# Primary

1. Chakraborty, S., Dutta, S., & Timoney, J. (2021). The Cyborg Philharmonic: Synchronizing interactive musical performances between humans and machines. Humanities and Social Sciences Communications, 8(1), 1–9. https://doi.org/10.1057/s41599-021-00751-8

This article presents and intertwines several methods of AI music generation for the idea of synchronizing humans and machines in an ensemble. There are a couple interesting oscillator models presented for beat tracking and so on. The article has a bunch of interesting notes and citations that are relevant to crossing musicians with machines. There might be an important debate as to whether these models in an ensemble are extending the humans in the group's collective cognition or individual independent agents playing their parts.

2. Kaipainen, M., Ravaja, N., Tikka, P., Vuori, R., Pugliese, R., Rapino, M., & Takala, T. (2011). Enactive Systems and Enactive Media: Embodied Human-Machine Coupling beyond Interfaces. *Leonardo (Oxford)*, *44*(5), 433–438. https://doi.org/10.1162/LEON_a_00244

Article on defining enactive media experiences, which methods of data collection for interfaces are presented. Breaks down the steps for an interactive creative system making use of metadata tags on top of the media which the system might take from. Discusses the practicality of the system to assist artists in expanding their works to something much more dynamic.

3. Zioga, P., Pollick, F., Ma, M., Chapman, P., & Stefanov, K. (2018). "Enheduanna—A Manifesto of Falling" Live Brain-Computer Cinema Performance: Performer and Audience Participation, Cognition and Emotional Engagement Using Multi-Brain BCI Interaction. *Frontiers in Neuroscience*, *12*, 191–191. https://doi.org/10.3389/fnins.2018.00191

An interesting study on the use of brain interfaces and live performances. The study found that participants were in fact able to distinguish that their thoughts were influencing the performance. Whether or not the interface is crude, this is an important identifier for the future of interactive media.

4. Cook, P. R. (1999). *Music, cognition, and computerized sound : an introduction to psychoacoustics* . MIT Press. https://mitpress.mit.edu/books/music-cognition-and-computerized-sound

Important older text to mine a computationally based structure of biological music and auditory perception. Contains information on the physical understanding of how the brain functionally is able to process musical abstractions. A good basis for transposing how an ear works to how a computer's ear might work.

5. Ehrlich, S. K., Agres, K. R., Guan, C., & Cheng, G. (2019). A closed-loop, music-based brain-computer interface for emotion mediation. *PloS One*, *14*(3), e0213516–e0213516. https://doi.org/10.1371/journal.pone.0213516

Basis for the emotional aspect of human interaction with computers. Whether or not "happiness" or "sadness" are true abstractions, a computer interface needs to have some general understanding of what will please a human and displease a human to the extent that they might exit the experience. An interesting article on defining the closed loop between a machine mapping human thoughts into a generated music experience which will influence the human's next thoughts. Good for breaking ground into the idea that some interface should be able to translate a humans internal thoughts into a distinct external form, akin to exposed film which is only a reminiscent image and when developed will have different characteristics(good or not) than of the scene captured.

6. Holland, S. (2013). *Music and human-computer interaction* . Springer. https://www.springer.com/gp/book/9781447129899

Text containing a large amount of information on HCI in regards to music. From instrument interfaces to augmented performances, this contains a wide range of information on the general field.

7. Lefford, M. N., & Thompson, P. (2018). Naturalistic artistic decision-making and metacognition in the music studio. *Cognition, Technology & Work*, *20*(4), 543–554. https://doi.org/10.1007/s10111-018-0497-8

Important article on how producers, engineers and so in the music studio interact. Provides an academic framework for understanding how decisions happen in a music studio, which is relevant to using technology to extend musical capabilities whether live or in the studio. The studio allows more leeway of course.

8. Johnson, D., Damian, D., & Tzanetakis, G. (2020). Evaluating the effectiveness of mixed reality music instrument learning with the theremin. *Virtual Reality : the Journal of the Virtual Reality Society*, *24*(2), 303–317. https://doi.org/10.1007/s10055-019-00388-8

A direct example of how technology interfaces might be used to enhance a cognitive experience which traditionally takes a specially trained ear.

## Secondary

1. Brown, Oliver. (2021). *Beyond the Creative Species: Making Machines That Make Art and Music* . MIT Media Press, https://mitpress.mit.edu/books/beyond-creative-species.

New book on many methods of creative computation and their anthology. Presents many different views on algorithmic, machine learning, and other methods of music experiences. Describes how a performer might interact with a machine or the machine might act as a sole agent performer.

2. Luca, M., & Bazerman, M. H. (2020). *The power of experiments : decision making in a data-driven world* . The MIT Press. https://mitpress.mit.edu/books/power-experiments

Recent book on how many companies use all sorts of methods to collect, organize, and use data to extend the cognitive capabilities of services like playlist making, music suggestion and so on. This intertwines with using interfaces to extend music capabilities, as curation of taste in music listening is the "data collection" of a human.

3. Kao, J. (2021). Another Perspective: Music Education in the Age of Innovation. *Music Educators Journal*, *107*(3), 63–69. https://doi.org/10.1177/0027432121994079

Small article, yet important, on the state of music transferring between people especially during the pandemic. Social media, streaming companies, and so on are contributing to a very harsh shift from traditional models of music education and distribution. The analogy to waves is important, as once rising bands were physically constrained geographically and now are in the ether.

4. Glinsky, A. (2000). *Theremin: Ether music and espionage*. Urbana: University of Illinois Press. https://www.press.uillinois.edu/books/catalog/98mgt7tm9780252072758.html

Will provide a very good introduction for the paper using the most traditionally wild of music interfaces, the theremin. Vivid story on an inventor from many years ago who continues to inspire musical inventors to this day.