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*Beyond Command and Control:  
Sense Making under Large World Uncertainty*

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Strategic Development in a Large World

*James W. Bryant*

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# Strategic Development in a Large World

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## Abstract

In order to take charge of discourses about the future, this article argues for the construction of robust, coherent visions that can be used both to communicate and impose our view upon others and to provide those with whom we are working with a clear basis from which to develop local strategy that remains consistent with our broader aims. To achieve this, an integrative approach to interaction analysis within a wider scenario-informed strategic development context is proposed. The method is to use scenarios created through a conventional scenario development process to develop robust strategies for key stakeholders in a situation. These strategies are then allowed to interact, either through a role-play enactment or through co-operation/confrontation analysis. Stakeholders' management of the dilemmas posed for them by the interaction amend their original strategies and these revised strategies are then refined through further cycles. The approach suggested here represents a first stage of development; it is concluded that later work should link the approach more firmly into network centered thinking.

## Introduction

The military must plan in a small world whilst acting successfully in a large one.<sup>1</sup> This large world – small world dichotomy is especially germane to those who provide analytical support for such military strategists, for their support is normally based upon models (small worlds) of the large worlds inhabited by their clients. While some models purport to indicate ideal *solutions* to specific military challenges, a more realistic, but still not widely accepted, role for modeling is to see it as an approach to rehearsing strategy (Dyson et al. 2007). This rehearsal takes the form of an iterative process wherein mission commanders drawing upon analytical support respond critically to the models from a large world perspective and inject fresh information and knowledge. These prompt changes to be made in the small world of the models, which thereby are progressively refined. Commonly though the eventual value of the process comes not from the fully-developed model that may emerge from this interaction, but from the challenge and debate that is stimulated by the conjunction of the two worlds. So the essential payoff of modeling is actually an enhanced sense-making (Weick 1995) process. Seen from this perspective, the strength of a process of model-enhanced strategic decision making resides largely in the quality of the dialogue that it promotes between strategists and between them and other stakeholders.

Almost 30 years ago Mason and Mitroff (1981) insisted upon four basic principles that should underpin a strategic approach to complex *messy* problems. These were that it should be adversarial, participative, integrative and mind-supporting. Their reasoning for these was: that the best judgment is prompted in the face of opposition;

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1. The concept of Large and Small Worlds has recently attracted much attention across a wide span of disciplines. It was first introduced by the statistician Leonard Savage (1955) by reference to the two proverbs “Look before you leap” and “Cross that bridge when you come to it.” You are in a small world if it is feasible always to look before you leap. You are in a large world if there are some bridges that you cannot cross before you come to them.

that the knowledge and resources needed to address complex problems is likely to be dispersed amongst a group of individuals; that the systemic attributes of real-life situations must be acknowledged in solution approaches; and that the distillation of the essentials of a situation must be such as to provide insight for practical actions. These principles have since been instantiated in a wide variety of frameworks, methods, and models intended to enhance sense-making under real world uncertainty (see for example Rosenhead and Mingers 2001; O'Brien and Dyson 2007). Prominent amongst these approaches are:

- Journey-making (Eden and Ackermann 1998). An ongoing, cyclical process of negotiating, designing, and implementing strategic change is supported by the explicit modeling and linking of representations of people's perceptions configured as a *strategy map*. The latter is the basis upon which strategic intent is agreed and from which strategic actions are generated.
- Strategic Choice Approach (Friend and Hickling 2005). A workshop-based approach to enabling a group facing strategic choices to manage uncertainties about guiding values, related agendas and the environment. Progress through four modes of working—shaping, designing, comparing, and choosing—is facilitated towards a commitment package of actions and explorations.
- Soft Systems Methodology (Checkland and Poulter 2006). A debate is constructed between rigorously constructed conceptual models of systems relevant to the situation being addressed and a rich description of the *real* system. The critical comparison and models point directly to strategic actions that explicitly acknowledge the systemic nature of the situation.
- Decision Conferencing (Phillips 1989). The use of multi-criteria decision models embedded within an interactive dialogical process that enables a group to work towards a shared understanding,

sense of common purpose and commitment to action. It is usually supported by real-time quantitative models that make trade-offs and espoused values explicit.

