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Embodied Ecology; visualizing biological data with dance and technology, Abstract

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BODY of KNOWLEDGE

Embodied Ecology; visualizing biological data with dance and technology

Koryn Ann Wicks and Piper Wallingford

An interactive environment in which dance manipulates visual representations of biological data in real time to depict the effects of climate change. This project combines Koryn Ann Wicks' research in dance and augmented performance with research by Piper Wallingford from the Department of Ecology and Evolutionary Biology. "Embodied Ecology," fosters education about climate change by appealing to both logic and emotion through an interdisciplinary project.

Piper Wallingford's research deals with predator-prey relationships in tidal ecosystems along the West Coast. Wallingford's preliminary data predict a spatial mismatch of predator and prey distributions due to the increasing thermal stress predicted over the next century.ⁱ Data from her upcoming research on environmental gradients will illustrate how predator-prey interactions may change as a result of climate change.

Embodied Ecology utilizes an interactive video system that allows dancers to manipulate visual representations of Ms. Wallingford's data through movement. The video system combines Microsoft Kinect technology, Max visual programming language, and Active Space intermedia system for live performance. The system is projected into the performance space and responds to the dancers in real time. To convey the scope of human impacts, the data is interpreted choreographically by manipulating distribution patterns using spatial relationships between dancers representing different species.