

# INFLUENCE OF MUSICAL CONTEXT ON THE PERCEPTION OF EMOTIONAL EXPRESSION OF MUSIC

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## Abstract

Factors determining and influencing the perception of emotional expression of music include those related to music itself, to the listener, and to the context. Among the latter there is also music, as we rarely listen to a single piece. A simple experimental study has been carried out into the effect of music listened to immediately beforehand on the perception of the emotional expression of a musical piece. The following variables were involved: type of emotional expression of music conceived in terms of a most basic *sad-joyful* dimension, initial and final mood of the listeners, their professional musical education vs. lack thereof, age, and gender. The subjects were students of three age groups: 9, 15, and 20-23 year olds, both from non-music and music schools. Each group listened to a sequence of two short pieces of music of the opposite emotional expression in two experimental conditions: *sad-joyful* and *joyful-sad*. The perceived expression of the listened music, as well as the initial and final mood of the subjects, were recorded with a simple self-report measure. The results demonstrated that the perception of emotional expression of the musical piece was entirely independent of the influence of the preceding music. The initial mood played no role. This was the case consistently in the musically educated and non-educated subjects, in all age and gender groups. Three patterns of changes in mood during the session of listening were also described: mood increase, mood decrease and mood stability. The latter proved to grow among musically educated with age.

**Keywords:** emotional expression, perception, mood

## 1. Introduction

Music evokes subjective experience. This is the essential reason why people listen to it. Music which doesn't is regarded as bad or even as not music at all. The experience evoked by music is of a very particular nature, specific to itself. It is most often referred to as emotion, but besides an affective content, it includes also a sensory (various aspects of sensation) and cognitive (ideas, mental imagery, memories, etc.) components.

The cognitive aspect of experience evoked by music is of great importance as the differentiation between feeling emotion aroused by music and the perception (a strictly cognitive process) of the emotional expression of music

is strongly emphasized in the literature (Gabrielsson, 2002; Sloboda & Juslin, 2010; Hodges & Sebald 2011), the differences between these being, however, to some extent fuzzy, and the terms often used interchangeably. The relationship between them is also a subject of scientific inquiry (Juslin, Liljeström et al., 2010; Hodges & Sebald 2011). This is one essential thing about the experience evoked by music.

Another essential thing about it is that it can be as vivid, and can elicit as strong a response, as the experience evoked by the real life events (cf. Davies, 2010). This quality, in fact ultimately unexplained, makes the subject all the more worth of interest. Philosophers,

psychologists, musicologists and the musicians themselves have gone to great lengths in their attempt at identifying the essential factors determining the nature of the experience evoked by music.

The scientific interest in the emotional expression of music dates back as early as the late 19<sup>th</sup> century. In a pioneering study Gilman (1891, 1892) found some degree of agreement among the listeners as to the expressiveness of the music they listened to. He also attempted at connecting various kinds of expression to some structural features of the musical pieces. Then a period of active research ensued. In 1940 Schoen reported over 300 studies devoted to the topic. The next more than half a century was a time of some stagnation or perhaps incubation, as is often the case with important ideas in science. Only the last decade or so has witnessed the return of research into the emotional expression of music. On the contrary, scientific exploration of the emotions induced by music did not emerge until the 1990s (Sloboda & Juslin, 2010; Juslin, Liljeström et al. 2010). Soon, the studies also emerged on the interrelation between perception of the emotional expression of music and feeling emotion aroused by music (Hodges & Sebald, 2010).

Today's theoretical ideas and empirical investigation into the field of the experience evoked by music roughly fall into two broad categories dealing with: 1. the properties of music possibly connected to the various emotional expression, such as melody, harmony, mode, rhythm, etc., 2. the properties of the listener, such as musicality, musical education, musical preferences, general ability (intelligence), special abilities, cultural and educational background, age, gender, etc. Furthermore, the third category seems to have emerged quite recently dealing with 3. the contextual factors affecting the experiences evoked by music. This category covers the elements not included in the first two. They can be referred to as the environmental, situational and circumstantial factors. Their importance has been all the more appreciated as the evidence from research in the first two categories accumulated.

