The Role of Drama Theory in Negotiation

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Introduction

A number of frameworks, models and tools have been proposed and developed for the analysis of what have been termed strategic conflicts: situations the outcome of which is shaped by a number of autonomous decision-makers. However the majority of these approaches focus upon the identification of a set of solutions in a structure that is taken to be fixed: for instance they search for "stable" outcomes of the interaction. This restricts attention to the "small world" (Binmore, 2006 after Savage, 1951) question facing participants of "which to do?" rather than considering the broader and more demanding matter of "what to do?" Drama theory addresses the latter "large world" question and so complements the contribution of game theory and similar approaches in supporting group decision and negotiation.

This chapter begins with a brief resumé of the antecedents of drama theory: specifically the development pathway from earlier work on metagames is traced, leading into a short review of the initial papers on drama theory. The next section provides an illustrated introduction to the framework, differentiating it from alternative models. The theory has been significantly developed and simplified during the recent past and so a current summary is provided to inform future work. The following section outlines some of the principal modes of application of drama theory (notably including confrontation analysis and immersive role play) giving references to general texts and to relevant cases. Software has been used to assist in the use of drama theory, especially but not exclusively for analysis, and this is discussed in a further short section. The conclusion briefly assesses the contribution to date of the approach and offers some thoughts on the potential for its future evolution.

Antecedents

In 1971 Nigel Howard's seminal text *Paradoxes of Rationality* (Howard, 1971) was published. It elaborated upon his earlier concept of a meta-game (Howard, 1966) which had controversially (Rapoport, 1970; Shubik, 1970) set out a solution to the classic paradox of the Prisoner's Dilemma. However the later publication now identified three breakdowns of rationality (the latter taken as "choosing the alternative one prefers"). Stated informally in regard to an interaction between two parties:

1. It may not be possible for both parties to be objectively rational.
2. Sometimes both parties are better off if they are irrational.
3. To be rational is usually to be a sucker.

A theoretical discourse, but nevertheless firmly based in the world of practice through the author's concurrent work on nuclear proliferation, the Vietnam and Arab-Israeli conflicts and issues of social discord (Bain et al., 1971), this book directly attacked the dominant concept of instrumental rationality. It was no surprise

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D.M. Kilgour, C. Eden (eds.), *Handbook of Group Decision and Negotiation*, Advances in Group Decision and Negotiation 4, DOI 10.1007/978-90-481-9097-3_14, © Springer Science+Business Media B.V. 2010

that the text attracted both favourable (Lutz, 1974; Thrall, 1974) and strongly critical (Harsanyi, 1974a) reviews, the latter leading to a heated debate (Harsanyi, 1974b, c; Howard, 1974a, b) and subtly but steadily to schism from mainstream work in game theory. This breach is only now being healed through a fresh recognition of the complementary roles that drama theory – the lineal successor of Howard's earliest work – and game theory can play in modelling strategic conflict. The early history is still relevant because it established a position which carries through to present-day work in drama theory; that the making of unreasonable assumptions about human rationality should be avoided.

"A metagame is the game that would exist if one of the players made his choice after the others, in knowledge of their choices" (Howard, 1971). In other words metagame theory supposes that a player in a game will not only ask himself whether his current plan is reasonable (given that others will anticipate his plan) but also whether his plan, given knowledge of others' plans (which correspondingly take account of his plan) still remains reasonable; and so on recursively. While the theory does not requires such cogitations to be conscious (any more that we expect people to be able formally to solve the simultaneous differential equations necessary to riding a bicycle) it does assume some degree of mutual understanding. Such understanding is acquired through communication, whether explicit or implicit, between the players.

Now communication is not artless. The motivation for communicating is not merely to inform but to attempt to influence the other players. So one party may encourage others to take actions that will be of benefit to itself. The snag is that if we say that one player, knowing others' preferences and assuming that they will react rationally, takes actions that he anticipates will lead to a jointly created outcome which he prefers (this is termed his being "metarational"), then we must make identical assumptions on behalf of the other players. If all players are trying to bring about the same outcome then this will be stable; otherwise there is a so-called "conflict point" (Howard, 1971) in addition to the outcomes that each player individually is attempting to achieve. One way of addressing the challenge of analysing such a situation is to construct a theory based upon thinking about the power that each player possesses, by virtue of the choices he makes, to control movement from one outcome to another: essentially this is the approach of the Graph Model (Kilgour et al., 1987; see the chapter by Kilgour and Hipel, this volume) and the Theory of Moves (Brams, 1994). However such theories, no matter how open they may be to metarational behaviour, are still theories about the presenting game. They look for "solutions" within a structure in which players' preferences and opportunities for choice are fixed. An alternative tactic is to recognise that although neither player is willing to accept the conflict point, this outcome might nevertheless become stable through a process of transformation of the game itself: this is the approach of drama theory.

What pressures transform the game being played? In a paper that took stock of the achievement of metagame analysis over almost two decades, Howard (1987) included a section headed "Laws of emotion, irrationality, preference change, deceit, disbelief and rational argument in the common interest". A thesis was developed, through twenty successive assertions, that what drives the transformation of the game being played is participants' need for others to believe their "unwilling" threats and promises. Furthermore Howard suggested that "it is the function of interpersonal emotion to make such irrational intentions credible". They do this by encouraging others to believe that a player has abandoned individual rationality and is centred upon persuading them by rational arguments in the common interest of all concerned.