A further approach developed in the same tradition as those just listed, which will be discussed more fully in this article, is the 4-phase process of CC Modeling (Bryant and Howard 2007). Here a modeling core provided by analytical drama theory (to be described below) is set within a facilitated group process designed to deliver strategic insights for stakeholders in a multi-organizational situation.

It may be observed that although much of the stimulus for this portfolio of Problem Structuring Methods (PSMs) came from the US (notably from the work of Ackoff and others at the Wharton School) the subsequent evolution of specific approaches has largely been achieved in the UK. This has led to a situation whereby PSMs are today widely used almost everywhere except in the US (Mingers 2009), where modeling remains stubbornly linked to the tasks of prediction and optimization rather than being seen as a means of prompting creative discussion and achieving insight. One of the aims of the present article is to begin to bridge this knowledge divide.

From the perspective of PSMs, strategic management is viewed as “a pro-active process of seeking to change the organization, its stakeholders, and the context...within which it seeks to attain its aspirations” (Eden and Ackermann 1998). Significantly they take the future as something to be shaped rather than as something to be responded to, and so they focus upon the opportunities that it offers as much as upon the constraints that it could impose. These two strands—the promotion of dialogue through modeling and the facilitation of participative, structured processes for making strategy—can come together around a number of distinct perspectives upon sensemaking. The present article is concerned with one of these: a view of the future as contested, constructed, and colonized by multiple stakeholders. While the recent growth in interest in agent-based modeling (Bonabeau et al. 2003) reflects one approach to such an

interaction-based view, this article proposes a different route, placing its main emphasis upon parties' "ability to impose interpretations [of what is going on] upon others" (Mangham 1978), that is upon the power dynamics in their relationship.

This stance implies paying attention to the potential for action and the consequent leverage possessed by those who have some claim on the future and upon the way that their divergent voices shape the setting within which each is compelled to make action choices in the present. Such an approach coincides precisely with the concept of missions as Complex Endeavors (Alberts and Hayes 2007) that have multiple chains of command and include participants with divergent perceptions and potentially conflicting objectives. It also meshes neatly with the effects-based approach described by Smith (2002) as being characterized by four things: a focus on the human dimension of competition and conflict; the consideration of a full spectrum of actions whether in peace, crisis, or hostilities; a multifaceted, whole-of-nation concept of power; and the recognition of the complex interconnected nature of the actors and challenges involved.

The discussion below begins with a brief consideration of the *contested future*, which provides essential orientation for what follows. The next section of this article gives a short overview of scenario techniques which it is proposed should be used to provide a secure context for strategic thinking about the future. In the following section attention then turns to the strategic interactions that may occur amongst stakeholders in the future and the specific technique of confrontation analysis is advocated here as means of developing robust strategy. In the succeeding section the use of the composite methodology is illustrated in a case situation; some observations about the philosophical challenges of mixing methodologies and some comparisons with cognate methods follow. In the conclusion the overall approach is briefly evaluated and some pointers for further work are suggested.

## Contested Futures

General Sir Rupert Smith has asserted (2006) that “war no longer exists” as least as conceived as “battle in a field between men and machinery, war as a massive deciding event in a dispute in international affairs.” In the new paradigm, force is only relevant in willing confrontations (Smith et al. 2001); physical measures support the psychological conflict being played out at a wider level that enables a side to prevail in the clash of wills. As the range of actors involved multiplies and as the boundaries between forms of conflict blurs, hybrid approaches (US DoD 2010) become essential, especially as adversaries—often non-state actors—seek to coerce or intimidate in order to alter the mood of the people and so change the balance of power.

