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Editorial: What Is Experimental Art?

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Editorial

What Is Experimental Art?

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There is a school of thought that holds that art is, by definition, experimental. "In the relevant sense of 'experimental' (and using the relevant word 'art') there is no other sort", says Donald Brook[1]. Certainly, one of the few generalizations that may safely be advanced about contemporary art is that it *experiments*—and not just with its given materials; art is inclined to experiment with anything and everything: "with raw matter or time, relationships amongst people, things and tendencies" as Ross Gibson observes[2]. As such, art is apt to exceed any institutional designation, confounding expectations about what it is and where it belongs. At this level, its experimentality manifests as a disposition, a drive to question, transgress and reinvent that in turn inflects the particular exploratory processes or "methods" of art making. When we describe art as "experimental", then, we are often referring not to a formal testing procedure but to the inclination to test social boundaries and conventions; in other words, to contemporary art's roots in the history of the avant-garde.

At the other end of a disciplinary spectrum, the scientific experiment, characterized by its procedural rigour and controlled conditions is associated with a world identified in the university sector as STEM (Science, Technology, Engineering, Mathematics). Contemporary art has a long and productive engagement with this sector and with its contrasting formulations of experimentalism, approaching these in a variety of ways (complementary, critical, collaborative). Terry Smith, Douglas Kahn and Donald Brook each describe parts of this history in their essays in this issue, noting how the crossover has been framed in relation to experimentality (as for example by the artists and engineers, who founded *Experiments in Art and Technology* in the U.S. in 1967). Brook, who first established the Experimental Arts Foundation in Australia confesses:

> Forty or fifty years ago I, like many others, was seduced by the idea that serious artists *must* engage with the domains of science and technology. Why? Because this is where our emergent understanding of how it is possible to act in the real world in regularly purposeful ways most dramatically unfolds[3]

But why *now*? Are the vast silos of academia transforming slowly over time, so that movements begun in the 1960s are only now manifesting as institutional impacts? If so, what has changed; what are the social, political and economic drivers (since these are always what finally catalyzes institutional change) propelling this movement?

The papers collected here derive from the 2011 Experimental Arts conference convened by the National Institute for Experimental Arts (NIEA) in part to investigate these questions. NIEA was itself founded in 2010 at UNSW in Sydney. Located in an art school (the College of Fine Arts) with links into computing science, robotics and engineering as well as to multidisciplinary research labs around the world, NIEA enfolds understandings of experimentation from both art and science. Its labs (which include the iCinema Advanced Visualisation and Interaction Environment; Holography Lab; Porosity Studio; and Creative Robotics Lab)

[1] Quotations from Brook, D. (2011). "Experimental Art" follow the wording of the paper delivered at the Experimental Arts Conference, UNSW, 2011. A different version of this paper is included in the current issue.

[2] Gibson, R. (2010, October). The known world. *TEXT Special issue, Symposium: Creative and practice-led research—current status, future plans*, p.7.

[3] See note 1 above.

promote artists' collaborations with programmers, engineers and scientists as well as across humanities and within communities. Emblematic of the rise of "research culture" in the arts, the Institute's researchers have advanced not just art-*based* but art-*led* multidisciplinary research. Producing both art and knowledge outcomes, arts-led research maintains a commitment to fundamental "discovery" in the arts, often developing its technological base by establishing its necessary connection to spheres of science and engineering (Paula Dawson and Mari Velonaki both outline this process in their papers in this issue). At the same time, art-led research addresses pressing research questions in a broader domain (Leah Heiss's paper provides one example of such an external focus)—and on occasion (as in the case of Nigel Helyer's *LifeBoat* biotech lab project, discussed here with John Potts) dispenses a healthy dose of critique. Key to such arts-driven research is the affirmation of distinctive aesthetic (sensory and affective) methodologies that transform the nature of an experiment as Jondi Keane exemplifies in his essay.

The advantage of signaling "arts-led" research is that it asserts the research agenda of art itself, avoiding the instrumentalization of art as a form of visualization or its subordination to an externally defined research agenda. One danger, however, is that this formulation simply reverses an order of priority, positioning computing science and engineering (for example) as enabling disciplines for art. While this may not always be a bad arrangement, it nevertheless obliges us to think more adventurously about how art itself might be transformed—rather than merely enhanced—in an encounter with science or "STEM". Within institutional discourse there is increasing talk of "breaking down silos", motivated by the notion that bridging divisions might leverage disciplinary research across a wider arena. Correspondingly, critical theoretical disciplines have moved beyond mechanistic models of interdisciplinary exchange toward a concept of transdisciplinarity (extended here by Keane), evoking a new field of operation produced by conjunction or overlap that potentially changes the terms of conventional discipline operations.

The radical necessity of breaking down silos in this way is often not understood before the fact. Sound artist David Dunn and physicist Jim Crutchfield exemplified this in a keynote delivered at NIEA's Experimental Arts conference, describing the effects of their collaborative research on bark beetle infestation in California[4]. By moving outside their respective domains (the music department and the physics department, where questions of entomology and climate are out of bounds) they combined the creative imagination of the sound artist and the supercomputing skills of the physicist in an experiment that demonstrated a connection between the micro-ecology of insect infestation, deforestation, and global climate change. In a context where current insect-control strategies are insufficient to cope with the bark beetle infestation--a threat of mammoth proportions not just in California but globally--Dunn and Crutchfield discovered that bioacoustic interactions between insects and trees are key drivers of infestation and the resulting large-scale deforestation. Through transdisciplinary experimentation, then, they have opened up the unanticipated possibility of redirecting insect behavior.