There is a variety of contextual factors which can play a role. The traditional classifica-

tion can be applied involving physical factors (the place where music is listened to, the acoustic quality of the sound, the presence of other physical stimuli), social factors (the presence of other people with the listener, their role), cultural factors (the culturally developed musical taste, the cultural norms for expressing emotions), and others. Sloboda (2010) proposed several more domain-specific factors, such as the frequency of occurrence of musical experiences and ordinariness vs. specialness of the context or the experience. The empirical studies on contextual factors are not common yet. Some of them include such factors as additional variables (e.g. Juslin, Liljeström et al., 2008), others address them directly (e.g. Dibben, 2004).

Research into the contextual factors can be a valuable contribution to our understanding of the experience evoked by music, its nature and function. They can be also of practical importance for psychologists, music therapists, as well as for musicians themselves, including composers and performing musicians.

## 2. Problem

The current study addressed the question whether the music listened immediately beforehand affects the perception of the emotional expression of a musical piece. Such music can be called a musical context. People rarely listen to a single, isolated piece of music. This follows both from the very nature of music, which frequently consists of a number of movements following one after another, as well as from the very popular habit of listening to large amounts of music at a time. Therefore this problem concerns both the purely musical events and the listening to music in everyday life.

There were three main purposes of the study:

1. To answer the question concerning the musical context posed at the beginning of the preceding paragraph.
2. To determine whether the initial mood of the listener, his/her musical education or lack thereof, age and gender play a role in the possible influence of the musical context.

3. To determine whether a mood of the listener changes along with the possible changes in perception of the emotional expression of the musical piece under the influence of a musical context.

The following hypotheses were formulated:

1. There is some influence of musical context on the perceived emotional expression of a musical piece and the mood of a listener. The direction and details of this influence weren't specified.

2. There is asymmetry in the influence of musical context, i.e. it possibly changes the positive emotional expression into negative one in a different way than the negative into positive. The same holds for the mood. The details also weren't specified.

The emotional expression *joyful-sad* has been adopted for the study. It is regarded as the most basic one, recognizable very early in life (McPherson, 2006; Nawrot, 2003; Terwogt & Van Grinsven, 1991).

### 3. Method

#### 3.1. Subjects

The subjects were 344 students of two types of schools: the general education schools and music schools, both at the three levels of education: primary, secondary and tertiary (university). The level of education served as an indicator of age, hence there were three age categories, respectively, children, youth and adults. The whole sample has been divided into six subgroups according to the type of school and the level of education (age). There were in total 6 subgroups. The characteristics of the subjects is presented in Table 1.

**Table 1.** Characteristics of the subjects participating in the study.

| Level of education (age)       | General education (non-music) schools |              |                  | Music schools |              |                  |
|--------------------------------|---------------------------------------|--------------|------------------|---------------|--------------|------------------|
|                                | N                                     | Gender       | Mean age (y. o.) | N             | Gender       | Mean age (y. o.) |
| Primary (children)             | 56                                    | M 31<br>F 25 | 8,75             | 61            | M 20<br>F 41 | 8.90             |
| Secondary (youth)              | 54                                    | M 17<br>F 37 | 15.00            | 52            | M 19<br>F 33 | 14.94            |
| tertiary (university) (adults) | 64                                    | M 19<br>F 45 | 20.96            | 57            | M 15<br>F 42 | 21.24            |

#### 3.2. Material

The material consisted of three short fragments of the musical pieces selected for their emotional expression:

1. Neutral piece: Johann Sebastian Bach *Fantasia in G major BWV 572*, duration time 1 min. 15 sec.
2. Joyful piece: George Haendel *Arrival of the Queen of Sheba*, duration time 1 min. 30 sec.
3. Sad piece: Peter Tchaikovsky *Symphony No 5 E minor, Op. 64, Part 2 Adagio cantabile*, duration time 1 min. 30 sec.

#### 3.3. Measuring instrument

All the measurements collected during the study were performed on a 7-point two dimensional scale made up of large facial expressions with the appropriate captions in Polish. The following points went from left to right: *very sad, quite sad, sad, neither sad nor joyful, quite joyful, joyful, very joyful*. *Very sad* was assigned score 1 and *very joyful* score 7. The same scale served both for measuring the emotional expression of music and the subjects' mood and was used by all the participants.

The scale was printed in a special answer booklet on separate sheets. Each sheet served for one measurement (see the procedure described below). The scale is presented on Figure 1.



Figure 1. The measuring scale

### 3.4. Procedure

Each group was divided into two parts and assigned randomly to one of two experimental conditions: a *joyful-sad* condition, in which the joyful piece preceded the sad one, and the *sad-joyful* condition, in which the sequence of pieces was reversed.

