

# **DOCTORAL THESIS**

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## **RESEARCH OF THE ELEMENTS INFLUENCING DEVELOPMENT AND UNFOLDING OF MUSICALITY**

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2008

## **I. Purpose of the thesis, defining of the subject**

As a singing and music teacher, talent development expert and mother of four musician children I turned attention to music talent development. During my research I had the purpose to reveal elements that are influencing talent development in the group of music talents, to introduce the characters of their development, approach to worth, their personality and connection between them. I was looking for an examination group of age where one could find music talents (Czeizel), who can show their talent efficiently.

In the theoretic summary of my thesis I studied the notion of talent on the basis of works of Révész (1918, 1952), Czeizel (2004), Balogh (2004). I based the notion of music talent on the works of Révész (1952) and Gembri (2002) first of all. Concerning the talent – music talent – I introduced six types of talents after Hany (1998), these are the Galton type, Terman type, Winner type, Feldman type, Sternberg type, Ericsson type. The types received their name after their creator of course. I regarded important to define the music talent on my own, too, it runs as follows:

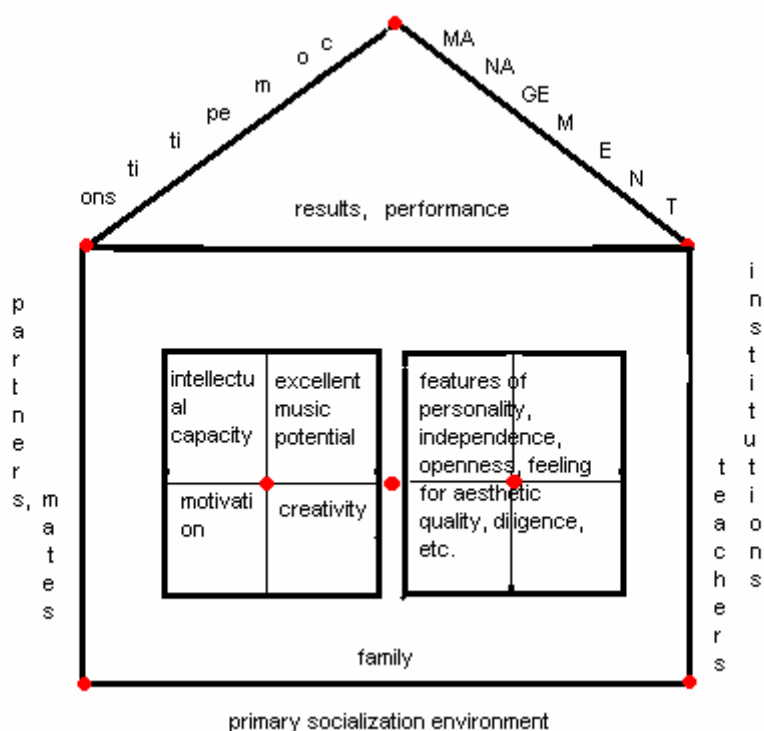
*Music talent is a person who has good music abilities, is developing optimal and mentally healthily, who can approach or reach the upper limit of his/her abilities that appears in outstanding music performance.*

Besides this I summarized in a symbolic model the external and internal elements, components of music talent: interpersonal features, suitable, good intellectual capacity, music abilities and potentials, motivation, creativity are suitable features of a personality. Elements of the system of interpersonal effects: family, school and the teacher, school-mates and contemporaries, judgement of being worth for the society through performance, acknowledgement and management.

The meeting points of elements • are important situations for decisions during life of talents and they pose questions for the research, too;

- What kind of particular features of a personality that appear together or are lacking can help or hinder the development of a talent?
- How does the transmission of music culture of a family run? What does/can do the family?
- How far can music performance be determinant? What does students think to be important for supporting their own development?

I named the model „HOUS MODEL” and I illustrated it this way.



## II. Description of methods

Choosing my research group I kept in my mind the reasons of Révész (1918), Bastian (1989), Wing (1941), so my research group consisted of 313 students; they were from 8 vocational secondary school of arts and that of musical arts (Budapest /Bartók and Szent István/, Győr, Székesfehérvár, Vác, Debrecen, Miskolc, Nyíregyháza), in the age-group of 17-19 years. My research had two directions,

- I applied a questionnaire and collected information about instrument learning, parental background, important activities of the students, practicing, elements that can support the development, results achieved by several competitions
- I applied personality test methods, I made three tests:

Eysenck Personality Questionnaire (EPQ) version for adults, work – value questionnaire of SUPER and the Survey of Interpersonal Values (SIV) test of Gordon.

The questionnaire and the test were fulfilled in groups, in the class.

Data processing happened by SPSS programme. During processing we looked on results at music competitions, expression of music talent (production) as important factors that can prove a talent. We formed two groups accordingly, one for those who have already had some

results at international, national or regional music competitions (T1 group N=155) and another for those who do not have any yet (T1 N=158). We also made sexual and regional differences and by processing the data we compared the results we measured with external control groups, too.