Things come to be the way they are as a consequence of considered actions. Agency depends upon economic, social, and political choices that in turn rely upon people *buying in* to them because of persuasive political narratives. Even apparently deterministic temporal patterns only *lock in* or *lock out* developments through their appropriation by dominant voices. Metaphors, agendas, scripts, narratives, expectations, and promises serve actors as they try to secure the future they desire (which will require complicit actions by others as well as themselves). Widely accepted narratives (e.g. the business *need* to outsource costly functions to secure competitive advantage) develop massive inertia. Organizational strategy may (sometimes dangerously) be built upon such foundations. In this polyvocal world it is through the subtle management of discourses rather than the use of the blunt instruments of physical force that a mission can be achieved.

In a seminal text Brown et al. (2000) observed that the future only exists as a result of its active creation in the present through contested claims and counterclaims. Participants continually simulate and test its form when they take decisions about current actions. In other words, the future is *manufactured* through discourses that

resemble those used to recount (and re-package) the past. Today a wider range of voices—critically including *edge organizations* (Alberts and Hayes 2003)—claim the right to debate the future, so forming a clear and stable picture is far more difficult. This perspective raises important questions as to how, by whom, and to what ends, the future as a temporal abstraction is constructed and managed. It also brings into relief related questions such as how it is that some futures come to prevail over others; why once seemingly certain futures fail to materialize; and how other futures become marginalized by the dominant metaphors adopted by a society. Clearly the answers to all these questions are of key importance in C2; missions usually aim to establish a dominant future, to dissolve opposing visions and to instill new ways of thinking about the world.

## **Shaping the future**

Scenario planning (van der Heijden 1996) has proved a potent means of distilling visions of the future. However normally work with scenarios ends with the generation of a strategy that is robust within alternative futures. It is argued here that this pays insufficient attention to the actions of others and the strategic management of external relationships. Accordingly it is proposed that the specific modeling approach of drama theory (Howard 1994a and 1994b) should be used to test developed strategies and to generate ways of handling the confrontations that they would inevitably set in train.

A *predict-and-control* approach is inappropriate in today's uncertain world and scenario analysis was first developed—in the military and later by the RAND Corporation and work (Kahn and Wiener 1967) at the Hudson Institute—as a way of widening out from a single line forecast to shape a *trumpet* of opportunity. During more recent times scenario planning has developed even further (Bradfield et al. 2005) as a means of stretching people's mental models and surfacing their assumptions rather than merely being a toolkit for assessing the likelihood of future events. Adam Kahane (2004) orchestrated the

Mont Fleur scenarios that did so much to *unstick* South African progress towards a multi-racial society. He later wrote about the aims of such processes, “We have to bring together the people who are co-creating the current reality to co-create new realities. We have to shift from downloading and debating to reflective and generative dialogue. We have to choose an open way over a closed way.” It is in this spirit that scenario thinking is advocated in the present article.

Bradfield et al. (2005) identify three principal schools of scenario planning, of which the intuitive-logics process that is advocated in this article involves the following stages to produce the scenarios themselves:

1. Determine the *oracle* question that the process is designed to address.
2. Establish the scope of, and an appropriate time horizon for, the scenarios.
3. Generate a comprehensive list of relevant factors (trends and driving forces) shaping the future.
4. Assess all the factors in terms both of their importance and their certainty.
5. Identify themes/clusters of the factors as well as cross-linkages between them;
6. Set down the principal certainties that must underlie any proposed scenario.
7. Decide upon the major uncertain factors that will differentiate the scenarios from each other.
8. Construct the skeletons of a set of contrasting yet internally coherent scenarios.

9. Flesh out each scenario and set down the narrative time-line that would plausibly link it back to the present situation.

The aim here is to form a set of descriptions of plausible futures, each of which is internally consistent, that as a set span the range of possibilities.

