Is Futures Studies a Science or an Art?

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Abstract:

Futures studies is currently undergoing a process of professional legitimization. A key debate is the status of futures research as either an art or a science. The author considers the evolution of North American and European perspectives as a pivotal influence. Ikka Niiniluoto's proposal for futures as a "decision science" is contrasted with Wendell Bell's case for "action science" and "cultural realism." Jerry Ravetz's social critique of highly-politicized science and Richard Slaughter's model of critical futures are both mentioned as ways to frame the sociopolitical landscape of this debate. Niiniluoto's definition limits the activist-emancipatory tradition and ignores contributions from hermeneutic ands cultural theory. Resolving the art-science schism may lie in expanding the global scope of futures and appreciating its trans-civilization knowledge base.

Introduction: Futures Studies and Professional Legitimization

After the utopian excesses of the late 1970s, futures studies in the early 21st century is undergoing a process of academic and professional legitimization. Debate about the status of futures discourse, usually framed as an art-science schism, remains an important conflict where different cultural meanings are negotiated. (Slaughter, 1999: 232-233). Attempts to build consensus have largely occurred through membership in the major professional institutes (the World Futures Society, the World Futures Study Federation, the Futuribles group and the Global Business Network), by discussion in journals and university courses, and by adherence to specific methods and tools. The art-science schism can serve as a useful lens to view the development of futures studies and the multi-layered approach (or not) of individual theorists and groups. Wendell Bell was optimistic when he observed that "Everyone involved in the futurist enterprise—and, for that matter, nonfuturist consumers of futures work—has a stake in the discussion." (Bell, 1997: 168).

North American and European Traditions

The debate about futures as an art or science highlights the different views held by North American and European practitioners. Influenced by Hermann Kahn and Edward Cornish, the North American trajectory ". . . reflects a sense of optimism and power which is, perhaps, central to the American experience." (Slaughter, 1988: 7). Kahn and Cornish's emphasis on quantitative methodologies and technocratic scenarios thrived in the post-World War II climate of 'big science', argues Jerry Ravetz, an era exemplified by the 1960s Space Race and fears of thermonuclear Mutually Assured Destruction (Ravetz, 2002: 201). The 'forward view' was co-opted in America by portfolio-driven conglomerates during a frenzied period of vertical integration, and by state institutions for budgetary planning and to inaugurate the utopian ideals of Lyndon Johnson's Great Society. The contrasting European tradition, exemplified by Robert Jungk and Eleonora Masini's visioning workshops, Bernard de Jouvenal's *The Art of Conjecture* (1967), and Johann Galtung's peace studies, developed an activist-emancipatory tradition (Slaughter, 1988: 19) which resonated with the trans-Atlantic counterculture and antiwar movements. This bifurcation reflected the historical matrix of differing post-World War II experiences: the Holocaust's ravages and Marshall Plan nation-rebuilding (Europe) versus *laissez-faire* economic prosperity (North America).

American technocratic mind-sets were soon challenged by blowback from geopolitical crises, including the Vietnam conflict and the 1973 OPEC oil crisis. Management by Objectives gave way to scenario-driven planning and computer simulations. 'Big science' was simultaneously facing a post-positivist revolt, which began trickling with Thomas Kuhn's *The Structure of Scientific Revolutions* (1962), (Bell, 1997: 198), grew with Paul Feyrabend's *Against Method* (1975) and became a flood of postmodernist critiques. This philosophical battle would be repeated, during the following decades, in the controversies

regarding the epistemological status of sociobiology, memetics and evolutionary psychology.

While these debates created the social space for futures as a "transdisciplinary social science" (Bell, 1997: 186-187), they also undermined the epistemological assumptions of the American tradition. The 1990s popularity of complexity theory and Eastern pantheism heralded the demise of Cartesian dualism: ". . . the Western/industrial worldview based on certainty, predictability, control and instrumental rationality has become fractured and incoherent." (Slaughter, 1988: 102).

Art and Science: A Cognitive Split

The Enlightenment's cognitive split of art and science, for Wendell Bell, is the historical nexus of the current debate. "The problem," Bell observes, "is that the distinctions are false." (Bell, 1997: 168). Western intellectual history evolved through the counterpoint of scientific rationality with Romanticist inspiration, organic nature by non-natural intellect. Yet when faced with the *global problematique*, many futurists felt that this progression had led to a scientific-industrial cul-de-sac (Slaughter, 1988: 101). This realization fueled a revisionist climate that enabled Michel Foucault's view that Western science was just another meta-narrative to flourish. Finally, the American emphasis on quantitative methodologies, risk management and utilitarian application by think-tanks had contributed to an over-simplistic public image of how scientific research was actually being conducted. "It should be remembered," Ikka Niiniluoto notes, "that creative imagination is needed in the discovery of scientific theories as well." (Niiniluoto, 2001: 373).

