

Bernard Dionysus Geoghegan. *Code: From Information Theory to French Theory.* Duke University Press 2023. 258 pp. \$99.95 USD (Hardcover 9781478016366); \$26.95 USD (Paperback 9781478019008).

Code is an intellectual history of the surprisingly tight theoretical interplay between cybernetics and the human sciences, which establishes a relationship between French literary and anthropological theory and American communication theory that is often forgotten. Geoghegan argues that strategies of total capture of cultural knowledge via codification were employed in response to threats of global violence in the mid-twentieth century. While the researchers' intentions were often noble in these endeavours, they were also enmeshed in (and often actively supportive of) colonialist and technocratic structures that made the resulting research programs a mixed bag of genuinely new insights and problematic flattening of humanistic inquiry.

Chapter 1 discusses the philanthropic context of early information theory led by the influence of Warren Weaver within the Rockefeller Foundation and the creative cross-disciplinary collaborations of Margaret Mead and Gregory Bateson. The rise of cybernetics and social engineering were part of an aspiration for universal communication and a project of inter- and postwar international peace, guaranteed through the coordination of superpowers according to colonial logics. Their project shifted the focus of human study, sometimes at the instigation of humanists seizing on funding opportunities, sometimes via the utopian vision of technocrats, but all under the auspices of industrial (Geoghegan adopts the terminology 'robber baron') philanthropy.

Chapter 2 looks at how data-driven approaches to ethnographic research were developed in Bali and carried over to suburban American social contexts in the postwar period. The initial goal of Mead and Bateson's work in the 1930s was to present a more complex picture of supposedly 'primitive' ways of life by identifying cultural logics through pattern-capturing technologies, particularly film and photography. Predictably, however, 'the search for impersonal cultural patterns ... carried within it hallmarks of imperial political technologies' (63). It also easily overlooked existing hegemonic structures that sometimes worked to manufacture an artificial primitivism in the first place. As 'primitive' patterns were of interest in non-Western contexts, so also 'aberrant' social structures became of interest in postwar America, leading to similar observational studies seeking to understand the family as a cybernetic network and the communication structures that explained mental health phenomena such as schizophrenia.

Chapter 3 chronicles the work of the Russian refugee linguist Roman Jakobson to integrate Saussurian linguistics with cybernetics, a project that dovetailed well with research funding in the United States at the time. Jakobson's work demonstrated how information theory's influence on the metaphors and operating logic of linguistics could also be reflexive: Jakobson insisted not only on a cybernetic critique of language, but also on applying poetics to our understanding of information theory.

Claude Lévi-Strauss's structuralist anthropology as it was stimulated by US technocratic interests, UNESCO, and others is the focus in Chapter 4. While Mead and Bateson had previously developed approaches to cybernetics with input from anthropological field research, Lévi-Strauss



found in cybernetics the key to a science of cultural diversity, which he sought with incomplete success to bring back to French academic circles. Chapter 5 charts this continued radiation of cybernetics from American corporate-academic beginnings to continental theory, showing how the work of Jacques Lacan, Roland Barthes, Jean Baudrillard, and others challenged the universalism of code.

Key projects of early cultural anthropology, systems theory, linguistics, and structuralism actively liaised with postwar communications theory and cybernetics research. This much, at least, is established in Geoghegan's story. The careers of Mead, Bateson, Jakobson, and Lévi-Strauss are primary here insofar as they are tied to Rockefeller Foundation money as well as other philanthropic ventures and international organizations. The influence on French theory after Lévi-Strauss is the significant second act of the story but is downstream of the establishment of cybernetics as a force in theory.

What is the lesson of this story? In part, Geoghegan wants to show us that a cybernetic outlook captured, during several significant decades, both the imagination and the ire of a number of theorists who are often read without reference to this context. Likewise, there is a human face to the technocratic aims of postwar scientists and their financial backers that need to be recognized for their own attempts to capture kinship structures, linguistic heritage, and colonized cultures through systemic analysis. A strength of this study is that it does not pit the two cultures of information theory and the humanities against each other, offering only a relatively obvious critique of the technocracy of the former. There are no clear villains or heroes in this story, and code can be read at different times as a contaminating influence or as an inspiration for new research programs.

A comment made in the introduction brings the significance of this ambiguity into sharp relief. Commenting on how cybernetics and anthropological theory "drew on indigenous cultures," Geoghegan argues that 'a more complete historiography of cybernetics, including its global and colonial roots, complicates claims to its supposed antihumanism.' Sometimes, Geoghegan himself does not emphasize this humanism of code as much as he could. However, an attentive reader of the book will realize that this is not just a story of disciplinary antagonisms. The takeaway should be that computational approaches are rooted in more than merely military-industrial systems of interest.

The conclusion argues for current relevance by referencing Anna Wiener's *Uncanny Valley*. In fact the staying power of the history of 20th-century cybernetics goes well beyond the culture of Silicon Valley. Artificial Intelligence has currently taken the spotlight for theorizing about the possibilities of cultural analytics and does not seem to be diminishing in its public significance. The surveillance and control of human migration is at least as significant a development. Cybernetic systems are not a failed project, that is. They are ethically fraught but unambiguous in their staying power. What this means for the humanities as human sciences remains an open question, and here Lacan, Barthes, Baudrillard, and others become newly relevant in their attempts to move beyond the reproduction of the captivity to a structure and system that introduced cybernetics as a program of human study.

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