

## Research Traineeships 2016

### 1. Title of the Project

A fine-grained analysis of music played during rituals: strategies and profiles

### 2. Coordinators

Martin Hoondert, Department of Culture Studies

Menno van Zaanen, Department of Communication and Information Sciences

### 3. Project Summary

#### *Introduction*

Music plays an important aspect in a range of situations in our daily lives. It may have a personal influence on the emotional state of people, serve sociological purposes, bringing groups of people together, or build an atmosphere in contexts such as films, or plays, but also during other (social) gatherings.

This proposal deals with the impact of music in the context of rituals, in particular during cremations. In the Netherlands, cremations are typically secular and highly individualized rituals. This means that there is some flexibility in how these rituals are performed. In particular, this flexibility is found in the music played during the cremations, which allows for specific personalization. Based on the data we have on songs played during actual cremations, it is apparent that the music ranges from religious, pop, and rock music as well as highly specific songs such as the Willem II club song.

#### *Previous research (2014 and 2015)*

Previous Research traineeships concentrated on linguistic aspects of the lyrics and musical aspects of the music played during cremations (database Crematorium Tilburg). Given songs played during cremations, musical properties, such as tempo, energy, key, etc. are extracted and compared against other playlists, such as the Top40 and the Top2000. This research has shown that, indeed, music played during cremations is different from "regular" popular music. It turns out that the music played during cremations tend to have more nostalgic feelings (compared to the other music).

As many songs also have a linguistic component (in the form of lyrics), we are currently investigating the impact of the textual aspects of songs. Several experiments are carried out. In general, based on a large dataset of lyrics (500,000 songs) we aim to identify relations between the topics of the lyrics described by the words and their musical properties. In the context of cremations, we aim to find words that identify the intention of the song, which indicates the purpose (remembrance, personal or collective coping with grief, etc.) of the song within the ritual.

#### *Proposal 2016: Research questions and methods*

Even though the previous research provides a wealth of information on the use of music in general and specifically in the context of cremation rituals (one journal article is conditionally accepted, others are currently being written), the research thus far concentrates on general trends: Which

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properties do all the songs played during cremations have? This approach completely disregards information of songs being played together during each ritual. In this project, we aim to investigate the individual differences between cremation rituals (Crematorium Tilburg and if possible also other crematoriums). Informally examining the songs played during individual cremations, we see that the cremations rituals may be grouped together based on their music. For instance, music in one ritual may comprise mostly of classical music, whereas another uses more contemporary music. Several questions are relevant here: Can we identify profiles of cremations based on the music that is being played? Which (musical, sociological, or linguistic) properties have an influence on the musical profiles? Do these profiles say something about the function of music during cremations?

In order to come to music profiles, several approaches may be taken. Firstly, we may make use of information collected through observations of concrete cremation rituals and from interviews of people leading cremations. This may be combined with information from the database of music played during cremations at the Tilburg crematorium. Secondly, we may perform computational analyzes of the music played during cremations using techniques developed during earlier projects. This includes clustering based on musical properties such as tempo, liveness, and energy, but also semantic properties such as mood.

Once the musical profiles have been identified, the results may be further strengthened by analyzing the lyrics within the musical profiles. This should provide information on what these songs are about. They may be related to different views on immortality (literal, such as a soul that remains, or non-literal, such as memories that remain).

If profiles arise, these might be used explicitly in the development of a music recommendation system. Currently no such system exists for the selection of music of cremations. Given some properties of the preferred type (or profile that describes the function of the music within the ritual) of a cremation, the system may present specific songs: if you prefer this song, you might also like these other songs (based on content, function, or musical properties). We will present the recommendation system to the designer of the software (Hecla, Hengelo).

### *Collaborative aspects of the project*

This research requires both qualitative research (interviewing the cremation directors and, if possible, the bereaved, observations during cremations) and computational research (analyzing the musical and linguistic aspects of the songs actually played, but also those in predefined lists as was common in the past). Both approaches may be applied to analysis of websites containing tips for music, musicians that play during cremation rituals and their repertoire, etc.

Even though the qualitative and quantitative research may be carried out in isolation, the results of both approaches need to be evaluated. For this, results in both fields are essential. On the one hand, musical profiles that are the result of, for example, interviews must be evaluated on the coherence of their musical and linguistic properties. On the other hand, musical profiles arising from computational analysis of songs must be validated through qualitative analysis. This means that the evaluation of the results required a close collaboration between researchers of both cultural studies and communication and information sciences.

In the past we have shown that a similar collaboration is very fruitful. One journal publication is conditionally accepted, and one is almost ready for submission. Furthermore, conference papers are currently being written. In the past, three MSc students have already graduated and currently

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two more MSc students are working on related topics. This is a clear indication that the project so far has become larger than simply a project with research assistants.

#### 4. Project timeline

Phases	Research trainee 1 (DCU)	Research trainee 2 (DCI)	Milestones
1	a. Literature study on music and ritual b. Analysis of prescribed lists of music related to cremation rituals	Computational analysis of songs played during cremation rituals > musical profiles	Short paper (2000 words) on musical profiles, based on literature study, prescribed lists and contemporary cremation rituals, co-authored by the two research trainees.
2	a. Observation of cremation rituals (Crematorium Tilburg) b. Interviews with cremation directors and ritual coaches on strategies in choosing music	Computational analysis of lyrics (in relation to musical profiles) to find coherence (or not!) in content	a. Short paper (1000 words) on strategies in choosing music b. Short paper (1000 words) on coherence / patterns in lyrics / content.
3	Evaluation of the results of the research, writing a first draft of an article, to be submitted to a peer-reviewed journal	Designing a recommendation system, based on musical profiles, ritual function of music and coherence with respect to the content of the songs used in cremation rituals	a. Recommendation system (presentation to Hecla) b. Article (first draft by Research trainee 1), co-authored by the two research trainees and the two supervisors.

#### 5. Research Trainee Profile

The research trainees that participate in this project essentially serve as the driving force behind the project. Even though both coordinators are very keen on further collaboration, the trainees speed up the collaboration greatly by performing practical research, which takes place on the intersection of the research areas of both coordinators. In practice, the research is supervised by both coordinators, which brings up differences in methodological approaches in the different fields. In particular, trainees will perform research based on methodologies coming from the culture studies background (such as qualitative and ethnographic research) as well as a communication and information science background (including computational and experimental research).

Given the interdisciplinary focus of the research, this topic may be interesting to students from a range of tracks, such as:

- Algemene cultuurwetenschappen / Religie
  - CIW: Human Aspects of Information Technology
  - CIW: Data journalism
  - CIW: Tekst en Communicatie
  - CIW: Interculturele communicatie
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- others

The level of the students (bachelor, master, or research master) is less important compared to the drive to learn more about the topic as well as the research techniques from the different disciplines. Given the interdisciplinary nature, it would have our preference to find a student who has a background in the field of culture studies (taking an interest in music and/or ritual) and a student with a background in communication and information sciences (preferably with some computational affinity), who are keen to learn techniques are from other field.

**How to apply**

Send a curriculum vitae as well as a brief motivation letter to Martin Hoondert (M.J.M.Hoondert@uvt.nl) or Menno van Zaanen (mvzaanen@uvt.nl).

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