The procedure involved 6 stages:

1. The subjects received the booklet, entered the obligatory information (a nickname, age and gender), and listened to the instruction read by the experimenter.
2. Marked on the scale their current mood (before listening to music).
3. Listened to the neutral piece and undertook no action. The purpose of this stage was to introduce the subjects into the listening of music.
4. Listened to the joyful/sad piece, depending of the experimental condition, and marked on the scale the perceived emotional expression of the piece.
5. Listened to the sad/joyful piece, opposite to the preceding one, depending on the experimental condition, and marked on the scale the perceived emotional expression of the piece.
6. Marked on the scale their current mood (after listening to music).

A single session with one group lasted 10-15 min. The research was carried out in Warsaw from November 2012 to January 2013.

## 4. Results

### 4.1. Perception of emotional expression of music

The mean rates of emotional expression ascribed by the subjects to the joyful and sad pieces of music, both preceded by the neutral piece and by the piece of the opposite emotional expression, were compared using the Student's *t*-test. The comparisons were made first for the whole sample of subjects partici-

pating in the study, and then with reference to the remaining variables involved in the study: the initial mood, musical education vs. lack thereof, age, and gender. For the comparisons including mood the subjects were divided into three subgroups: those who rated their initial mood 1-3 were categorized as sad, 4 as neutral, and 5-7 as joyful. It is important to note that in the whole sample only 10.5% reported their mood as sad (of these only 2.6% out of the youngest group), 19.2% as neutral and 70.3% as joyful. Students of general education schools were labelled as nonmusicians, and those of music schools as musicians.

The results of the comparisons for the joyful piece are presented in Table 2, and for the sad piece in Table 3.

Table 2. Mean rates of emotional expression of the joyful musical piece preceded by pieces of neutral and the opposite emotional expression.

| Joyful preceded by neutral |                   |                   | Joyful preceded by sad |                   |                   |
|----------------------------|-------------------|-------------------|------------------------|-------------------|-------------------|
| Whole sample               |                   |                   | Whole sample           |                   |                   |
| 6.31 <sup>a</sup>          |                   |                   | 6.34 <sup>a</sup>      |                   |                   |
| Initial mood               |                   |                   | Initial mood           |                   |                   |
| sad                        | neutral           | joyful            | sad                    | neutral           | joyful            |
| 6.07 <sup>b</sup>          | 6.19 <sup>c</sup> | 6.37 <sup>d</sup> | 6.05 <sup>b</sup>      | 6.13 <sup>c</sup> | 6.45 <sup>d</sup> |
| Nonmusicians               |                   | Musicians         | Nonmusicians           |                   | Musicians         |
| 6.20 <sup>e</sup>          |                   | 6.41 <sup>f</sup> | 6.31 <sup>e</sup>      |                   | 6.38 <sup>f</sup> |
| Age                        |                   |                   | Age                    |                   |                   |
| Children                   | Youth             | Adults            | Children               | Youth             | Adults            |
| 6.41 <sup>g</sup>          | 6.11 <sup>h</sup> | 6.38 <sup>i</sup> | 6.46 <sup>g</sup>      | 6.22 <sup>h</sup> | 6.33 <sup>i</sup> |
| Males                      |                   | Females           | Males                  |                   | Females           |
| 6.20 <sup>j</sup>          |                   | 6.35 <sup>k</sup> | 6.35 <sup>j</sup>      |                   | 6.34 <sup>k</sup> |

Student's *t*-test for difference between means  
<sup>a-k</sup> n.s.

**Table 3.** Mean rates of emotional expression of the sad musical piece preceded by pieces of neutral and the opposite emotional expression.

