153 FISH

SOUND INSTALLATION BY ULI AUMÜLLER AND MARTIN DASKE

EXPLANATION

The sound installation "153 Fische" by Uli Aumüller and Martin Daske is based on the motet "Nuper rosarum flores" by Guillaume Dufay, which he composed on the occasion of the consecration of the Florentine Cathedral by Pope Eugene IV on 25 March 1436. The motet was analysed and interpreted by Hans Ryschawy and Rolf W. Stoll (Musik Konzepte, Heft 60, Munich 1988). The installation follows the results of this musicological work in a freely varying manner.

The foundation of the motet "Nuper rosarum flores" as well as the installation "153 Fische" is the beginning of the introit "In dedicatione ecclesiae": "Terribilis est locus iste" (This world is full of terrors).

When the Gregorian chorale was scaled, the repeated notes of the strophic multi-note neumes were neglected. The same procedure was followed with the apostrophic tone repetition. The result is a structure of 2 x 7 tones divided in the ratio 4 : 3 and 3 : 4.

The chorale not only forms the melodic nucleus and shaped the supply of harmonic combination possibilities, but the large-scale form of the installation is also derived from it:

3 sounds of earthly spheres (in ascending order: water, road traffic, nuns singing) are juxtaposed with 4 sounds of heavenly spheres (nightingale, whistling wind, aeroplanes, space noise).

Two sounds are paired with each other, and form the tonal material for 12 (+1) ascendingly complex double canons (4 to finally 32 voices).

Each of these double canons is assigned a sign of the zodiac and each sign of the zodiac the name of one of the tribes of Israel. Since Manasseh and Joseph inhabit a house together (the house of the twins), Dina is included in the circle of signs as the "God-bearer" and only daughter of Jacob. Jacob as the father of Israel, whose dream of the ladder to heaven (1st Book of Moses 28, 10ff.) inspired the sound installation, is at the centre of the circle.

The length of each canon in seconds is derived from the gematrical numerical value of the 12 tribes of Israel based on the Greek spelling. Dina was not calculated with her primary numerical value 32, but with the numerical value 198 ("God-bearer"). Her position in the circle of signs also marks the "birth of the new light" (ÒÓ-vo-oþo = 198).

The twelve signs are divided into 4 groups, which were vaguely associated with the 4 temperaments. The speed ratios of these 4 groups correspond to the size proportions of the temple that King Solomon built: 60 cubits long, 20 cubits wide and 30 cubits high. "Forty cubits long was the main room before the back room." (3rd Book of Kings 6:2 and 16f.)

The total division is as follows:

Introduction:

Jakob

61 seconds

Water/Space Noise

1. group

"Water"

Metronome 60

Nephtalim

85 seconds

Water/Street Noise

Zabulon

92 seconds

Street noise/singing of nuns

Joseph (Manasseh)

79 seconds

Nunsong/Nightingale

2nd group

"Air"

Metronome 40

Benjamin

69 seconds

Nightingale/Wind Whistles

Reuben

74 seconds

Wind Whistles/Aircraft

Simeon

92 seconds

Plane/Space Noise

3rd group

"Fire"

Metronome 20

Issachar

86 seconds

Space noise/airplane

Judas

67 seconds

Airplane/Wind Whistle

Levi

45 seconds

Wind Whistles/Nightingale

4th group

"Earth

Metronome 30

Dina

198 seconds

Nightingale/Nunsong

Gad

8 seconds

Nunsong/Street Noise

Azer

43 seconds

Street noise/water

After running through one cycle, all canons were mirrored, i.e. repeated mirror-symmetrically.

The intermittent fading of one canon into the other results in a total time of 1997 seconds for the runs of both cycles.

The two cycles of the "Himmelsleiter" are framed by a double-choral 2 to 4 part ensemble of the 4 elements, whose total durations were derived from the triangular number 153 (multiplied in each case in the ratio of the golden section).

Earth = 153 seconds (spades)

Water = 232 seconds (jungle rain)

Air = 351 seconds (fluttering wings)

Fire = 232 seconds (fire crackling)

Total duration: 968 seconds

These 968 seconds were divided into 11 segments of 88 seconds each (88 is the symbolic number of Christ). In these 11 segments all possible combinations of 2 to 4 voices were varied. The following pattern emerges:

1st segment: 1 2 3 4

2nd segment: 1 2 3

3rd segment: 2 3 4

4th segment: 1 2 4

5th segment: 1 3 4

6th segment: 1 2

7th segment: 1 3

8th segment: 1 4

9th segment: 2 3

10th segment: 2 4

11th segment: 3 4

I.e. in the first segment a 4-voice combination of all four elements is possible, in the 2nd segment only 3 voices (without the earth = 4), in the third segment 3 voices (without the air = 1), and so on.