However generating the scenarios is only part—some would say the least important part—of the overall process. The point is to use them:

- to challenge received wisdom and stimulate debate
- to *wind tunnel* existing strategy and information monitoring
- to identify the components of a robust strategy
- to provide a background for *what if* analyses of shock events

Both commercial organizations and think-tanks have created scenarios to provide a springboard for public discussion of topical issues (e.g., gene therapy). Conventional military exercises provide illustrations of the use of scenario thinking to test the efficacy of planned interventions or for training purposes (e.g., Liao 2005). An *inverse* process (e.g., O’Hanlon 2005) draws implications for military requirements and deployments from assessment of the diverse demands of a set of contrasting but feasible scenarios. In each case the value comes from consideration of shaping robust responses to the demands of possible future strategic and operational environments.

Despite the truism that *things only change because people change them*, the action of stakeholders has been relegated to a minor consideration in most scenario planning. Van der Heijden (1996) discusses the essential role that *actor-testing* plays in testing scenarios; this involves *walking through* each scenario narrative in the role of each key stakeholder to check that the narrative is consistent with the behavior that the actor

might plausibly exhibit. Such simulations highlight where an actor might make choices that would create a different time path from that associated with the scenario being investigated. However such testing of the internal consistency of scenarios, while important, treats actors independently and so only goes part way towards a systemic consideration of stakeholder interaction in strategic planning.

This article argues for a fresh and integrative approach involving the use of interaction analysis within the wider scenario-informed strategic development context. In brief, the method is to use the scenarios created through a conventional scenario development, as outlined above, to develop robust strategies for each key stakeholder in the situation. These strategies are then allowed to interact through a conceptual framework that is similar to, but distinct from, that offered by game theory.

In game theory interaction is modeled as occurring between autonomous players who each have actions available to them and preferences between the possible futures that they could co-create. This is a *small world* approach in which solutions are found within the game theoretic models. In contrast, drama theory (Bryant 2003a) presupposes a *large world* in which players do not have common knowledge of the possible unfoldings of a situation. In such a world there can be surprises—things may happen or participants may appear whose presence was not suspected. Parties realize that theirs and others' assumptions and assertions about future intentions have created dilemmas which must be addressed. This prompts a search for solutions to situations that lie outside the *small world* of decision-making with which game theory is concerned.

Drama theory complements game theory by representing the strategic communications that take place between erstwhile players as they propose and counter-propose the form of the game that they should eventually play. This pre-game communication crystallizes the *stands* taken by each party with respect to others' intentions. Formally it establishes sufficient communicated common knowledge

to shape a *moment of truth* involving certain generic *dilemmas*. In turn the emotionally-supported reaction to these dilemmas stimulates the creation of fresh proposals for the redefinition of the current shared picture of the game. In other words the very acceptance of the interaction as fixed generates the energy that is needed to change it. Such redefinitions continue until a point is reached at which either no party faces dilemmas or there is no collective acceptance of a redefined game. At this point the then current game is played within its *small world*—and corresponding actions are taken by the players in the large world of reality.

Drama theory predicts that each party will use emotion and argument in attempts to change others' hearts and minds so as to eliminate the discomfiting dilemmas it faces through trying, despite a confrontation, to achieve the goals that are consonant with its values and beliefs. Naturally it will try to eliminate dilemmas in its own favor. But dilemma-elimination is not, and cannot be, instrumentally rational (Howard 2004) because instrumental rationality assumes fixed preferences and opportunities (and so addresses an optimization problem) whereas dilemma-elimination is precisely about redefining preferences or finding new opportunities. Emotion helps overcome the friction of fixed positions while to cement and assure the redefined situation characters will normally advance rational arguments in the common interest; rationality therefore still has a key part to play.

Drama-theoretic informed interaction of strategies can be achieved in two ways. One is through a role-play enactment—*immersive drama* (Bryant and Darwin 2004)—which will give a rich though broad-brush cognitive and affective appreciation of outcomes. The second approach is through co-operation/confrontation analysis (Bryant and Howard 2007), which will provide a sharper and more focused diagnostic understanding. Whichever route is followed, stakeholders' idiosyncratic management of the dilemmas posed for them by the interaction would amend their original strategies and these

revised strategies would then be tested in turn in the context of the scenarios where they may be found robust or require a further cycle of refinement.

