

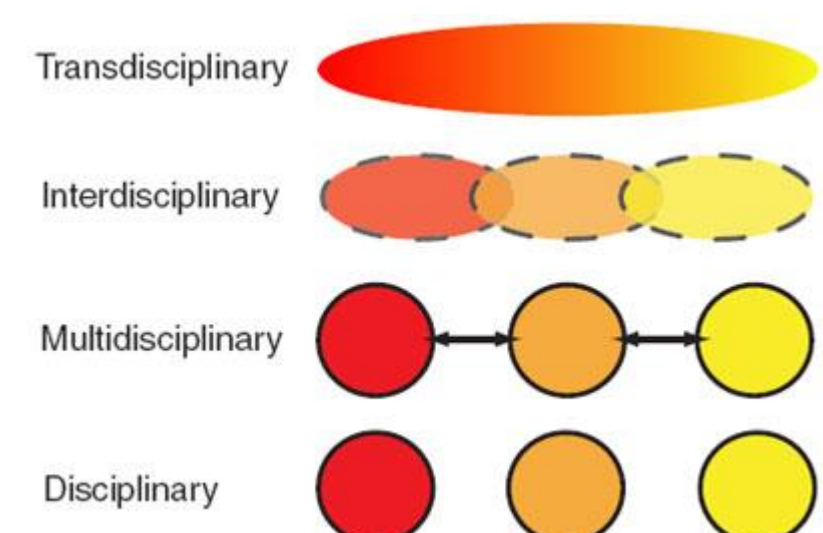
# 'Mind the Gap...What Gap? Co Constructing Knowledge in Somaesthetics and Kinesiology to Transcend Boundaries between Creative Arts and Science'

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## Driving Change with via Transcendence of Disciplinarity

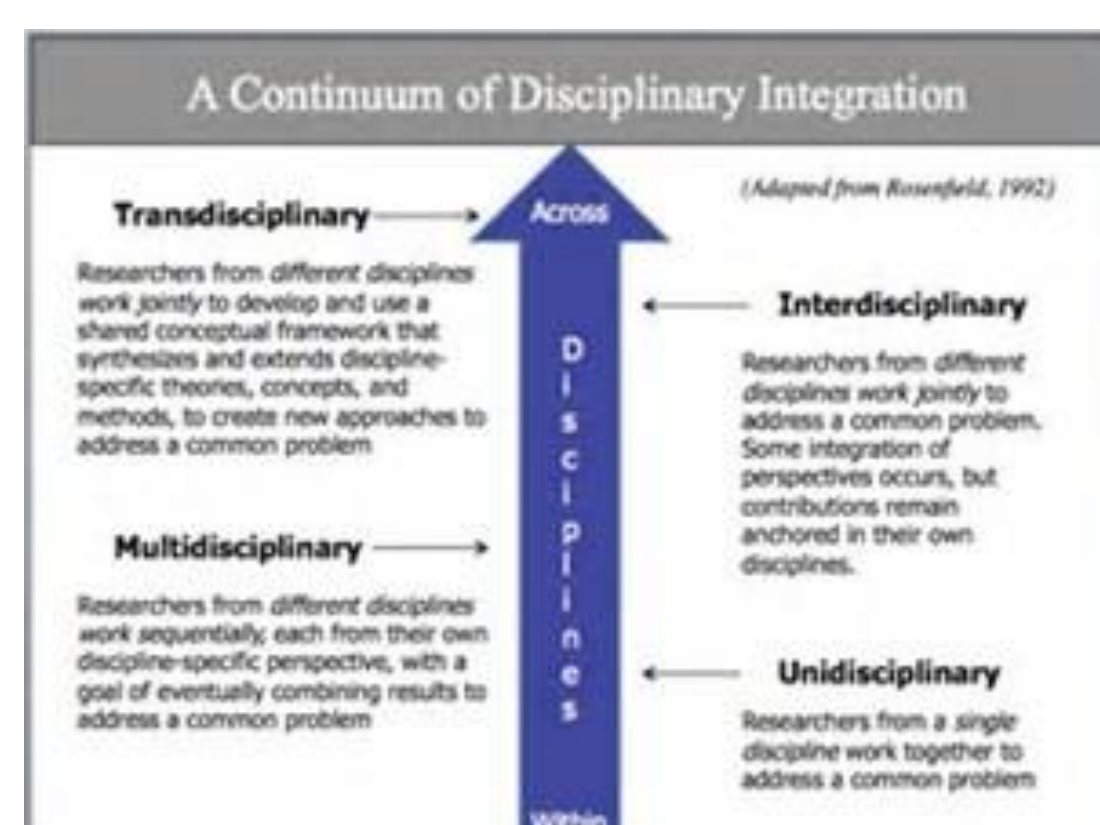
At a conceptual level it is relatively easy to be tokenistic in claiming transdisciplinary working between art and science. An epistemological basis for this has an historical basis in how real world contexts, values and behaviours are manifest in practice.

