

The Valins Effect in Music.

Influences of False Feedback on Aesthetic Appreciation, Emotional Involvement and Empathy

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Background

According to the Valins Effect, which states that the cognitive information provided by a false feedback leads to an interpretation of the alleged physical reaction as an emotion that must have been triggered by the stimulus, in this study such responses to music were investigated. The Valins Effect was already been found during a prior study (Roos & Mühlhans, 2018), but the research needed to be taken a few steps further to clarify the possibly confounding role of empathy.

Method

Subjects

Participants (N=52; students of various subjects at LMU; 19 male and 31 female; 16 to 67 years old, $M[\text{age}]=27.18$, $SD=7.29$) were randomly paired into two groups, both led to believe that their skin conductance responses were recorded during the experiment. They were told that ascending graphs indicate a high (positive or negative) arousal and strong intensity of emotion, while steady graphs indicate little emotional involvement. After having seen both neutral and strong SCR graphs during two test-stimuli, the experimental group received only pictures of strong skin conductance responses while the control group received pictures of neutral SCR graphs.

Stimuli

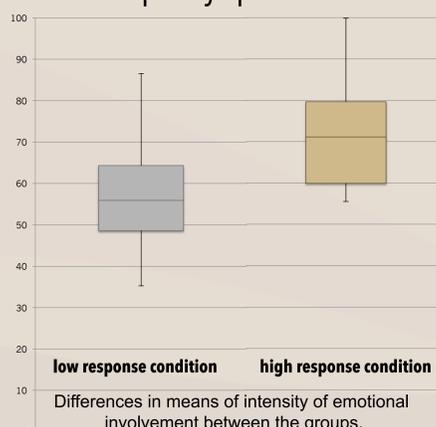
The stimulus sets consisted of 15 musical excerpts, each about 30 seconds in length, retrieved from movie scores and popular music pieces, which have proven to trigger strong positive respectively negative emotions. Then a forged skin conductance graph was displayed. For each stimulus the participants were asked to rate/describe:

- ❖ the emotion that best described what they felt while listening
- ❖ the intensity of their emotional involvement with the music
- ❖ their familiarity with the presented stimulus
- ❖ their liking of the music
- ❖ whether they were picturing images in their heads while listening and
- ❖ their general aesthetic perception on various dimensions.

Additionally, they were asked to answer an empathy questionnaire.

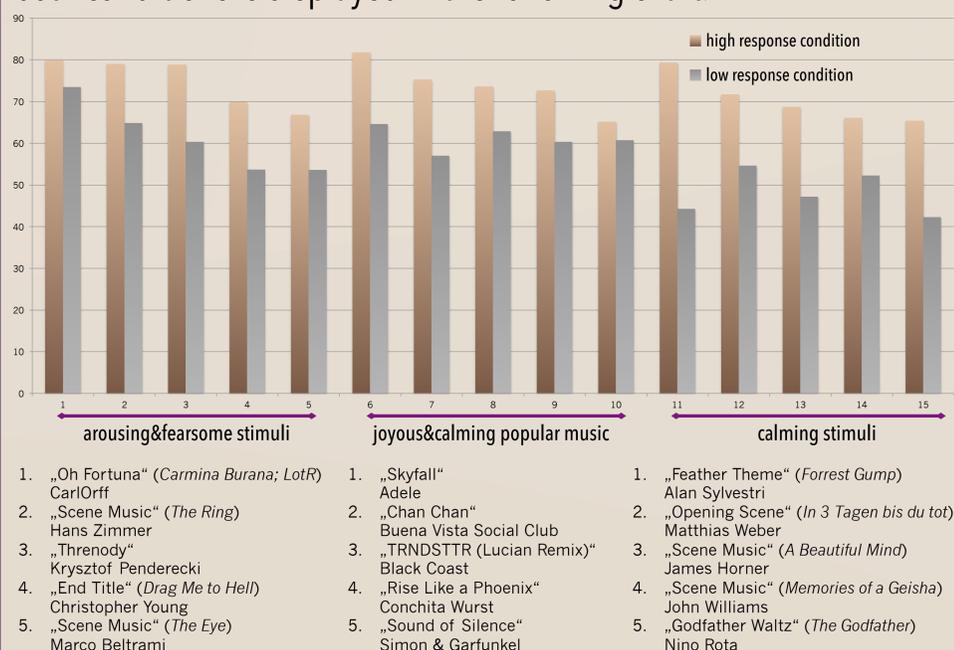
Results

The Valins Effect could be found in each of the 15 stimuli. A t -Test performed on overall means of intensity of emotional involvement was highly significant ($t=-6.15$, $p<.001$).



Emotional Involvement

The mean intensity of emotional involvement for each stimulus in both conditions is displayed in the following chart.



Emotional and Cognitive Appreciation

As for the emotional-affective appreciation as well as the cognitive appreciation, no significant differences in overall mean values could be found, except for the item „i feel how my body is reacting to the music“, which was significantly higher rated by the subjects in the strong feedback group ($p=.007$).

Empathy

The prior study showed significantly higher empathy scores for subjects in the high response condition, so the follow-up participants took one half of the questionnaire at the beginning, the other half at the end of the experiment.

The t -Test shows a significant increase of „Empathic Concern“ in the high response condition ($p<0.001$), whereas the empathy score (for each dimension) slightly decreased in the low response condition during the experiment.



Increasing mean values of „Empathic Concern“ before and after the experiment in the high response condition (golden) as opposed to the low response condition (silver).

Discussion

The data indicate that false feedback of emotional reactions to music leads to higher perception of emotional involvement as well as higher perception of actual physical reactions and higher self-assessment of empathic abilities.

In the prior study, variances could already be explained with a confounding combination of familiarity and liking, which presumably led to a stronger opinion about the music, making the participants less likely to be influenced by the false feedback.

References

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