

Scenarios Practices: In Search of Theory

Angela Wilkinson
University of Oxford
UK

Graham Molitor's article provides a timely prompt for reflecting on the value of scenario practices, especially given several data sources indicating their usage has increased significantly since 2001 (e.g. Ramirez, Selsky, & van der Heijden, 2008, p.9).

Molitor is not alone in his struggle to clarify the effectiveness of scenario practices. Others, including myself, are endeavouring to address similar questions: how to judge effectiveness and what do we mean by 'effectiveness' when referring to such practices? As he implicitly suggests, his critique does not imply that we should throw the scenario 'baby out with the bathwater'.

It is all too easy to agree with some of the criticisms of scenarios raised by Molitor. Three aspects are particularly relevant:

The first is that futures work seems to be characterised by highly personalised practices. Such practices can be introduced by someone who thought it was "a good idea" but who failed to fully reflect on the complexity of the situation and bases their choice of techniques on sound theoretical principles. Secondly, as much of scenario work is secret – particularly in military and corporate sectors- and/or difficult to assess, it is very hard to engage in comparative research. Thirdly, common to other practitioner-led fields, scenario practices are blessed with a high degree of innovation and entrepreneurship and cursed by a lack of reliable accounts that render explicitly what has worked and what has not, why and for whom in different settings.

In the limited space available, however, I would like to raise three areas that I feel are worthy of further reflection:

1. Scenarios Are Not Forecasts

By implicating scenarios with "*any technique that may advance forecasting capabilities*", Molitor contributes to the already considerable methodological confusion that characterises the futures field, in general, and scenario practices in particular. In fact, scenarios – i.e. many futures - and forecasting – one future - have different ontological and epistemological underpinnings.

a) Knowledge and ignorance

In forecasting, the emphasis of attention is on what is knowable in advance from evidence of the past. Uncertainty is treated as a 'lack of knowledge'.

In periods characterised by rapid and stable growth, forecasting has proved to be a reliable approach to predicting the future. In situations characterised by complexity, turbulence and ambigu-

ity, over-reliance on forecasting can be a fatal error.

Part of the trick, as Molitor puts it, of "*paring the number down to the essential or domineering forces that figure pivotally in the calculus of change*", can so easily become the problem. If paring down is based solely on Ian Mitroff's uncertainty-importance grid, which Molitor references as a tool to assist in assessing the validity of generated scenarios, the agreement of uncertainty is usually achieved without attention to ignorance. Agreement using this tool can also overlook implicitly held worldviews and the social construction of ignorance, which goes hand-in-hand with organising in every firm or public sector agency.

Unlike forecasting, certain scenario practices, e.g. the Shell tradition which is the foundation of my practice, can encourage attention to the social construction of ignorance by individuals (i.e. the microcosm of the manager's mind), groups and organisations, as well as other collective knowledge-based biases that stem from disciplined expertise and group-think (Schoemaker, 1993).

b) Attention to vocabulary and units of analysis

In inter-organisational settings, forecasting does not enable groups and organisations to appreciate and address their significant challenges, which are variously characterised as systemic and emergent risk, socially messy or wicked problems or puzzling and seemingly intractable situations.

Common to these characterisations is the idea of irreducible complexities. These are social (e.g. multiple and contested worldviews); dynamic (variables and linkages?), structural (which system?) and temporal (which time horizons really matter?). Ironically, such challenges involve high decision stakes but are often oversimplified to avoid paralysis and remain politically gridlocked or overlooked, ignored and denied.

In such cases, the language of forecasting and analysis can be problematic. Any assessment of the future (or past) is not neutral, and is rarely objective. Furthermore, the future of these challenges and puzzling situations cannot be seen or understood from a study of the past or past dynamics alone.

In forecasting, the units and language of analysis are assumed to be given, neutral and descriptive. Scenario practices, on the other hand, can help forge a new common vocabulary and encourage a rethink of the units of analysis.

c) Deeper understanding

Scenario practices and forecasting direct attention to different flows of time and different forms of systemic and cultural depth. In forecasting, the flow of time is linear: past to present to future. In scenario practices, by contrast, the flow is multi-directional (e.g. past and future into the present) and iterative.

Scenario practices can also be designed to help groups and organisations attend to different forms of 'depth', e.g. structural drivers of change and/or cultural perspectives. The latter is essential when scenarios are developed for collective sense-making purposes as a means to establish common ground and forge the new and shared vocabulary for more inclusive strategic conversation.

In forecasting there is attention to structural dynamics within the 'cone of uncertainty' but not beyond it – and it is blind to cultural depth – to the deeper myths and

beliefs in play.

Some scholars and practitioners are already suggesting that these different forms of depth and the triad of time (past, present and future) can be incorporated within the ongoing evolution of scenario practices. For example, Inayatullah (2008) demonstrates the role for causal layered analysis for transformative futures thinking and Wilkinson and Eidinow (2008) highlight RIMA – a reflective, interventionist multi-agent based approach to scenario practices.

d) Sustaining constructive disagreement

Scenarios practices can also enable constructive disagreement to be sustained, e.g. by coupling scenarios to ongoing tracking or early warning systems. Forecasting, on the other hand, drives consensus and attention to a single – sensitivity bounded or probable - future.

e) Plausibility vs. Probable Futures

In the so-called Shell tradition of scenario practices the emphasis is on creating and maintaining a set of *plausible* futures rather than, as Molitor emphasises throughout his piece, determining the *most probable* future, which is more common to forecasting.

