

Mechanisms Underlying the Social Effects of Music: Comment on “Musical engagement as a duet of tight synchrony and loose interpretability”

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Research in the social, cognitive and neurosciences in the last couple of decades has revealed the fascinating role that synchronising bodies and behaviours plays for facilitating social interactions and connecting people (Hoehl et al., 2021; Rennung & Göritz, 2016). Examples included a wide range of cultural phenomena, such as armies marching, sports teams rowing, choirs singing, orchestras playing music, and tribes dancing. The fascination with the power of interpersonal synchronisation has been so strong that the distinctions between these vastly different phenomena started to be set aside. Rabinowitch’s (Rabinowitch, 2023) review and proposed framework are a welcome contribution, inviting the field to consider the contradictory social effects that interpersonal synchrony can have in the context of musical engagement.

The tight – loose framework Rabinowitch (2023) proposes argues (i) that musical tightness, as signified by strict temporal alignment (or interpersonal synchrony) among the players, enhances positive social behaviours and attitudes towards one’s own group members while enhancing negative social behaviours and attitudes towards other groups’ members – the state Rabinowitch terms Common Group Membership, and (ii) that musical looseness, as signified by players’ deviations from the original score or social-cultural traditions, enhances positive social behaviours and attitudes towards one’s own group members without enhancing negative social behaviours and attitudes towards other groups’ members – the state Rabinowitch terms Tolerant Group Membership. Thus, while Common Group Membership echoes the well-established and studied social psychology concept of intergroup dynamics marked by in-group favouritism and out-group hostility (Tajfel & Turner, 1979), Tolerant Group Membership describes another social dynamic, in which in-group favouritism occurs without out-group hostility. This framework lends itself to interesting and testable hypotheses. However, a lack of focus on the mechanisms explaining how tightness and looseness operate may lead to overlooking the intricate effects that musical experiences have on social interactions.

As has been widely reported in the literature, and acknowledged in Rabinowitch’s paper, joint musical experiences can lead to such strong social identities that evoke partisanship and out-group hostility, for example in the case of nationalism or football fanaticism (Bohlman, 2011;

Newson et al., 2018). Since these examples with clearly negative social effects involve loose elements, and looseness in Rabinowitch's framework is associated with tolerant group membership, the framework fails to explain how looseness can have negative social effects. At present, Rabinowitch's framework dismisses these cases as odd ones out and attributes the negative effects of these musical engagements to the contents of the song lyrics or connotations of that musical event. An alternative approach would be to examine the mechanisms through which each tight and loose element operates rather than trying to map all negative social effects to tightness and all positive or balanced social effects to looseness.

Research shows that sensorimotor coupling between individuals is a key mechanism inducing the social bonding effects of interpersonal synchrony; shared neurophysiological representations that arise from similarity in body movements extrapolate to psychological attributes as perceptions of similarity, affiliation and pro-sociality (de Barbaro et al., 2013; Hoehl et al., 2021; Uddin et al., 2007; Wass et al., 2020). This bottom-up sensorimotor coupling process is conducive to eliciting intergroup dynamics; the same reasons that lead to perceptions of similarity and affiliation towards a synchronising individual would lead to perceptions of dissimilarity and dis-affiliation towards a non-synchronising individual. This dual effect of interpersonal synchrony on enhancing affiliation with synchronous others and reducing affiliation with non-synchronous others might be similar, respectively, to in-group favouritism and out-group hostility.

Indeed, empirical studies have found that interpersonal synchrony elicits effects akin to in-group favouritism – potentially extending to extreme conformity – and out-group hostility (Rabinowitch, 2023). However, previous research also shows that engaging in interpersonal synchrony can increase affiliation with people who belong to an opposing group (Tunçgenç & Cohen, 2016). This suggests that far from being divisive by default, interpersonal synchrony can alleviate negative attitudes towards out-group members. Thus, the picture might be more nuanced than tight interpersonal synchrony necessarily leading to intolerant group membership marked by out-group hostility.

Bringing in the mechanistic explanations can enable us to characterise and predict the diversity of social effects that musical experiences have more accurately. For instance, it might be that tight interpersonal synchrony operates through bottom-up sensorimotor processes, whereas musical looseness operates through top-down processes. In any given musical interaction context, then, the relative strength and interaction of these different mechanisms would determine which social effects would be observed. Identifying sensorimotor coupling as the mechanism through which interpersonal synchrony operates would explain how tight synchronisation can enhance affiliation with all interactants – regardless of whether they are an in-group member or an out-group member. From this, it would follow that tight synchronisation does not necessarily lead to so-called Common Group Membership, but can, in certain conditions, lead to so-called Tolerant Group Membership. In a similar fashion, identifying the mechanisms through which musical

looseness operates would explain how, far from being tolerant, joint musical experiences during nationalistic parades or fanatical celebrations constitute some of the most intense scenes of out-group hostility.

To conclude, Rabinowitch's (2023) proposed framework is a step forward that brings together what has thus far been siloed areas of research, namely the (tight) interpersonal synchrony and other (loose) elements of music. This examination has the potential to contribute to our understanding of not only musical experiences but also other experiences involving interpersonal synchrony. An even bigger step forward would be to have a framework motivated by mechanistic explanations in order to account for the diversity of the positive and negative social outcomes of musical experiences.

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Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: