

BEYOND THE PIANO: THE SUPER INSTRUMENT. WIDENING THE INSTRUMENTAL CAPACITIES IN THE CONTEXT OF THE PIANO MUSIC OF THE 21ST CENTURY

Dissertation (University of Oxford, 2014)

3.8 Karlheinz Essl: “Sequitur XIII”

Karlheinz Essl's “Sequitur XIII” (2009/2013) for extended piano and live electronics is an innovative work in which the piano has been transformed into a super instrument thanks to a computer-based algorithmic system. Turning the relatively simple instrumental material into an orchestral entity through various real-time harmonic and spectral alterations, the piece multiplies the functions of the original instruments by recording the musicians' performance and playing it together with its modified version. The work shares many features with “Sequitur V”, most of them on the aesthetical as well as the technological level. As with “Sequitur V”, the electronic player of “Sequitur XIII” is a real-time system that reacts to the piano part without producing any sounds by itself. Its main purpose is to enhance and reflect the collected sonic data with the help of two high-quality cardioid microphones, as the fine and monophonic piano texture becomes a vast and polyphonic entity.

Different partials and resonances are constantly emphasised with the help of the electronic system, which creates a unique sonic atmosphere. The electronic system has two different dynamic levels: the input into the programme (marked on the score in green colour) and the output from the programme (marked in red colour). By controlling the input level, it is possible - for instance - to send only the resonance of the sound to the Sequitur Generator¹. The inherent canonic principle is concealed, as one does not hear the characteristic loud attack but only the soft resonances, which creates an effect that resembles an echo (Essl², 2014).

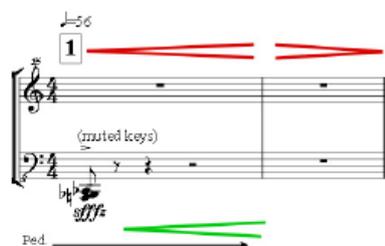


Figure 22: bars 1-2. The input and output levels of the computer program are indicated on the score with green and red colours. As seen in bar one, only the resonances are played through the speakers, which disguises the starting points of the canons.

¹ The specific computer program designed for “Sequitur XIII”.

² An email conversation between the author and the composer, 6.8.2014.

3.8.1 “Sequitur XIII”: Creating a Super Instrument with the Help of Technology

The super instrument qualities of the work can be heard most clearly in its versatility of timbres and resonances. Although most of the piano part is thinly scored, the overall harmonic and rhythmical world of the composition sounds rich and full. As stated by the composer himself, “the virtuosity of this piece is not found in the polyphony of the voices, but in the polyphony of the structural components which – by interacting with each other – form a common “sound” together” (Essl, 2009, 3).

The composer uses the EBow to emphasise the key points of the overtone based material and to sustain certain harmonies for a longer period of time. The piece is based on three different harmonic scales based on odd-numbered overtone series that are anchored together towards the harmonic center (middle “C”) by the use of EBow (Essl, 2009, 1).



Figure 23: The overtone series used by Essl in “Sequitur XIII”

The harmonic world of “Sequitur XIII” is rather chromatic. The use of three different overtone scales at the same time allows sharp dissonant textures. The pitch material is exclusively based on the following 22-tone scale:

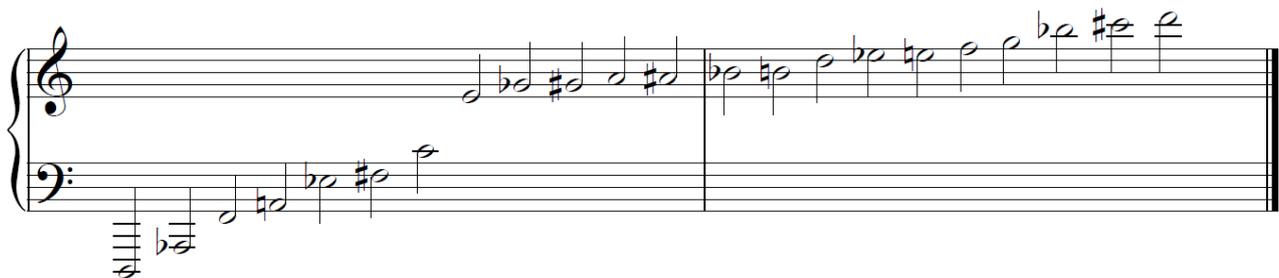


Figure 24: The overtone scale of Sequitur XIII

Although the notated score is full of space, freedom and rests, the overall sonic development is constantly evolving. The musical tension is constructed between the pianist's actions on the keyboard and the electronically-produced material controlled by the sound technician and played through the speakers. Both parts are knitted together closely, making it impossible to aurally distinguish between the electronic and acoustic components.

3.8.2 “Sequitur XIII” from the Performer’s Perspective

The rehearsing process of “Sequitur XIII” was different from that of “Sequitur V”: first of all, when I commenced to practise “Sequitur XIII” I had already gathered a fair amount of experience in performing electroacoustic works, which was not the case when I first learned “Sequitur V”. Despite its extensive use of extended techniques, “Sequitur XIII” is a work for my main instrument. I did not need to adjust to a completely new instrument as with “Sequitur V”. Having been a member of a contemporary music ensemble for years, I was also familiar with different extended techniques and instrumental preparations, which made it easier to master the technical requirements of this particular composition. After rehearsing and performing “Sequitur V” I had also become more familiar with Essl’s aesthetics and composition techniques, which helped me better understand the role and functions of the electronic part, as well as the notation of the piece. Moreover, “Sequitur XIII” was commissioned by pianist Tzenka Dianova, whose recording of the piece is publicly available³. Watching and listening to her performance quickened my own learning process.

