Integrating scenario planning and design thinking: Learnings from the 2014 Oxford Futures Forum

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ABSTRACT

This issue of Futures has covered a lot of ground and much of it breaks new ground. It is not too bold to write that these articles have added new thinking to the scenario and design literatures. Even bolder, we believe that human existence and long-term sustainability are predicated in part on the ideas in this issue of Futures. In his recent book *The Meaning of Human Existence*, Pulitzer Prize winning Biologist E.O. Wilson wrote: premier among the consequences [of human existence] is the capacity to imagine possible futures, and to plan and choose among them. How wisely we use this uniquely human ability depends on the accuracy of our self-understanding. The question of greatest relevant interest is how and why we are the way we are, and from that, the meaning of our many competing visions of the future. Wilson, 2014, p. 14.

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1. Integrating scenario planning and design thinking

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As many new ideas begin as blasphemy, it is not yet clear how practical some of these ideas will prove to be. Yet the task of this article is to do just that—to distill these ideas and try to pull out how they may change the way we do things. With certainty, the ideas presented in this issue of Futures will require elaboration, modification, and development until they can be refined to enhance the practice of scenario planning and design thinking. The premise of this article is therefore to situate scenario planning and design thinking as uniquely human abilities that have historically kept us alive and brought us to where we are today, although they may not have been labelled as such. No doubt, innovations in how we use these abilities, and the wisdom with which we apply them will tell the story of our collaborative futures.

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This will indeed be an article of extremes as we try to integrate an exercise that has no doubt stretched the thinking on scenarios and design beyond where it has ever gone before. On the one hand, we might have a practical extreme that indicates a degree of intolerance for theorizing about how integrate scenario planning and design thinking—we simply just do it. We are better at separating our work into the facilitation of scenario planning or design exercises for clients and then later, reflecting on them to assess what we have learned and how it may be useful to others from a design perspective. We can then design something better next time. The undoubtedly pragmatic approach may appear reductionist, and it can be disturbing to have to integrate these activities in real time. Indeed we might rather not disrupt our neatly integrated thinking about how to do each, separately, than to risk being most entirely derailed by having to answer questions about how they apply simultaneously.

On the other end of the spectrum we may focus on the ideal solution without having to reconcile the messiness of practice. We may face a responsibility to indicate exactly how to do things better based on evolving concepts and ideas beyond a singular point of view and conclude that pure practice is often shallow. Theories and models make the world neat and easy to understand. We cannot labor too much to account for all the nuances of practice now, can we? However, both ends of the spectrum agree that: "We are devoted to stories because that is how the mind works—a never-ending wandering through past scenarios and through alternative scenarios of the future" (p. 43).

Faced with the difficult conundrum of integrating scenario and design practice and theory, we are tempted simply to take our toys and go home, unwilling to attempt the difficult feat of actually integrating cutting edge theorizing and emergent, innovative practice.

But, as contributors to this volume, just this once, we'll take the bait.

1.1. Purpose of the article

The purpose of this article is to summarize and synthesize the collection of articles that are the outcome of the 2014 Oxford Futures Forum and are presented in this issue of Futures. Further, the intention is to interpret and describe the practical, key messages of each article for both scenario planners and design thinkers, balanced with theoretical perspectives that make the logical case for improvement. Again, while many of these contributions considerably expand current thinking on scenarios and design, the true tests of these contributions will be in how they ultimately might transform practice. This will take time.

1.2. Background and context—foundational concepts in scenarios and design thinking

Before delving into each of the previous articles, it is important to draw from foundational work previously done in this area. While it is not always explicit, certainly past work has attempted to address some of the dynamics involved in scenario planning and design thinking. To us, the most obvious tone-setter is the design school of strategy established by Mintzberg, Ahlstrand, & Lampel (2008).

The design school of strategy "clearly separates thinking from acting" (p. 32) and is widely regarded as the foundational school of strategy. It "represents, without question, the most influential view of the strategy formation process" (Mintzberg et al., 2008, p. 24). Dating back to the 1960s, the design school was a favourite of US business schools such as Harvard, the Sloan Management School, and the University of California (Berkeley—before it became the Haas School of Business). The major premise of strategy, according to the design school approach, is to "establish fit" (Christensen, Andrews, Bower, Hammsermesh, & Porter, 1982, p. 164). Therefore, strategy becomes "a deliberate process of conscious thought" (Christensen et al., 1982, p. 543), asking decision makers to design a strategy that establishes, allows and/or promotes a continued fit between the organizational and its external environment.