| Joyful preceded by neutral |                   |                   | Joyful preceded by sad |                   |                   |
|----------------------------|-------------------|-------------------|------------------------|-------------------|-------------------|
| Whole sample               |                   |                   | Whole sample           |                   |                   |
| 2.99 <sup>a</sup>          |                   |                   | 2.99 <sup>a</sup>      |                   |                   |
| Initial mood               |                   |                   | Initial mood           |                   |                   |
| sad                        | neutral           | joyful            | sad                    | neutral           | joyful            |
| 3.38 <sup>b</sup>          | 2.92 <sup>c</sup> | 3.04 <sup>d</sup> | 2.80 <sup>b</sup>      | 2.50 <sup>c</sup> | 3.03 <sup>d</sup> |
| Nonmusicians               |                   | Musicians         | Nonmusicians           |                   | Musicians         |
| 2.71 <sup>e</sup>          |                   | 3.27 <sup>f</sup> | 2.71 <sup>e</sup>      |                   | 3.26 <sup>f</sup> |
| Age                        |                   |                   | Age                    |                   |                   |
| Children                   | Youth             | Adults            | Children               | Youth             | Adults            |
| 2.63 <sup>g</sup>          | 3.22 <sup>h</sup> | 3.13 <sup>i</sup> | 2.46 <sup>g</sup>      | 3.15 <sup>h</sup> | 3.38 <sup>i</sup> |
| Males                      |                   | Females           | Males                  |                   | Females           |
| 3.00 <sup>j</sup>          |                   | 2.98 <sup>k</sup> | 3.06 <sup>j</sup>      |                   | 2.95 <sup>k</sup> |

Student's *t*-test for difference between means  
<sup>a-k</sup> *n.s.*

All the differences between the mean rates of the emotional expression of both pieces of music turned out to be insignificant. This is very clear-cut result. Neither of the variables affected the rates. The mean rates for the joyful piece range from 6.05 to 6.46, and for the sad piece from 2.46 to 3.38, which, as for the ratings made on a 7-point scale, means a remarkable stability and consistency of the measured relationships.

#### 4.2. Mood

The second part of the analysis of the results concerns the mood of the subjects and its change during the listening session. Three patterns of changes in mood could be noticed: mood increase, mood decrease, and mood stability. Table 4 presents the percentage of subjects who underwent them during listening to the two different sequences of musical pieces: joyful-sad and sad-joyful.

**Table 4.** Percentage of subjects who underwent changes in mood in two experimental conditions according to age.

| Age      | Change in mood | Joyful-sad experimental condition | Sad-joyful experimental condition |
|----------|----------------|-----------------------------------|-----------------------------------|
| Children | Increase       | 31.15%                            | 53.57%                            |
|          | Decrease       | 31.15%                            | 12.50%                            |
|          | Stability      | 37.70%                            | 33.93%                            |
| Youth    | Increase       | 14.55%                            | 29.40%                            |
|          | Decrease       | 60.00%                            | 35.30%                            |
|          | Stability      | 25.45%                            | 35.30%                            |
| Adults   | Increase       | 9.84%                             | 23.33%                            |
|          | Decrease       | 40.98%                            | 21.67%                            |
|          | Stability      | 49.18%                            | 55.00%                            |
| Total    | Increase       | 18.75%                            | 35.12%                            |
|          | Decrease       | 43.75%                            | 22.62%                            |
|          | Stability      | 37.50%                            | 42.26%                            |

In the *joyful-sad* condition nearly equal number of participants from the youngest group fell into each of the three patterns of mood change, the majority of the 15 year olds underwent mood decrease, while the adults' mood for the most part remained unchanged. In the *sad-joyful* sequence most of the youngest felt mood increase, the 15 year olds were distributed nearly equally across all the categories, and the adults, again, mainly remained stable. In Table 5 these data are split into two additional categories: nonmusicians and musicians.

**Table 5.** Percentage of subjects who underwent changes in mood according to age and type of school

| Age      | Change in mood | Joyful-sad experimental condition |           | Sad-joyful experimental condition |           |
|----------|----------------|-----------------------------------|-----------|-----------------------------------|-----------|
|          |                | Nonmusicians                      | Musicians | Nonmusicians                      | Musicians |
| Children | Increase       | 22.60%                            | 40.00%    | 44.00%                            | 61.30%    |
|          | Decrease       | 32.20%                            | 30.00%    | 16.00%                            | 9.70%     |
|          | Stability      | 45.20%                            | 30.00%    | 40.00%                            | 29.00%    |
| Youth    | Increase       | 15.50%                            | 13.70%    | 28.60%                            | 30.43%    |
|          | Decrease       | 61.50%                            | 58.62%    | 39.30%                            | 30.43%    |
|          | Stability      | 23.00%                            | 27.58%    | 32.10%                            | 39.14%    |
| Adults   | Increase       | 6.25%                             | 13.80%    | 28.13%                            | 17.85%    |
|          | Decrease       | 50.00%                            | 31.00%    | 25.00%                            | 17.85%    |
|          | Stability      | 43.75%                            | 55.20%    | 46.87%                            | 64.00%    |
| Total    | Increase       | 22.73%                            | 14.61%    | 37.81%                            | 33.00%    |
|          | Decrease       | 39.77%                            | 47.19%    | 18.29%                            | 27.00%    |
|          | Stability      | 37.50%                            | 38.20%    | 43.90%                            | 40.00%    |

Table 5 shows that among the adult musicians the stability of mood was substantially more frequent than among younger musicians.

