School: School of Creative Industries

Researcher: Ron Herrema

Project Title: Code as Prosthesis

UOA: 33 - Music, Drama, Dance, Performing Arts, Film and Screen Studies

300-Word Statement

Code as Prosthesis is a practice-led research project which aims to understand how generating music by means of computer algorithms relates to the traditional and inescapable materialities of musical practice. It also aims to understand how generating music by means of computer algorithms impels the researcher towards a seemingly paradoxical feeling of self-expression. These aims were met through the creation of a nexus between Herrema's creative practice and the concept of prosthesis as discussed by such authors as Matthew Crawford, N. Katherine Hayles, Tim Ingold, and Marshall McLuhan.

Code as Prosthesis is a term originated by Herrema in response to Matthew Crawford's use of the word 'prosthetic' in his book *The World Beyond Your Head* (2015), where he describes how humans learn to 'pay attention' to the world through the exercise of various physical crafts and skills. Herrema extended this concept to an ostensibly non-physical domain (writing computer code to control virtual instruments), finding through his inquiry that: coding maintains a complex, multi-layered attachment to the learned materiality of musicmaking; traditional musical instruments can also be understood as prostheses through which humans learn how to 'extract invariants from the stimulus flux'; there is a link between virtuosity as conceived in both traditional, physical domains and in virtual ones.

The research was funded by means of an Automation Fellowship awarded by the Southwest Creative Technology Network (SWCTN). Dissemination of the findings took place through the use of an innovative interactive website (codeasprosthesis.net), as well as through the International Journal of Creative Media Research (April, 2020). The use of the interactive, animated website formed a secondary dimension of the research - namely, to explore alternative means by which practicing artists can disseminate knowledge embedded in their work, doing so through means that more inherently resemble their nonlinear practices as artists.