### **Projection of power: interaction within a scenario context**

The complementarity of physical and psychological confrontation is seen in its most obvious form in relation to aggression in anti-access environments (US DoD 2010). Here the projection of power into a region harboring potentially hostile resources must largely be through communication that will challenge hearts and minds and so undermine intent or unsettle the interests of the anti-access regime. Such a case will be used here to illustrate the approach advocated in the last section.

The development and acquisition of enhanced capabilities by hostile state and non-state actors threatens the ability of forces that are trying to maintain stability and peace. The clandestine enhancement of such hostile capabilities can be exposed through intelligence gathering, but can only be deterred by the threat of credible countermeasures, defenses and mitigation strategies or by the promise of credible benefits and the acknowledgement of common interests. North Korea and Iran represent current examples of states that are actively developing new technologies which could underpin attack capabilities, in defiance of international norms. At a non-state level, isolated or loosely-networked extremist groups are determinedly sourcing more sophisticated and diverse weapon systems to inflict more unexpected and lethal damage upon security forces or in civilian contexts.

To provide a specific illustration, consider a rogue state (referred to hereinafter as *Rogue*<sup>2</sup>) that is known to be working erratically but steadily towards a nuclear weapons capability and which has publicly stated that it sees such armaments as an essential counter to the *hostile policies* that it perceives others to be exercising towards it. An oracle question might be *how can the Allies persuade Rogue to dismantle its nuclear weapons program?*, and a fitting time horizon 3-5 years.

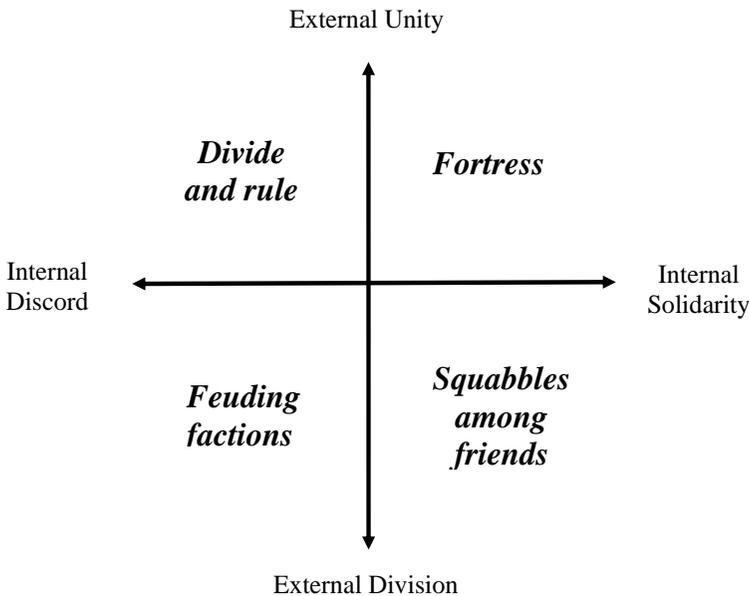
The next stages in the scenario development process are to generate and subsequently filter the major factors shaping the environment in which the organization concerned—here *the Allies*—is acting. While the conventional approach in civilian scenario work is to use some form of structured process (e.g., typically using PESTEL analysis) to identify trends, in the present context it would be more relevant to draw upon the outputs of tools such as ASCOPE, planning devices like METT-TC and broader constructs such as PMESII-PT, since these are already established in the appraisal of complex environments. Conducting an ASCOPE from the perspective of each party involved would help to ensure that significant factors are not overlooked. In the present example the list might include: health of the global economy, social cohesion of Rogue, unregulated flow of information, religious vs. secular alignments, emergence of IT-networked communities, political fragmentation of Allies, availability of nanotechnologies, shifts between prime energy sources, population growth and migration; and so on.