### III. Thesis-like listing of results

#### 1. In majority of the families there is a model for the music career.

According to our data in our model it is typical that 77% of persons learning music on the comparative degree have a professional musician family member or somebody who understands music (parents, grandparents). Beyond the genetic inheritance of abilities the sociocultural influences are very significant, too.

In a musician family it can happen that the parents start to teach children at first. 37 informants marked this fact, most of all piano (12 persons) and violin (7) are the instruments parents started to teach at home. In 4 families there is no musician at all, however parents started to teach their children. Examining the connection between this type of parents' activity and competition results one can see a significant correlation according to the cross illustration Khi-square=3.95,df=1,  $P<0.05$ . We could think that the behaviour of parents mentioned is increasing the chance of a student to achieve a competition result. Also taking into consideration whether there is a professional musician in the family or not, we had to analyze the following three-dimensional cross illustration:

*Connection between competition results, parent lessons at the beginning and professional musician parents*

		Is there any professional musician in the family?			
		no		yes	
		Parent lessons		Parent lessons	
		no	yes	No	yes
Prize-winning	yes	84	6	47	18
	no	109	5	36	8

We examined the above three variables (means the connection-system of prize-winning (D), presence of a professional musician in the family (P) and parent lessons (S)) with a log linear

analysis of a software named LEM. We found that the DP PS} model fits to the data (Khisquare=1.8194, df=2, p=0.4026).

It means that if there is a professional musician in the family parents themselves are teaching children more often at first and in case of a professional musician in the family students win prizes more often, too. At the same time one can see from the model, too that the above-mentioned significant connection between parent lessons and prize-winning is only virtual that is explained by their common reason, the presence of a professional musician in the family.

## **2. To start early is connected with talent development**

According to researches (Gaser and Schlaug 2003, Elbert and colleagues, 1995. quotes Acsády 2003) learning music before the age of 7 has lasting effect on the nervous system. In our model 65 persons, 20,76% of the informants started learning music before the age of 7. The most of them (59 persons) started to learn their instrument at the age of 8 that is in connection with the tradition of elementary education and conservatory education. Children in the first and second classes are learning solfege at first, then they also start to learn instrument next year. By music talents it often happens that they are learning theory and instrument at the same time or it can even get ahead.

The early age can be pointed out because those who started at the age of 6-8 come to 47% of the whole model.

Majority of the informants in the model who started learning instrument very early, at the age of 4-6, marked piano (19 persons), violin (17 persons), cello (6 persons) and solfege but there were some informants who marked guitar, percussion instrument and folk music, one of each. It corresponds to the theories that the music talent education should be started at the early school years or even before that because the early start means an advantage for the talent development but it does not forecast success! On the basis of our data we examined whether there is a connection between the age of starting to learn an instrument and prize-winning. We executed a two-aspect variety analysis. We learnt that there is no interaction but the effect both of *prize-winning* and *the instrument* is significant. *Those who have already had results started to learn music much earlier.*

### **3. Families are supporting their children differently but we found differences regarding the way of supporting in case of musician parents and prize-winning students.**

Students had to choose from the listed ways of supporting whether it was typical in their family.

Examining family supports with a statistical method, a hierarchical cluster analysis we were looking for groups after 9 variables. We could separate three groups (clusters) that could be characterized after the averages. At the same time we examined whether the cluster variable has any connection with other variables. *We found a significant correlation with the musician parents. ( $\chi^2=39.4$ ,  $df=6$ ,  $p<0.001$ )* In the first group the financial support, follow-up and taking care of practising were dominant. 35 % are musician parents here. The second group is homogenous, parents were supporting their children just in all ways of supporting. *78 % of the parents were musicians here.* Informants in the third group were assisting their children the least, they provided financial support mostly but they were dealing with them hardly and they did not take enough care of practicing (they must not be an expert in it!) either. 76 % of the parents were not musicians in this cluster.

Informants in the second cluster – mainly musician parents – who not only had more possibility, followed from their expertise, to provide some help but they are really supporting the musical development of their children. The successful performance is influenced by the support of parents. It was also worth examining numerically how more students marked the family support in the T1 group considering the other (T2) one: however we could not find any significant difference between the two groups, from 9 variables in 8 cases gave more informants a „positive” answer in the group T1. In the whole it still means a significant difference because testing the depart from the chance with a binomial trial  $p(x \geq 8) = 0.02$ .

### **4. Opinion of students about the elements necessary to the development of their own talent is homogeneous**

Students marked my standpoints, regarded important from the point of view of their own development, on a seven-scale. We came to the following order, starting with the most important: 1. Diligence, holding out. 2. Talent. 3. Further studies on the Academy. 4. Parents encouragement, help. 5. Famous, well-known teacher. 6. Financial background. 7. Further studies elsewhere. 8. Good management, mentors 9. Results. 10. Good school certificate.

Importance of the school certificate differed upwards (4.45) from the mean value; it indicated that they regarded all of the standpoints important.

Judging their activities they regarded practicing the most important, it was at the first place, it was followed by learning (however they do not appreciate good school certificate so much), common programme with friends, language learning, relaxation, and sports took the last place.

#### **5. Quantity of practicing is connected to the success**

Researches proves (Acsády, 2003) that practicing is influencing success.

