

GORDON TEST IN MACEDONIA

One of the key questions for the music pedagogy and psychology, and also in general, for the music culture was and is the question of *music abilities*. The complexity and the multi aspect of this question open several problems in its clearing up: the establishment of terminology, comprehension of the nature of music abilities, their origin, research methods. It can be said that in music science, despite the significant achievements, there is still no unique stand point on all given sub-questions – from terminology to validity of certain research procedures. On one hand, it is due to relatively short period of studying this problem (music psychology is one of the youngest branches of music science), and on the other – the complexity of the phenomenon and objective difficulties during its studying (the need of long term studies, scan of the human structure at different age, reconstruction of the environmental influences etc. which is hardly feasible).

Terminology. Not only in the professional literature, but also in everyday language there are several expressions which are actively used: *dispositions, capacity, aptitude, abilities, musicality, gift, talent* for music, *genius*. Some of them are used as synonyms, but very often one and the same term has different nuance of meaning at different authors (the situation with terminology is getting especially complex when it comes to translation from one language into another). In this text we have decided to use the term *music abilities*, typical for this language region - neutral, susceptible to gradations, and hence applicable for the most of the population.

Factors of music abilities. Among the research workers there is no unity on the question of whether the music abilities are *unique, indivisible* entirety (“ability”, “musicality”) or it is a *complex of different abilities* which reflect levels of understanding of different elements of the music phenomenon. Also there is a question of how significant is the role of other characteristics of the person – first and foremost, the intelligence.

Origin of music abilities. This question is especially important for the music pedagogy: Are the music abilities *innate* or *acquired* quality? It seems that there is more unity on this: the research workers admit that the mutual action of the innate potential and acquired experience from the environment are crucial and create the

final form of the music abilities of the person. Here, it is stressed that the innate characteristics combined with the psycho-physiological characteristics of the person define the “ceiling” of the opportunity for music development under the influence of a stimulating environment.

Methods of research of the music abilities. Generally, in contemporary science and practice there are two types of methods: *subjective* and *objective*. Subjective methods are used mainly by music pedagogues for practical purposes – evaluation of child’s musicality during the entrance examinations in music schools or during auditions for certain music activities. These methods are based primarily upon the personal experience and instant impression from the contact with the child. But, in contemporary psychological and pedagogical science the objective methods are having more and more bigger role – *standardized tests* based on accurate statistical calculations and suitable for group tests which can cover the broadest population.

As it is well known, the author of the first standardized tests for examining the music abilities is the American psychologist of Swedish origin Carl Seashore (his tests are used even today). After Seashore, Bentley, Wing and other scientists have created and applied their own tests based on their own theoretical attitudes about the music abilities. During the creation of the tests, three crucial questions arise: *sound material* upon which the research is made, *parameters* researched and the *reliability of the music knowledge*. About the first question the positions of the researchers are different. The basic dilemma is: whether the tests should use the music material (reactions of the person tested are similar to those during the music experience) or non-musical, i.e. acoustic material (the reactions of the person tested are more sensor like, directed towards the acoustic characteristics of the sound phenomenon). About the question of measured parameters, the researchers mainly stand on the same or similar line, no matter of their theoretical stand points.

Almost all tests measure the following *parameters*:

- discrimination of pitch
- discrimination of duration
- music memory
- sense for harmony

Some tests measure even higher level parameters related to the aesthetic evaluation and music taste (phrasing, appropriate accentuation, sense for consonance and dissonance, sense for style, music preference). On the other hand, certain researchers

think that these components are too tightly connected with the music experience and the music culture, i.e. with external factors and that is why they cannot be treated as manifestation of music abilities (systematization of tests according the parameters, see Rojko 1981:58). The given parameters naturally reflect the basic elements of the music phenomenon – first and foremost its pitch (horizontal and vertical) and time organization. That is why they are present in the tests of the authors – representatives from the different concepts of music abilities.

Some of the tests understand certain level of acquired music education, but also, numerous are the authors of tests who avoid tasks which require some basic acquired knowledge.

