Ludic Performance: Embodied, Game-Based, Data-Driven Experiences

Our current technologies, namely the Internet, mobile devices, and now wearables, are numbing our biological self through a form of what Marshall McLuhan referred to as "self-amputation." This paper is a critical examination and a creative reversal of the legacy of cybernetics. It seeks to both interrogate the underlying rhetoric fueling the post-biological technocracy to which we are unconsciously ceding control of our cognitive and affective faculties, and also explores how embodied, bio-adaptive game-based networked performance practices can serve as an antidote. Through two case studies of my own interdisciplinary collaborations, *[radical] signs of life* and *Beware of the Dandelions*, this practice-based research attempts to recuperate the biological self by 1) re-inscribing the body, affect and the senses into current techno-utopian discourse, and 2) re-stimulating the peripheral nervous system through kinesthetic play and bio-adaptive feedback.[1]

[radical] signs of life is one of the first large-scale uses of biotechnology to integrate networked bodies and interactive dance. The work externalizes the mind's non-hierarchical distribution of thought through responsive, rule-based choreography and a database of phrases. Music is generated from the dancers' muscles and blood flow via biophysical sensors that capture sound waves from the performer's bodies. This data triggers complex neuro-biological algorithms to be projected onto multiple screens as 3D imagery. As the audience interacts with the images produced, they enter into a dialogue with the dancers. Conceptually, the piece is an embodied examination of self-organizing systems and the increasing disparity between the encroachment of bio-data and the quiet discord of bio-memory.

Beware of the Dandelions (work-in-progress) is an alternative reality game-based, immersive theatre performance that teaches social movement building through complex science. Through a sci-fi parable, the work integrates a data-driven narrative with game-based collaborative problem-solving communicated through live hip-hop and DJ performances. The audience--players--wear biophysical sensors to control a 3D game engine projection mapped onto a 24 x 12 foot sentient pod. Players spatially trigger real-time story content consisting of data visualizations, surveillance cameras, systems communication, embedded clues and puzzles, and embodied social interactions. They are tasked with interpreting the flow of non-linear information to make sense of the narrative in order to act collectively to transform the framework of the AI system--a metaphor for systems of oppression.

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[1] Both works visualize, sonify and trigger real-time data from the performers' bodies through the Xth Sense (XS), an open-source biophysical sensor that my partner Marco Donnarumma and I developed through a Creativity + Technology = Enterprise grant from the Rockefeller Foundation and Harvestworks. The XS currently reads muscle contraction and blood flow, but a new version will be released in the Fall of 2014 with added IMU and body temperature functionality.

Both the case studies and theoretical paper attempt to define a new genre--"ludic performance"--and offer an alternative technological paradigm, one which highlights embodied differentials; the irreducible and changing differences of bodies and contexts that foreground unpredictability and emergence, and resist social control and quantification. By reifying the centrality of the body, affect and the senses--the messiness of subjectivity--these works reject the human API, and instead attempt to establish mixed reality conditions for the cultivation of a social ecology that optimizes our ability to "experience our own intensity" suspended in multiplicity and relational becoming.