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Publisher: Routledge

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Journal of Responsible Innovation

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/tjri20>

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Accepted author version posted online: 28 Jan 2014. Published online: 17 Feb 2014.



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To cite this article: Cynthia Selin (2014) On not forgetting futures, Journal of Responsible Innovation, 1:1, 103-108, DOI: [10.1080/23299460.2014.884378](https://doi.org/10.1080/23299460.2014.884378)

To link to this article: <http://dx.doi.org/10.1080/23299460.2014.884378>

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DISCUSSION PAPER: RESPONSE

On not forgetting futures

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(Received 4 January 2014; accepted 13 January 2014)

In his discussion paper “Responsible innovation, the art and craft of anticipation”, Nordmann (2014) critiques the anticipatory stance of some contemporary forms of technology assessment. His scepticism of “knowledge of the future” actually places him in good company with the marginalized intellectual community organized as futures studies. Across disciplinary gulfs, in a neglected zip code in the academic landscape, scholars such as Bell (1997), Slaughter (1996), Robinson (2003), and Wilkinson (2009) have been asking similar questions about the limits of our knowledge of and for the future. While Nordmann keeps his ideas about the future quite broad and even opaque, this community of scholars has worked over the past decades on different theories of sociotechnical change, nuanced conceptualizations of temporality, detailed accounts of future-oriented practices, and reflections on uncertainty, risk, and ignorance.

Such theoretical understandings have been translated into dozens of future-oriented methods. Nordmann engages neither with this practice-led field, nor the intellectual traditions that undergird its contemporary methods. In failing to distinguish between, for instance, visioning in appreciative inquiry (Cooperrider and Srivastva 1987) and predictive modelling through decision analytics (Lempert, Scheffran, and Sprinz 2009), he conflates very different epistemological traditions, all of which have already been contested in various literatures. In not targeting or delineating what sort of futuring he means to critique, Nordmann thus ignores this history of philosophical and practical questioning. Taking the radical diversity of future-oriented methods and clumping them into “the art and craft of anticipation”, can only hint at some of the intricacies of our impulse to explore “the future”.

Indeed, many foresight practices are meant to contrast the techno-scientific, future-grasping hubris that has been under scrutiny from STS scholars (amongst others) for decades (work on the sociology of the future by Brown and Michael (2003), Selin (2007) and Brown, Rappert, and Webster (2000)). It is not clear whether or not Nordmann sees the anticipation he critiques as rightly disposed but wrongly described, or perhaps rightly disposed but wrongly executed, or wrong on all counts. His unease with looking towards the future is left vague, without a systematic categorization of which sorts of practices fall within or beyond of his line of acceptability. Nordmann’s policing of “the future” makes allowances for science fiction and, in a footnote, for thought experiments, but he does not clarify exactly how these acceptable foresight activities differ from scenarios, which are typically characterized as alternative future stories.

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Engaging with the scholarly and practice-led traditions of foresight would help ground and clarify Nordmann's philosophical argument and, in some cases, even strengthen it. But futures studies has never really taken hold in academia, and today even whether it is a field, a discipline, a discourse, or a club of specialists is contested (Sardar 2010; Marien 2010).¹ But while the contribution of futures studies is uneven, it has provided valuable insights that will be productive in dialogue with Nordmann's reflections.

I will pursue two important strands derived from future-oriented scholarship, each of which I think helps to problematize Nordmann's perspective. The first has to do with decision contexts and the practical need to consider consequence in a systematic way. The second relates to history, including a response to Nordmann's bluntest attack, which we cannot know what future generations will want, so we best not try to act on their behalf. This discussion is largely informed by my own research and practice in scenario planning, a practice that arose as a reaction to planning as "predict and control" and the tendency to treat the future as a simple extrapolation from the past. Instead, "[s]cenarios are developed collectively to build shared images of possible futures ... scenarios nurture openness to change by allowing more complexity in future states of a system and the environment to be taken into account" (Selsky and McCann 2008, 180).