This over-simplistic image of science has contributed to several narrow definitions of the *telos* of futures studies. Jerry Ravetz warns that this image was "constructed for the needs of particular ideological struggles" and that the sociopolitical transformation of science was now dominated by "total commodification" (Ravetz, 2002: 201). This reductionist logic is evident in the commercialization of the Human Genome Project, the late 1990s dotcom consultancies, and the labyrinth patent wars being fought in biotech and nanotechnology. Critique of individual tools needs to be extended to the sociopolitical imperatives of futures institutes: ". . . many of the major institutional centres of futures activity have tended to maintain close links with the centres of social and economic power." (Slaughter, 1988: 18).

Is Futures Studies a Decision Science?

Ikka Niiniluoto's argument for futures studies as a "decision science" is plausible for proponents of "total modification". Herbert Simon's "design science"—the systematic deployment of optimal means for utilitarian ends—is contrasted with activist views that emphasized sociopolitical engagement and philosophical views that cultivated self-reflexive awareness (Niiniluoto, 2001: 373). Acceptance of humanistic values, Niiniluoto fears, may endanger the normative status of scientific discourse (Niiniluoto, 2001: 374). The multi-motivational strategies of futures practitioners—"a mixture of theoretical and

empirical research, methodology, philosophy, and political action"—results from the creative tension of probable versus preferable futures (Niiniluoto, 2001: 376).

Niinuluoto shares Ravetz's concerns that elites may use futures research to manufacture the "consent of the governed" (Ravetz, 2002: 202) and prevent people from making "their own morally and politically relevant choices." (Niiniluoto, 2001: 373). While Ravetz, alongside Ulrich Beck and Anthony Giddens, frames this confrontation as a renegotiated "postwar social contract" (Ravetz, 2002: 201), Niinuluoto is more concerned with ethical implications for the futurist's employer (Niinuluoto, 2001: 374). Richard Slaughter observes that "All science, all futures work is committed," (Slaughter, 1988: 17), yet by focusing on different layers, Niinuluoto and Ravetz show that the nature of this commitment and to who it is given remains varied.

Ars, Scienta and *Techne*

The "decision science" frame cuts through these often-conflicting strategies: "futures studies would not be a knowledge-seeking activity but rather a form of social technology, comparable to the more restricted field of urban planning." (Niiniluoto, 2001: 375). Yet this definition remains problematic. Niiniluoto distinguishes "between *scienta* (as a form of knowledge) and *ars* (as a form of skill." He interprets *ars* as a subset of *techne* (Niiniluoto, 2001: 371). Wendell Bell resolves this false dichotomy with a more precise definition of *ars* "dealing with aesthetics, embracing sculpture, painting, music, poetry, drama, dance, and even literature and some aspects of architecture." (Bell, 1997: 169). Niiniluoto's focus on "futures studies as a branching *tree* with alternative possibilities" and "graphical, statistical, and quantitative methods" (Niiniluoto, 2001: 373) limits his discussion to the level of problem-oriented futures, in contrast to Ravetz's critical mode.

Futures Discourse as Cultural Evolution

Niiniluoto recognizes that futures discourse is a form of directed cultural evolution: "an artifact that is created by human actions." (Niiniluoto, 2001: 375). His arguments highlight, ironically, how transmitted ideas evolve through mutation. He prefers "the patterns of the emergence of new scientific specialties" (Niiniluoto, 2001: 371) yet offers few in-depth analyses of how new sciences emerge through memetic replication, group selection and paradigm shifts. This is how scientific principles that are discovered, refined and actualized. His focus on defining futures as "a new form of planning" (Niiniluoto, 2001: 375) and replacing the term "descriptive science" with "decision science" (Niiniluoto, 2001: 372-373) has already framed the terms of his 'debate'. Ravetz counters with "highly politicised" examples (Ravetz, 2002: 202) from the "pop-Darwinian disciplines" and the "Gaia hypothesis" as a form of "the ecological way of thinking." (Ravetz, 2002: 200).