What has provided a distinction between tokenism and genuine transdisciplinary practice at the University of Sunderland, is the level of specialisation involved in investigating complex human movement and physiological response in the context of both signature pedagogies (Shulman, 2005).



Effective partnership working is the key to transdisciplinary working.

The outcome of this transdisciplinary work has formed the basis of new approaches to the potential of integrating research and pedagogic practice in the development of holistic knowledge relevant to both fields of knowledge in art and science.



## Making Objects to Enliven Sense of Embodiment

Claire Todd's glass and ceramic 'somaesthetics' postdoctoral focus will advance the field of Somaesthetics and transcend disciplinarity between the field of creative practice with kinesiology and biomechanics. The composite term 'somaesthetics' will enable her to work in an explicitly experimental way with hot glass, clay and cloth – as active body based processes and examine how these processes translate through art materials to enliven our sense of embodiment (Shusterman, 2008).



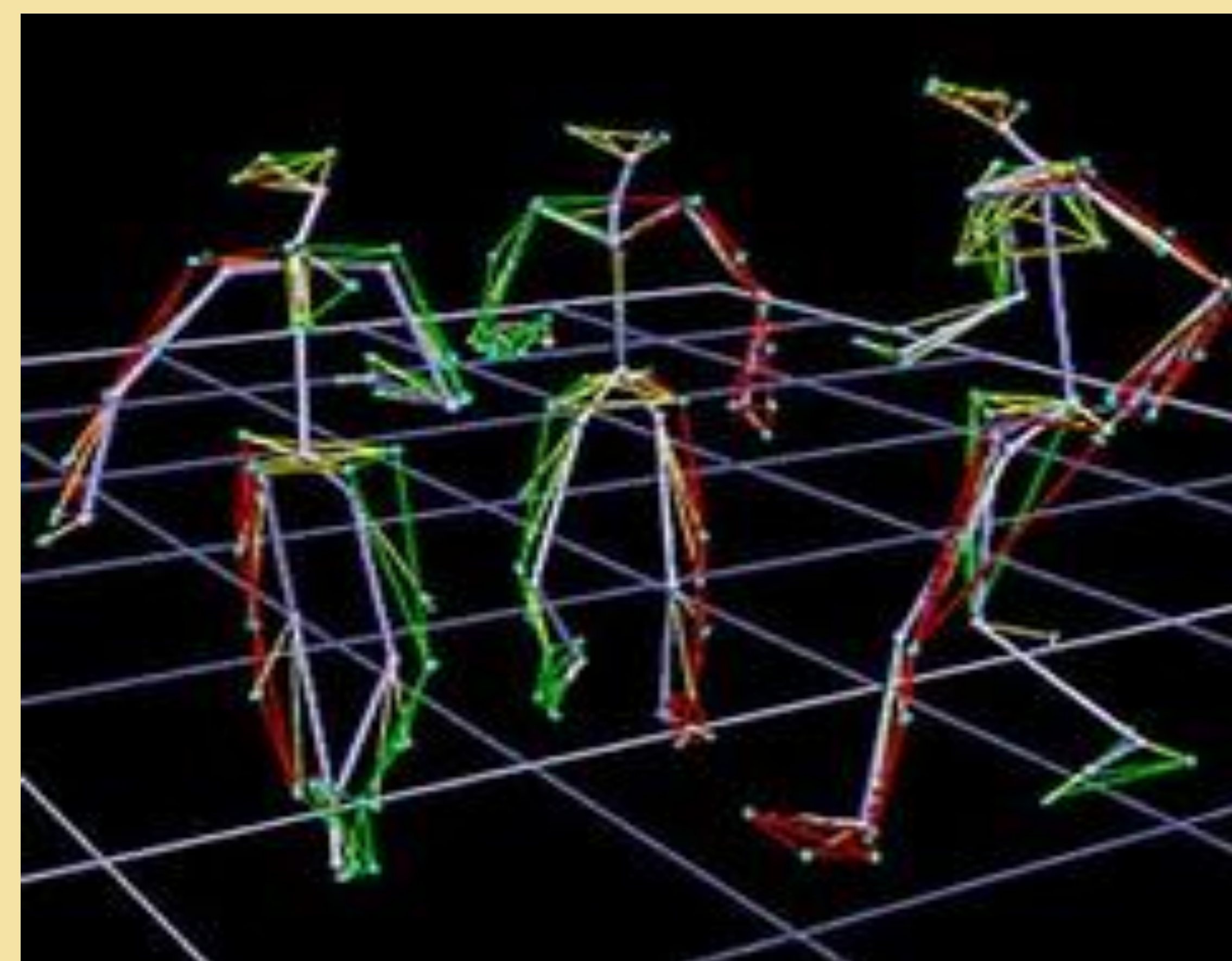
Plastinated specimens capture the concept of human 'movement' in the art and science duality characterised in anatomical dissection work by Gunther von Hagens