Using an assessment of the importance and certainty of these factors principal clusters of uncertainties may be discerned. Plausibly these might relate, for example, in the present case to external and

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2. The label *Rogue* is used here to refer to the anti-access state but this is not to imply that it or others would characterize it using such a pejorative term. It may think of itself as *The People's State* or *The State of True Believers*. What matters is not the term used but that each party knows what is meant by the term, and knows that the other knows; etc. In other words that it is common knowledge which entity is referred to. The same proviso relates to the naming of options and other features of the Options Board that appears later.

internal coherence: on one dimension would be the strength of international unity in dealings with Rogue; on the other the degree of national solidarity within Rogue. While it might be argued that these are not independent this is by no means necessary—united pressure from outside Rogue might strengthen national cohesion, but it is also possible that such pressure could exacerbate latent internal divisions. Four scenarios could readily be constructed around this basic skeleton, one inhabiting each quadrant in Figure 1.



**Figure 1. Handling a Rogue state – four scenarios**

Within each quadrant a rounded description of the future would be fleshed out, the image of each one crystallized in a telling name. Internal consistency is vital in each scenario. For example *Divide and Rule* might reasonably assume responsible management of arsenals by existing nuclear states, mutual respect between major powers, wide commitment to Nuclear Non-Proliferation Treaty, worsening social and economic conditions and the emergence of dissident factions in beleaguered Rogue; and so on. A time line tying each scenario

back to the present would also be constructed. *Feuding Factions* might have developed as consequence of key events including the death of the charismatic leader of Rogue, incidents fuelling mistrust between nuclear powers over the militarization of space, and domestic economic problems constraining the political viability of providing aid packages to Rogue.

Each scenario places different pressures on the key stakeholders and so the strategies they would use to confront them vary. The essence of the scenario approach is to identify those robust actions that would feature in the response to any scenario, as well as the environmental changes against which alerts need to be established. In the illustration, robust strategy for the Allies might include: building a strong partnership-of-equals in dealing with Rogue, only providing *rewards* to Rogue for progress towards a cessation or dismantling of its nuclear weapons program, and refusing to react strongly to provocations by Rogue. However for Rogue, it might be robust to: more tightly maintain control of communication channels, seek temporary and opportunistic alignments with individual great powers, and to declare a willingness to negotiate. Note that these strategies for the two parties conflict.

At this point confrontation analysis (Howard 1999) is introduced to model the interaction between the strategies of the two key participants (practical analysis would of course have to include a fuller set of stakeholders). The Options Board of Figure 2 provides a schematic summary of the interaction.

	t	A	R
<b>Allies</b>			
Reward Rogue	◇	?	?
Acknowledge Rogue	◇	□	■
<b>Rogue State</b>			
Dismantle nuclear programme	◇	?	?
Provoke & Align	◆	□	—
Offer to negotiate	◇?	■	■

**Figure 2. Handling a Rogue State – Confrontation Options Board**

At the left are listed the two parties involved and their policy options (matters they have power to decide). The columns headed *A* and *R* respectively represent the compliance plans of the two sides—the solutions that each is demanding. A filled rectangle signifies that the corresponding option is taken, an empty one that it is not and a bar that the party has no declared view on the option. So column *A* means that the Allies want Rogue to dismantle its nuclear program and be prepared to negotiate but not take provocative actions or form hostile alignments against the Allies; also that while the Allies are prepared to reward Rogue for these actions, they would stand firm against acknowledging Rogue as a significant global player. The latter views are likely to be implicit in Allies communications with Rogue rather than explicitly stated, nevertheless we shall assume that they are common knowledge. Column *R* can be interpreted in a similar way. The column headed *t* represents the future that threatens if agreement cannot be reached, it brings together the stated intentions of each party. Question marks signify doubts—it is clear

from the context in this illustration whose doubts they are—about others' declarations. So, for example, Rogue is skeptical that the Allies would honor their promise to reward compliance.