To paraphrase Mintzberg et al. (2008), the other premises of the design school of strategy are as follows:

- Responsibility for strategy control rests with the CEO.
- The model of strategy must be kept simple and informal.
- Strategies result from a process of individualized design.
- The design process is complete when strategies appear fully formulated as perspectives.
- Strategies should be explicit, so they have to kept simple.
- Only after these strategies are made explicit and simple, can they be implemented.

The utility in revisiting the Design School of strategy is that it lays out some fundamental principles in attempting to apply design concepts to strategy and vice versa. While design thinking has evolved considerably in recent years, some fundamentals may remain the same.

Foremost of these fundamentals is the idea of simplicity. While certainly scenarios and design approaches can become considerably complex, we are reminded of the utility of elegant solutions that make no more use of concepts or ideas than is necessary.Weick Karl, 1989

Karl Weick's (1989) notion of thought trials is also foundational to the intersection of scenarios and design. Thought trials are essentially a set or series of conjectures about a variety of possible solutions to a given problem. These solutions may be entirely practical or wholly theoretical—the range is what counts. Essentially, these are scenarios. At its most fundamental

application, the act of using thought trials is based on designing multiple possible solutions to a given problem, based on a variety of perspectives.

These two early contributions to the Management literature are worth revisiting because they can help to frame our current task of integrating scenario planning and design thinking. Turning to the previous articles in this issue with these concepts as a backdrop allows us to consider just how we might move both disciplines along, and perhaps even create a new one. This article will then necessarily proceed by reviewing the fundamentals of each preceding article with emphasis on their core contributions. Where possible and appropriate, connections are drawn between the works, highlighting the various intersections in thinking, theory, and practice.

2. Scenarios and design: scoping the dialogue space

Selin, Kimble, Ramirez and Bhatti take us on a tour of the Oxford Futures Forum as an in-practice example of integrating scenario planning and design thinking. Their article describes the major overlap in detail, as well as highlights the use of the Oxford Futures Forum as an example of engaged scholarship. Using Van de Ven's model of engaged scholarship to frame the OFF experience (which dovetails nicely with Weick's thought trials), the authors explain how the concept for this pairing came together: the juncture between scenario planning and design is heretofore unexplored. Further, both fields provide a unique opportunity for scholars and practitioners to interact, learning from each other as they ingest and integrate concepts from both sides.

The fertile soil of this newly envisioned relationship between scenarios and design comes in part from the somewhat tenuous nature of scholarship or practice in each field. On the one hand, scenario planning has enjoyed application and exploration in practice, but it has not necessarily come from theory in social science. Rather, it is not uncommon to see humanities inquiries into the processes and effects of the discipline. On the other hand, design is similarly driven primarily by practice, and has not yet been fully explored by theorists or scholars. As the authors illustrate, both fields – scenario planning and design – sit tentatively between these two domains – scholarship and practice. Both seem then well suited to benefit from a meeting of the minds as it were, an opportunity for experts in either scholarly inquiry or active practice to discuss, dialogue, and explore interconnections between their two worlds. As the authors themselves so aptly put it: "the need then is to develop ways to fill in the space between theory and practice in both these practice-led fields."

Beyond the practitioner-scholar intersection, this piece stresses the potentially bountiful territory of the connections that scenario planning and design share. In particular, scenario planning may benefit from interacting directly with design, and vice versa. By doing so, both fields are able to gain from the architecture and underlying constructs of the other. As scholars or practitioners may choose to delve deeper into the possible interplay, they may find additional areas for research, development, and execution in practice.

The clear implications for both fields are elucidated in the nine themes described throughout the article. Full exploration of these themes is provided, but two struck us as especially noteworthy in terms of impact to either field: purposefulness and re-perceiving. Both design and scenario planning must get at "deeper understanding" of value creation. This novel perception of the relationship between scenarios and design suggests that both work to guide and direct comprehension of meaning. The interesting ways each goes about accomplishing this are fascinating and warrant further study.