Extended techniques and preparations form an important part of the pianist’s expression within this particular work. Rather than merely changing the timbre, they have been used in order to manipulate the harmonic structure. This responds acoustically to the functions of the electronics (picking up harmonic partials and resonances). The performer is often required to play harmonics, which she or he produces by touching the string on the corresponding spot and then hitting the key with the other hand. The composer recommends that such places should be marked with a chalk⁴ in order to make it easier to find them: I have also myself found this rather useful.

³ A video recording of the performance is available at <http://www.essl.at/works/sequitur/sequitur-13.html> (accessed 5.9.2014)

⁴ However, crayon/china marker might work as well, as it does not crumb.

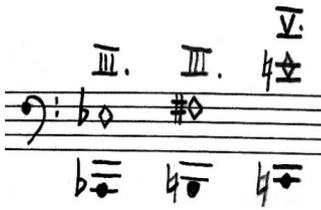


Figure 25: This image demonstrates which keys to hit (the lower line) in order to attain the required flageolets.

Before commencing to play the work one is supposed to mute the three lowest and highest piano strings with rubber wedges. This way a completely muffled sound is acquired, which is essential in order to play the rhythmical and percussive passages in a correct way.



Figure 26: The muted keys produce a rhythmical and percussive effect. The electronic system elaborates the texture with added polyphony (bars 17-22).

Other technical specialities of “Sequitur XIII” are the use of EBow and fishing wire (or a single hair from a violin bow): learning to incorporate these implements to the musical performance requires some practice. The performer should place the wire around Contra-A flat and Great-A natural, after which he or she can control the resulting “drone” sound by adjusting the pressure and speed of bowing (Essl, 2009, 3).

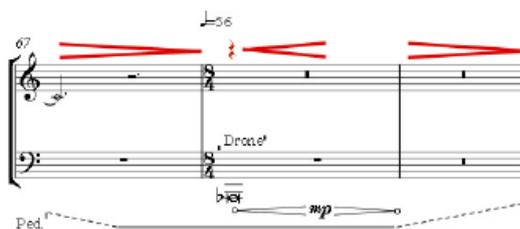


Figure 27: The ”drone” sound: the performer plays the piano strings with a fishing wire (bars 67-69).

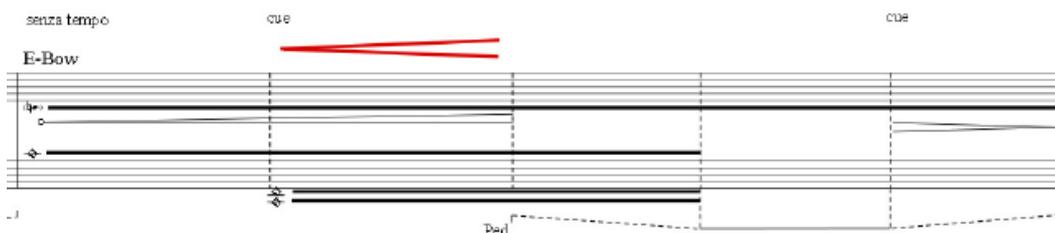


Figure 28: Notation of the use of EBow in bar 51. The device should be placed on the strings of the middle C.

As is the case with “Sequitur V”, the most important musical events of this composition do not take place in the acoustically performed piano part, but in the electronic line which reflects it. Both works require a performer who is comfortable with playing together with a real-time based electronic background. “Sequitur XIII” requires a lot of natural musicianship and willingness to improvise, as one cannot find all the important information from the score, which is typical of Essl’s compositions. The pianist is supposed to listen to the reactions of the electronic real-time modifications of the electronic player in exactly the same way as, for example, in “Sequitur V⁵”. “Sequitur XIII” is a duo work: Essl treats the sound technician as another performer rather than an assistant of the soloist. The sonic outcome relies mostly on the functions of the electronics rather than the reactions of the acoustic performer, as the sound technician is in charge of determining “Sequitur XIII”’s time structure, dynamics, and key points of harmony. Thus, in my experience, good communication between pianist and sound technician is essential in this situation.

Figure 29: bars 30-37. The numbers in boxes (2 and 4) show the performer the approximate time to move to the next passage, which, however, at the end mainly depends on the behaviour of the computer generated material.

⁵ It is possible to perform “Sequitur V” with or without a sound technician.

3.8.3 The Listeners' Perspective

The different textures played by the pianist and the sound technician give the impression of a super pianist or an electroacoustic ensemble formed by a single performer.⁶ In addition to playing the instrument, the pianist is also in charge of different implements and preparations, which has a strong visual and dramatic impact on the listeners' experience. The different sonic colours result from the combined use of acoustic instrument, electronic manipulation, and extended techniques.

“Sequitur XIII” is an atmospheric piece: according to my own experience some of the sonic colours even seem to relate to the aesthetics of film music (especially within the horror movie genre), which is not surprising, considering that Essl has also composed several soundtracks for visual media.

⁶ This is, however, only the listener's impression. As stated before, the roles of the pianist and the sound technician are equally important and most of the sonic texture is actually generated by the computer.