As stated, the situation poses distinct dilemmas for both parties:

- Rogue needs to persuade Allies not to carry out their credible threat to withhold reward (e.g., give economic aid or withdraw sanctions).
- Rogue has no leverage to force Allies to acknowledge it as a significant power.
- Allies have no doubt that Rogue will refuse to dismantle its nuclear program if it cannot get its proposition accepted, so how can they persuade Rogue otherwise?
- Allies similarly seem powerless to prevent Rogue from attempting to fragment the Allied coalition.
- However Allies believe Rogue's threat not to take part in negotiations to be a bluff, so this poses a dilemma for Rogue about how to make this threat credible.

Each party would attempt to dispel the dilemmas it faces. So to overcome its so-called Persuasion Dilemma over the withdrawal of rewards, Rogue might typically use the escalation/conciliation tactic of making clear that while any *punishment* from the Allies would be steadily countered by a refusal to negotiate, rewards, however modest might elicit more compliant behavior.

It is possible that through some adjustment of compliance plans and stated intentions the parties might arrive at the board shown in Figure 3. Such a transformation might be the outcome of a lengthy process of interaction and require a good deal of emotional labor.

		a	A	R
<b>Allies</b>				
Reward Rogue		?	?	?
Acknowledge Rogue				
<b>Rogue</b>				
Dismantle nuclear programme		?	?	?
Provoke & Align				
Offer to negotiate		?		?

**Figure 3. Handling a Rogue State – Agreement Options Board**

Then each party is still faced with dilemmas, this time arising from their lack of mutual trust (signified by the doubts shown in the board about the other’s compliance plan and intentions). These dilemmas would need to be addressed (e.g., by the making of unilateral commitments) before any resolution could be achieved.

As Howard established (Levy and Howard 2009) each dilemma can be addressed in a number of different ways so there is no predictable resolution of the situation. However the dilemma management styles (Bryant 2003b) of each party may provide justification for giving prominence to certain outcomes. The eventual compliance plans of each party arrived at through this process would generally be different from those first stated, and so would represent a revised strategic position. Clearly it would be impracticable to pursue the example further down this route both because of the multiplication of possible strategies for each player and of corresponding denoue-

ments. In any case to be useful such modeling needs to be firmly based in the particularities of a situation, whereas the illustration here is purely generic in character.

## **Variant Processes**

There is an alternative to analytical exploration of the interaction between parties and that is to use role-play. Huxham and Eden (1990) developed Radford's (1984) earlier process in which workshop participants, each assuming the role of a key stakeholder in a situation take strategic actions in response to the strategic actions of others. The role-play continues until stability is reached. Eden and Ackermann (1998) extended this process by repeating the *role-think* a number of times so that the strategy dynamics generated by the stakeholder responses settles to a stable outcome. The briefings provided to players are crucial to success in role-play exercises. To provide a driving sense of purpose, Eden and Ackermann provided their participants with goal hierarchies in the form of cognitive maps which set down the informal theories and beliefs of the character they are playing. However these fail to capture the *political* aspects of the situation—mutual perceptions, motivations for sanctions or incentives, uncertainty about others' intentions. Furthermore they were devised to test an organization's strategy rather than to simulate interacting strategies.

Immersive role-play (Howard 1999) was proposed as a means of overcoming the shortcomings of traditional role-play. It involves immersing each participant in the life situation of its character setting down "what it is trying to achieve, and why and how, and what it thinks others are trying to achieve, and why and how." Immersive briefings mimic those which a commander would receive when taking over tasks from a predecessor. They include details of the character's background, values, motivations, projects, relationships and confrontations—in short, the character's memory. Immersive drama has been used (Bryant and Darwin 2004) to test strategic plans in

multi-organizational missions, options boards providing a concise summary of the communicated common knowledge upon which briefings are based.

