Abstract Title: A Comparative Study of The Research Proceedings of Knut Wiggen and Pierre Schaeffer during the foundation of EMS

“In fact we can be completely reassured by Wiggen’s remarks: he in no way ignores the “ravine”, and was actually one of the first and only people who has continually echoed my own warnings during the last ten years.”

P. Schaeffer

The purpose of this paper is to study the research proceedings at EMS (Elektronmusikstudion) in Stockholm under the leadership of Knut Wiggen focusing more specifically on his interactions with Pierre Schaeffer approximately from 1968 to 1972. Despite a certain number of studies on EMS history, for the first time, this research aims to introduce a specific historical period of EMS through the comparison of the musical concepts of the two forerunners of electroacoustic music in Sweden and in France. The study also strives to put into perspective how Wiggen acknowledged Schaeffer’s theoretical and musical thoughts and what were the diverging points as well as the similarities of their conceptions regarding the research which would widely influence the technological developments and the musical creation in their institutions EMS/GRM.

First of all, the inquiry argues that P.S. and K.W., they both proposed a sort of compositional and technical program which led the main scientific and creative directions of GRM and EMS. For instance, P.S. and his research group, they invented the concrete music by recording and manipulating the natural sounds in relation with a specific listening technique giving the priority to the ear as the main instrument, favoring the human perception. Accordingly, Schaeffer developed a new solfeggio based on his conception of listening, in order to define all kind of sounds without any notation or any causal reference, attempting to explore the musical potentialities of sound objects. Thus, Schaeffer summarized his huge research proposing a method for the composition of concrete music within his Tracté (1966), which would be a great source of inspiration for Knut Wiggen.

Second, in the middle of 1960s, Wiggen, Fylkingen’s chairman, proposed a curious and exciting project for the electroacoustic music composition by establishing a new hybrid studio, which would combine Art and Technology. First of all, in his article « The Musical Background of Computer Music » in 1969, he suggested that in 20th century, the sound material- the orchestra- was replaced by the electronic sounds, the compositional technique replaced by the atonality followed by the serialism and the distribution-the concert hall- replaced by loud speakers and the studio apparatus [Wiggen 1969, 9]. In the same article, Wiggen also argued that the composer should keep the balance between those three elements since they are dependent upon one another. As for the electroacoustic music, he pointed out a need for a new compositional technique, which was suitable for the new sound material and the distribution. Moreover, this compositional technique should be fed by a good

2 Fylkingen is an association/a sort of venue for experimental works of contemporary music and performing arts, founded in 1930s.
knowledge of studio apparatus in order to obtain required sounds, which was not the
case in Germany during 1950s [Wiggen 1969, 12]:

Electronic music – such it was developed in Cologne and other similar studios – took its point of
departure from instrumental music and the technique of instrumental composition. The destruction of
tonal music was to be carried out to the bitter end – out to the « lonely » sinus tone – and from there,
the new music was to be built up. That construction job was unsuccessful in its first phase, because the
working method, which was chosen, made no distinction between the physically conceived
composition technique and the sonorous result, which was judged on quite another basis.

Schaeffer, he also agreed with Wiggen having the same retroactive point of view
concerning German electronic music, referring to above-mentioned article [Schaeffer
1971, 76]:

(...), inversely, the synthetic sounds derived from the new material resources may not suit traditional
music. (...)

Finally, Wiggen highlighted that the first pertinent example, which kept that balance
with the help of a new technique, appeared in Schaeffer’s research within the concrete
music. Consequently, Wiggen attempted to make a new compositional technique
partly inspired by Schaefferian model by means of a new studio apparatus for the
diffusion and the creation of sounds in high quality. Furthermore, Wiggen mentioned
that during the first experimentations of concrete music, the technology was not able
to produce such a complex and rich sounds and as a result, he underlined the
importance of the computer as an important aid to compose. Although Pierre
Schaeffer was always skeptical about the composition by computer, he seemed to
agree with the idea of using the computer in Wiggen’s perspective for the creation of
new sound objects [Schaeffer 1971, 76]:

Now we come to the second use of the computer – as an instrument – I should like to propose, as a
contrast with respect to the preceding intentions, the point of view of an investigator who has devoted
his life towards an authentic research in this field...(…)Knut Wiggen’s « preliminary declarations »
(…) The computer is supposed to contribute the « instrumentarium ».

