

Harfe

1980
open

for harp solo, electronics and magnetic field
Harp: Gyde Kamer-Knebusch

Commissioned by the "9es Rencontres Internationales de Musique Contemporaine", Metz,
France

Some thoughts before:

The composition HARFE is a further development of PIANO. In PIANO I tried for the first time to scan a string with a coil. I would like to develop the work on this idea further. Coils were attached to different strings and controlled with a sequencer. This setup is to be refined. Hum and feedback problems would have to be solved. A suitable suspension system for the coils and the mics should be developed.

The second problem of HARFE is the conception of a live delay system in which the delay times are variable. With MINIMAL, the amount of noise from the loops is so great that a new solution should be found. The use of a digital delay unit would be the best. The information about this would have to be worked out. Perhaps systems can be made with the microprocessors available at "STEIM". Here, too, I need the support of "STEIM". Some problems will of course arise during the creation of the composition. I cannot give an opinion on this at the moment.

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To HARFE:

In my composition PIANO I had tried to develop a style of composition that I called "ecological music". The composition "Harp" develops this idea technically and musically. Ecological music" deals with the relationship of the specific sound character of the harp (microstructure) to the definitive compositional form of the composition (macrostructure). The sound of the harp, the primary acoustic characteristics that is, contains information, e.g. overtone series, different volume ratios of the overtones to each other, which are to influence and shape the finite form of the piece.

The electronics clarify the acoustic information, they examine and "magnify" it, as if seen with a magnifying glass. The 8 bass strings of the harp (metal strings) are made to resonate by a computer using a terminal via 8 coils with magnetic fields. These resonances can affect the harp strings in two different ways:

1. the voltages are below 16 Hertz, i.e. the harp is plucked automatically, tempered tuning (see part 1).

2. the tensions are above 16 Hertz, i.e. the harmonics of the harp strings become audible, untempered tuning.
(see part 3)

The computer can generate or not generate the tension information at the moment of the game. The information itself is previously recorded on a diskette. They can no longer be changed live themselves. The flow of information can thus only be started or interrupted. At the beginning of the composition, the harp is made to vibrate "naturally" by a wind machine. This sound production corresponds to that of the Aeolian harp of antiquity, which Aiolos, the Greek god of the winds, played. This is a historical reminiscence of the computer game with the harp.

"Harp" premiered in Lille on 17.11.1980 and then in Metz on 23.11.1980.

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Description:

The computer score of HARFE consists of the sum of different compositional models (see model number).

These models are arranged in the piece in different ways (18, 17, 16, 21.....) and then run in sequence

according to the time sequence (1, 2, 3,...). Model 18, the first model, is thus given the number 1 and so on.

Model 18 here consists of a maximum of 2 pulses (see number of pulses) and runs in the time from 0' to 1'15" (see time sequence).

During this time, the model is repeated until the following model 17 sounds at 1'15".

The box indicated with red shows the range of the strings. Each of the 8 strings of the harp is plucked by the computer

plucked with magnetic coils (sign 0) or not. In model 18 the strings 3 4 and 6 (see correction) are plucked

are plucked on the first beat, strings 1 and 6 on the second beat. We also see the entire model 18 at 6'23".

It consists of 13 pulses in total. The harpist Gyde Kamer-Knebusch played the notes belonging to model 18 repetitively, whether rhythmically or melodically (MEL). She thus had the freedom to play the note sequences that suited her, depending on the musical tension. Each model was concluded with a transitional phrase.

Gyde Kamer-Knebusch is a German concert harpist who lives in Brussels. In addition to classical harp music and chamber music, she has also been playing avant-garde, jazz and free music for several years.

She received the soloist diploma from the Brussels Conservatory (teacher Susanna Mildonian) and the state diploma in rhythm and improvisation from the Jacques-Dalcroze Institute in Brussels. Her harp teachers also include Phia Berghout and Lily Laskine. Besides giving concerts in all European countries and collaborating on new projects, she is a teacher at several state music academies and at the Jacques-Dalcroze Institute in Brussels.

Computer models and harp playing techniques

Model number
Procedure

Plucking the strings

Number of pulses
time lapse



