Interactions between music and language on the semantic level in a song

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Since music, just like language, represents a uniquely human and universal feature that challenges almost all of the components of human cognition, it constitutes one of the most prominent tools for exploring human cognitive processes. Given its similarity with language, music has lately attracted scholars from various linguistic branches who have offered evidence for their mutual influences on various levels, from the sensory to the cognitive one. Overlapping brain areas for the processing of both musical and language meaning (Steinbeis & Koelsch, 2008), as well as shared conceptual networks for language and music (Schön et al., 2010) have been suggested, and the capacity of the latter to convey concepts has been empirically proven (Painter & Koelsch, 2011). Music is meaningful mainly on the pragmatic level (Patel, 2008) because the arrangements of its acoustic features resemble movements, gestures, and prosodic patterns of people in certain psychological states. Just like gestures add meaning to a speaker's message (Schlenker, 2019), gestures perceived based on musical acoustic patterns are understood as meaningful (Juslin & Laukka, 2003). By means of a metaphorical relation between structure and emotion based on universal facial expressions or psychophysical cues, listeners draw inferences about the communicative intent of what they hear. This view of a song as a kind of intentional communication is further supported by the automatic engagement of Theory-of-Mind and social cognition brain networks during music listening (Koelsch, 2011). This study in cognition and perception of songs therefore highlights the communicative nature of music (Slevc, 2012). The use of ecological stimuli, such as songs, seems necessary to uncover the true nature of the brain's processing of meaning in both domains (Fitch, 2015). Yet, only a few studies have focused on the cognitive processes underlying sense-making of a song. Drawing on current advances of musical semiotics and empirical evidence from cognitive linguistics, we investigate how the musical sign influences the understanding of simultaneously presented words. A song is being approached as an act of communication where musical accompaniment provides additional pragmatic information to the one contained in the lyrics and has to be interpreted, just like the context of a dialog. In discourse, pragmatic information is quickly integrated (Berkum et al., 2008), and similarly, does the musical meaning merge with the text-based message, and meaningful representations are constructed based on the two information sources. This paper argues that arts in general, and the study of music and its interactions with words in particular, can provide an encompassing account of mental representations and the mechanisms by which humans allocate meaning to their surroundings and advance our understanding of the nature of meaning in general (Fitch & Gingras, 2011). This study, therefore, attempts to add to the knowledge of semantic processing by bridging evidence from cognitive sciences and neurolinguistics on one hand, and pragmatics and musicology on the other hand, in order to contribute to a better understanding of human meaning production.

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