Some scenario practices, e.g. the Probabilistic Modified Trends Model (Bradfield, Wright, Burt, Cairns, & van der Heijden, 2005), are more in the forecasting camp, underpinned by assumptions of deductive logics, a concept of an objective 'environment', i.e. independent of any 'client' (Wilkinson & Eidinow, 2008) and associated with more positivist metrics of effectiveness (Walton, 2008).

Of course, these above crucial differences between forecasting and some scenario practices are not just blurred by Molitor. For example, Saffo (2007) in his article on six rules for more effective forecasting, offers the goal of forecasting as "*not to predict the future but to tell you what you need to know to take meaningful action in the present*" and positions himself as a forecaster as an "observer trying to understand and bound the uncertainties generated by events and trying to frame the choices that might influence the outcomes". Many scenario practitioners would say the same of themselves.

However, I suggest it is more helpful to clarify that scenarios and forecasting are different approaches to futures thinking and encourage attention to how they might be related to better effect, i.e. deployed in combination by groups and organisations to achieve better future-mindedness, that is action with the future in mind.

This brings me to my second point. In asking whether scenario practices are worth the effort, Molitor draws attention to the lack of agreement on 'effectiveness'.

2. An Agreement on What Is Meant by 'Effectiveness' Is Limited by Lack of Attention to Theory

Secrecy in scenario planning practices aside, it is easier to get money to conduct research using futures methods than it is to study futures methods and the effectiveness of interventions in practice. Funding for the production of studies of the future

(i.e. for research 'using' futures methods) exceeds that for research into futures practices and the study of 'consumption' and effectiveness in engagement, use and implementation!

Some grounded theories for scenario practices exist (see Schoemaker, 1993 and van der Heijden, 2005). In addition, approaches for theory building (Chermack, 2004) and theories of effectiveness from other walks of life, such as social ecology (Ramirez et al., 2008) are also emerging.

However, it is also important to avoid premature foreclosure of these highly innovative theoretical developments. At least one recent paper (Lang, 2008) suggests that, based on an analysis of the scenario literature, many more framings of effectiveness are possible depending on organisational metaphors in play.

The lack of systematic and scholarly study into futures practices, in general, and scenario practices in particular, means it is not possible to confirm or reject, on any statistically valid or otherwise basis, Molitor's statement that "*no major contribution or breakthrough*" is possible with scenarios.

Molitor rightly notes that '*one or a few cases do not make a compelling case for the value of engaging in scenarios deliberations.*' Indeed, the case evidence and literature on scenarios provides, at best, learning from second hand experience and, at worst, post-rationalised accounts of success.

Furthermore, there is limited evidence of limitations and failings from which to enable learning. Perhaps this is what also concerns Molitor when he refers to "*what some colleagues might brag about*"! (For a notable exception of this situation see the discussion between Richard Whittington (2006), Gerard Hodgkinson and George Wright (2006) as to why a scenario-based intervention by the latter two authors failed.)

Respecting different traditions in scenario practices

Attempts to clarify the general methodological confusion about scenario practices – practices which encompass probable, plausible or possible futures – is already evident, e.g. Bradfield et al. (2005) and Ramirez et al. (2008) each trace the multiple origins of scenario practices. Bradfield et al. also note three different models in practice.

Clarification of the confusion in scenario practices is also being tackled through the development of different typologies of scenario practices (Borjeson, 2006) and other futures practices (Inayatullah, 2002).

Walton (2008) highlights the challenge of determining the effectiveness of scenario practices given the reality of different ontological and epistemological foundations and suggests pragmatism as a method for developing criteria.

Communities in conflict?

It is perhaps less comforting to reflect that the methodological confusion might also stem, from the conflict – or at least lack of respect – between different communities of scenario practices and perhaps even individual practitioners.

On the one side there is 'Homo-Deductivist', the formal-expertise focussed, qualitative – evidence led, computer-modelling based, often probabilistic scenarios folks and on the other side is 'Homo-Constructivist' (the qualitative – evidence led, intuitive

causal logics, storytelling, plausible or possible but certainly not probable futures, scenario folks.

Influencing both sides, developments in sciences (social and natural) and technology are forging a new paradigm and furnishing new tools, e.g. agent-based modelling, in which quantitative and qualitative approaches relate differently to each other than they have so far. Standing in the sidelines is 'Homo Abductivist' (imagination followed by causal analysis) - a practice of scenarios that hopefully and helpfully bridges the quant-qual, expert-stakeholder, model-story divides of old.

3. Exciting New Developments Are Emerging Concerning Theoretically – Derived Understanding of Scenario Practices

Molitor's article could be interpreted as suggesting that scenarios are nothing new. But is this right?