The use of technologies in applied science will mean that the research can evidence the ways in which contact with applied art (surfaces, volumes, environments) may affect bodily motion, sensorimotor action/perception and the nervous system. A scientific analysis is made possible through digitally capturing human motion, quantifying biological change and identifying physiological affects. This will open new artistic, integrative (for healing and enhanced wellbeing), spatial, material and performative applications of applied artwork.

## Pedagogic Alliance



## Transdisciplinary Education



## Signature Pedagogies

## Beyond Disciplinarity

Interaction with social objects is inherently value laden but also necessitates cognitive engagement in the process of making meaning and internalising perceived and actual experience. In aesthetics this has several implications for epistemological stance, in that it has the capacity to fundamentally alter how we makes sense of things and how we then translate sense making into action as a result of our epistemic cognition. There are two types of practice related research which can be operationally defined as: a) practice-based (if a creative artefact is the basis of the contribution to knowledge, the research is practice-based) and b) practice-led (If the research leads primarily to new understandings about practice, it is practice-led) It is here that propositional content can be debated.



Historically the debate of whether knowledge can emerge from a social object is fraught with division in relation to the notion of propositional language, insight and reflection. This is embedded in the notion and seeking of 'truth' (Platts, 2016). What is not tangible is the knowledge that art imparts but rather the impact of it. Dimensionality and interdisciplinary difference is a fundamental consideration of what knowledge is and what it informs.

## Kinesiology & Biomechanics

The field of kinesiology and biomechanics has provided a means off addressing tacit knowledge in creative arts in relation to the artefacts produced as an integral part of doctoral research.



The doctoral creative practice of Claire Todd has provided a context for future reciprocal working and the reconnection of work between art and science at an onto-epistemological level.

## Implications for Change

Where theoretical positioning illuminates the whole rationale for biomechanics and kinesiology research, the significance of ontology and epistemology is irrefutable. An understanding of each and in particular their embedded and symbiotic relationship is essential in subsequently understanding the connection between the origins and foundations of pedagogic research across both disciplines.

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