The Gestalt psychological music analysis theory and method, applied in a case analysis of Japanese Shakuhachi flute music

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The main targets in this case are to form the *Gestalt Psychological Music Analysis* method (GPMA), a survey to the Gestalt theories, and to analyse the Japanese Shakuhachi flute music piece *Kokuu* (10:20) case analysis. The analyse is concentrated to the focus of the *auditive*, phenomenological associations of the piece together with the *visual*, sonological graphical prints, as well as *the cultural Gestalt frame analysis* (Utriainen 2001).

The method is created according to the theory of the Gestalt psychology and the cognitive musicology. The whole structure of the music piece has its affects to the parts, and the Gestalt psychology tries to find principles of human’s psychical behavior. The whole of the musical piece is, due to this case, more important than its parts; we perceive first the impression of the whole Gestalt and then the impressions of the parts.

In the figure one is represented the model of the Gestalt psychological music analysis.
In the cognitive musicology the focus is to research the cognitive processes between music and the human mind, where the inner mental acts represent the perception material of outer behavior, associations and experiments of the music (Louhivuori 1999, 39). The representations of the music are important in the cognitive musicology when analyzing the structure and the meaning of the music, aiming to develop deeper and better models of musical cognition with computer (Roads 1999, 45). In this GPMA method is used the representation levels of music developed the musicologist Marc Leman. In his theory the sound represents the abstract object in three different ways: 1. *The acoustic, sonological representation* (sonogram), 2. *The symbolic representation* (transcriptions, notes) and 3. *The subsymbolic representation* (mental images, associations) (Leman 1999, 84-86). According to Leman’s theory the sound synthesis programs offers the link from the symbolic level to the acoustic level, and the ear models binds these former to the subsymbolic level. In this case the focus is to analyze the musical representations of the acoustic and subsymbolic level.

The sound is transformed to the two-dimensional picture of the acoustic signal, the sonogram, where the time is in the x-axis and the frequency is in the y-axis. The subsymbolic representation of the music is a
nomenological method, where the music is analysed due to the ear perceptions, images and associations of the music. The phenomenological method contains the following levels:

1. **The Free Associations**, where the music is brought to the listener and makes neurofysiological affects reacts;
2. **The Standard Polarity Method**, where the listener perceives the music with three parameters: *Potens* energy of the music; *Stimulans*, emotion – surprise and *Valens*, aesthetic - pleasant. The listener signs (x) to the axis with the suitable substantive that correlates the music. These ways are according to the Rauh writings the main impressive parameters of receiving the music immediately in perceiving process. (Rauh 1973, 91.) In the case analysis was used Helsinki University’s musicological students.

**The Formula Theory**

In the GBMA is used Jukka Louhivuori’s development of the *formula theory*, with which is ment the types structures of the beginnings, endings and movements from the part to the other in the folk music song analysis. Formulas are the main part of the melody and they can be compared with the motif of the traditional narratives. In the formula theory the art is based on the control of the components of the traditional melody (Louhivuori 1988, 48-51.)

**The Cultural Gestalt**

The cultural Gestalt is a frame analysis in this method. According to the music psychologist Kai Ko (1986, 26) the Gestalt of the music is firmly bound with the culture, and particularly the music anthropologist Alan Merriam has created the original theory how the music has to be researched as a cultural phenomenon (Merriam 2000). For example the Japanese Shakuhachi flute music represents sacral music, that is created from the natural sounds. The flute itself is produced from the bamboo of Japanese forests, and it symbolises the Japanese value, mind and the philosophy of the Shakuhachi music (Satosi et al. 1993, 15). The cultural Gestalt is analysed auditively and visually from the music by comparing the traditional music the modern composition of the same musical style. Kokuu is one of the three original Shakuhachi pieces is represented in the analysis as the original cultural Gestalt (K1) to which modern or novel pieces (K2 - Kn) are compared.

**GMPA Analysis**

**The Cultural Gestalt Analysis**

In the Japanese music traditions are three different styles of Shakuhachi music. *Komusô* shakuhachi, *kyoku* shakuhachi and *Shinkyoku* shakuhachi music. Kokuu represents Komusô Honkyoku Shakuhachi music which main target is to form associations of quiet and simple musical sounds with pentatonic scale, its special target is to create feelings of the togetherness of endless wandering (Malm 2000, 167). W
playing the Shakuhachi, the spiritual style of the Zen hara, and the movements of the head, blowing Zen the technical demands of the performance.

The targets of learning and playing the music are to keep and transform the musical traditions alive. There aren’t many Western style of transcriptions from the original shakuhachi honkyoku music, mainly the mnemonic directives (Japanese writing style) how to play the Shakuhachi. The playing traditions are based on learning by imitation, mnemonic instructions and the philosophy of playing (michi, ways). The highest target while playing Shakuhachi is the immediate transition, deeply unconscious “understanding the meaning without words” (Gutzwiller 1983, 234-244.)

Kokuu is composed in the 1200th century, according to the legend where a monk heard a mystical dream in a Japanese mountain in a meditation hall.