Standardized tests as method of diagnosing music abilities caused and are still causing certain reserves, especially in musicians-practitioners. Some of them think that in performing this procedure the individual access is lacking, and the result depends too much on the current situation and the child's condition, its understanding or misunderstanding of the tasks. However, today nobody denies the importance and the possibilities of the objective methods in the research of the music abilities which serve for practical purposes by diagnosing the level of the music gift in people, as well as for scientific purposes, contributing to more elaborate examination and clarification of the music gift phenomenon itself.

Edwin Gordon tests. As we said before, tests as a method of examining the abilities enable to cover a wide population of different age and education. In that sense, special interest for us have the tests created for children from pre-school and early school age, i.e. period of intensive development, studying, acquiring formal and informal knowledge and experiences. Precisely in these tests intended for this age group is especially important to have maximally clear, simple research procedure, where the good understanding of tasks does not depend on the inclusion of music education. One of the most successful examples of such tests are tests of the American researcher Edwin Gordon “*Primary Measures of Music Audition*” (further in the text – PMMA) and “*Intermediate Measures of Music Audition*” (further in the text – IMMA) intended for children between 5-9 years, i.e. from pre-school and early school age (I, II and III grade). These tests are short (the whole procedure lasts about 20 minutes) and are easy for conducting. It is not necessary to have a music background and hence it can cover a wide children population. Of course, the tests have a solid scientific base and high level of standardization. The set of test materials includes: a manual,

recorded sound material for both parts of the test, answering list for both parts of the test, checking key, profile card for each child and a list for each class.

Tests tasks. This is how Gordon himself formulates the tasks of these tests:

- to evaluate the comparative tonal and rhythm aptitudes of each young child;
- to identify young children who can profit from the opportunity to participate in additional group study and special private instruction in and out of school;
- to evaluate the tonal and rhythm aptitudes of each young child as compared with the tonal and rhythm aptitudes of other children of similar age.

With this, the test results achieve both, previously mentioned, goals – diagnosing the abilities and scientific research. But the author in his further presentation refers to the third goal: to define further strategy of music training appropriate to the needs of each particular child, which accomplishes the individual access in music teaching. For achieving this goal, Gordon in his manual includes extensive chapter which offers concrete methods for development of the hearing, the singing voice, sense for rhythm, as well as for song processing, development of motor skills, movement coordination etc.

Terminology. As we can see, Gordon uses the term *aptitude*. According to him, the terms “abilities” and “talent” in the field of their meaning include the element of “achievements”, i.e. reflection of previously acquired knowledge through formal music instructions. However, measuring of this type of abilities is not Gordon’s task, because in this case the population researched is decreasing, and what is more important, the results will depend on the external factor – directed pedagogical influence on the participant. Nevertheless, the term *aptitude* for Gordon is not a synonym for “innate dispositions” (“capacity”). The meaning of the term *aptitude* is defined as synthesis of innate and acquired, but acquired only through informal, spontaneous music activities. With that, by using the term *aptitude* he emphasizes informal, unconscious music experience of the child – foremost a very young child.

Gordon, also, emphasizes that there are no people who has not got some level of musicality: like other personal qualities, the musicality is normally distributed in the population. The majority of people have average level of musicality, and minor part – very low or very high level.

One of the key theoretical assertions of Gordon refers to the *development of aptitude*. There are two outstanding phases: the first one – *developmental* which lasts approximately up to 9 years of age, and the second one – *stabilized*. After the

completion of this phase, i.e. after about 9 years of age, the development of aptitude is almost impossible. This finding is of extraordinary importance for the music education and cultural policy: logically arises the necessity of qualitative music activities (listening to music, playing music, organized music teaching process) in this particular period from child's life – the earliest, but crucially important for the development of its music potential.

What is the way, i.e. the process of manifestation of the aptitude? For defining this process, Gordon, according to his saying, creates himself the word “*audiation*” – the second key term in his concept. According to Gordon, *audiation* is a type of music listening which represents instant reaction of immediate hearing impression. On the basis of this reaction hearing notions are being formed which afterwards can function even when real music sound does not exist. Such hearing cannot be specially learned – it is acquired by spontaneous, unconscious music experience of a young child. That is why, as it has been already said, through *audiation* the aptitude is manifested, and the *audiation* itself actually is subject to measurement in the testing procedure.

In both tests for measuring the music audiation (PMMA and IMMA), according to Gordon, two basic components of the developmental phase of aptitude are measured: *audiation of the pitch* (Tonal test) and the *audiation of duration* (Rhythm test).