Whereas conventional interdisciplinary work sought to bridge two disciplinary silos, servicing mutual needs, the transdisciplinary is impelled by external conditions or problems, but also by the conviction that disciplines do not have proprietary rights over their domains. Just as a physicist and sound artist might engage with a question entomology, an artist or designer might address an issue of sustainable city planning. The difference between a conventional application of the arts and a transdisciplinary experiment lies principally in the degree of latitude: rather than simply being confined to the designated locations of an art, the artist-researcher assumes the license of a planner—as Richard Goodwin has long demonstrated—reconceptualising public space in a way that inserts an artist's viewpoint into a set of pragmatic operations.

[4] Dunn, D. & and Crutchfield, J. P. (2006). Insects, Trees, and Climate: The Bioacoustic Ecology of Deforestation and Entomogenic Climate Change. Santa Fe Institute Working Papers, Santa Fe, NM. See also: Bennett, J. (2011). Living in the Anthropocene. Series: DOCUMENTA (13) "100 Thoughts". Ostfildem: Hatje Cantz,

Urban planning is a particularly good example of a practice that shifts unavoidably in the current climate where the sustainability agenda has come to the fore. An aggressive focus on sustainability targets in many cities has in turn opened government departments and developers to the possibility of engaging the arts as a means of reshaping people's relationship to space and resources. This burgeoning interest in urban ecology tracks one of the primary shifts from the 1960s, when, as Brook points out, science was inordinately more inspiring to artists than, say, "grocery retailing". Today it is hard to maintain such a separation as Brook concurs. The grocery sector—extended to food security, food production and distribution--comprises one of the planks of sustainability, of interest to an increasing number artists (think, for example, of engineer-artist Natalie Jeremikenko's urban farming projects), along with other resource issues to do with water, energy, waste and so forth (see Nigel Helyer's account of his environmental work). In this regard, artists are working with scientists or engineers not because they 'must' or because science is the beacon of progress in the way that Brook describes its fascination for earlier generations. Artists work with science and technology to get things done; to address big agendas, to transform public space or processes of consumption on a grander scale: to "act in the real world in regularly purposeful ways" (Brook).

The "problem", in other words, is not defined and addressed by science alone. Indeed, we are getting *more* used to placing *less* faith in science and technology solutions when it comes to solving intractable environmental problems (note that the City of Sydney's current plan acknowledges that it cannot meet its 2030 emissions reduction targets through the implementation of available technologies alone; a suite of approaches, as yet unidentified, are required to effect social and behavioural change). If we are becoming more open to multidisciplinarity at an institutional level, this is no doubt in part an acknowledgement of the scale and complexity of the problems we face: "wicked problems" as they are now called as an index of the fact that they have no optimal solutions, just better or worse responses. Wicked problems are precisely things like urban sustainability, climate change, the Murray Darling Basin plan, the European debt crisis; problems whose complex interdependent variables mean that any potential "solution" exacerbates yet another raft of entrenched problems. Many would argue that such problems, particularly in the environmental realm, are now engendering a paradigm shift, the effects of which are new ways of working, new economic models and systems of resource management, new allegiances[5].

This is the evolving context of experimental practice. If, as Smith, Kahn and Brook demonstrate, the history of art encompasses a history of engagement with science and emergent technology, art's methods have long been experimental, hybrid and potentially transdisciplinary; well attuned, in other words, to this context of twenty-first century planetary politics. Heiss in her paper draws on a definition of transdisciplinarity as implying that the nature of a problem "is not predetermined and needs to be defined cooperatively by actors from science and the life-world"[6]. Such a description pertains to the generative process of many experimental arts projects, as well as to the approach of papers in this collection. It is equally an indication of a changing understanding of "the problem"—and of how large-scale social and environmental concerns are now imposing on us in a way that challenges old paradigms and mono-disciplinary methods. Experimental art today is increasingly concerned with the complex relationships involved in seeing, defining, framing and responding to pressing events. What is clearer today than in previous generations of research is that the aesthetic (in the fullest sense, encompassing the practical study of affect, sensation, perception, behavior, imagination) is fundamental to any understanding of the connections between lifeworlds, disciplinary procedures and given problems: the arts, in other words, are at the core of the transdisciplinary experiment.

[5] See Bennett, Living in the *Anthropocene*.

[6] Weismann, U., et. al. (2008). Enhancing Transdisciplinary Research: A Synthesis in Fifteen Propositions. In G. Hirsch Hadorn, et. al. (Eds), *Handbook of Transdisciplinary Research*. Dordrecht: Springer, p. 436.

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Jill Bennett's books include *Practical Aesthetics: Events, Affects and Art After 9/11* (IB Tauris Radical Art/Radical Aesthetics series, 2012); *Empathic Vision: Affect, Trauma and Contemporary Art* (Stanford University Press, 2005) as well as several new media monographs and a contribution to the DOCUMENTA 13 "100 Thoughts" series, *Living in the Anthropocene* (Hatje Cantz, 2011). She has co-curated a number of exhibitions including, most recently, *Curating Cities: Sydney-Copenhagen* (Customs House Sydney, 2011), part of an Australian Research Council funded project on public art and ecology.