

The Relationship Between Emotion and Music Production Quality

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Abstract— It is commonly known that music expresses emotion. In music production, the role of the mix engineer is to take a piece of recorded music and convey the emotions expressed as professionally sounding as possible. In this work, we investigated the relationship between music production quality and musically induced and perceived emotions.

I. INTRODUCTION

There have been a number of studies that have looked at why people prefer some mixes over others. In one study, De Man et al. conducted a mixing experiment where groups of nine mix engineers were asked to mix 10 different songs [1, 2]. The mixes were then evaluated in a listening test to infer the quality, as perceived by a group of trained listeners. We are interested in the emotional impact of mix quality.

II. INTRODUCTION EXPERIMENTAL METHODS

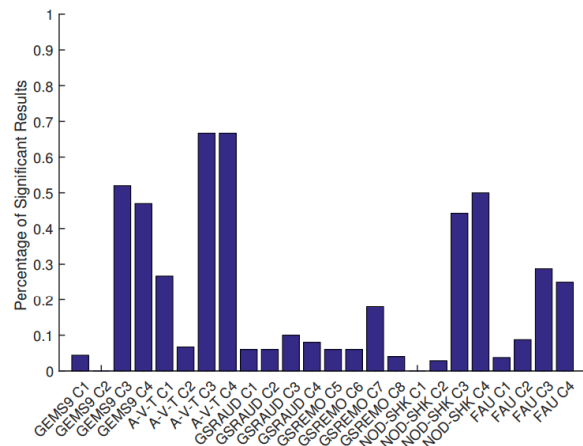
We performed a listening test where 10 critical listeners and 10 non-critical listeners listened to 10 songs. There were two mixes of each song, the least preferred mix and the most preferred mix, where the mixes were rated for mix preference in a previous independent experiment [1, 2]. We measured each participant's subjective experience (GEMS-9 and Arousal-Valence-Tension), peripheral physiological changes (ECG and GSR), change in facial expressions and the number of head nods and shakes they made as they listened to each mix.

III. RESULTS AND DISCUSSION

By examining self-report scores, we showed that music production quality has more of an emotional impact on critical listeners. We also showed through facial expression analysis and head nod-shake detection that critical listeners have significantly different emotional responses to non-critical listeners for the most preferred mixes and to a lesser extent the least preferred mixes.

The results imply that the amount of emotion in a mix, whether it be perceived or felt, seems to matter the most to those with critical listening skills. This was most evident from the GEMS-9, Arousal-Valence-Tension, Head Nod/Shake Detection and Facial Action Unit results since they had the most amount of significant p-values. This can be clearly seen in Figure 1. If one was to take a cynical view on these results,

it could be said that using the most professional and experienced mix engineer to mix a piece of music only really matters to those who have been trained to listen for mix defects, and mix quality has little bearing on the lay person emotionally. However, audio engineering could still be relevant to a listener without impacting them emotionally.



IV. CONCLUSION

We have shown that music production quality seems to only have a significant impact emotionally on those with critical listening skills.

ACKNOWLEDGMENTS

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