Book review

Code: From Information Theory to French Theory

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Bernard Dionysius Geoghegan. *Code: From Information Theory to French Theory*. 272 pp., 47 figs., index. Durham, NC: Duke University Press, 2023. $26.95 (paper).

Code traces the ways in which the notion of code grew to be a remarkably influential concept, both across interrelated theories and schools—mainly cybernetics, information theory, and structuralist and post-structuralist thought—and outside of academic research. *Code* forefronts "code" as the leading component in a range of cross-disciplinary thinking in terms of communication and with communicative models. Following the various paths from which the concept of code emerged and through which it diffused, the book uncovers the political motivations that gave rise to cybernetics, and the ways in which the cybernetic perspective has influenced our understanding of cultural and social phenomena, from speech, literature, and hermeneutics to kinship and illness. In *Code*, Geoghegan suggests a broad yet nuanced narrative which unearths the crises out of which cybernetics and information theory emerged—colonial control, World War II and the Holocaust—discovering in them the human-machine and human-human entanglements that accompanied the rise of these theories and eventually also became their legacies in subsequent paradigms. In this, *Code* presents a compelling case which exemplifies how the dissemination of knowledge and the circulation of ideas within scientific structures is always already committed to political, social, and cultural impetuses.

Code joins previous seminal studies that narrated the rise and influence of cybernetics and information theory—among them, Galison,[1] Liu[2] and Medina,[3] to mention only a few—and adds to them a reading of this story from within: what led to the cybernetic way of thinking, what were its sources, and how these eventually shaped subsequent theories and schools of thought. This trajectory follows the trans-Atlantic axis through which cybernetic ideas were diffused and transmitted synchronically as well as diachronically, beginning with its sources in European and North American thought and research which preceded the famous Macy conferences of the late 1940s and early 1950s, and following the dispersal of these ideas and methodologies across several research fields, institutions, and policy-making agencies. By looking at the before and after of cybernetics, the book suggests a longer historical perspective on the enduring impact of the cybernetic prism and its principal ideas, but also highlights the political, racial, and other social themes that continued to shape the production of knowledge, up to the present day. It is possible to understand this move offered in the book in cybernetic terms: The immigration of ideas, and people, across that trans-Atlantic axis and back, and their continuing and powerful impact on Western thought, may be described as a cybernetic loop of influence that generates feedback, intersections, and even metaphorical noises which nourish both theory and practice.

Although the boundaries of the category "cybernetics" are questionable, the book wisely uses the phrase *cybernetic apparatus* to include in its analyses "the network of institutions, methods, techniques, researchers, conferences, instruments, laboratories, clinics, infrastructure, and jargon mobilized around cybernetic themes" (13). This allows the discussion to deal with both human and non-human contributions to the rise of information theory and to investigate the distribution and transfiguration of complex ideas and models. For example, the notion of *technocracy*—which is commonly associated with a generally inflexible and insensitive adherence to mechanisms or systems—serves in *Code* to reveal a much more nuanced depiction of thinking with and through technologies, which is inherently "politically motivated" even when it purports to be "a supposedly nonpolitical and neutral tool of governance" (15). Carefully grappling with such key terms and phrases, *Code* unpacks the ways in which cybernetics is political down to its core and from its very beginnings. In my mind, this argument is of great importance to the history of media studies for two main reasons. First, it restates the central role cybernetics and its promotion of thinking technologically had in the emergence of key ideas across almost all the disciplines in the human sciences. Secondly, it simultaneously refutes the widespread associa-

[1] Peter Galison, "The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision," *Critical Inquiry* 21, no. 1 (1994).

[2] Lydia H. Liu, *The Freudian Robot: Digital Media and the Future of the Unconscious* (Chicago: The University of Chicago Press, 2010).

[3] Eden Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende's Chile* (Cambridge, MA: MIT Press, 2011).

tion of cybernetics and information theory with the supposed "cold gaze" of science, informed by the quasi-neutrality of machines and technical models. In this sense, it also provides theoretical depth, and a longer historical perspective on how media are inherently political machines, to research on contemporary information technologies—which, at their most basic levels, rely on cybernetic models.

The analysis suggested in *Code* follows the transfiguration of cybernetic terms and keywords—such as code, communication, computing, feedback, and control—as well as the influence of the cybernetic mindset on ways of thinking in patterns and structures that became the pillars of theories such as structuralism and post-structuralism. The wide range covered by the book, in jointly discussing the parallel developments in fields such as anthropology, sociology, psychology (including psychoanalysis), semiotics, and literary theory, reflects the extensive and enduring influence of cybernetics. The book depicts the travels of ideas and people, and delves into famous scholarly cooperations and the mutual influences they absorbed: from Weaver's co-optation and "translation" into socially meaningful concepts of Shannon's servomechanical designs that eventually became the influential mathematical model of communication, through how Mead and Bateson together and separately developed their methodologies of pattern discovering, continuing with how Jakobson and Lévi-Strauss inspired each other in formulating their own versions of structural analysis, and following with how Lacan (and his disciples) and Barthes implemented some of these ideas, while transfiguring them, in their theories and research.

Here lies, to my mind, the main take for the history of media studies and for the historiography of science in general. The depiction provided by *Code* sheds light not only on the nature of direct influence and mutual inspiration but also on how free and creative understandings as well as misuses of ideas—which might be considered, in cybernetic terms, as metaphorical "noise" as I suggested above—serve as productive and thought-provoking maneuvers that eventually lead to the development of theories and methodologies. And this is another level on which *Code* embodies and reflects the principles of its own subject matter, because it exemplifies how the communication and development of knowledge, while indeed depending on systems and structures (e.g., grants offered by institutions, conferences bringing researchers together with similar interests), is more messy than structurally organized. Examples of this may be found in the inner feedback-loops of influence and translation of knowledge which gave rise to post-structuralism, out of and against structuralism, and in how "French Theory" (as it has come to be known in the English-speaking world) actually emerged from

the cybernetic influence on Continental thought. In a sense, the book suggests, post-structuralism was also post-cybernetic, harnessing the logic of the machine to critique communication systems (for example, in Kristeva's or Baudrillard's philosophies).

This last point opens a new trajectory for considering contemporary algorithmic culture, and especially its current, still-emerging manifestations in generative technologies. These are based on machine learning and natural language processing models, which are initially, again, cybernetic systems. What will "code" become in the age of autonomic coding AI agents? What will be the political and social stakes of such technologies? While contemporary research has already started to provide some preliminary answers to these questions, the historical analysis provided in *Code* also suggests that for future historians of media studies, the retrospective description of current technological developments would have to consider the complexity of beyond-human communicative concepts.

Bibliography

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