THE EFFECT OF HARMONIC CONTEXT ON LEXICAL DECISION IN VOCAL MUSIC

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Background

An experiment using a phoneme monitoring task showed that a harmonic context influenced the processing of sung phonemes (Bigand, Tillmann, Poulin, D'Adamo, & Madurell, 2001).

Aims

The main goal of this study was to investigate how harmonic structure can influence the processing of words in vocal music.

Method

Eight-chord sequences sung by four singers were presented to the participants. We manipulated the semantic relation between the last word and the previous linguistic context (*the giraffe has a very long neck* versus *the giraffe has a very long foot*). We also manipulated the harmonic function of the last sung chord in the musical context (*a related tonic chord* versus *a congruent but less related subdominant chord*).

The participants performed a lexical decision task in which they had to quickly decide if the target (the last lyric of the sequence) was a word or a nonword.

Results

There was a main effect of the semantic relationship, the words semantically related to the linguistic context were processed faster than the words that were semantically unrelated. There was also an interaction between the semantic and the harmonic relationship. The related target words were processed faster when they were sung on a tonic chord rather than on a subdominant chord. This effect is not replicated for the unrelated target word.

Conclusions

Our present study showed that manipulating the harmonic structure of a musical sequence influences the processing of words even when the participants are not asked to pay attention to the music. This suggests that the processing of words and musical sounds is not independent, but interacts at some level of processing.