Secondly, the concept of re-perceiving, dear to many scenario planners for its Wack-ian connection, illustrates how both design and scenarios work on participants or users so that they come to see the world anew. In the school of design, the impetus to deliver innovation and fresh perspective is echoed in scenario planning's work to jolt participants into new ways of seeing. This piece enlightened the creation of the Comparing Design and Scenarios model, scoping out the boundaries under discussion. This model provides a framework for linking the articles to each other, displaying their relationships along a continuum. Because this issue seeks to explore the potential intersections and transpositions between scenario planning and design, the model is helpful in two ways. First, it situates the perspective of each article along the spectrum between scenario planning and design as they exist separately. Second, by contextualizing the articles in such a way, we are able to visualize the "map" of learning—the holistic view of the articles together, how they relate to one end of the spectrum or another.

3. Orchestrating a creative learning environment: design and scenario work as a coaching experience—how educational science and psychology can help design and scenario work and v.v.

The potential intersection between scenario planning and design is explored in Steckelberg's work through the lens of coaching—specifically the team-coaching experience. From the field of coaching, both the componential theory of learning and its foundational componential model of creative learning are set as possible supportive structures for both the schools of scenario planning and design. Ultimately, Steckelberg's article suggests strategies for leveraging these theories for successful execution of both design and scenario efforts.

It is reinforced throughout the papers presented here that both scenario planning and design suffer as misfits. Just as Selin, Kimble, Ramirez and Bhatti discuss, Steckelberg explains that neither field can be cleanly situated in either the arts or the sciences. Instead, both fields conjure the notion of the *craft*—there are assuredly underlying, discoverable processes at work, but executing those processes requires finesse, skill, and experience. This article considers the significance of that reality, and discusses ways in which connections to other fields may serve to locate scenario planning and design more securely in one camp or the other.

Additionally, Steckelberg contemplates the mutual benefit available to both fields if they are able to connect to and employ educational science and psychology. These interdisciplinary possibilities provide intriguing prospects for ongoing research and development. For example, both design and scenario planning draw inexplicably from each other in their core components. Design makes use of "future scenarios" in order to create prototypes, aiming to generate "new forms and engender possible disruption of the past"—in other words, creative destruction. Scenario planning are actually configurations of possible futures, designed to destabilize assumptions about what is yet to come—again, disruptive and in some ways destructive through their creativity.

Both these processes are performed such that individuals or members of a team must contribute to the production of the conceptualizations. The use and application of either scenarios or design can be enhanced by understanding how these theories – componential theory of learning and componential model of creative learning – guide, inform, and direct. Coupled with education theory and learning psychology, the core aspects of coaching can help improve scenario planning and design results, making the efforts more productive.

Coaching, which is based on these theories and models, produces three effects that can be used for the benefit of scenario planning and design: process, dialogue, and relationships. Both scenario planning and design also create – or seek to create – these effects. The underlying processes are actualized as soon as creative learning – or creative destruction – occurs: "In other words, the componential model of creative learning can help assess whether a concrete process in use for design or scenario work enhances the creativity of design or of scenario team members as desired." While the relationship and dialogic components are more esoteric, they play essentially the same role. Through the perspective of coaching, Steckelberg shows how dialogue and relationship recursively support the process and are strengthened by way of it.

These insights have implications for the practice of both scenario planning and design. First, foundational theories to support the process and outcomes of either field are helpful in fleshing out understanding of how and why each works. Second, the potential interdisciplinary research is provocative, and suggests additional possible linkages. Keeping with this theme of mutual benefit, Roubelat, Brassett, McAllum, Hoffman, and Kera dig into the possibilities emerging from a conceptualization of scenarios as fashion design.

4. Probing ephemeral futures: scenarios as fashion design

Roubelat, Brassett, McAllum, Hoffmann, and Kera offer a captivating look at the ephemerality of both design and scenarios, focusing intently on the values placed in each field on the different time-based realities of their products. In design, for instance, the whole field is saturated in the understanding that "seasonality," or the fleeting imprint left by one design or another, are the underlying foundation upon which the entire operation rests. They note Lagerfeld and McQueen as rare examples of creators able to be timely while evoking a sense of the interconnectedness of past and present: "design is often viewed as making sense in the short term." Designers design with the knowledge that their efforts are not meant to be lasting or eternal.

Conversely, scenario planning – which by all rights is based on the idea that the future is always changing, morphing, evaporating into the past – tends to make light of the ephemeral nature of its work. In fact, scenarios are just as fleeting, just as transient as any design. The school may well be served by taking note of its fashion and design counterparts, learning to live more in the moment, or at least to understand how it can only be of one moment in time and place. Scenarios are also a way to make sense of the world, but they are often considered more long-term impactful, more lasting—despite the reality that they are also a snapshot of time.