Recently, work at the University of Oxford has characterized scenarios according to two well recognised social science theoretical frameworks – causal textures theory (Emery & Trist, 1965) and, most recently, sensemaking (Weick, 1995).

This undertaking to reveal and clarify theory in scenario practices is rare, but it is a necessary step if the field is to secure the quality control and intellectual rigour required for it to be more fully recognised. This attention to theory is needed for scenarios to realise their potential contribution as a rigorous activity within the domain of public policy and strategy development.

Ramirez, Selsky and van der Heijden (2008) assembled the work of the 2005 Oxford Futures Forum (www.oxfordfuturesforum.org.uk) to consider scenarios practices in light of causal textures theory. Causal textures theory is employed by the co-editors of the book to explain why scenario work increases in times of crisis (whether it was the 1973 crisis, 9/11 in 2001, or – as can be expected- the 2008-9 financial crisis).

Their work suggests that scenario work is not of value when non-turbulent environmental conditions are in place. Instead scenario thinking helps decision-makers increase their perceived adaptive capabilities when facing turbulent conditions. It provides the first contingency theory for the use of scenarios.

These authors explain how scenarios can enable organisations in turbulent conditions to collaborate with each other to stabilise their immediate environments and render turbulence more distant and less relevant to their affairs (Ramirez et al., 2008).

An important conclusion from their efforts is that a theoretically sound version of scenario work – arguably more sound than its alternatives- concerns scenario work which is about the plausible futures of the context of something rather than possible futures of the something itself.

The 2008 Oxford Futures Forum (www.oxfordfuturesforum.org.uk) investigated how 'sensemaking' theories developed by Weick (1995) and Weick and Sutcliffe (2001) might help explain scenario work in an equally rigorous intellectual way.

Two important challenges became evident in doing so. The first one is that the social psychology work of Weick et al. suggests sense is made ex-post, whereas scenario practices by definition considers the world ex-ante. The other challenge has to

do with 'levels', in particular, individual versus collective sense-making.

Making sense ex-ante

Scenarios are organised efforts to imagine (some would say fabricate) possible future conditions which are used to challenge existing perspectives and or/plans (Schwartz, 1996; van der Heijden, 2005) and which can be deployed to counter group and individual decision biases (Schoemaker, 1993). In scenario practices the future is explicitly treated as a safe conceptual space, operating at a higher logical level than the present (Normann, 2001), in which it is possible to safely consider how to act from the present into the future. In other words, scenarios act as a transitional object or space (Amado and Ambrose, 2001) and the 'future' is an abstraction of the possible-in-the-actual that allows back-casting from 'there and then' to 'here and now' in ways that are consistent with the retrospective characterisation of Weickian sense-making.

The advantage of this is that it invites us to be explicit about the ontological assumptions and epistemological considerations, not only of our practices in scenario work (as Walton (2008) initiated), but also about ontological and epistemological perspectives regarding time, choice and action. In other words, what we are learning in confronting scenarios and sensemaking with each other is to give more priority to our assumptions regarding temporality, choice, and agency (as compared to methods involved in scenario work per se.)

Issues of Level

Sense-making has been studied by Weick and others mostly in terms of individuals in small groups (cockpit and air traffic controlling teams; firefighters). Scenarios work has also been studied in such terms, notably by Schoemaker (1993) in relation to decision-making biases and by Naude et al. (2000) in relation to Belbin's roles in senior executive teams. Wack's (1985) work on the 'microcosm' of the decision-maker is ambiguous in this respect – it is unclear if he addresses the individual's perspective or the common world view of a small group of executives. Van der Heijden's (2005) emphasis on conversations also suggests that scenarios contribute to groups and his idea of scenarios improving the 'quality' of strategic conversation has the advantage of selecting how the scenarios impact the sense that people have of each other and the common business idea that holds them together.

The challenge is how group-level sense-making affects the organization as a whole, and vice versa, or in public interest scenarios, large swathes of society. This we know is still problematic in social psychology: work like Maturana and Varela's (1992) suggests that minds are in any case collective, not individual constructs – which problematises how individual agency may be affected by scenario work. So the issue is both group-to-individual as well as group-to-society

Conclusion

Scenario practices are under-researched and under-theorised. The potential strengths, and limits, of scenario practices which encompass probable, plausible or possible futures thinking are unclear.

Some scenario practices appear to produce remarkable successes. Undoubtedly they also entail multiple failures. There needs to be more shared reporting of and learning about both aspects.

Enabling this, in part, will require that funding for research into futures practices becomes available. It will also require a clinical research tradition to be established.

I therefore welcome Molitor's reflections as a provocation towards a greater effort to discuss and research the state of the art and effectiveness of scenario planning practices from the perspective of different traditions and across the range of experiences in different sectors and world regions.

Correspondence

Angela Wilkinson
Director of Scenario Planning and Futures Research
James Martin Institute
University of Oxford
Email: angela.wilkinson@sbs.ox.ac.uk
www.martininstitute.co.uk
Phone: +44 (0) 1865 288974
1 Park End Street
Oxford
OX1 1HP
UK

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