

IMITATION AND AUTONOMY AS A BASIS FOR MUSICAL AGENCY

Andrew R. Brown
Griffith University
andrew.r.brown@griffith.edu.au

ABSTRACT

Recent experiences of performing with interactive music systems have stimulated ideas for me about how my creativity is enhanced through these interactions and how much creativity might be attributed the computational processes. These ideas resonate with old philosophical questions around tool use and existential interactions with them (Heidegger 1977). They are also issues raised in more contemporary discussions around integrative music (Rowe 1993, 2001; Cope 1996, 2004). However, today's powerful computational tools and enhanced interest in machine learning and computational creativity bring these questions into sharp relief (Coulton 2008). In particular, for me, the following questions are pertinent. How creative is imitation (i.e., mimesis and reflexivity) and does autonomy correlate with musicality, or our perception of it? (Pachet 2006). How are these seemingly competing capabilities coming together in musical agency? (Pickering 1995). In this presentation, I will reflect on these issues with reference to selected literature and through reflection on my own recent creative practice in developing and performing with variously autonomous interactive music systems that include deliberate use of imitation. In particular three of my recent works will be featured, *Unity In Diversity* (2013), *CIM-biosis* (2015), and *Ripples* (2015) – that latter which I hope to perform at ACMC 2015.

1. REFERENCES

- Cope, David. 1996. *Experiments in Musical Intelligence*. Vol. 12. Madison, Wisconsin: A-R Editions. Cope, David. 2004. "A Musical Learning Algorithm." *Computer Music Journal* 28 (3): 12–27.
- Colton, Simon. 2008. "Creativity Versus the Perception of Creativity in Computational Systems." In *AAAI Sprint Symposium: Creative Intelligent Systems*, 14–20. AAAI.
- Heidegger, Martin. 1977. *The Question Concerning Technology and Other Essays*. New York: Harper & Row. Pachet, François. 2006. "Enhancing Individual Creativity with Interactive Musical Reflexive Systems." In *Musical*

Creativity: Multidisciplinary Research in Theory and Practice, edited by Irène Deliège and Geraint A. Wiggins,

359. New York: Psychology Press.

Pickering, Andrew. 1995. *The Mangle of Practice: Time, Agency and Practice*. Chicago: The University of Chicago Press.

Rowe, Robert. 1993. *Interactive Music Systems: Machine Listening and Composing*. Cambridge, MA: The MIT Press.

Rowe, Robert. 2001. *Machine Musicianship*. Cambridge, MA: The MIT Press. Unity in Diversity (2013): <https://youtu.be/Gmunxu3eK8g>

CIM-biosis (2015): <https://youtu.be/sUtRCiaqpn0>

Ripples (2015): <https://youtu.be/9AxsIQWZ4-U>

2. ARTIST BIOGRAPHY

Andrew R. Brown is Professor of Digital Arts at Griffith University in Brisbane, Australia. He is an active computer musician and computational artist. His research interests include digital creativity, computational aesthetics, music education and the philosophy of technology. He pursues a creative practice in computer-assisted music performance and audio-visual installations, with focus on generative processes and algorithmic music performance including live coding.