Title: Music Descriptor Space

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In order to evaluate intercultural descriptions of Western music, we designed a bilingual experiment in which participants in either France (N = 120) or the United States (N = 184) rated 15 novel 30-second stimuli either on quantifiable musical qualities (e.g., tempo, meter, harmony) or using adjectives (e.g., bright, dark, soft). Specific questions include a) whether there was an identifiable cognitive listening space, b) whether this space was consistent across listeners of different nationalities, and c) whether this space was consistent between surveys. A total of 30 stimuli were composed for this study, and each participant rated half of the stimuli at random. To evaluate these questions, we used exploratory multivariate analyses including hierarchical cluster analysis, distance analysis and correspondence analysis, in conjunction with bootstrapping and permutation tests

A correspondence analysis (CA) of the musical qualities survey revealed that many different musical qualities contribute to judgements of difference between musical excerpts and that excerpts that reflect more modern musical movements (e.g., minimalism) greatly affect the overall factor space. Another CA of the adjectives survey provided a space that reflected the valence/arousal emotional model that is much more robust to musically diverse stimuli.

A distance analysis on the participants' ratings showed that the average American and French participants described the stimuli differently.

An additional analysis correlating the results of both surveys suggests that multivariate correlations between the adjectives and qualities models are able to identify stimuli that anchor the 'corners' of the valence arousal model.