The Whole Gestalt Analysis

According to the auditory analysis the piece Kokuu creates rhythmically and melodically peaceful and relaxing images with the long and constant sounds in the beginning of the piece. In the middle of the piece can be found a strong intensity that creates tension to the musical whole where something “unconscious memory associates to some former memory of act” and makes the rhythm and tempo vibrate intensively while calming down in the end of the piece.

In the visual analysis, the beginning of the whole seems to be like “ungestalted, unfigured and a long lasting piece that seems to have any gestalt at all, only few sounds”. Actually it is typical to analyze a single sound in Japan, because the whole music piece is created from one single sound and the structure is free from Western form (Guzwiller & Bennett 1991, 35).

The Gestalt Formula Analysis

Kokuu forms a structure of A, B and C according to the Western style of music analysis theory. The whole develops from 42 different time frequency leveled formula Gestalts. The part A lasts 52 % of the total ing, part B lasts 31 % and part C lasts 17 % of the total time.

In the formula analysis the piece contains six different formula types: a, b, c, d, e and f. a formula is a traditional formula, that is created mainly from one sound and it consists of one peak in the middle of the formula, could be analyzed as a graphical form of a neural pulse and the technique to play the flute. b formula traditional shakuhachi formula, that consists of 1-3 constant sounds. c formula is a melody formula 1, w can be heard and seen mainly the melodical movement of two sounds. d formula is a melody formula 2, where are auditory and visual melodical changes in frequency level, and it is consists of from 2 - 4 sound. e formula is a melody formula 3 that consists of intensive melodical changes in frequency levels. f formula are unexpected formulas that are the sum of the formulas a - e in the time frequency and amplitude level.
The formula structure of the part A: a/c/a/a/af/a/b/a/c/d/d/c/b/af/a/b/c/c/f/a/a/a/d/d/a
The formula structure of the part B:
e/e/e/ef/e/c/e/d/a/d/f
The formula structure of the part C: d/c/d/f/a/c

In the formula Gestalt analysis the several pauses that lasts 0,5 – 4 seconds, are interesting material of music. In the part A are the longest pauses that takes 12,74 % of the total timing. The pauses in the part B lasts 1 – 2 seconds that takes 7,9 % of the total timing and in the part C the pauses lasts 0,5 – 1 seconds takes 2,6 % of the total timing.
The part A can be interpreted as preparation and concentration to the unconscious “being conscious of the wordless existence”. The pauses are long, formulas are short and the melody is constant. In the part E music is rhythmically melodic and intensive where the pauses are constructive. In the part C the music varies a lot and creates an endless melodical form.

The relations of the formulas

When analysing the formulas and their relations, the focus is to find how the elements are bound together. This is the way of receiving the information of the structure of the inner relations of the formulas and the whole musical Gestalt. The relations of the part A and B creates clear auditory and visual images. In the part A you can hear long and relaxing melodies and sounds that changes to an intensive melodical atmosphere in part B. The relations between the part B and C are also clear, the intensive melody and images in part B changes after four second’s pause to the melody of the part C.

The results and conclusions

The listening group’s perceptions results strengthened and widened the music analysis. The auditory analysis is the most important point of view when making conclusions of the music. From the sonogram you make more detailed analysis, because there the music is transformed to the visual, stable form.
The law of Pregnans in the Gestalt theory, where the organism is supposed to behave in certain qualitative ways, the sensorical and sensomotorical phenomena, or inner pressure of the Gestalt, creates the musical figure, where the composition can be divided to the pre-Gestalt, the main-Gestalt and the trace-Gestalt. The part A can be interpreted as the pre-Gestalt, part B is the Gestalt and part C represents the trace-Gestalt. The part B is the most interesting Gestalt figure and phenomenon, some kind of inner meditative vibration, and a representation of a thought. Is it some important association with a meaning? - very difficult to interpretate according to the Western philosophy and psychology (Rauhala 1973, 33-34). In the GMPA analysis the whole composition Gestalt, the idea of the music, arises up from the piece. relations of the form A B C and the formulas a - f, as well as redundances and unexpected formulas formed clearly step by step. The whole meaning of the Kokuu’s Gestalt can be interpreted from forms...
the peaks in the formulas, the repetitions of neural pulses and variations, as well as the clear pauses between the formulas.

When demonstrating the structure of the formula analysis instead of the horizontal time axis, with a “timecircle” viewpoint, where formulas a – f are located in a circle. The formula e is in the inner part of the circle as a dominant and, the formula a is situated in the outer part of the circle as a tonica. Formula f forms the core center of the circle and represents probably the unconscious.

The Representations of Music

According to the case analysis when the formula reaches the tensional dominant formula e and the unexpected formula f, it returns to the outer figure of the circle, to the constant tonica (a formula). The balance of the composition would be formed from the changes of the energetic tensions and the relations of the formulas inside the formula circle. According to this construction, the Shakuhachi music and the Gestalt psychological music analysis of the piece would correlate each other, where the music is created due to the philosophy of the sound circle (breathing technique and yin/yang) - and the analysis is represented with the circle style model.
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