

The Effects of Competition on Improvisers' Motivation, Stress, and Creative
Performance: A Reaction Paper

Angie Nikoleychuk

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In *The Effects of Competition on Improvisers' Motivation, Stress, and Creative Performance*, Jacob Eisenberg and William Forde Thompson had amateur musicians perform on a keyboard (Eisenberg & Thompson, 2011). One group was told experimenters were interested in exploring how the musicians improvised. The second group was told experimenters were looking for the best improvisers. Then, ten expert judges graded the resulting pieces for creativity and technical goodness.

The questions experimenters asked were simple: Does competition increase or decrease improvisation quality? How does competition affect task motivation and stress? What is the relationship between creativity and technical goodness, and how does motivation affect improvisation?

Ultimately, experimenters found that pieces were considered more creative in the competition condition. The competition group was also more motivated and more stressed. Lastly, their data suggested that technical goodness and creativity were positively correlated. Together, these findings suggest that competition and skill can be used to make someone more creative and, possibly, that more creative people utilize skills and competition to achieve more. Still, the study's external validity and the musical tasks used to test the hypotheses create far more questions than answers.

First, experimenters assume creativity begins and ends with the musician and possibly the instrument chosen. This isn't the case. As famed cellist Yo-Yo Ma once stated, "Content, communication, and reception...are the three elements that go into a performance; but unless they are in total alignment, there will be no magic" (Eisler, 2007). During a performance, the musician harmonizes with other musicians and the audience or listener. In fact, studies have found that, during a performance, the physiological states of the listener and the performer, such as heart rate and respiration, synchronize (Watanabe, Ooishi, & Kashino, 2017). The same phenomenon happens when listening to a story being read aloud (Pérez et al., 2021). Whether performing on stage for five people, millions, or alone in the woods, the decisions about improvisation,

creativity, and performance respond to the listener. And this has been well-known for centuries. A common saying heard among musicians is that music has nothing to do with the notes on the page but is found in the silence between them. For musicians, the interplay between them and the listener is a conversation between souls. The notes are merely the language they speak. The improvisation, implementation, ornamentation, and other flourishes are the tone, affect, and inflections in that conversation.

The second issue with this study is the music chosen. The paper's authors chose *Romeo and Juliet* by Prokofiev, "March of the Black Knights" (pg 132). This piece is well known, but it also has a set of unwritten instructions. Musicians learn these unspoken instructions as they gain experience performing music of a specific period and learn more about music history. These lessons are repeated so often that they become intrinsic to the music and the style. Each period has rules about which ornamentations and variations are "allowed." And in terms of judges, classically trained "purists" will judge any improvisations that violate these rules much more harshly than improvisations that meet expectations for the period. Judges who are more open-minded regarding creativity will judge them less so. Experienced listeners will also have expectations in terms of ornamentation and innovation. Creativity that fails to meet the rules for the period will sound wrong and even turn the listener off because it will violate their expectations, much like a bird song will turn off potential mates if it contains mistakes.

The purposes and drivers behind the act of competition for musicians may also play a role in the results of this study by Eisenberg and Thompson. First, in the no-competition group, there is still a motivator to perform well and do a good job, similar to social desirability bias in surveys. If someone is investigating how you improvise, you naturally want to be consistent and do well so that they can do that. There's also the intrinsic drive to simply fall into the music. If you dislike the piece, it is much harder to improvise and be creative than if you love and know the musical work well and enjoy playing it. In the competition condition, it's important to note that how the musician approaches competition, in general, will vary in how they compete or

improvise. Sometimes, a musician may have a nemesis—one person they always lose to when they compete. Or they may use competition as a learning opportunity; they try specific things they've been working on and either receive adjudication or see if they ranked higher than expected. The definition of improvisation and what is creative for one musician may be entirely different compared to another. Simply listening to various interpretations of the same song between musicians, between performances by the same musician, and even conductors reveals this quite clearly.

Despite having data to support their conclusions, this study failed to find clear evidence of the effects of competition on creativity. The errors and assumptions made here appear to be fundamental misunderstandings of music and musicians. In replication, I would prefer to see comparisons of a single piece played by the same musicians across time. Also, as opposed to looking at technical variations and additions to a piece, I would like to see variations in the intonations, dynamics, communication between the musician and audience, and other qualities of music overlooked in this study.

References

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