The authors attend first to the issue of time—both in terms of its continual passage and in light of contemporariness. A "longitudinal viewpoint" can inform both design and scenarios. Referencing Pettigrew's longitudinal theory of method, they provide a framework for understanding fashion-design transformation types, connecting those back to the concept of scenario thinking. Such a vantage point allows analysis of change processes, producing line of sight into the "temporal interconnectedness" of different cases. In the case of fashion design, the authors are able to provide a guideline for interpreting and connecting the "inner rhythms and outer changes" of the design experience.

Using a typology of scenario transformation modes, the authors provide a technique for outlining the way scenarios are created or how they evolve. They suggest that the scenario planning process may be strengthened through consideration of how different time scales and rhythms may impact thinking about the future.

For the Oxford Futures Forum, this team used Tailoring Voting, "a construct for discussing the future of politics in a data driven world." The case example explored evaluates a possible scenario in which voters' data is warehoused and utilized to better predict and ultimately act on behalf of individuals. Everything from interests to shopping habits is catalogued and leveraged, just as in the world of fashion design. The use of such a scenario illustrates the intersection between fashion design and scenario planning, at the same time highlighting some of the potential limitations of scenaric thinking. Moreover, these authors also share a glimpse of the experience of the Futures Forum, as Selin and company have done.

This article makes explicit some precise implications for both designers and scenario planners—ways each group might learn and grow through further consideration and exploration of the others' processes, practices, and "rituals" of being. In the Comparing Design and Scenario Planning Model, this piece would truly between the middle and one extreme. While the design school fits most logically in the pure design end of the spectrum – typified by rapid prototyping and the fleeting nature of the work product – the scenario presented for consideration might fit best in the mini-scenario zone toward the centre. While it is process oriented and does include detail, it is not necessarily as deeply or thoroughly developed as the highly complex examples seen in advanced scenario planning.

5. Styling the future. A philosophical approach to design and scenarios

In "Styling the Future: A Philosophical Approach to Design and Scenarios," Brassett and O'Reilly consider whether style is dead in the discourse of design. In the field it would appear that many dismiss style as undeveloped, unnecessary, or misplaced in the broader understanding of what style is and how it operates. Over the last several decades, the role of style has been marginalized. However, Brassett and O'Reilly assert that style can and should be emergent—not chained to a prescriptive, bounded definition of meaning-making, but dialled into the moment, to the immediacy of time, space, and need. Humans themselves are dynamic processes, emerging out from continual design and redesign, the output of our own strategic processes. Styling is ultimately an "ontological act: a material affective act of forming the present through the future and the possibilities for experience that this allows."

Drawing from Schwartz's descriptions of scenario planning, scenarios, similarly, are an array of possibilities, moving unbounded in a variety of directions with the intention of drawing our thinking inexorably toward the wide range of potential future realities. In this way, much like style, there is a tangled interplay between the medium and the observers with whom it interacts. Both design and scenario planning are disruptive; just as Roubelat, Brassett, McAllum, Hoffmann, and Kera maintain, there is an aspect of destruction in the act of creation. Though Brassett and O'Reilly do not necessarily use the language of ephemerality, there are echoes here of that same theme: that style, design, and scenarios are beset by the temporariness of their existence. That unless that temporariness can be harnessed as a power, the results are unfulfilled.

Perhaps one of the most striking connections drawn is between scenarios and Freud's concept of the uncanny—"an experience of the unfamiliar future given by the design of this image." The transformative power of the scenario experience as described by Schwartz is, at least in part, due to the extreme nature of that which is to be considered. While Schwartz explains the notion of seeing with a different eye, or actually changing to be able to perceive as if from the being of another – or an animal – the authors suggest this extremity operates outside the boundaries of realism, moving through style into a wholly new and revolutionized world view.

Style provides value to the future; Hebdige's work *Subculture: The Meaning of Style* is used as a reference to establish part of this value. Throughout the piece, the case is made that style is more than just beautification, "prettification." Style is, instead, a vehicle for expression—of meaning, of self, of culture. Brassett and O'Reilly also connect style to scenario planning. Because scenarios also offer meaning – and they do so in a way that elucidates the self, the culture, the deeper meaning of the group involved – they invoke style and draw from its well of creative power.