„Without practicing talent becomes swampy” (Hubay 1929) but according to Gardner (1997) only those are able to practice many hours who are talented. Practicing alone is not enough for success. Students say that during school lessons they are practicing minimum 1,38 hours, maximum 3,21 hours their instruments. At the weekend they are dealing with practicing their instrument minimum 1,96 hours, maximum 3,91 hours on the average. We assumed that competition-winners are practicing more. From the examinations we learnt that prize-winning students do not practice significantly more than the others. Then we examined these differences instead of the maximum and minimum practicing time. We asked them how many more hours they are practicing at the weekend than on weekdays.

However the average of both groups were similar in both cases, the effect of competition successes proved to be significant only by the difference of maximum time of practicing  $F(1,246) = 4.395$ ,  $p < 0.05$ ). It means that more successful students are increasing time for practicing in the free time much more. We can also say that they devote more time for practicing. Besides this the significant effect of the instrument group exists here, too than in the case of time of practicing.

*So, we found that the prize-winners are increasing time of practicing at the weekend much more than those without any results of this kind.*

#### **6. Quantity of practicing is connected to the aim of further education**

There is a difference of time of practicing at the weekend by those who want to be a musician and those who do not (still do not know or would choose and other occupation). We found that the practicing time of above 4 hours was more typical by those who are preparing for a music career (Khi-square = 4.82,  $df=1$ ,  $p=0.028$ .)

#### **7. There are no significant difference between boys and girls**

190 girls and 123 boys took part in the examination. Boys and girls usually choose different instruments, there are feminine (harp, blockflöte, flute, singing), masculine (saxophone, tuba, horn and clarinet) and unisex instruments. It is typical for the proportion of gender that piano is learnt by most students (60 persons), dominantly by girls (41 persons), the second most common instrument is the violin, however more girls are learning to play the violin (26 persons), regarding the proportion number of playing the violin is a little bit more (14,6%) by the boys than by the girls (13,7%). The difference between girls and boys will be mentioned by the success of personality-tests, too.

**8. Regarding the personality characters we found differences compared with the Hungarian standards and the instrument groups had some influence as well.**

	sex	sample average	dispersion	Hungarian average	dispersion	Deviation from the Hungarian average
extroversion	Male	<b>13,99</b>	<b>3,82</b>	11,69	4,34	<b>2,30</b>
	Female	<b>13,63</b>	<b>3,94</b>	10,39	4,52	<b>3,24</b>
neuroticism	Male	<b>11,21</b>	<b>4,90</b>	9,71	4,98	<b>1,50</b>
	Female	<b>12,08</b>	<b>4,66</b>	12,64	4,96	<b>-0,56</b>
socially wanted	Male	<b>7,73</b>	<b>3,35</b>	11,08	4,86	<b>-3,35</b>
	Female	<b>8,80</b>	<b>3,54</b>	11,84	4,32	<b>-3,04</b>
Psychoticism	Male	<b>3,65</b>	<b>3,11</b>	3,13	2,59	<b>0,52</b>
	Female	<b>1,86</b>	<b>1,96</b>	2,01	2,04	<b>-0,15</b>

The extraversion average both by men and women exceeded the Hungarian average ( $t=6,667$   $p<0,001$  ;  $t=11,332$   $p<0,001$ ), it means that *the musical talents (talents of promise) are more extraverted*.

The neuroticism value (14,30) by the singers is significantly higher according to the examination of instruments groups after pairs than that by the piano players and the wind instrument players ( $p=0.021$ ).

The low value of desire for being socially suitable refers to the non-conform behaviour, we also assumed a lower value in this age and talents.

Regarding psychoticism there are is significant difference but comparing the instrument groups with a contrast examination the average of string instrument players and wind instrument players exceeds that of the singers and piano players to great extent. ( $p=0.011$ ).



**9. In the hierarchy of work values of Super we found significant deviation from the contemporary group.**

The aesthetic values in the hierarchy of contemporary group the 15 value groups are on the 13 place, by the students of vocational secondary school of music arts they are on the 3 place. In our opinion reason for that was on one hand the effect of music education, on the other hand the request for becoming an artist.

**10. The levels of the interpersonal values (Gordon – test) are common or low.**

In the test we measured demand for support, acknowledgement, controlling, goodwill, conformity and independence. We assumed that ambition for acknowledgement would be typical, by prize-winner even more. Our hypothesis proved true, by the boys we only found a hierarchy of “high” value in one school of Budapest. Regarding girls, in an other school in the capital and in the country the value of ambition for acknowledgement was “low”. On other places it was average. The index of independence is on five places “higher” by the girls but it almost exceeds the average.

**11. The regional differences can not be evaluated because there was a significant difference by the data of strength.**

However, it is worth mentioning that by the Gordon test results of one third of the students in one of the vocational secondary schools of Budapest could not be evaluated, that is much higher proportion than in other schools. We came to the conclusion that much more students had difficulties to understand the guide how to fill in the form, the verbal understanding here. We estimated that there we met the most gipsy young people (mostly boys) in this school, that can be a partial explanation.

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