Adopting Simon's definition consigns the spectrum of critical/epistemological futures to the dustbin of history. It enables Niiniluoto to bypass contributions from hermeneutics and critical theory that might have prompted him to "reflect critically upon the more-or-less arbitrary conditions" and "skewed power relations" of applied futures (Slaughter,

1988: 20). By adopting Simon's definition of "decision science", Niiniluoto offers a prescription of things "ought to be" while deleting who decides this criteria. An ongoing engagement with hermeneutics and critical theory reveals that the pursuit of scientific objectivity cannot be separated from its sociopolitical origins or the wider context (normative culture, language and tradition) that are embedded within applied research and individual projects (Slaughter, 1988: 16). Ravetz wittily sums this up as a shift from "the traditional grail of Truth" to "the criterion of Quality." (Ravetz, 2002: 203).

Ikka Niiniluoto's Cognitive Biases

Niiniluoto's cognitive bias is also glaringly evident when he misrepresents Plato's definition of knowledge as meaning "the same as justified true belief" (Niiniluoto, 2001: 372). Plato actually distinguished between *pistis* and *eikasia* (preconventional emotion and instinct), *dianoia* (conventional intellect) and *noesis* (postconventional insight). Thus Niiniluoto also avoids Slaughter's discussion of the foresight principle and the prospects for developing a wisdom culture. His disavowal is a reaction to earlier attempts to codify futures research as scientific laws (Niiniluoto, 2001: 372).

Given his private support for humanist values such as Ossip Flechtheim's emancipatory function (Niiniluoto, 2001: 374), Niiniluoto's dismissal of the activist-emancipatory tradition remains unconvincing. The original research emphasis of "decision science" has been relegated to the "impoverished margins" of academe (Ravetz, 2002: 202). Debate within the antiglobalist and environmental movements has also shown that laypersons can challenge experts, contribute to forming policies and deconstructing hidden ideologies (Ravetz, 2002: 202). Ravetz defines the scientific battleground as being fought "between reductionist corporate science assuming total certainty and control, and wholistic environmental/critical science concerned with uncertainty and irreparable harm." (Ravetz, 2002: 202-203). Critiques of "decision science", consequently, parallel fears that the "professionalising" of futures will limit dissenting voices and alternate visions.

Wendell Bell Exits the Labyrinth

Wendell Bell proposes three solutions to the art-science schism and the post-positivist revolt. The first is a recognition that many pioneers, notably Daniel Bell and Bernard de Jouvenal, felt "that the futures field by its very nature cannot be a science . . . Moreover, many working futurists today, perhaps a majority, would agree that futures studies is an art." (Bell, 1997: 167). Yet Bell concluded that artists, unlike scientists, "are *not obligated* by their commitment to art to tell the truth." (Bell, 1997: 172). This ignores the domain of Sacred Art (which does hold this obligation) and probably denotes the lingering influence of post-Dada cynicism and Pop commerciality. Bell's insight suggests that the art-science schism is an inter-generational paradigm shift still in-progress and that a new generation of futurists may have different orientations.

The second solution Bell offers is to replace Niiniluoto's "decision science" with an "action science" orientation (Bell, 1997: 181) that enables the fusion of scientific methods—" conditionals, counterfactuals, dispositionals, theoretical speculations, creative formulations of hypotheses, and predictions"—with the awareness of psychological, economic, cultural and sociopolitical implications of forecasts (Bell, 1997: 179, 182).

Finally, Bell navigates out of the post-positivist cul-de-sac through Critical Realism, which defines science as "a body of linguistic or numerical statements about the nature of reality," (Bell, 1997: 207), acknowledges sensory knowledge, personal and social biases, and the simultaneous evolution of discourse "by small continuous additions and discontinuous paradigms." (Bell, 1997: 208). Critical Realism appeals to Bell, post-*l'affaire Sokal*, because it combines empirical logic, a construction of social reality, "the conjectural aspects of knowledge, the many threats to validity, and limitations to knowing with certitude." (Bell, 1997: 208).

Conclusion: The Dawning of Postconventional Insight

Resolving the art-science schism involves reframing the Aristotelian 'either-or' question into a non-Aristotelian formulation. Proponents of the critical futures tradition have recognized the need for a "variety of criteria to assess knowledge." (Slaughter, 1988: 16). One regenerative solution to the art-science schism may lie in expanding the global scope of futures and appreciating its trans-civilization knowledge base. To-date, futures discourse has been molded by existential knowledge of the human condition and the past, and by the "images, beliefs, goals, values and intentions" of its practitioners (Bell, 1997: 174-179). The current search for a 'Theory of Everything' and investigation of postconventional insight will replace the art-science schism with a more inclusive framework. The trans-disciplinary focus of futures studies may be closer to Ken Wilber's synthesis and Edward O. Wilson's *consilience* than the separation implied by Stephen Jay Gould's *non-overlapping magisteria*.

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