In the next step the comparison was made between the mean rates of initial and final mood reported by the subjects, according to the experimental condition and age. These results are contained in Table 6.

**Table 6.** Mean rates of initial and final mood according to experimental condition and age

| Age      | Change in mood | Joyful-sad experimental condition |                   | Sad-joyful experimental condition |                   |
|----------|----------------|-----------------------------------|-------------------|-----------------------------------|-------------------|
|          |                | Initial mood                      | Final mood        | Initial mood                      | Final mood        |
| Children | Increase       | 4.68 <sup>a</sup>                 | 6.26 <sup>a</sup> | 4.97 <sup>b</sup>                 | 6.40 <sup>b</sup> |
|          | Decrease       | 5.89 <sup>c</sup>                 | 4.42 <sup>c</sup> | 6.14 <sup>d</sup>                 | 4.71 <sup>d</sup> |
| Youth    | Increase       | 4.13 <sup>e</sup>                 | 5.25 <sup>e</sup> | 3.93 <sup>f</sup>                 | 5.27 <sup>f</sup> |
|          | Decrease       | 5.16 <sup>g</sup>                 | 3.82 <sup>g</sup> | 5.17 <sup>h</sup>                 | 4.00 <sup>h</sup> |
| Adults   | Increase       | 4.17 <sup>j</sup>                 | 5.17 <sup>j</sup> | 4.14 <sup>j</sup>                 | 5.29 <sup>j</sup> |
|          | Decrease       | 5.44 <sup>k</sup>                 | 3.96 <sup>k</sup> | 5.62 <sup>l</sup>                 | 4.46 <sup>l</sup> |
| Total    | Increase       | 4.45 <sup>m</sup>                 | 5.82 <sup>m</sup> | 4.51 <sup>n</sup>                 | 5.85 <sup>n</sup> |
|          | Decrease       | 5.43 <sup>o</sup>                 | 4.01 <sup>o</sup> | 5.50 <sup>p</sup>                 | 4.29 <sup>p</sup> |

Student's *t*-test for difference between means

<sup>a-c, e-h, j-p</sup>  $p < .001$

<sup>d</sup>  $p < .01$ , <sup>i</sup> *n.s.*

All the differences between the mean rates, except one, are statistically significant, the vast majority of them at the high level. The one exception is likely to be caused by too small number of subjects in the compared subgroups.

The mean rates of the mood split into the categories of nonmusicians and musicians are not presented here, as some of the comparisons turned out impossible to make, again, due to too small number of subjects.

The last comparison involved the initial mood of the subjects. Only two categories of the initial mood were taken into account, the *neutral* and *joyful*, as the *sad* category contained insufficient number of subjects for the comparisons to be made. Table 7 presents the percentage of subjects who underwent changes in mood according to two categories of initial mood.

**Table 7.** Percentage of subjects who underwent changes in mood according to two categories of initial mood

| Change in mood | Joyful-sad experimental condition |                     | Sad-joyful experimental condition |                     |
|----------------|-----------------------------------|---------------------|-----------------------------------|---------------------|
|                | Initial mood neutral              | Initial mood joyful | Initial mood neutral              | Initial mood joyful |
| Increase       | 22.20%                            | 15.20%              | 43.33%                            | 30.00%              |
| Decrease       | 27.80%                            | 52.00%              | 3.33%                             | 29.00%              |
| Stability      | 50.00%                            | 32.80%              | 53.34%                            | 41.00%              |

About 50% of the subjects with initial neutral mood remained stable in both experimental conditions, whereas in the *joyful-sad* condition nearly equal parts of them underwent mood increase and decrease, and in the *sad-joyful* condition the latter group dramatically diminished in favour of the group with mood increase. On the contrary, the subjects with initial joyful mood in the *joyful-sad* condition for the most part underwent mood increase, and in the *sad-joyful* condition the majority remained stable, the rest of the group falling in nearly equal proportions into the groups of mood increase and decrease. There is clear evidence of the relationship between the initial mood and the subsequent changes in mood.

Finally, Table 8 and Table 9 present the mean rates of the initial and final of the subjects according to the initial mood in two experimental conditions.

