

2015-10-24

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<http://hdl.handle.net/10026.1/6577>

10.1162/LEON_e_001194

Leonardo

MIT Press - Journals

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Editorial

Cognitive Innovation and The Cognitive Turn.
Michael Punt

October 2014

For nearly half a century *Leonardo* has surveyed, reflected and shaped the intellectual project of ISAST. As part of this mission it has, in the best possible sense, been alert to 'the next big thing'; what in the sciences is called a 'breakthrough', a 'movement' in the arts, and in technology an 'opportunity'. In recent years in the humanities the 'next big thing' has been relentlessly labelled as a 'turn' to the extent that the term itself now resonates with self-irony. Nonetheless by tracking the bibliographies of various 'breakthroughs', 'movements', 'opportunities' and 'turns', it is possible to see the recurring pattern of secessionist impulses as they strive for recognition, build their own communities, launch conferences, sponsor journals and anthologies, appear in encyclopaedias to become an established presence that amounts to respectable middle age. A sceptical follower of *Leonardo's* own passage from an engineering avant garde to glossy middle age can be excused for voicing a certain ennui as yet another 'next big thing' stakes its claim in a call for papers for a conference, a special issue or a special section. Yet without these calls, conferences and the generous energies of their advocates, the gravitational pull of disciplinary orthodoxy would have stifled the radical drive of the ISAST project long ago. Its salvation has been the platform it offers for risky discussions that are not bound by the routine rehearsals of questions and topics that are considered essential for training researchers to have disciplinary focus (and careers). This is how *Leonardo* began in Paris in 1968 and, in this sense, it was at the outset a transdisciplinary project ahead of its time; attempting to bring a different order to the open challenges to the conflicting paradigms of the arts sciences and technology. Through all the 'breakthroughs', 'movements', 'opportunities' and 'turns' it has, borne witness to the inexorable struggles with competing versions of what idea of the 'world' and the 'real' that we are sharing. In recent times this has, more often than not, returned us to familiar discussions of the bifurcations and paradigm conflicts between (and in) the arts and the sciences, technology and culture and theory and practice.

The current media vogue for cognitive science may have generated its own problems and popular misunderstandings, but the intellectual mobility of many of the researchers it attracts opens up a new and unexplored space for creativity in the theoretical, experimental and philosophical in the idea of *cognitive innovation* in which the processes that we understand as creative are not exclusively concerned with human thought and action. Cognitive innovation may appear to be a 'turn' within a 'turn', however, to throw creativity into the practical and theoretical mix of a fashionable science may be more than the apparent colonisation of the *Leonardo* project by yet another intellectual fashion from 'elsewhere'. Cognitive innovation provides a theoretical and practical platform in which some of the more challenging critiques of the humanities can find themselves at one with similar critiques of the sciences.

In 2003 Bruno Latour reflected on this battle of the paradigms with a military analogy (for which he was much criticised). He pointed out that there was a tendency that new battles were fought with the assumptions and technologies of the previous wars, and once this was recognised the military took remedial action. Alas, he laments, not so in academia where we are still wedded to a version of reality that he claims we have long outgrown. His plea in *Why Has Critique Run Out of Steam* is that before it is too late we might turn our attention to developing a more sophisticated and inclusive model of what might be understood as 'real'. To short circuit his elegant argument here, he

critiques his own constructivist contributions of the past and suggests that rather than resigning ourselves to paradigm conflict we use our collective efforts in all disciplines to develop a notion of the real as both a matter of fact and a matter of concern.

Latour returned to this theme in two lectures delivered at the University of Amsterdam in 2005 that are now available in a new anthology (*The Lure of Alfred North Whitehead*) that revisits the speculative philosophy of Whitehead. In his contribution, *What is the Style of Matters of Concern?* Latour uses Whitehead's objection to the bifurcation of nature:

[the problem] is the bifurcation of nature into two systems of reality, which in so far as they are real are real in different senses. One reality would be entities such as electrons which are the study of speculative physics. This would be the reality which is there for knowledge: although in this theory it is never known. For what is known is the other sort of reality, which is the byplay of the mind. Thus there would be two natures, one is conjecture and the other is the dream. (footnote 1)

Latour re-presents Whitehead a little more forcefully:

The world is made of primary qualities for which there is no ordinary language but that of science – a language of pure thought that nobody in particular speaks and that utters law from nowhere; as to ordinary language, it deals with secondary qualities that have no reality. (footnote 2)

And a little later scolds us all and asks:

how come we have, for three centuries, discounted what is given through experience and replaced it instead with something never experienced that philosophers nonetheless have the nerve to call “empirical” and “matters of fact”. (footnote 3).

What Latour and Whitehead insist upon is that it is an error to bestow disciplinary monopoly over what constitutes truth and fact. In as much as both have recourse to the social to relieve the problem as they see it, they do so not as sociologists but by insisting that human cognition is a consequence of socialized intelligence in which the network of cognitive determinants is distributed between matter (which is a complex of matters of fact and matters of concern) and perception (which is a product of affordance and attention). In this context the fairly recent ‘cognitive turn’ in the arts and humanities maybe something more than another move in the inexorable progress of ‘the next big thing’ particularly as it focuses on creativity and innovation. Like many of the ‘turns’ before it that have featured in *Leonardo* in the last decades with prefixes derived from biology, consciousness, computational science, interaction, nanotechnology etc. the cognitive turn has at its core a fundamental concern to restore to science (and technology) the ‘poetic’ human and quite possibly has no better chance of convincingly achieving this than the previous ‘next best thing’. However, following Latour, the promise of ‘cognitive innovation’ as a collaborative project in the sciences, arts and humanities is that we can approach creativity as a bootstrapping cognitive process in which the energies that shape the poem are necessarily indistinguishable from those that shape the poet. In this collaboration under the rubric of cognitive innovation we cannot reasonably distinguish between the language that deals with pure thought and that which deals with secondary qualities that have ‘no reality’. If we can hold our nerve there is a potential here to identify new research topics and concerns and in doing so make inroads into the apparently intransigent problem of bifurcation that frustrate Latour and Whitehead –and possibly many of the *Leonardo* community. If it is to succeed much depends on the degree to which the enquiry into cognitive innovation can resist the strictures of disciplinary momentum and, like *Leonardo*, remain true to its transdisciplinary origins. (footnote 4)

1. B. Latour, "What is the Style of Matters of Concern" in *The Lure of Whitehead*, eds. Nicholas Gaskill and A. J. Nocek (Minnesota: University of Minnesota Press, 2014). p. 93
3. Ibid. p.94.
3. Ibid. p.112.
4. I am grateful to Dr. Martha Blassnigg, Prof. Sue Denham and Prof. Roger Malina for their help in preparing this editorial.

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