

PAST, PRESENT AND FUTURE IN ETHNOMUSICOLOGY: THE COMPUTATIONAL CHALLENGE

Sergio Oramas

Polytechnic University of Madrid, Spain
soramas@gmail.com

Olmo Cornelis

University College Ghent, Belgium
olmo.cornelis@hogent.be

ABSTRACT

Ethnomusicology has changed its paradigm over the years, but the core of this field is mainly related to non-Western and folk music studies. It combines an anthropological and musicological point of view, not only studying the sound itself, but also its context. The MIR community is evincing interest in non-Western traditions, but this interest is still very recent. During the late break session at ISMIR 2012 (Porto), several researchers joined the session on ethnomusicology and some ideas were proposed, sketched in this paper. First, it was suggested the necessity of creating a web site or wiki page for the publication of content related to the field. Second, it was stressed the importance of the creation of an international research network. Third, the connection between MIR researchers and ethnomusicologists was emphasized once more.

1. INTRODUCTION

1.1 Ethnomusicology

Ethnomusicology is an interdisciplinary field of study whose term was coined in 1950 by Jaap Kunst [1]. It was not suddenly developed, but has its roots in a previous scientific field with interest in non-Western and folk music called comparative musicology [2].

After some folklore studies done by composers like Béla Bartók or Zoltán Kodály, comparative musicology developed at the end of the 19th century in Vienna and Berlin by Carl Stumpf, Curt Sachs, Erich Von Hornbostel, and Otto Abraham. Its objective was the study and understanding of music by comparing different cultures with the aim of finding musical universalities and the origin of music. It was also the beginning of the creation of sound archives.

Around 1950, the evolution of these studies led to the creation of a new discipline called ethnomusicology. With this new concept researchers such as Alan P. Merriam or Bruno Nettl pursued to strengthen the link with anthropology [3] and also emphasize the importance of the focus point of the researcher rather than the object of study it-

self. Fieldwork became an essential part of any research and contextual information was considered crucial [4].

In the following decades, there was a confrontation between two different viewpoints, a more anthropological, sociological one and a more analytical, musicological one. Nowadays, ethnomusicologists are supposed to cover both perspectives within their research, integrating the study of sound and its cultural context.

Moreover, the interests of scholars have expanded significantly and today not only do they encompass sound events and their relationship to context, but also could include the study of their historical dimension, gender aspects associated with musical activity, iconographic representation, motor aspects related to production of sound and dance, the relationship between execution of musical instruments and the human body, and many other issues.

1.2 Computational Ethnomusicology

Since late 20th century more and more audio archives have been digitized. This process led to some (rather individual) initiatives to create automated musical content descriptions. Tzanetakis launched the name computational ethnomusicology [5], and since then interest in non-Western music research in the MIR community has grown [6]. Several MIR techniques have already been applied to the analysis of some ethnomusicological corpora, such as pattern matching, melodic similarity, music emotion recognition, and so on. Some research groups has been created to study these topics, such as the COFLA (COMputational analysis of FLAmenco music) group [7]. Moreover, a first large European funded project called CompMusic has been released, which focuses on Turkish, Chinese and Indian music [8].

2. NEW CHALLENGES

A new discipline always comes with new research questions, asks for new methodologies, and contains new challenges and problems.

2.1 Reflection: what to research, for who, and how!

Are current studies focused just on sound or also on the relationship to context? Are they fitting the needs of ethnomusicologists? Do the current studies provide useful and accessible tools? Is it easy to find information on the Web about these tools? Is the MIR community aware of the

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page.

© 2012 International Society for Music Information Retrieval.

last tendencies in ethnomusicology? All these questions should be posed by the MIR community in order to really understand issues and tendencies in computational ethnomusicology.

2.2 Pragmatical: being organized

Since a few years, an interest group on computational ethnomusicology has been organized through a mailing list. A modest attempt in receiving COST funding for creating an international network was rejected, despite positive and hopeful comments. Also, a new conference saw the light: FMA (Folk Music Analysis, held in Greece, Spain, and upcoming Holland (2013) and Belgium (2014)), where the community shows their new challenges and developments in the field.

2.3 Present issues

Current MIR research mainly focuses on Western music. The results obtained are not straightforwardly transferable to music of other cultures whose musical concepts that do not always correspond to the Western theoretical music concepts [9]. Therefore, it is important to discuss the reasons why existing techniques fail and what strategies are required. There is an urgent need for collaboration between musicologists and MIR researchers. Another recurring problem is the lack of ground truth. Such set might be attractive for MIR researchers in general (e.g. task in MIREX).

3. CONCLUSION

The interest and role of MIR in computational ethnomusicology is increasing, and a new interdisciplinary field is taking shape. But there is still a long way to go before we can speak of a well-established discipline. Our community has two main organizational challenges. The first is the creation of a central platform, such as a web site or a wiki page, where news, events, publications, data-sets, and tools could be posted and shared by researchers. A place where ethnomusicologist as we, could find new tools to use in their work; where researchers in computational ethnomusicology could find datasets to test their algorithms or quickly see the state of art of a specific problem. The second challenge is the creation of an international network that will help in the development of the field, providing funding to support interchange of researchers and promotion of activities such as workshops and seminars, which will encourage the interest in and broaden the knowledge of computational ethnomusicology.

4. REFERENCES

- [1] Kunst, J.: *Musicologica*. Royal Tropical Institute, Amsterdam, 1950.
- [2] Adler, G.: *Umfang, Methode und Ziel der Musikwissenschaft*. Vierteljahrsschrift fr Musikwissenschaft 1, pp. 5–20, 1885.
- [3] Merriam, A.P.: *The Anthropology of Music*. Evanston, Northwestern University Press, 1964.
- [4] Nettl, B.: *Theory and Method in Ethnomusicology*. The Free Press of Glencoe, London and New York, 1964.
- [5] Tzanetakis, G., et al.: “Computational ethnomusicology” *Journal of Interdisciplinary Music Studies* 1 (2), pp. 124, 2007.
- [6] Cornelis O., Moelants D., Leman M.: “Global access to ethnic Music: the next big challenge?” *Proceedings ISMIR*, Kobe, Japan, 2009
- [7] Pikrakis, A., Gmez F., Oramas S. et al.: “Tracking Melodic Patterns in Flamenco Singing by Analyzing Polyphonic Music Recordings” *Proceedings ISMIR*, Porto, 2012.
- [8] Serra, X.: “A Multicultural Approach in Music Information Research” *Proceedings ISMIR*, Miami, 2011.
- [9] Cornelis, O., Lesaffre, M., Moelants, D., Leman, M.: “Access to ethnic music: Advances and perspectives in content-based music information retrieval” *Signal Processing*, 90 (4), pp. 1008 -1031, 2010.