“Primary Measures of Music Audition” (PMMA) – structure and contents. In the further presentation we shall keep on the content of PMMA – test which we have conducted in Macedonia (although the structure, the way of distribution and the calculation of the results are the same as in the PMMA and IMMA).

PMMA Tonal test includes 40 tasks – pairs of phrases comprised of 2 tones (13 tasks), 3 tones (25 tasks), 4 tones (1 task) and 5 tones (1 task). Like in the tests of the previous researchers, when checking the pitch audiation Gordon controls other parameters of the sound: all tones in the phrases are with equal duration and equal timbre (synthesizer). In all tasks prevails Major, and at least one phrase includes tonic. In that sense, the sound material of PMMA Tonal test is somewhat “in the middle” between the pure acoustic and music: although only the pitch parameter has been extracted, it has, however, the most elementary “music” organization.

PMMA Rhythm test like PMMA Tonal test includes 40 tasks - pairs of rhythmical phrases in which other sound parameters are controlled (all tones in the phrases are with equal pitch and equal timbre). Besides, each phrase has metric beats (macro

beats) performed with other timbre. These beats create subtle differences even between phrases comprised of same number of tones with same duration.

The question asked for answering in the PMMA Tonal test as well as in the PMMA Rhythm test is: whether the two parts of the “song” sound the *same* or *different*. Thus formulated, the question is directed towards the audiation, i.e. instant reaction of the immediate hearing impression. Both phrases which comprise one task sound one after another, and the pause between the tasks is very short – 5 seconds. Due to this quick unfold of the test, the comparison of the phrases itself is very quick, only on the basis of the hearing notions. In this process, according to Gordon, neither short term, nor long term memory is used.

The answers are given on a list where the variants “*same*” and “*different*” are given in a picture form (the appropriate picture should be circled).

For successful conduction of the test, in “*Preliminary test directions*” and “*Specific Directions for Administering the Primary Measures of Music Audiation*” one can find precise instructions for the entire procedure and steps for those who run the test. Couple of sound examples for “*same*” and “*different*” in melodic and rhythmical phrases are given, as well as couple of trial tasks in order to understand the way of marking the answers.

Processing of the results. Processing of the results and forming the *data base* start with forming the scores of both tests which is done as simple as possible – by counting the correct answers in each of them. The complete data base consists of 3 groups: *results from the Tonal test*, *results from the Rhythm test* and the *common result (Composition)* which is formed by simple summarizing of the results from both tests. Each group (Tonal test, Rhythm test and Composition) has two ways of presenting the results: *Row Score* where the number of correct answers is presented and *Percentile Rank* where this number is expressed in percents defined for each age level of participants. Percentile Rank is the one which presents the development of the aptitude.

Gordon tests in Macedonia. As we said before, “Primary Measures of Music Audiation” test by Edwin Gordon was conducted for the first time in the Republic of Macedonia in 2004/2005 in 12 elementary schools in Skopje – the capital of Macedonia.

The research procedure was performed in *several phases*:

1. Preparation. This phase was conducted from February to March 2005 when we prepared the complete material for running the test:
 - translation of the test words in Macedonian, Albanian and Turkish language;
 - recording and editing the sound material (words and tasks) in the Faculty of Music Student Radio Studio – Skopje);
 - translation of the “*Specific Directions for Administering the Primary Measures of Music Audiation*” (Gordon 1979 and 1986, pp.33-36, 39-42) in Macedonian, Albanian and Turkish language;
 - preparation of the work group of participants in the research - students at the Faculty of Music whose native tongue is Albanian and Turkish.
2. Trial testing in order to apply the procedure in practice and to obtain the initial experience in administering this test for the first time in Macedonia. Trial testing was performed on 1st and 2nd March 2005 in the 1st grade in “Vojdan Cernodrinski” elementary school in Skopje.
3. Conducting the test (March-May 2005, technical equipment: laptop “Toshiba”, music Hi-Fi system “LG”)
4. Checking the tests (March – June 2005)
5. Checking the students data (correct names, sex, date of birth, ethnic affiliation) from the school logs in consultation with the teachers (May-June 2005)
6. Creating data base (August 2005)

In the bellow tables we present the characteristics of the test participants:

