

Review of *Tackling Wicked Problems*

There is no undisputable public good, wrote Horst Rittel and Melvin Webber in an often-cited 1973 paper. They concluded that questions of social policy are thus “wicked”: never to be solved, at best merely re-solved, over and over again.

In *Tackling Wicked Problems through the Transdisciplinary Imagination*, a group of 23 contributing investigators takes Rittel and Webber as a primary starting point for the development of individual and collective inquiries. This timely, ambitious and carefully organized volume is a product of a sustained series of meetings hosted by the Human Ecology Forum at the Australian National University and joined by participants from the fields of physical, social and political science, education, health, design and management.

More basic than the question of what makes a problem wicked is that of what makes a problem problematic. “There are no problems in nature,” cautions contributor John Schoonveldt. Problems, like systems or regions, are conceptual artifacts created by people for making sense of the world. The description of a particular situation as problematic depends on factors of social and ethical context, timeframe and so on.

A paradigmatic example of problem formulation is the development of understanding about anthropogenic climate change (ACC), now identified by numerous scientific bodies as a growing threat to societies around the world within the current century, yet still questioned by many people, especially in the U.S. If ACC were more broadly recognized and prioritized as a problem, could it be effectively engaged (or “re-solved”) through current legal, economic and social institutions – or would some forms of institutional transformation be required? According to Schoonveldt, this distinction between adaptation and transformation is what defines wickedness. “Good problems operate within defined rules; ones we can live and play with. Bad or wicked problems are ones where existing rules do not work.”

The project’s particular ethical context is stated in the introduction; investigators seek to contribute to a just and sustainable future. Coeditor Jacqueline Russell lays out the book’s bold philosophical challenge, a “tempered realism” that rejects both scientific positivism and epistemic relativism, offering instead a set of guiding principles for an open and critical approach to transdisciplinary inquiry. Principle number one: all knowledge is partial, plural and provisional. The claims to partiality and provisionality, that knowledge will always be incomplete and fallible, are likely less controversial than the claim of plurality, that there are multiple ways of knowing, shaped by historically and culturally situated values, as well as by the purposes and processes of inquiry.

Coeditor Valerie Brown distinguishes five knowledge cultures, each with its own criteria for testing evidential validity. These cultures (and types of evidence) are: individual (memory), community (story), specialist (reproducibility), organization (workability) and holist (meaning). When making decisions, each of us draws upon each type of knowledge, though not in equal measures, Brown writes. According to the book’s introduction by Brown, Russell, Peter Deane and John Harris, this typology of knowledge cultures did not find unanimous acceptance among the group. In fact, transdisciplinary research, as contributor Roderick Lawrence notes, aims not at knowledge unity, but at knowledge coherence.

Transdisciplinarity is defined in the book’s glossary as “going beyond the academic disciplines to include all forms of structured knowledge relevant to an issue or theme.” In the book’s introduction, it is “the collective understanding of an issue.” Lawrence emphasizes a quality of transcendence, “the giving up of sovereignty over knowledge, the generation of new insight and knowledge by collaboration.” The process of transdisciplinary inquiry relies on imagination, write the introduction’s authors. Drawing upon sources as diverse as Samuel Taylor Coleridge, Albert Einstein, C. Wright Mills and Mary Midgley, they see the exercise of imagination as essential to the challenges

of grappling with paradox and complexity, overcoming cultural and disciplinary limitations, and developing connections among multiple ways of interpreting the world.

Brown sets out the book's research framework: (1) identify the range of worldviews that make up the context of the problem; (2) establish the validity of the evidence that each of the knowledges can provide; (3) create the conditions that sponsor creativity among the diverse participants; and (4) develop a strategy that allows all the contributing knowledges to share possible actions for the future. She lists a variety of research strategies – including action research, pattern language development and appreciative inquiry – for valuing, without reducing, diversity; accepting, without eliminating, uncertainty; and respecting, without belittling, the knowledge cultures involved.

In an academic volume like *Tackling Wicked Problems*, the central emphasis on researchers' perspectives is perhaps inevitable. Yet given the project's ambitious goals, I think it pertinent to consider: are there instances where a specifically research-oriented perspective might prove overly narrow? Take for example the framework directive to "establish the validity of evidence that each of the knowledges can provide." Suppose that, instead of seeking to establish validity, investigators seek to create the conditions for cross-validation of perspectives among participants. Would this reflect a broader approach – transdisciplinarity performed not as research, but as "bridging," through facilitation or decision support?

The organization where I work, which is similarly committed to the values that support "a just and sustainable future," occasionally operates like a research organization and also occasionally like a bridging organization. As described by Carl Folke and colleagues, bridging organizations seek to enable institutional adaptation and transformation by creating opportunities for sense making, conflict resolution and trust building among diverse social actors. In a bridging context, *Tackling Wicked Problems* would take a place on the shelf with other recent volumes that, though less directly challenging to scientific positivism, offer complementary approaches and frameworks for developing and evaluating deliberative and learning processes. My own shelf includes *The Change Handbook: The Definitive Resource on Today's Best Methods for Engaging Whole Systems*, edited by Peggy Holman and colleagues, and the U.S. National Research Council's *Public Participation in Environmental Assessment and Decision Making*.

Revisiting Rittel and Webber's classic paper offers an illuminating historical perspective. The paper betrays a sense of urgency. Standing assumptions had been exposed. They quoted the RAND Corporation's Charles Hitch (c.1960): "We must learn to look at *our objectives* as critically and as professionally as we look at our models and our other inputs." Today, the skillful navigation of fact-value entanglements is as essential as ever. *Tackling Wicked Problems* offers fascinating insights for reflecting – and acting – on situations both problematic and wicked.

REFERENCES

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