This work provides interesting insight for the world of scenario planning, which can benefit from deeper understanding of and alignment with principles of style. This concept fits further to the Wackian side of scenario development, meaning that we are talking about more than rapid-fire approaches to the future here. At this end, we find greater detail, deeper consideration. Moreover, style as a construct imbues scenarios with a greater connection to the human experience, to the immediacy of the instant of human creation.

5.1. The new narrative: applying narratology to the shaping of futures outputs

In the world of scenario planning, though much has been written to describe the process, there is a definitive gap in the available scholarship and practice around exactly how to craft the stories themselves. In fact, there is discord even about what exactly to call the stories. While "scenarios" is typically the generally accepted primary name, many works describe them as "stories," "narratives," even "tales of the future."

Raven and Elahi take a thought-provoking dive into the world of scenarios—the written content produced during the scenario planning process. Using well-established schools of thought from literary, film, and science-fiction theory, as well as narrative study, they provide a new framework from which to understand exactly what scenarios are. They point out that this is just the beginning—that in scenario planning, there is much to be gained from further exploration of the written scenarios. Yet they have most certainly provoked the conversation, and we imagine their work will compel new studies.

At the intersection of scenario writing and design, Raven and Elahi first differentiate between a writer-as-artist and a writer-as-scenarist. Here we find echoes of Roubelat, Brassett, McAllum, Hoffmann, and Kera's consideration of scenarios as fashion design. While an artist has the freedom to design and style a piece of writing however she sees fit, the scenario writer must work within the confines of the world of the organization. Further, the scenarist is limited in scope and method by the specific requirements of scenarios themselves. This distinction is key in their analysis of narrative, because it positions authorship in this context specifically outside the realm of pure design. However, design and artistry are still key components of the scenario crafting process.

The core of this work is a structural analysis of narratives of futurity. To begin, they deal with the naming convention of scenarios as "futures," working quickly to "dethrone" this label in favor of "narratives of futurity." The need for such a change comes from the classic description of futures—"speculative depictions of possibilities yet to be realised." Such "futures," like designs, are problematic because they are too loosely defined. Because none can truly know the future, because scenarists are so prescriptively bound by the logics of scenario writing, it is more appropriate to understand scenarios as "speculative and subjective depictions of possibilities yet to be realized." They advocate authoritatively for a metacategory – "narratives of futurity" – over any more limited label.

The ultimate output of their investigation is a matrix based on Raven's previously published work on the topic introducing the rhetoric of futures, specifically for a science-fiction audience. Through this 2×2 matrix – appropriate, since

scenario writers often use such a matrix to develop the logics of the scenarios – they are able to map answers to their guiding research questions. They explore the relationships between stories, narratives, narrators, and worlds – reverberating content from Vervoort, Bendor, Kelliher, Strik, and Helfgott's work on worldmaking. They explore points of view and narrative voices, specifically focused on how meaning is ascribed onto stories. Finally, they discuss the ways in which media, narrative modalities, and narrative logics change the rhetorical framing of a narrative of futurity.

Storytelling is convincingly posited as they key connection point between design and scenarios. Both forms use storytelling to convey meaning; both use narrative creation in the execution of their products.

5.2. Scenarios and the art of worldmaking

The final piece in the issue also focused on the concept of the story used in scenario planning. Vervoort, Bendor, Kelliher, Strik, and Helfgott investigate the worldmaking nature of scenarios. Contrary to the point raised by Raven and Elahi, the authors suggest that in scenario planning research, the narrative and systems views are generally more developed. On the contrary, the perspective that scenarios are worlds, and that the process of creating scenarios is one of worldmaking, is underdeveloped.

Worldmaking involves key components, including *creating belief,immersion*, and *complicated pleasures*. These are explored in the article, specifically through the participant experience in co-developing and then experiencing scenarios as part of the planning process. Ultimately, people are more willing to go through the changes elicited by scenarios because they are able to connect fully with the stories. The only way for the scenarios to achieve their purpose – to be impactful in a way that alters participants' ways of seeing the world – is for the stories to be emotionally engaging.

To elaborate on their thesis, the authors provide a worldmaking framework. Further, they provide an illustration of that framework through an example of the scenario development experience. Here, they highlight the participatory process tools integral scenario planning. They also draw connections to the school of design, linking the worldmaking nature of scenarios to the sense and meaning-making nature of design.