First, then, Nordmann attacks approaches that seek to develop "knowledge of what may come in the future" (Nordmann 2014). But a quick glance through some of the well-cited articles from the futures studies community readily shows that futurists, foresight practitioners, scenario planners, and their colleagues do not see their work as yielding knowledge about a future condition. The future is repeatedly conceived as a time that does not yet exist and is impossible to know. Indeed, even in the heyday of futurism in the 1960s, this work was explicitly distanced from knowing in a traditional sense: French futurist de Jouvenal (1967) said that "knowledge of the future" is a contradiction of terms, and Brumbaugh (1966, 649) wrote: "There are no past possibilities and there are no future facts."

There are, certainly, open questions about the rift between qualitative and quantitative approaches (respectively "foresight" or "forecasting"), with the latter criticised as creating illusions of certainty through awe of numbers, while the former emphasizes narrative and thus skirts the semblance of "true" knowledge. It is also true that it is easy to slip into language about "knowing" futures. But few scholars in the foresight or futures studies community see their work as predicting the future or developing knowledge of the future. Instead, there is a tight focus on examining futures to make better decisions in the present ("learning from the future"). Even if one cannot know the future, it is possible – and useful – to make explicit one's expectations of it, and to work to problematize, reframe or interrogate otherwise taken for granted expectations.

In this way, the problems of the future faced by the future studies community are not, as Nordmann would have it, a lack of knowledge about the future and a consequent muddle that needs more precise rendering. Uncertainty is seen as intrinsic and unavoidable. Rather, the challenge is to better understand our perceptions of alternative futures, appreciate a greater complexity of possible outcomes, and calibrate our actions accordingly. The understanding is thus that decisions can be improved by thinking through alternatives and potential consequences in a disciplined fashion (Swart, Raskin, and Robinson 2004). Practices such as scenario planning typically arise in response to a lack of clarity clouding a very specific decision-making context. In these decision contexts, the future is turned to achieve some goal in the present, whether to discover other options, more clearly articulate a current state, or consider the futurity of a set of actions. Unlike other forms of knowing, however, scenarios are always intended to be more than just idle speculation. It is seldom that scenarios are evoked as mere thought experiments to "stimulate the speculative mind"; scenarios are evoked when difficult, uncomfortable conversations are needed and where existing modes of analysis fall short. Scenarios are not developed in a temporal

void, or an imagined future, but are crafted by someone, at some time, for some purpose, and for some present use.

Fundamentally, then, scenario planning works to help overcome barriers to conversation and to help mere mortals deal with the messiness of decision-making. The craft of building scenarios works to re-frame problematic situations and to offer a corrective to some of our biases. (Scholars (Schoemaker 1993; Bradfield 2008) have, for instance, written about how scenario planning may help broaden perceptions and counteract “anchoring”, which occurs when people rely too much on what has already occurred, failing to consider the possibility of anomalies.) Scenarios are thus often deployed in organizational contexts, which implies the presence of conflicting values, pathologies of group learning, and intractable dilemmas about influence, authority, and persuasion. Nordmann seems to suggest that persuasion is avoidable, that values are in the way (and eradicable), and that simply looking forward to a vacation is suspect. Yet futuring methods have emerged in these messy, real-life contexts, and in the inevitable and intractable presence of such persuasion, values, and power.

This brings us to the second contribution that future studies and foresight can bring to Nordmann’s piece: reflections on history. Nordmann (2014) argues:

By the time the envisioned new technologies have insinuated themselves into the fabric of society, this will be a society of new people in that they will have integrated these new technologies with their system of values. If we now wanted to anticipate the presumed impacts of the new technologies, we would need to take into account the various ways in which this non-trivial future constitutes a world that is profoundly different.

He suggests that if our values change, then our modes of understanding change too, and therefore our contemporary gaze holds little value in assessing the needs and values of “new” people. The average time horizon for most policy relevant futures work that Nordmann appears to be concerned about it is about 10–15 years, a time in which one could question how “profoundly different” “the world” might actually be. He continues:

Since we cannot deny that people change in the course of history and through the uptake of new technologies, we are adopting in effect a paternalistic attitude towards the inhabitants of the future world when we judge their technologies from our point of view. (Nordmann 2014)

There are several issues at play here, from social theories of change to more jurisprudential thinking on intergenerational ethics. I can only gesture at the complex debates that exist around all of these.

