

Dromos/Autos: The Autistic Ontology as Performance

Matt Rogerson, MTI Research Centre, De Montfort University, Leicester, UK

1. PROGRAM NOTES

The author is a neurodivergent sound artist and performer. Their research-practice investigates the interdisciplinary convergence of electroacoustic music, live art, sonic-autoethnography, biofeedback, audio-visual viscerality and disability studies; mediated via the practice of EEG/neurofeedback performance and informed by their own lived experience as a person diagnosed with an Autism Spectrum Disorder (ASD) to auto-ethnographically supplement their research. Furthermore, they accommodate for their musical practice as a guitarist and improviser by engaging in contemporary and experimental solo and ensemble projects.

2. PROJECT DESCRIPTION

The essence of this research performance-project is comprised of a transgressive implementation of 'neurofeedback'; a process in which one attunes and self-regulates their own cognitive and emotional functioning via the utilisation of EEG (Electroencephalography) to harness their brainwaves and generate external audio and/or visual stimuli, which in turn consecutively modulate their brainwave patterns to desired, often placative results; a feedback loop. The transgressive nature of this performance derives from the conceptualisation of neurofeedback as a process that induces negative cognitive consequences, by means of a 'provocative' audio-visual performance ecology the performer is both a passive mediator and subject to; engendered via cascading digital 'provocative' systems established within Max/MSP. The performance leverages, and assigns primacy towards, the artist/performers autistic cognition; a particularly idiosyncratic and revealing interface for performance and musical expression which can serve to auto- ethnographically evoke and deconstruct the systemically debilitating socio-economic constructs and metanarratives of the social model of disability (Shakespeare, 2013), represented by the provocative performance ecology, that disempower members of the autistic and wider disability community.

3. PERFORMANCE NOTES

The aim for this performance-research project explores how EEG (Electroencephalography) and neurofeedback facilitated sensory overload can lead to new performance paradigms, mediated through a particularly idiosyncratic yet revealing interface for musical expression: the autistic cognition. The research adopts an interdisciplinary, practice-based methodology; incorporating facets of generative electronic music, psychoacoustics, audio-reactive visuals and performance/endurance art (Shalson, 2018). The main body of work for the research encompasses the design of 'provocative' sounds, i.e. sounds tailored to induce sensory overload specific to the performers/researchers autistic ontology. These sounds are curated towards parameters established via a reflexive autoethnographic research methodology. The has then deliberated potential arrangements for the sounds, which then influences the nature of their generative programming in tandem with gathered EEG data to produce an open 'neurofeedback' loop; a dynamic sonic and performance ecology in which the performer is subject to, inducing embodiment (Forcucci, 2018).

The performance-project utilises commercially available EEG and BCI (brain-computer interface) technology to engender an electroacoustic performance ecology, manifest as a durational endurance art performance, in which the parameters of bespoke virtual 'provocative systems'

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produce sonic events that are determined and modulated by the preceding audio stimuli via neurofeedback. The events are tailored to stimulate the performers autistic cognition, insofar as 'provoking' it into an embodied cognitive sensory arrest. This transgressive performance method is intended to elucidate an auto-ethnographic representation of the augmentative capabilities of ASD, in addition to reconfigure the social metanarratives that bracket, over-pathologize and disempower the autistic ontology.

4. MEDIA LINK

- Google Drive: <https://drive.google.com/drive/folders/1q7YA-pjN4S3V0P36eYTn-8I83zH1cgk?usp=sharing>

ETHICAL STANDARDS

This research project follows De Montfort University's (DMU) Research Ethics Code of Practice guidelines. The author is the sole participant who is placed under the research gathering conditions, which included frequent convalescent periods and safeguards towards health and wellbeing. The formal monitoring of and data gathering from audience members are precluded from the research process, as stipulated by the De Montfort University ethics committee.

REFERENCES

- [1] Forcucci, Luca. "Music for Brainwaves: Embodiment of Sound, Space and EEG Data." *Body, Space & Technology* 17, no. 1 (2018): 76-94
- [2] Shakespeare, Tom. "The Social Model of Disability." In *The Disability Studies Reader*. Edited by Lennard J. Davis. New York, NY: Routledge, 2013, 214-221
- [3] Shalson, Lara. *Performing Endurance: Art and Politics since 1960*. Cambridge: Cambridge University Press, 2018