

The cybernetic music of Roland Kayn

Thomas W. Patteson

University of Pennsylvania, USA
thomas.patteson@gmail.com

Abstract

The interdisciplinary project of cybernetics, one of the most pervasive and enigmatic intellectual trends of the mid-twentieth century, was launched in 1948 with the publication of Norbert Wiener's *Cybernetics: Or Control and Communication in the Animal and the Machine*. Based on the fundamental idea of feedback, through which organic systems maintain homeostasis in the face of ever-increasing entropy, cybernetics quickly found applications in virtually every domain of thought.

Not surprisingly, given the mid-century enthusiasm for the merger of art and science, music was a receptive field for cybernetics. Perhaps the most sustained involvement is that of the German composer Roland Kayn (1933-), who since the early 1960s has cultivated a self-proclaimed "cybernetic music" as a compositional orientation distinct from the dominant mid-century strains of *musique concrète*, *elektronische Musik*, and computer music. Just as the purpose of cybernetics was, according to Wiener, to model artificially the features of organic life, Kayn envisioned cybernetic music as "a generative process through which existent sound-material is fed back upon itself, from which departures from what preceded can emerge."

Kayn's project can be traced to his interaction with the philosopher Max Bense, with whom he studied at the Technical University in Stuttgart in the early 1950s. Bense was among the first to channel the primarily Anglophone discourse of cybernetics into continental European philosophy. Under the rubric of "generative aesthetics," Bense also applied cybernetic thinking to art, and oversaw some of the first applications of cybernetic and algorithmic procedures to the composition of poetry and visual art. Through an examination of the Kayn-Bense connection and a survey of the composer's writings, this paper will explore the significance of Kayn's music within the aesthetic context of avant-garde music in the second half of the 20th century.

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Thomas Patteson is a graduate student in historical musicology at the University of Pennsylvania in Philadelphia. His research centers on 20th-century music, with a focus on technologies of sound, experimental and electronic traditions, and inter-media encounters, especially between music and the visual arts. He studied previously at New College of Florida and as a Fulbright Scholar at the University of Cologne in Germany. In addition to his research, Thomas curates the music blog Acousmata and directs an event series called *Experimental Culture* which seeks to introduce innovative 20th and 21st century works of art to a general audience.