

# USER BEHAVIOUR IN THE SPONTANEOUS REPRODUCTION OF MUSICAL PIECES BY VOCAL QUERY

*Micheline Lesaffre*

*Dirk Moelants*

IPEM-Dept. of Musicology, Ghent University, Belgium

## Background

This experiment is part of a broader research project in the field of musical information retrieval. In order to realize a user-friendly system for searching musical pieces by vocal query, we investigated the behavior of subjects asked to imitate well-known songs from long-term memory and unfamiliar songs after a single hearing.

## Aims

We want to analyze the characteristics of the behavior of people who reproduce a piece of music from memory in an intuitive way. This should lead us to a view of preferences for certain methods of vocal query. Additionally we look at effects of musical content, memory, gender and musical background.

## Method

73 subjects participated in an experiment in which they were asked to reproduce pieces of music in front of a microphone. No further restrictions were given. In the first part of the experiment subjects responded to titles of pieces they previously indicated as familiar. In the second part entire pieces of music, indicated as unfamiliar, were aurally presented before asking reproduction.

## Results

In general, participants asked to reproduce music prefer a melodic use of the text or of specific syllables. Significant effects of gender and musical background were found as well as differences between the reproduction of unfamiliar melodies and the recall of known melodies. Clear relations between user behavior and musical content were found.

## Conclusions

User preferences and general characteristics of vocal queries aimed at searching specific pieces in a music database are established. These results can serve as a guideline in the development of user-friendly systems for musical information retrieval based on vocal queries.