Rhythmic Complexity and Preference for Tempo

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Introduction

H1: Rhythmic complexity and preferred tempo would be inversely correlated (people prefer complex rhythmic patterns to be played more slowly, or vice versa). Additionally, participants are expected to demonstrate an anchoring effect, irrespective of complexity.

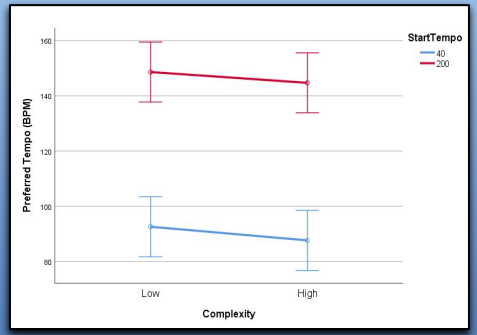
H2: Participants will prefer a faster tempo for patterns that start extremely fast than patterns that start extremely slow.

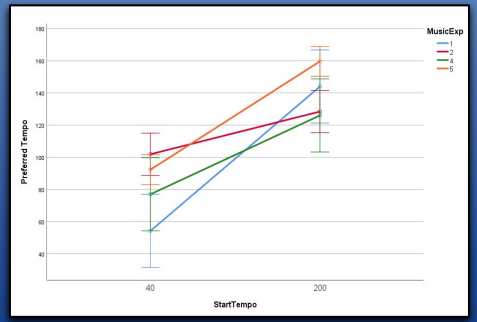
Methods

N = 11 participants between the ages of 24 and 54 (M = 28.82, SD = 8.55) were presented with 8 different rhythm patterns of varying complexities and tempos. They were asked to choose a tempo that best suited their ease of listening/musical preference. The 8 patterns were counterbalanced and randomly presented in 4 different sequence types.

References

Shmulevich, I., & Povel, D. J. (2000). Measures of temporal pattern complexity. *Journal of New Music Research*, *29*(1), 61-69.





Results

Source	df	SS	F	Partial eta^2
Complexity	1	104.27	.201	.003
Start Tempo	1	43276.01	83.277	.536
Musical Experience	3	8249.96	5.30	.181
ME x Tempo	3	9131.86	5.86	.196

Discussion

Initial tempo had a significant effect on participants' preferred tempo, suggesting that people can be flexible in their preferred tempo for a rhythmic pattern. This supports H2 as participants with extremely fast initial tempos selected faster preferred tempo and vice versa. Second, there was an interaction between musical experience and tempo preference. Participants with no musical experience (1) or advanced experience (5) were most sensitive to initial tempo. They had the largest change between initial and preferred tempo. Faster processing speed of experienced musicians or hesitation on the part of non-experienced musicians could be a contributing factor. That is, because non-experienced musicians don't feel like they understand music, they also don't feel comfortable changing the tempo too much. Thus, varying musical experiences allow participants to listen to simple and complex patterns, while still finding them enjoyable. Finally, complexity had a small yet subtle effect on participants' preferred tempo, supporting proposed H1. Future studies can focus on presenting more elaborate rhythm patterns that elucidate a stronger effect of rhythmic complexity.