**Table 8.** Mean rates of initial and final mood in *joyful-sad* experimental condition according to initial mood

| Change in mood | Initial mood neutral |                   | Initial mood joyful |                   |
|----------------|----------------------|-------------------|---------------------|-------------------|
|                | Initial mood         | Final mood        | Initial mood        | Final mood        |
| Increase       | 4.00 <sup>a</sup>    | 5.50 <sup>a</sup> | 4.65 <sup>b</sup>   | 5.96 <sup>b</sup> |
| Decrease       | 4.00 <sup>c</sup>    | 3.00 <sup>c</sup> | 5.59 <sup>d</sup>   | 4.13 <sup>d</sup> |

Student's *t*-test for difference between means

<sup>a, b, d</sup>  $p < .001$

<sup>c</sup> *n.s.*

**Table 9.** Mean rates of initial and final mood in *sad-joyful* experimental condition according to initial mood

| Change in mood | Initial mood neutral |                   | Initial mood joyful |                   |
|----------------|----------------------|-------------------|---------------------|-------------------|
|                | Initial mood         | Final mood        | Initial mood        | Final mood        |
| Increase       | 4.00 <sup>a</sup>    | 5.46 <sup>a</sup> | 4.64 <sup>b</sup>   | 5.93 <sup>b</sup> |
| Decrease       | *                    | *                 | 5.58 <sup>c</sup>   | 4.30 <sup>c</sup> |

Student's *t*-test for difference between means

<sup>a, b, c</sup>  $p < .001$

\* lack of data due to insufficient number of observations

All the comparisons made in the last two tables are statistically significant on a very high level. The only exception is likely due to too small number of subjects in the compared subgroups.

The data for the subjects with initial sad mood would be of interest.

## 5. Discussion and conclusions

Musical context proved not to influence the perception of the emotional expression of a musical piece, at least that conceived in terms of a dimension *joyful-sad*. Also, neither of the factors which could have seemed to be involved in the expected change of perception of the emotional expression played part. The initial mood, musical education, as well as age and gender made no difference. Quite naturally, therefore, no asymmetry was found, too.

The hypotheses haven't been confirmed for this part of the data. This a clear-cut result, well grounded in the consistent empirical data.

Simple as this result may seem at first glance, it makes quite serious a contribution to our knowledge of the contextual factors in the experience evoked by music. First of all, it demonstrates that listeners needn't necessarily change their perception of the emotional expression of music, even if they emotions change. Additionally, it confirms the basic position of this emotional dimension, which may in fact play a crucial role in human life, maybe acting as a kind of a signpost.

While the perceived emotional expression of a musical piece remained perfectly stable, the mood of the listeners changed. Although the current study wasn't designed to precisely measure the mood and its changes, which were only the controlled variables, it can be inferred that the changes occurred due to what happened between the two measures of the mood, i.e. under the influence of the listening to music or, to put more pertinently, under the influence of the musical context. Some characteristics of this influence on the mood of the listeners have been grasped, namely its dependence of the joyful vs. neutral initial mood, as well as of the musical education and its level, and probably, of age. Certain asymmetry can be clearly observed in the relationship between the initial mood and the influence of the musical context on the mood change. Here, both hypotheses have been confirmed.

By the way, it should be noted here, that one of the defining characteristics of mood is that it can be long lasting. This characteristics couldn't be addressed in a short empirical investigation. However, it would be interesting to examine the mood in the longer time range, as well as other types of affect or emotion.

One important conclusion of the current study is that the independence of cognition and emotion in music listening has been once again confirmed. It is frequently described in the literature on the musical emotions (Hodges & Sebald, 2011, Sloboda & Juslin, 2010). It is also probably one of the most essential features of human mind. This finding makes therefore a modest contribution to answering

one of most basic questions of contemporary psychology.

Among concluding remarks the indications for further research are in order. First of all, subsequent analyses on the current material should be made, including some cross comparisons, e.g. of the perception of two pieces of opposite emotional expression according to musical education, gender and age, which went beyond the scope of this report. Then a study would be desirable precisely measuring the possible influence of the musical context on both the perception of a musical piece and the emotions accompanying it, whatever methodological difficulties such a study could encounter. Finally, other types of musical emotions should be investigated, both in terms of quality, less basic than *joyful-sad*, and, as mentioned above, in terms of formal characteristics.

The investigation of the musical context of the experience evoked by music seems significant and promising.

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