

Expressive microstructures of timing in the style of Aníbal Troilo's tango orchestra

Demian Alimenti Bel¹, Isabel Cecilia Martínez², Luiz Naveda³

¹ *CICba (Scientific Research Commission of the Province of Buenos Aires), LEEM (Laboratory for the Study of Musical Experience), Universidad Nacional de La Plata, Argentina*

² *LEEM (Laboratory for the Study of Musical Experience), Universidad Nacional de La Plata, Argentina*

³ *Escola de Musica, Universidade do Estado de Minas Gerais, Brasil*

¹demianalimentibel@gmail.com, ²isabelmartinez@fba.unlp.edu.ar, ³luiznaveda@gmail.com

Background

Musicologists and musicians tend to think that the organic features of a musical style are annotated in the musical score. However, musicians add innumerable types of variations during performance, accounting for a range of differences within the boundaries of the style itself. Tango musicians are aware of these features when they speak about the melodic phrasing during performance. In some music styles, such as jazz and samba, the systematic recurrence of rhythmic-melodic patterns became an idiosyncratic feature that supports the identification of the style itself (Benadon, 2006; Naveda et al, 2011). An expressive characteristic of melodic phrasing in tango would consist of the production of temporal recurrences in the peculiar elongation and shortening of rhythmic-melodic patterns embedded in the microstructure of the phrase.

Aims

To reveal the expressive stylistic identity of Anibal Troilo's tango orchestra, identifying the recurrent microtiming temporal patterns associated to the melodic phrasing.

Method

We analysed a dataset of motifs and phrases contained in ten tango recordings, performed by Anibal Troilo's orchestra between 1960 and 1978. The melodic motifs were segmented from each fragment. For each motif, we annotated a set of "target sequences", which are defined as a set of rhythm figures that are common to all motifs. Each motif was classified according to its compositional characteristic (original, varied, and repeated), and its metric position (thetic, anacrusic, and acephalous).

The timing and pitch information of motifs and target sequences were extracted from the sound signal by semi-manual annotation, and normalised according to the length of the target sequences. The organization of each compositional feature was analysed using a set of classification tests. Finally, we applied a clustering algorithm based in K-means, which determined the models of recurrent timing patterns present in Anibal Troilo's style.

Results

Classification results showed how each compositional variation lead to differences in the microtiming structure. Rhythmic-melodic-temporal patterns were grouped according to their different modes of variation, mainly melodic contour, and timing characteristics. The sonic phrasing in Troilo's style prioritises an expressive temporal microstructure, in which the grouping of 4 onsets (four eighth notes) between beats 3 and 4 in the measure, lengthens the second onset and shortens the third and fourth, recurrently.

Conclusions

The stylistic performance in tango is understood as the outcome of the interaction between musical properties (pitch-rhythm) and the microstructure of temporal patterns, strongly rooted in perception and action over time. The study indicates that the communication of the stylistic identity in Aníbal Troilo's orchestra might involve the production and perception of microstructural pattern invariants between onsets 3 and 4 of each motif, both in ensemble and solo performance. We call this temporal-expressive feature a syncopated performative effect. Future studies could concentrate on how the perception of these subtle features occurs across acculturated and non-acculturated audiences.

References

Benadon, F. (2006). Slicing the beat: Jazz eighth-notes as expressive microrhythm. *Ethnomusicology*, 50, 73-98.

Naveda, L.; Gouyon, F.; Guedes, C.; and Leman, M. (2011): Microtiming patterns and interactions with musical properties in samba music. *Journal of New Music Research*, 40:3, 225-238.

Keywords: timing, expressive microstructures, temporal patterns, Troilo, tango.