The second major step in Wiggen’s studio project, which was greatly influenced by
P.S., concerned the description of sounds for this “new music”. Wiggen explained in
his book De två musikkulturerna in 1972, three types of musical description [Wiggen
1972, 127]: Apart from the physical description and the traditional notation, he
proposed the third kind of description « Schaefferian psychological terms », which is
the most efficient representation of the sound substance according to composer’s
perception. Therefore, Wiggen intended to make operational those psychological
terms, with a computer program for producing « complex sounds » in Schaefferian
way. This project would be soon called SYNTOM (Synthèse+Traité des Objets
Musicaux) in collaboration with GRM in charge of François Régnier [Teruggi 1998,
84]. The first point of this idea is to analyze sounds in physical terms after their

3 Schaefferian model - that is to say a method for the creation of complex and rich sounds based on his
listening technique and the theoretical basis of his solfeggio program, which corresponds to the typo-
morphology

4 Wiggen in his book De två musikkulturerna, he defined Schaeffer’s terms for sound objects as
« psychological terms ». Since, Wiggen didn't provide us any reference or detail about that
definition, I suggest that he meant the most achieved part of Schaeffer’s solfeggio program, which
is typo-morphology.
conversion into digital signals with the help of the computer. And then, the analyzed sounds would be synthesized with a synthesizer that Wiggen called «analysis/synthesis circuit» [Wiggen 1969, 12]. Schaeffer also referred at Unesco Conference that the computer could be a “big analysis/synthesis circuit” like his thème/version concepts which means respectfully “natural listening/the analysis of nature” and the “reintroduction into the imitated structures of nature” [Schaeffer 1971a, 63]. On the second step, if the synthesized sound was suitable with the sound of departure, the result would be examined in Schaefferian terms by a computer program in order to produce some scales creating a connection between physical and psychological description of sounds. This program would allow composer to have an access to the intended sound with these terms translated into a computer language by the apparatus. Besides, Schaeffer situated this project at the crossroads of electronic and concrete music since Wiggen conceived the idea of creating complex sounds or sounds in different types by synthesizing [Wiggen 1969, 12].

PRELIMINARY CONCLUSIONS

• In sum, Wiggen’s and Schaeffer’s method, they both proposed a way of thinking for making electroacoustic music. Pierre Schaeffer’s method for concrete music composition is most commonly favoring the listening side whereas Wiggen’s method aims at producing sounds / making sounds favoring the usage of apparatus.

• As for Wiggen’s project in collaboration with GRM, one of the main reasons, which couldn’t make possible the idea, was the inability of technological possibilities during the beginning of 1970s at EMS. The second reason as defined Daniel Teruggi, was that Schaeffer’s description system can not be operational for a general computing system, since his research is directly related to the human perception [Teruggi 2007, 221].

• Aside from Syntom Project and some inspirations by Pierre Schaeffer’s method, Knut Wiggen realized a hybrid studio at EMS having one of the most recent technical equipment among the electroacoustic music studios in Europe. However, his studio installation made extremely difficult to practice the sound composition for a large number of composers during the 1970s, which provoked serious conflicts with the composers. As for Schaeffer, he left quiet quickly his research presented in the Traité without really proposing any connection between the descriptive level (typology-morphology-characterology) and the practical level (analysis-synthesis) that François Bayle explained [Bayle 1976, 28]:

Le Traité est une étape. Même pour la notion d’objet, il n’a pas voulu apporter un point final.(…)le Traité ne parle pas des objets en fonction, il considère les choses sous l’angle de l’observation et non sous l’angle de l’activité5.

5 The treatise is the first step however it didn’t make a final point even for the concept of object.(…) the treatise doesn’t talk about objects in practice, it considers them into the perspective of observation, the object is not situated in an operational context.
Hence, the reception of Wiggen’s and Schaeffer’s method in EMS and GRM, was quite different from what they expected from composers. As a further step, this research will examine the reception of their proposal at those institutions drawing attention to the relativity of artistic achievements according to the technology, the research as well as the culture.

REFERENCES


