoretical work will need to go hand in hand (no doubt the corporate scientists of Google or Facebook are in a somewhat luxurious position when it comes to the amount of data that is available to them). But above all, this issue makes clear the demands that a theory of media effects must satisfy—including the provision of theoretical tools that are abstract enough to capture effects themselves as media (see Luhmann, 2000, p. 8). And maybe someday, these efforts will lead to a grand unified media theory after all. At least to me, Roger Silverstone's warnings about such a universal theory exert a certain appeal,[2] just like the defiance of some media theorists who consider a consistent media concept to be a mistake (Pias, Vogl, Engell, Fahle, & Neitzel, 2000; see p. 10).

As the contributions to this journal have demonstrated, systems theory also remains fundamental research. It is still far too soon to estimate the consequences of many of its theoretical decisions, just as the possible consequences for the kind of systems inspired media theory presented in this special issue are not yet clearly visible. This, however, is not so tragic; for what emerges from it is yet another open field of possibility. And what could be more exciting than letting oneself be surprised by the consequences of one's own research?

My special thanks goes to Florian Meisenberg, who has fortunately agreed to illustrate this issue, in the spirit of Luhmann, as a kind of parallel poetry "that says everything that has already been said differently," and by doing that, artistically points to the limitations of scientific research.

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2. He refers to the attempt to, as it were, forcibly produce a unitary entity out of media theory as "a political mistake, an intellectual mistake, a moral mistake" (Silverstone, 1999, p. 5). Bob Craig's honorable attempt in 1999 at a normative unification of diverse communication theories can be characterized as such an intellectual mistake. It expressly points to the necessity of coupling communications theory with social theory; it would otherwise have been presumably apparent to Craig that communication in modern society has its operational mode based in contingency: "the frantic search for communal grounds of consensus … (results) in more dissipation and fragmentation, more heterogeneity" (Baumann, 1990, p. 436).

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Regular Features

Lou Kauffman's column this issue is in the form of a science fiction short story. A demolished computer in the Arctic called the Erdos Machine appeared to have developed the ability to use mathematical concepts related to G. Spencer- Brown's *Laws of Form* to address mathematical questions related to the Riemann hypothesis. But the Erdos Machine may not have reasoned according to the usual canons. A mysterious procedure called "reasoning by imaginary values" has been alleged possibly to have been applied at some point. "Spencer-Brown hinted that a circularity was fundamental to reasoning by imaginary values so that the truth of a Theorem would be justified by its own reverberated truth," writes the anonymous Analyst of the Erdos Document, whose report is appended. Whatever this may mean, and whether or not such proofs can prove that white is black, making them useful to advertisers and