The mixing of methods proposed in this article is not the only way in which scenario planning and interaction analysis can be used together. More than a decade ago Khalifa (1997) proposed the use of game-based models to construct contrasting scenarios of the future. Briefly the approach advanced was that the key issues and principal stakeholders in a situation first be identified. Parties' priorities over these *burning* issues would then be established and so a map of the cross-linking between them, relevant in respect of any trade-offs that might be proposed by the parties, could be constructed. In Khalifa's work three scenarios were then developed: a base case assuming parties to pursue their present intentions; a cooperative case in which they are prepared to soften their positions; and a competitive model in which positions harden. The analysis shaping each scenario involved setting down for each issue and each party (what is now referred to in drama theory as) the compliance plan and stated intentions, these then being used together with plausible assumptions about preferences across outcomes to establish stable outcomes for the issues. Khalifa's work is an extreme expression of the argument that the future is shaped by the interaction of autonomous decision-makers. However his methodology only aspires to generate a limited set of futures and these are variants on a base case that projects the stance of actors in the present situation and so is tightly shackled to the status quo. In contrast, scenario-led processes leap free of this cognitive prison by creating free-spirited images of the future that only afterwards are linked back by a time line to the present situation. Furthermore Khalifa's game-based models are static whereas drama theory is in its very nature a means of capturing the tensions that drive the dynamics of boundary-breaking changes to a *frame* which is thereby transformed.

An alternative is to rely entirely upon drama theory and to dispense with scenario thinking. Implicitly this was Howard's approach (Howard 1999), rather than creating scenarios to provide the context for stakeholder interaction, he treated and modeled the context as a higher-level drama involving different stakeholders. For example in his analysis of the conflict in Bosnia, dilemma management in the *Grand Strategic Drama* is carried out to understand the pressures that global power-plays might bring to bear on decision-makers in the Bosnian theater. While such an approach is appealing, the higher-level interactions tend in practice to be built from the lower-level dramas—effectively the reverse of the process proposed in this article—and so they are less likely to be challengingly divergent or innovative.

## **Conclusion**

The premiss of this article is that the future is a coproduced dream. Statements about the future delimit and make available *spaces* within which individuals, groups, and organizations may act. Powerful discourses can defuse or marginalize alternative futures or else co-opt and possibly overwhelm them. Such discourses restrict what is doable, thinkable, and knowable. Indeed knowledge and power “inhabit each other” as Foucault (1980) said “the exercise of power perpetually creates knowledge and conversely, knowledge constantly induces effects of power.” Since there are always multiple discourses at play, exercising power over the conversation that takes place is clearly critical.

It can be argued that a primary task in C2 is to develop and promulgate a vision of the future that provides maximum opportunity for successful pursuit of one's own missions while inhibiting conflicting interests. To succeed, such a vision must be strong and coherent—strong in the sense that it is robust to the challenges of uncertainty and opposition, and coherent in the sense that it can be translated into strategies for action at any level of command. The approach

that has been outlined here first generates strategy that is viable across the multiple demands of diverse scenarios, and then tests this strategy against the best attempts of other key stakeholders to achieve their goals within the same context.

The success of the proposed approach is however contingent upon some important assumptions about the dialectical process within which the methods described above are used. A rich plurality of perspectives and inputs is needed, for example, if the scenario development is to be innovative and creative. Kahane (2004) gives an extreme example of inclusivity in a project carried out in Colombia involving the “participation of both of the illegal, armed, left-wing guerrilla groups,” the only condition imposed being their willingness “to talk and listen.” And a similar open-mindedness must permeate the drama-theoretic stages—these are not a matter of dry analysis but ideally involving, *immersive* and empathetic reflection about the pressures faced by all parties. Achieving such a broadly-based conversation would be hugely challenging, but without this it is unlikely that any real progress would be made.

It is a measure of achievement in promoting a vision of the future if it becomes accepted by others as *inevitable*. While the combination of scenario development and interaction analysis suggested here may go some way towards creating and testing defensible images of the future there is a further task to be undertaken in disseminating these images and using them to colonize the minds of others. Disseminating such visions internally so that they become the lingua franca for our own party’s perceptions of a situation may be achieved using a multi-level CC system of the sort first proposed by Howard (Stubbs et al. 1999). However doing so for external stakeholders points to the need for linking such work more strongly to the management of information and communication; in other words to align it with the principles of Network Centric Warfare (Alberts et al. 1999).

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