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Utopian thinking and the collective mind: Beyond transdisciplinarity

Valerie A. Brown *

Local Sustainability Project, Fenner School of Environment and Society, Australian National University, Australia

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ABSTRACT

The future is frequently presented as a forced choice between human sustainability and human extinction, utopia or dystopia. This paper examines a different option: to develop the full capacity of the human mind to remain open to all possibilities, guided by utopian thinking. An inquiry into the creative potential of the human mind finds that collective thinking from a collective mind goes beyond transdisciplinarity as currently constructed. In collective thinking, knowledge boundaries are reframed as dynamic inter-relationships, and due weight is given to each of personal, physical, social, ethical, aesthetic, sympathetic and reflective ways of knowing. In applying the collective mind in these times of transformational change, there is hope is for innovative solutions to seemingly intractable, aptly labelled wicked problems.

1. Context: a collective mind in a changing world

A rapidly changing world with its major shifts in electronic communication has put the standard 20th century construction of knowledge to the test (Gibbons et al., 1994). In this changing world of global warming, ethnic violence, increasing pollution, and food insecurity, a positive future for humankind has become increasingly hard to imagine. On the other hand, global flows of people, natural resources, finance, and ideas offer a wide range of possible futures, both positive and negative (Falk, 1999). The sum of the changes produces transformational change: business will not be as usual, tomorrow will not be the same as yesterday. The transformational changes in both society and environment mean that the future remains chaotic and uncertain and knowledge about the future is under review (Nowotny, Scott, & Gibbons, 2001).

Yet accounts of the future continue to present contrasting courses of action, moving towards a self-sufficient utopia in which all will be well (Hopkins, 2008, 2012)[1] as against moving to prevent a catastrophic dystopia in which human-initiated changes make the planet uninhabitable (for example, Diamond, 2006). Such futures thinking remains in line with the long-dominant compartmentalised form of knowledge construction, a forced choice between opposites, packaged within the academic disciplines and seeking certainty (Meadows, Meadows, & Randers, 1992). Healing the divisions created by this polarised thinking requires access to a more comprehensive system of thought within a hopeful vision of a world not so divided.

* Tel.: +61 2 62958650.
E-mail address: valeriebrown@ozemail.com.au

[1] Transition Towns is an international grass roots network of people working for positive social change.

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A decade ago a special issue of *Futures* journal suggested that such an expansion of thought was emerging under the heading of transdisciplinarity, that is, academic knowledge extended by other ways of knowing. Throughout this paper, knowledge is taken to be consistent with the *Oxford Companion of Philosophy* proposition that knowledge is a form of justified belief (Honderich, 1995).

In spite of the multi-dimensional nature of contemporary change, most research into the changes continues to be restricted to single factors such as climate, water or food, and to a single outcome, the physical consequences for human beings, such as global warming and water wars (Flannery, 2005). Pressures from the complexity and uncertainty of the changes have meant that a broader lens was also emerging, a way of thinking about the future that brings together living and non-living systems, people and their natural environments, different scales of governance, and risks and opportunities in a collective understanding about positive future directions. Under prevailing constructions of knowledge such collective thinking risks being dismissed as impossible (Midgley, 2004).

On the other hand, for at least half a century the future has been influenced through broad-ranging inquiries which meet and even go beyond the current definitions of transdisciplinarity. For instance, Rachel Carson in *Silent Spring* (Carson, 1962) on the widespread effects of pesticide use and Donella Meadows in *Limits to Growth* (Carson, 1962; Meadows et al., 1992) on the cumulative effects of resource extraction brought into being new principles of environmental management. Jane Jacob's *The Death and Life of Great American Cities* (Jacobs, 1972); and Robert Putnam's *Bowling Alone: the Collapse and Revival of American Community* (Putman, 2000) brought a heightened understanding of and influenced social trends.

In the 1960s, multidisciplinary inquiry seemed to promise a more comprehensive understanding of complex problems. However, as Thomas Kuhn forewarned in *The Structure of Scientific Revolutions* in 1962 (Kuhn, 1962/1970), the normal practice of science continued to impose the fixed frameworks that divided the disciplines and the professions. Multidisciplinary initiatives tended to perpetuate the compartmentalisation of ideas and so to act as a barrier to a fresh understanding of the whole. More hopefully, in 1970 Jean Piaget brought to UNESCO the word 'interdisciplinarity' to describe research which could 'reshape or reorganise the fields of knowledge by means of exchanges which are constructive recombinations' (Piaget, 1970/1973).

At the same time, Michel Foucault (1969) in *The Archaeology of Knowledge* was drawing attention to the construction of knowledge as an artefact of the social era in which it is constructed (Foucault, 1969/2002). While interdisciplinarity was designed to treat disciplinary boundaries as permeable, the outcome was often a fresh discipline with its own boundaries, such as with biochemistry and psycholinguistics. Interdisciplinary research, teaching and publication remained controlled through research grants, academic curricula, and specialised journals that preserved existing disciplinary categories of thought. By the beginning of the 21st century, generating knowledge was more generally accepted as a process as well as an outcome, as a way of reflecting on a changing world as well as a well-defined body of content (Berlin, 1959/1990; Foucault, 1970).

Several fresh approaches to the construction of knowledge expanded the standard ideas of what was included under the rubric of knowledge. Systems thinking (von Bertalanffy, 1976), Post-normal Science (Funtowicz & Ravetz, 1993), wicked problems (Rittle & Webber, 1973), and Mode 2 Science (Nowotny et al., 2001; Rittle & Webber, 1973) sought to bring together any or all of the disciplines in company with other ways of knowing. Systems thinking connected the parts of an issue in order to understand the whole, pioneered by a series of international interdisciplinary forums, the Macy conferences.[2] C. West Churchman, one of the early systems thinkers, wrote in his 1968 *Challenge to Reason* p2, "*How can we design improvement in large systems without understanding the whole system, and if the answer is that we cannot, how is it possible to understand the whole system?*" In his later reflections, *The Systems Approach and Its Enemies*, Churchman begged practitioners to remain faithful to the synthesis-based, self-reflective transdisciplinary and ethical spirit that infused a systems approach (Churchman, 1968, 1979).

Post Normal Science was developed in order to address circumstances where 'facts are uncertain, values are in dispute, stakes are high and decisions urgent' (Brown & Harris, 2014). This called for the inclusion of values, ethics, aesthetics and reflection in scientists' contribution to 20th century knowledge (Ravetz, 1999, 2005). In company with Post Normal Science, recognition of the existence of wicked problems, problems that require changes in the society that generated them, emerged in the 1970s. Wicked problems could have no single definition or final answer, given the multiple interest involved and the commitment to change. This thinking extended the scope of disciplinary inquiry to the political, the diverse and the uncertain. Community, organisational and creative constructions of knowledge were to be included in thinking about wicked problems, as well as the contributions from the expert disciplines (Brown, Harris, & Russell, 2010; Rittle & Webber, 1973).

By 1994 forms of knowledge construction outside the academic disciplines were welcomed by Gibbons et al. in *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies* (Brown et al., 2010; Gibbons et al., 1994). The authors described a movement away from the dominant form of knowledge construction of Mode 1 science with its disciplinary boundaries, ownership hierarchy, and goal of certainty. Mode 2 science and research were identified as contextualised, heterogeneous, porous and transgressive, a considerable shift. All four of the movements sought to standardise transdisciplinarity as a mode of knowledge construction which included other ways of knowing as well as the

[2] The Macy Conferences of 1947–53, Summary: The Macy Conferences at http://www.asc-cybernetics.org/foundations/history/MacySummary.htm Accessed 25.04.13.