The realization of scenarios as worldmaking permits the development of "a new relationship between future futures and multiple presents, providing a frame and language to support a tradition of constructivist scenario practices that are interested in engaging with presents and futures in novel ways." The authors also provide insight into the impact of such a revelation for the different types of scenarios—explorative, normative, and transformative. Here we see connections between Brassett and O'Reilly's work and the transformative power of style, as well as interplay between many of the works included here and the concept of creative destruction.

One significant implication for scenario planning practice is the power that worldmaking has to move the process beyond the idea that there are only a limited set of "plausible" future realities. This recalls Raven and Elahi's assertion that "futures" is

SCENARIO TYPOLOGY

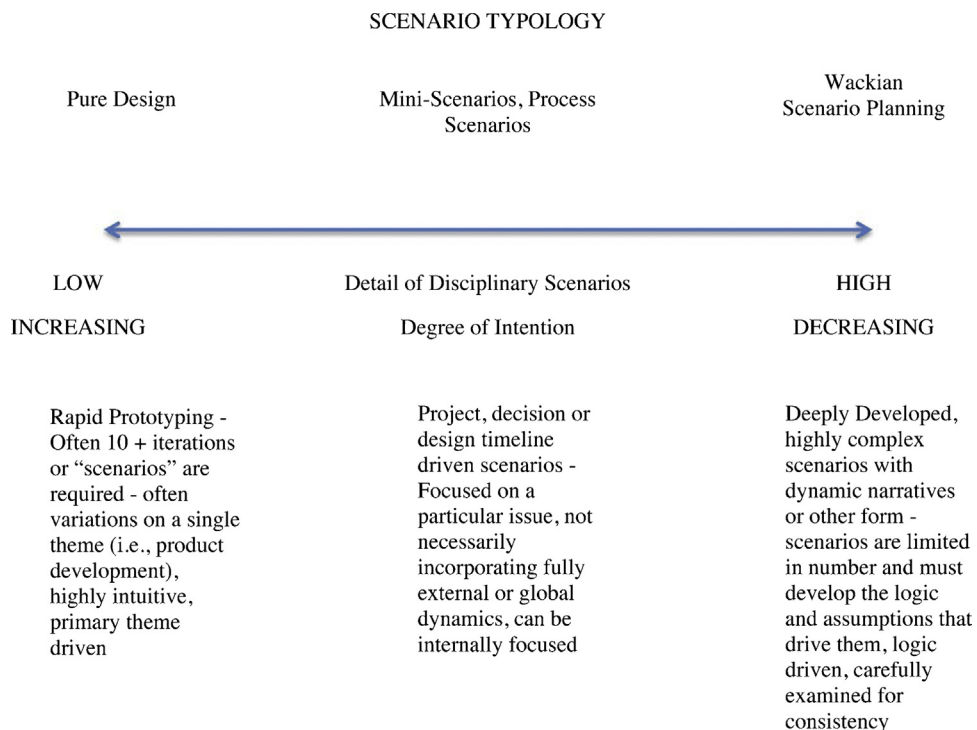| Pure Design	Mini-Scenarios, Process Scenarios	Wackian Scenario Planning
	← ———————————————————— →	
LOW	Detail of Disciplinary Scenarios	HIGH
INCREASING	Degree of Intention	DECREASING
Rapid Prototyping - Often 10 + iterations or "scenarios" are required - often variations on a single theme (i.e., product development), highly intuitive, primary theme driven	Project, decision or design timeline driven scenarios - Focused on a particular issue, not necessarily incorporating fully external or global dynamics, can be internally focused	Deeply Developed, highly complex scenarios with dynamic narratives or other form - scenarios are limited in number and must develop the logic and assumptions that drive them, logic driven, carefully examined for consistency

Fig. 1. A scenario typology.

too limiting a label for narratives of futurity, or written scenarios. The authors suggest that the practice today is currently impacted by such limitations. They advocate that "treating scenarios as worldmaking can help identify opportunities to shape new future worlds out of multiple present worlds." Finally, the worldmaking view of scenarios provides a pathway to explore more tenuous connections between "multiple present" and "possible future worlds."

As with Raven and Elahi's work, this article fits best somewhere between the fleeting, temporary form of scenarios posited by Roubelat et. al., and the more Wackian end of the spectrum. The more detail focused scenario creation process permits for deeper and more meaningful written scenarios.

