Seeing is Doing (and Believing?):

An exploration of metakinesis, neuroscience, the relationship between the moving body and the watcher, and the implications for dance as a performed art form.

Tessa Gordziejko
Clore Leadership Programme 2005-7

ABSTRACT

In his theoretical writings on the development of American Modern Dance in the 1930s, the American dance critic, John Martin, re-invoked the Ancient Greek construct of 'metakinesis' to explain the process by which performing and watching Modern Dance in particular, becomes a unified experience. In the late 20th Century, neuro-scientists in Europe discovered that areas of the brain activated when watching actions performed were the same as those used when performing the movement. These neurons, which became termed 'mirror neurons', have also been connected to a likely engagement with the emotions and intentions inherent within movement. There have been a number of recent science-arts initiatives where collaborations between neuro-scientists and dancers are extending knowledge in both dance practice and scientific knowledge, but to date the genuine convergence of creative and scientific endpoints has rarely been achieved.

This extended essay provides an overview and starting point for predominantly new territory in science-art development, and raises key questions for further investigation. Through interviewing dance professionals, I have gauged to what extent the dance profession is aware of, and imaginatively poised to exploit, developments in neuroscience around the specific relationship between the mover and the watcher. I aim to show that mirror neuron science provides a brain basis for the concept of metakinesis, and that this science could be highly relevant to the development of our understanding and appreciation of dance in Western society. I propose that whilst the arts generally and dance in particular, have a marginalised place in society, the development of knowledge of mirror neurons as a concept, from specialist discipline to a more mainstream consciousness, has the potential to create a significant shift . I identify a number of areas within the development of dance practice where the integration of mirror neuron science could, through a deeper understanding of the integrated brain functions of observing and performing movement, bring future benefits.