

Music, movement and metaphor: An investigation of degeneracy in human behaviour

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The brain is the organ of society and the biological vector of culture. Neuroanthropology, the study of brain and culture, is a means of investigation aimed at studying the brain in context and the context of the brain. An intermediary between brain and culture is meaning construction. Music and dance are sociocultural systems of distributed cognition and meaning construction. In western culture, music and dance are often discrete activities carried out by different individuals. Each art is created by embodied brains and the specific structures are shaped by sociocultural processes. The relationship between music and dance can be used to study fundamental neuro-cultural processes such as distributed cognition, meaning construction and analogical processing. The current project focuses on Australian Contemporary Dance and draws upon contemporary evolutionary theory, western choreomusicology and cognitive ethnomusicology. Brain and culture can both be considered as evolutionary systems coexisting at different levels of complexity. A fundamental prerequisite for the processes of natural selection within an evolutionary system is the presence of formacy. Formacy arises in the context of a population of variants. It emerges when some structural heteromorphous variants within a system are isofunctional with respect to context. Formative elements are systemic and cannot exist in isolation. It is hypothesised that meaning construction is a formative process. An analysis of formacy in neuro-cultural networks can be performed by examining the structural, functional and contextual relationships between two elements of a system. In Australian Contemporary Dance, this analysis can be performed using existing theory and methodology from Choreomusicology. Choreomusicology is the study of the relationship between music and dance. It allows a structural, functional and contextual comparison of musical and movement elements. Music and dance can have a context-driven relationship or a context-free relationship. By manufacturing a structural interdependence between music and dance, a functional and contextual comparison of musical and movement elements can be ascertained. In the first experiment a sample of Australian Composers were asked to compose music for a dance-film choreographed by an Australian choreographer. A selection of these compositions has been chosen for a Dance-Improvisation task and for a separate Choreography to music task. It was hypothesised that composers will create compositions that are heteromorphic and isofunctional and are based on context-free cues of the movement. Similarly, it is hypothesised that improvised or choreographed movement to music by various artists will be heteromorphic, isofunctional and based on context-free elements of the music.