Each element (in itself worked out as a 4-part canon on the chorale "Terribilis est locus iste") was cut into its triangular components.

$$153 = 1 + 2 + 3 + 4 + ... + 16 + 17$$
$$232 = 1 + 2 + 3 + 4 + ... + 20 + 21 \ (1)$$
$$351 = 1 + 2 + 3 + 4 + ... + 25 + 26$$

The sections were distributed over the 11 segments in such a way that a cross structure of the length values results. I.e. in the first segment the longest and the shortest clippings are represented, in the 11th segment only the middle length values.

Since the ensemble of the 4 elements is repeated mirror-symmetrically backwards after a single run, a further cross-structure arises both with regard to the density distribution and with regard to the distribution of length values, which is also already inscribed in the layout of the total duration values.

351 232

232 153

Embedded between the two ensembles is a text excerpt from the 21st chapter of the Gospel of John, the recitation of which lasts 61 seconds. The text excerpt is 153 words long, in its centre the number 153, which is at the same time the mirror point of the entire composition; because of the different mirroring procedures on the "heavenly ladder" level and the "fish" level, the number 153 is furthermore the intersection of a structural cross.

At the time of the writing of this text (presumably in the 2nd century A.D., because this chapter is not from John, but was added afterwards), 153 great fishes were known. "153 great fish" thus represent the totality of all species of the sea. Moreover, in addition to Christianity and Judaism, the existence of 153 tribes of pagan faith was assumed.

"Augustine gives a mathematical symbolic explanation. First of all, the number is the sum of the numbers 1 17 (i.e. the triangular number of the 17th order). For its part, 17 is understood to be composed of the summands 10 (=law) and 7 (=grace; the 7 in turn of 3 = earth and 4 = heaven). The salvation-historical meaning of 153 is based on the fulfilment of the Old Testament in the New. Furthermore, Augustine interprets the number from 50: 50 x 3 + 3. 50 symbolises eternal life or the grace of the Holy Spirit, namely baptism. The 153 fish thus become the sign of salvation and the election of the saints (cf. Revelation of John, 7th chapter).

As a triangular number of the 17th order, the 153 also refers to the sign , the 17th letter of the Greek alphabet. It is composed of the sun sign I and the crescent moon C, which are connected by the celestial ladder. In addition, the sign is also that of the Redeemer; its components form the initial and final letter of the name IÕo.

For Theophanus Kerameus, archbishop of Rossano in Calabria in the 12th century, the fact that Rebekka, the model of the church, has the numerical value 153 is proof of the correctness of the assumption that the number is a symbol of the church.

The fact that the net does not break despite the enormous weight of the 153 fish is generally understood as an expression of the permanent unity of the Church.

The meal that follows the "miraculous catch of fish" must be understood as an image of the Lord's Supper, the climax of the Eucharistic celebration.

In addition, there are the following interpretations, among others:

Joseph, the son of Jacob, who takes the place of Pisces in the zodiac, has two sons named EÓµand MÓvÓÕ= 65 + 88 = 153. They, themselves fishermen, can be regarded as Old Testament forerunners of the fishermen brothers Simon Peter and Andrew.

  The place of residence of Joseph, the "fish", and his two sons, the place of the event described as a "miraculous catch of fish"; finally, the place of the ministry of John the Baptist is the Sea of Galilee = µvÔ-vvÕÓ-þ = 153.

  The apocalyptic John describes the one "who sat on the throne" as "jasper and sardis".

and sardis" (Rev. John 4:3). IÓÕÒðÓÙ = 71 + 82 = 153.

  Finally, 153 is the number of the topaz XvÕoo, one of the precious stones on the breastplate of the High Priest, which in the Revelation of John becomes one of the foundation stones of the heavenly Jerusalem. The topaz is assigned to the sign of the zodiac of the Virgin, thus also to the judge Dina, the daughter of Jacob, who in turn is equated with the Virgin and Mother of God Mary via the name ÒÓ-vo-oþoo."

The text excerpt used in the sound installation "153 Fische" reads

reads:

He put on the outer garment and threw himself into the water.

The others came by boat. They were not far

from the land, about 200 cubits, and they were dragging

the net with the fish. As they went ashore,

they saw a coal fire and fish and bread on it. He

said to them, "Bring here some of the fish that you have just

you have just caught." So one of them went up

and pulled the net ashore, full of fish.

153

large fish. And in spite of this great number
the net did not break. Then he said to them, "Come here,
Let us eat together". None of them dared to
dared to question him. "Who are you?" for they knew
they knew who he was. So he came and took the bread
and gave it to them, and also the fish. This is now
the third time that he made himself known to them,
after he had risen from the dead.