First, Nordmann seems to be caught in a conventional, linear approach to thinking through time, one divorced from what social theorists have been learning about temporality. Johnson and Sherman (1990, 482), for instance, note that past, present, and future

fold backward and forward like Japanese origami. They collapse onto each other, emerge from each other and constantly determine each other as we construct and reconstruct both past and future in the present, and the past and future construct the present.

Such a view is not, of course, unique to social theorists. Here in the American southwest, Native American tribes such as the Hopi reckon time through cycles and ritual rather than the linearity of “time’s arrow”.

Linearity aside, Nordmann also seems to present a logical fallacy. If our values change with changing technologies, then are we not as likely to misunderstand the past as the future? If we are so changed that our future-oriented imagination fails us, would not the same be true of our

historical imagination? Does Nordmann dismiss historical study on the same grounds as dismissing the study of the future?

Nordmann's argument is thus tied to a dense thicket of debates about intergenerational ethics. Such debates, questioning the ontological status of future persons, are concerned with our current responsibilities to the rights and prospects of future generations. Should we care about future generations, even without perfect knowledge of their preferences? The heart of Nordmann's complaint, that we (in our present-bound imaginations) cannot know what future people will value, has been discussed exhaustively by legal theorists and environmental ethicists as well as scholars of future studies. From Parfit's "non-identity problem" or Rawls's "veil of ignorance" to the Brundland Report there are many detailed positions that play with our responsibility to future generations. In brief, for many environmental ethicists, concerns for future generations are resolved through notions of *care* rather than what Nordmann calls paternalism.

Nordmann similarly takes issue with what Adam (2005, 10) calls "latent futures", which she characterizes as "futures in the making" and which should be recognized as "material reality and latent process-world of an encoded invisible reality, a realm beyond the reach of the senses, beyond the world of linear causal connections". Pollution, pent-up carbon, and the ratified plan for a new highway – these are all examples of futures not yet here, but somehow imminent. (In scenario planning, these sorts of futures are unfortunately and inappropriately named "pre-determined elements", but despite the simplistic framing, the ideas are similar to Adams.) Nordmann (2014) demands: "It is these postulated, half-formed, non-trivial futures that are the object of anticipation and that can easily be excluded from [the technology assessment] of emerging technologies". But neglecting the ways in which historical processes may play out is dangerous. Should we contribute to a theatre of environmental politics in which policy-makers resist investing in climate change adaptation on the grounds of the overwhelming uncertainty of climate impacts? The court of the future seems more likely to condemn us for negligence than paternalism.

The kind of future-oriented research and outreach conducted in service of the vision of anticipatory governance (Barben et al. 2008; Selin 2008; Guston 2013) assumes this humble but responsible stance by appreciating that the future is an unsettled yet helpful category. Historically there has been much attention paid to whether or not scenario planning is an art or a science, and much concern over rigour and reliability. There are, to be sure, important questions to ask: Whose future carries weight? What constitutes quality when dealing with anticipation? But these questions do not concern the reliability of a particular vision of a future state, or the likelihood of any given future event coming true or not. Instead, the measure of success of a foresight project relates to how well it aided the decision-maker in the present. Are the options better understood? Are we asking better questions? This sort of future gazing as part of anticipatory governance is about trying on different vantage points, playing with alternative views in order to shift perspectives, but always within the context of today. In the end, acts of looking towards the future reside in the present and are wed to contemporary contexts of use, rather than to future ones.

Note

1. Stuart Candy directed me to the work of Nandy (1999), who insists that futures studies should be marginalized in order to preserve its critical edge. Candy notes that it "could perhaps be seen as self-serving on the part of the field to say that its lack of widespread uptake is because it is paradigmatically incommensurate with the dominant ways of thinking. But it would probably not be entirely untrue, either" (Personal communication, 10 January 2014).

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