5.3. Integration and conversation

These contributions bring us to a point of more holistic integration. Such an imaginative and exploratory set of works create the space to dream far and wide about the use, purpose, application and utility of scenarios and design as never before. One particular insight from studying these works and perspectives is a range of scenarios that manifests in a general scenario typology (Fig. 1). We intend this figure to aid in the location, description and intention of a given scenario or design project. It also helps to distinguish rapid prototype scenario generation from the deeper version used by Wack and others in the early days of scenario planning.

The scenario typology integrates the material in this issue of Futures in that all of the articles describe different types of scenarios that seem fit for different purposes. The ephemeral scenarios described by Roubelat et. al., suggest one end of the spectrum with a variety of points along the continuum.

Perhaps most of all, these contributions highlight the conundrum of any scenario or design project—the question of choice. Any scenarist or designer is eventually confronted with the prospect that choices at any point along the way will inevitably limit, expand or create new options for future choices (Brehmer, 1992). From here, the thoughtful participant will almost always ask: How can we influence the future to create or realize the optimal design or scenario for the situation?

The question of choice introduces the notion of free will, which has baffled scientists and philosophers for centuries. We are now treading into the world of normative scenarios, which have been well used and promoted (Kahane, 1992, 2013; Ogilvy, 2002), world-making and teleogenic, or purpose generating systems. However, none have approached the issue from the point of view of free will and human consciousness. What seems clear is that integrating scenarios and design involves another uniquely human ability: the ability to have intention.

"Neuroscientists who work on the human brain seldom mention free will. Most consider it a subject better left, at least for the time being, to philosophers. 'We will attend to it when we're ready and have time' they seem to say. Meanwhile, their sights are on the brighter and more realistically conceived grail of science, the physical basis of consciousness, of which free will is a part" (Wilson, 2014, p. 159). Consciousness, therefore, is a sure part of influencing the future and while nobody knows just where consciousness lives, its influence on our scenario and design activities is so dominant, we usually don't explicitly address it at all. Fortunately, the best neuroscientists are no more expert on consciousness than any scenarist or designer, meaning that

we must continue to explore ways of creating our desired futures or designs based on how we practice and apply scenario and design tools.

We have decided to conclude our thinking on the topic, for now, based on another compelling excerpt from E. O Wilson:

Human existence may be simpler than we thought. There is no predestination, no unfathomed mystery of life. Demons and gods do not vie for our allegiance. Instead, we are self-made, independent, alone, and fragile, a biological species adapted to live in a biological world. What counts for long-term survival is intelligent self-understanding, based upon a greater independence of thought that that tolerated today even in our most advanced democratic societies 2014, p. 26

So, scenario-on, design-on—try it. Think the most outrageous thoughts you can. Apply scenarios and design principles in increasingly innovative ways. Practical, practice-based disciplines like scenario planning and design thinking thrive when the innovation and practice outpace the theory and research. Yet the goal always remains praxis—integrating the best insights from all and eventually understanding more deeply through inquiry. Our long-term human survival depends on it. In the end, scenarios and design thinking promote our better self and other-understanding, which no doubt will increase the accuracy and wisdom with which we apply them again.

References

Brehmer, B. (1992). Dynamic decision making: human control of complex systems. *Acta Psychologica*, 81(3), 211–241.
Christensen, C. R., Andrews, K. R., Bower, J. L., Hammsermesh, R. G., & Porter, M. E. (1982). *Business policy: text and cases*, 5th ed.) Homewood, IL: Richard D. Irwin.
Kahane, A. (1992). Scenarios for energy: sustainable world versus global mercantilism. *Long Range Planning*, 24(4), 38–46. http://dx.doi.org/10.1016/0024-6301(92)90006-N.
Kahane, A. (2013). *Transformative scenario planning: working together to change the future.* San Francisco: CA: Berrett-Koehler Publishers, Inc..
Mintzberg, H., Ahlstrand, B., & Lampel, J. (2008). *Strategy safari: the complete guide through the wilds of strategic management.* New York. NY: Prentice Hall.
Weick Karl, E. (1989). Theory construction as disciplined imagination. *Academy of Management 32 Review*, 14, 516–531.
Wilson, E.O. (2014). On free will: And how the brain is like a colony of ants. Harpers. Retrieved from http://harpers.org/archive/2014/09/on-free-will/.