

ROLAND KAYN

ON CYBERNETIC MUSIC*

Cybernetic Serendipity

The evolution of advanced composition in the second half of the twentieth century—viewed qualitatively, and not driven by fashions such as serialism, aleatoric music, or the minimalism of Indian-American origin—has produced only one perspective which, in contrast to the prevalent ‘-isms’, has proven itself capable of consistent innovation—and that is cybernetics.

It should be well known that artists working in electronic and video art availed themselves of these new approaches much earlier than did musicians. At least some light seems to have been shed upon the basic principle of informatics, which has to do not merely with transmission from one place to another via ‘channels’—as musicologists have long erroneously supposed—but rather with the processing, differentiation, and distribution of information within an electronic circuit.

* Translation from German to English by Thomas Patteson—ed.

ROLAND KAYN

Seen in these terms, the state of affairs even now, in the middle of the 1990s, stands at the beginning of an evolution whose further course can hardly be predicted. In the 1970s, crucial observations made at the Institute of Sonology in Utrecht led to the thesis that analogue electroacoustic systems, with their manifold recursively conditioned fluctuations and relatively greater instability when interconnected, produced far more innovative output than is typically encountered in digitally controlled systems.

Thus, heuristic technological processes organised according to the principle of 'trial and error' were found to offer results of a fundamentally higher aesthetic quality than those produced by goal-directed run-commands. It is an improbable fact that the unforeseen literally bursts through in the midst of practical studio work, as happened in the discovery of my composition *Cybernetic Serendipity*. Here we have an *objet trouvé* concretised through an elaborately structured electronic-autonomous system that contains no directed control signals whatsoever.

Because the process that generates this music cannot be reproduced, documentation through recording becomes particularly important, especially since the relevant details cannot be communicated and the traditional sense of authorship has been completely disavowed.

ON CYBERNETIC MUSIC

From 'Sociological, Technological, and Aesthetic Aspects of Acoustic Innovation in My Work'

Cybernetic music, whether vocal, instrumental, or electronically generated, is above all music that is no longer 'composed' or rehearsed. It emerges out of a process set in motion by the play of interconnected feedback loops, whereby certain forms of information take on special significance—in particular, commands and electrical signals directed toward a memory storage system (human or machine). From this interconnection of partially recursive systems there emerges a type of process that can be described as winding up, rather than running down in the conventional way, and which may be fully autonomous. Just as chemical and technical procedures, viewed under a microscope, can give rise to repulsions, diffusions, rhythmic pulsations, colour displacements, expanding surface formations, and, in certain interactions, may result in new constellations and chemical reactions, so in the electroacoustic domain, heuristic approaches can uncover processes through which the composer is entirely divested of their original function. They can now merely decide either to intervene, guide, and regulate, or to be willing to accept what emerges as a self-generating activity.