Jean-Claude Risset (1938-2016): Overview of Writings

Jean-Claude Risset's writings include more than 130 texts written from the mid-1960s to his death in 2016. Few of his contemporaries wrote as much as he did, especially on subjects beyond their personal work. In this sense Risset's writings can be compared to the similar corpuses of Nono, Dufourt, Mâche, and, particularly, Boulez, with whom Risset shared the values of apprenticeship, craftsmanship, and the full possession of one's art.

However, while both were composers, Boulez was also a world-renowned conductor, whereas Risset was a scientist and researcher who worked in many laboratories (Bell Labs, IRCAM, LAM) on questions relating to sound synthesis, computers, and the use of the digital. Boulez discussed serial composition technique and situated himself in a continuation of Webern and Stravinsky; maintained faithful correspondence with Cage and Stockhausen; discussed the profession of the conductor; the institutional organization of music; and published the lectures he gave at the Collège de France. For his part, Risset documented his research on digital sound synthesis and perception; situated himself in a continuation of the art-science of Varèse; writing about those he called "pioneers and explorers of musical material" (Schaeffer, Mathews, Chowning, Vaggione, Tenney, Varèse); and taking interest in the notion of chaos.

Risset's earliest writings on music date to his first stay at Bell Laboratories in Murray Hill, New Jersey in 1964–1965. The American scientific community was very eager to share information and research results; it was also through publications that Risset learned of Max Mathews' work at Bell Laboratories, deciding to join him there, and later, of the complementary work of John Chowning, who they in turn invited to join them.

But writing was also a way to defend an idea, a vision, an intuition, and to communicate it to a wider audience beyond the scientific community. After all, Risset was also a composer who intended to use his research (and see it used by others) to compose new music. This is why he created a catalogue of computer-synthesized sounds, which had the particularity of setting down on paper a physical description of synthesized sounds so that they could be reconstituted at will using software like *Music 5*, with the resulting sounds later added to an audio format.

Upon his return to France, which lagged behind in the use of digital technology and computer music, Risset had to demonstrate the importance of these tools. During the UNESCO-organized conference on "Music and Technology" held in Stockholm in 1970, Pierre Schaeffer openly expressed his hostility toward computers, which he viewed as simple calculation machines, but also took interest in the work presented by Risset ("Synthèse des sons par ordinateur", 1970; "Pierre Schaeffer et

l'ordinateur", 2008)—so that he invited Risset to present in his class on electroacoustic music at the Paris Conservatory. Boulez also consulted with Risset during the creation of IRCAM, entrusting him with the direction of the "Computer" department (see "Musique et Informatique", 1975 in the first book published by IRCAM).

Risset's writings are extremely varied and include research reports and reviews, encyclopedia articles, articles in scientific journals, transcriptions of classes and lectures, conference proceedings, book prefaces. Only a few of them—principally his notes presented at the Academy of Sciences in the mid-1960s—are very technical and require special acoustic or mathematical knowledge. Risset addressed composers and musicians first and foremost. His aim was not to go into scientific detail, but to situate general results in the musical world at large, and especially, to describe the artistic perspectives they offered.

From the perspective of science, computer programing, physics, and psychoacoustics, one might speak of popular science (in the noble sense of the term), as Risset hoped to make these fields accessible to composers who did not necessarily have the expertise to take on such subjects. However, he expected his reader to possess a certain knowledge of Western music, particularly contemporary music, and good knowledge of the works of a few important composers (Varèse, Schaeffer, Boulez, Stockhausen, Xenakis, Ligeti, and the spectralists).

Risset regularly wrote about computer-assisted composition of sound and its impact on artistic creation, particularly in regard to perception and psychoacoustics ("Music is meant to be heard: psychoacoustics is central to electronic and computer music", 2003) and to sound illusions and paradoxes ("Les illusions auditives", 1979). Similarly, he placed great importance on the increasing consciousness of sound's evolving nature, something he called "la nouvelle acoustique" (the new acoustics). He pursued the study of sound and confirmed that it was an extremely complex phenomenon; this led to his growing interest in theories of chaos ("Temps, complexité, chaos et fractals dans la musique et le son calculé", unpublished 1994). Risset's music put his research to use and is therefore often cited in examples. Still, it was only in the 1990s that he began to write articles exclusively devoted to his music and his personal artistic interests. At the beginning of the twenty-first century, he also began to write about the pioneers of digital sound, often for the "portraits polychromes" of INA/GRM or conference proceedings. The scientist had become a musicologist.

This is noticeable in the subject matter of his articles but also in their style, whether in French or English. In his early texts, Risset wrote in a formal, impersonal style, like a rigorous and methodical observer, an attitude he likely acquired during his stay in the United-States. Gradually, as he used his research in his compositions, his writing became more fluid; the composer spoke more often in the first person singular ("Problèmes d'anayse : quelques clés pour mes premières pieces numériques, *Little Boy* et *Mutations*", 1997; "Why do I use the computer in my music?", 1998).

Published in numerous French or American journals, conference proceedings, research reports, etc., most of these texts, particularly the oldest ones, are no longer available. They can be found in university libraries or in specialized research centers in France or the US. They are nevertheless essential to understanding Risset's music, the history and context of computer music practices in "classical" music, and for undertaking a reflection on digital life, between the real and the virtual which has infiltrated our society in an exponential manner. This is why the composer sought to compile his texts in an anthology with the help of Márta Grabócz and the GREAM in Strasbourg. A first volume, *Composer le son — Repères d'une exploration du monde sonore numérique* was published by Hermann in 2014.

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