Table 1
Number of classes according to language

| Elementary school | Macedonian | Albanian | Turkish |
|----------------------------|-------------------|-----------------|----------------|
| <i>Dimitar Miladinov</i> | 4 | - | - |
| <i>Goce Delchev</i> | 2 | - | - |
| <i>11 Oktomvri</i> | 3 | - | - |
| <i>Kocho Racin</i> | 3 | - | - |
| <i>Kole Nedelkovski</i> | 3 | - | - |
| <i>J. H. Pestalozzi</i> | 3 | - | - |
| <i>Sv. Kiril i Metodij</i> | 3 | - | - |
| <i>Cvetan Dimov</i> | 1 | 3 | - |
| <i>Lirija</i> | - | 7 | - |
| <i>Dame Gruev</i> | - | 5 | - |
| <i>Tefejuz</i> | - | 1 | 3 |
| <i>Jane Sandanski</i> | 1 | 2 | 1 |
| Total | 23 | 18 | 4 |
| % | 51% | 40% | 9% |

As it can be noticed, out of 12 elementary schools, in 7 there are classes only in Macedonian teaching language, in 3 – only Albanian, in 1 school – Macedonian and Albanian, in 1 – Macedonian and Turkish, and in 1 school – all three teaching languages.

Table 2
Distribution of the students according to sex

| | | |
|--------------|-------------|-------------|
| Female | 536 | 50% |
| Male | 536 | 50% |
| Total | 1072 | 100% |

The total number of participants (1072) in this research was divided exactly on the half according to sex – 536 male and 536 female children.

In the following tables we present the distributions according to ethnic affiliation and teaching language:

Table 3
Distribution of the students according to ethnic affiliation

| Ethnic group | Number of students | % |
|---------------------|---------------------------|-------------|
| Albanian | 463 | 43% |
| Macedonian | 451 | 42% |
| Turkish | 89 | 8% |
| Bosnian | 30 | 3% |
| Roma | 20 | 2% |
| Serbian | 10 | 1% |
| Vlasian | 5 | 0.5% |
| Muslimanian | 1 | 0.1% |
| Belorussian | 1 | 0.1% |
| Undefined | 2 | 0.02% |
| Total | 1072 | 100% |

Table 4
Distribution of the students according to language

| Language | Number of students | % |
|-----------------|---------------------------|-------------|
| Macedonian | 526 | 49% |
| Albanian | 461 | 43% |
| Turkish | 85 | 8% |
| Total | 1072 | 100% |

Preliminary results. The summary of the test results in this stage of the data processing is on the level of descriptive statistics (mean, standard deviation etc.). We present the results from the Row Score (RS) comparing them to the results obtained by Gordon in his Instructions (we have taken the indicators from the II grade because of the fact that in USA children start school at the age of 6 years – one year earlier than the children in Macedonia):

PMMA RS Tonal

Maximal number of the test's correct answers: 40

| | |
|---------------------------|---------|
| Macedonia: | Gordon: |
| Mean: 29.184 | 32.0 |
| Standard deviation: 5.371 | 4.75 |

PMMA RS Rhythm

Maximal number of the test's correct answers: 40

| | |
|---------------------------|---------|
| Macedonia: | Gordon: |
| Mean: 27.956 | 27.7 |
| Standard deviation: 4.822 | 4.55 |

PMMA RS Composition

Maximal number of both test's correct answers: 80

| | |
|---------------------------|---------|
| Macedonia: | Gordon: |
| Mean: 57.981 | 59.7 |
| Standard deviation: 8.574 | 8.35 |

The initial insight in the results shows deviation in the Tonal test (lower mean value and bigger standard deviation, i.e. bigger difference of the individual results). Hence the lower mean value is in the Composition. Generally speaking, better results are achieved on the Rhythm test. As one of the possible explanations for generally better results in the Rhythm test is the pronounced rhythmic principle in the Balkan's music culture, which might influence the character of the musicality of the Macedonian children. In that sense, the orientation of these tests towards spontaneous, unconsciously acquired music experience (emphasized by Gordon himself) might help in noticing and understanding of the specifics of the relation of musicality with

the characteristics of certain music culture. Of course, the results achieved in this study require further detailed and profound checking and analysis, which is planned to be our next stage in this research.

Bibliography:

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