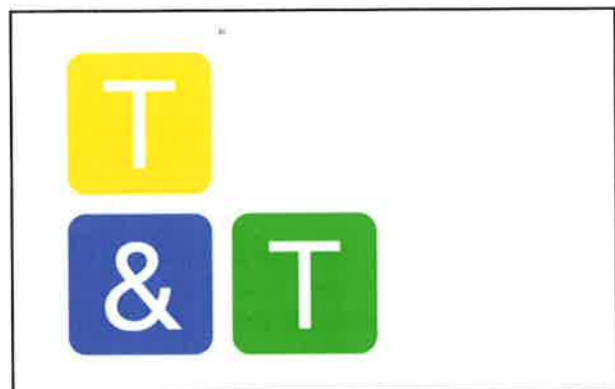


Tunes and Tales



Project team

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Variety and stability in Tunes & Tales - Studies on transmission in oral and written tradition

Oral transmission is a fascinating aspect of the broader phenomenon of cultural transmission. In oral culture, artifacts such as songs and stories are passed on to next generations without written or technical reproduction media, just by voice and ear. Oral transmission implies alteration and variation to a considerable extent. Yet after several generations of oral transmission the artifacts are still 'the same' (in oral terms), or at least recognizable variants (from a literate point of view). How can this be? Are there convergent forces? How to model the process of oral transmission? Since we are dealing with folktales and folksongs, the plots and melodies are also part of our collective memory and immaterial heritage, which makes them free of copyright, so every storyteller and singer, even an author or composer has the liberty to make new changes – also in print in folktale books or on sheets of music.

In the project Tunes & Tales we capture the mechanisms of change and stability, based on the vast oral and scriptural corpora of Dutch folksongs and Dutch and Frisian folktales of the Meertens Institute. We consider two categories: tunes (music) and tales (text). We formalize tunes and tales as sequences of motifs. Ph.D. students Folgert Karsdorp and Berit Janssen are working on this task (one for tales and one for tunes). This will result in prototype systems for the automatic recognition of motifs in tunes and tales. Formalization is an important first step that will enable us to analyze the large amounts of available data for creating models of the mechanism of oral and written transmission (postdoc Peter van Kranenburg). On top of that, automatic recognition of motifs can be used for automatic classification of the corpora – a much needed practical application for making the Meertens collections further accessible for ethnomusicological and ethnological research. In the final stage, we intend to develop a model that is able to predict variation and stability of folktales and folk melodies in oral and literary transmission as well.

Since most research of the Tunes & Tales project involves the development of tools, algorithms and computational models — which typically belongs to the domain of e-humanities — our primary source of output targeted journals and conference proceedings dealing with computational humanities (Natural Language Processing, Music Information Retrieval). We take it to be one of our biggest successes that we also managed to publish our findings in more traditional ethnological journals. Our articles found their way to internationally prestigious journals such as *Fabula*, *Folklore* and *Journal of American Folklore*. Moreover, our research caught the attention of other makers of folktale and folk song databases, with whom we most likely will cooperate in the near future in order to develop international harvesters to run queries in several folktale databases at the same time.

A major setback during our program was that our project leader Louis Grijp became terminally ill and passed away in 2016. He was an inspiration to us all, and his natural leadership, musical talents, enthusiasm, scientific insights, and fund raising qualities will be dearly missed. Some of his tasks were taken over by second project applicant Theo Meder.



The full Tunes & Tales team with all (research, documentation and technical) assistants (2015)

Worth mentioning is furthermore that we organized the Third International Workshop on Folk Music Analysis (FMA2013) at the Meertens Institute, which served as a platform for integration of traditional research and new, computational approaches in ethnomusicology. Within the project a Master's course on Computational Musicology was developed by Peter van Kranenburg for the Research Master's program in Musicology at Utrecht University. As one of the deliverables of the project, the Meertens Tune Collections were released. These consist of a series of data sets in which the melodic data of the Dutch Song Database is provided for research purposes. The data have already been used in a number of computational folk song studies.

After publication of the two dissertations by Berit Janssen and Folgert Karsdorp, the Tunes & Tales project has contributed to the emerging discipline of (e-)humanities with new tools (such as the motif finder MOMFER and a melody search engine). Additionally, the project has enhanced our understanding of the processes involved in oral and literary transmission, as well as cultural evolution. One key finding of the project is the presence of a number of biases in story transmission. It was found, for

example, that story transmission involves an age bias, in which young(er) versions of a story are more likely to be retold than old(er) versions. Another bias in story transmission involves the nature of the actors of a story (i.e. the character cast). It was shown that stories revolving around marvellous and slightly counterintuitive characters have a transmission advantage over stories without such characters. Although we believe to have made major leaps forward in our understanding of transmission of tunes and tales, we were unable to provide enough data for an overarching theory of transmission for both tunes and tales. Further research in this direction is necessary, for instance to match the results for both tunes and tales, both in 'behavior' and 'size' (a non-semantically based phrase of a melody tends to be smaller than a semantically based motif within a text). Both dissertations show that we are on the right track, but it will take more time before we can explain the transmission of (un)stable motifs in one evolutionary model. In some respects we can already predict what motifs will remain popular and what motifs are more likely to vanish, but again, constructing an accurate model with full predictive power will take more time and research.

Key publications

Janssen, B. de Haas, W. B. Volk, A. & van Kranenburg, P. (2014): 'Finding Repeated Patterns in Music: State of Knowledge, Challenges, Perspectives', in: M. Aramaki, O. Derrien, R. Kronland-Martinet, & S. Ystad (eds.): *Sound, Music, and Motion: 10th International Symposium, CMMR 2013*, pp. 277-297.

Karsdorp, F. B. van der Meulen, M. Meder, T. & van den Bosch, A. (2015): 'Animacy Detection in Stories', in: M. Finlayson, B. Miller, A. Lieto, & R. Ronfard (eds.): *Proceedings of the Workshop on Computational Models of Narrative (CMN'15)*, pp. 82-97.

Kranenburg, P. van, Volk, A. & Wiering, F. (2012): 'On Identifying Folk Song Melodies Employing Recurring Motifs', in: *Proceedings of the 12th International Conference on Music Perception and Cognition and the 8th Triennial Conference of the European Society for the Cognitive Sciences of Music*, Thessaloniki, pp. 1057-1062.

Karsdorp, F. B. van der Meulen, M. Meder, T. & van den Bosch, A. (2015): 'MOMFER: A Search Engine of Thompson's Motif-Index of Folk Literature', in: *Folklore* 126 (1), pp. 37-52.

Meder, Theo, Folgert Karsdorp, Dong Nguyen, Mariët Theune, Dolf Trieschnigg, and Iwe Everhardus Christiaan Muiser (2016): 'Automatic Enrichment and Classification of Folktales in the Dutch Folktale Database', in: *Journal of American Folklore* 129 (511), pp. 78-96.

Online databases and tools

www.liederenbank.nl
www.verhalenbank.nl
www.momfer.ml



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