

Publication

The persistence of information theory

Book Item (Buchkapitel, Lexikonartikel, jur. Kommentierung, Beiträge in Sammelbänden)

ID 1368127

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Year 2014

Title The persistence of information theory

Editor(s) Arnold, Darrell P.

Book title Traditions of systems theory : major figures and contemporary developments

Publisher Routledge

Place of publication New York

Pages 21-44

ISSN/ISBN 978-0-415-84389-8

Series title Routledge Studies in Library and Information Science

This chapter begins with a survey of the different senses of 'information' in everyday parlance as well as media theory to point out the distinct contributions made by more technical conceptualizations of the term, in particular Shannon and Weaver's definition of information as "a measure of one's freedom of choice in selecting a message" and Donald M. MacKay's understanding of information as an entity that triggers actions within systems to whom we attribute free will. This is followed by an outline of Shannon and Weaver's mathematical theory of communication that assesses both its weaknesses, which by and large derive from its understanding of communication as a one-way, linear process of transmission, and its continuing relevance for literary, cultural, and media studies. In particular, I challenge the common view that systems theory necessarily represents an advancement over information theory when it comes to the description of processes of communication. While Shannon and Weaver's transmission model has clear limitations in the description of highly complex systems such as computers, the human body or society, Weaver's suggestion that "[i]t is also possible to think of an adjustment of original message so that the sum of message meaning plus semantic noise is equal to the desired total message meaning at the destination" opens up ways of approaching highly innovative and recalcitrant literary texts and other cultural artefacts. In particular Shannon and Weaver's conceptualization of noise has fallen on fertile ground with philosophers such as Michel Serres (*The Parasite, Genesis*) and Jacques Attali (*Noise: The Political Economy of Music*) as well as media theorists such as Douglas Kahn (*Noise, Water, Meat: A History of Sound in the Arts*) and Friedrich Kittler (*Discourse Networks 1800/1900, Gramophone Film Typewriter*). These thinkers' revalorizations of noise as a disturbing yet productive force within the highly complex system of culture links up with earlier theorems such as the Russian Formalist notion of "enstrangement" and Adorno's reflections on negativity to allow us to read the "acoustic violence" of Japanese noise-artist Merzbow, experimental literary texts such as Diane Williams's collection of micro-stories *This Is About the Body, the Mind, the Soul, the World, Time, and Fate* (1990), and innovative films such as Christopher Nolan's *Memento* (2000) in ways that do not fall prey to the inherent conservatism of systems theory's "order-from-noise" paradigm, according to which noise is always only interesting as a precursor to a new order.

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