Howard's propositions created "clear water" between the intellectual strand that was to become drama theory and other approaches using metagame concepts. For instance, Fraser and Hipel (1984) regarded unwilling threats as incredible and so felt free to disregard them in their analysis of options. In their widely influential text *Getting to Yes* Fisher and Ury (1982) not only took the instrumentally rational view that people's ends are fixed – which is at variance with Howard's claim that they transform in "the white heat of emotion" – but they also assume both that the threats parties make are always credible and never against their own interests and also that the promises they make if agreement is reached can be trusted.

These radical ideas about emotion and change were formalised in a theory of "soft games" (Howard, 1990) and subsequently explored in a consideration of the role of emotions in organisational decision-making (Howard, 1993). Over the following decade they were further refined and their current form will be outlined in the next sections of this chapter. However

before moving on to the "launch" of drama theory and its initial statement, it is worth describing the modelling "toolkit" that was being employed through the pioneering years.

In one of the earliest papers (Bain et al., 1971) the analysis of options technique is described thus:

> Because it is futile to attempt the resolution of a conflict problem without knowing what each party considers an acceptable solution, each participant's preferences among the several possible outcomes must be known. Often an outcome may be described by listing the actions (called options) available to each party and stating whether that party takes or does not take the action for the outcome being considered. If necessary each option can be subdivided.

From this framing of the situation, analysis proceeds by the identification and classification of stable outcomes, taking account of the sanctions that may be wielded by all parties. This modelling method, which is quite independent of game theory, was first created to support consultancy interventions using metagames. It reveals what improvements are possible for any coalition of players and what others might do to undermine these. A graphical device called the "strategic map" (Howard, 1987) evolved as a useful way of displaying improvements between, and sanctions against, movements between alternative futures (then termed "scenarios") which the players collectively might bring about. As in other applications of the analysis of options (e.g. Fraser and Hipel, 1984; See the chapter by Kilgour and Hipel, this volume) all feasible scenarios might be considered here. To handle the combinatorial explosion in practical applications involving even relatively modest numbers of options, computer software packages were developed.

The Drama Programme

The story of the coining of the term "drama theory" and the subsequent development of a framework for representing and diagnosing human interactions has been recounted elsewhere (Bryant, 2007). It is sufficient to note here that its emergence was encouraged partly by a global context in which the nature of conflict was itself altering – in the military world, for example, from "war-fighting" to "operations other than war" – and partly by a more local evolution of problem structuring methodologies (see Rosenhead, 1989), intended to inform debate and decision-making about complex issues, in which "soft game" approaches formed a key strand (Howard, 1989).

The Drama Manifesto written late in 1991 and published the following year (Howard et al., 1992/1993) gave an overview of the principal features of the new paradigm. As intended it attracted considerable interest, not just from within the world of game theory but also in the social sciences where the ideas appeared to have potential. The name of the new field had been deliberately chosen to contrast with, yet also to complement and retain linkage with, the established domain of game theory. In a game, autonomous players make choices, circumscribed by certain rules, which affect the situation for all parties: the players' strategies as they make these choices are the focus of intellectual attention in game theory. The metaphor of drama also emphasises the interplay between participants' freely-made decisions, but whereas in a game the defining characteristic is rationality, in drama it is self-realisation. Players in a game seek to achieve given ends in a rational manner; those involved in a drama – hereinafter called "characters" – seek to come to terms, both intellectually and emotionally, with a situation through their own or its development. For this reason the focus of attention in drama theory is upon how the "soft game" changes, regarding the fixed, given game modelled by game theory as just one "frame" in an evolving sequence. Just as in a stage drama or in a TV "soap opera", attempts by characters to resolve the challenges of one episode lead to new challenges in further episodes involving the same or a different cast of characters. To explain this relationship with game theory, a number of the follow-up papers sought to clarify the difference between the two frameworks (Bennett, 1995; Howard, 1994, 1996). However a number of distinctive characteristics were also shaping drama theory.

By the mid 1990s a model of the process of dramatic resolution had been developed, depicting the movement within an episode from "scene setting", in which a common reference frame is established, through to the denouement, where the practical implications of enacted choices are faced by the characters. A unique feature of this process was the role attributed to emotion (Bennett, 1996) in supporting a characters' "unfreezing" from one position and shifting to another. Much as Frank (1988) had argued that emotion offers a

means for people to solve problems of "commitment" (handling those unwilling threats and promises which drama theory was explicitly embracing), so the new theory postulated (Bennett and Howard, 1996) that emotion accompanies preference change. Importantly, emotion on the part of one character has the strategic function of altering other characters' views about a situation, as well as its own.

The transformation of the frame which was clearly a central issue for drama theorists, was first expressed mathematically in unpublished papers as early as 1993, but it was much later (Howard and Murray-Jones, 2002) that it was explored in publications. Essentially this work considered the formal ways in which a frame could expand or contract (through the addition or removal of characters or their options) and how this might occur to shape transformations in the episodic tree.

The paradoxes of rationality are, in drama theory, the triggers for emotions. Initially the three paradoxes of Howard's original work (Howard, 1971) still remained central to understanding the pressures that characters experienced at the "moment of truth" when they realise that they do not share a single position. However early applications prompted reconsideration that led to a formulation including five (later six) paradoxes (later called dilemmas). These were defined mathematically by Howard (1998) in a paper that used them to specify conditions for a strong resolution of a situation.

A simplification that was to prove important for later work was also made: the realisation that for the analysis of a situation it was unnecessary to investigate every scenario: rather it was sufficient to focus on a "confrontation" – that set of scenarios representing the "position" of each character together with the "conflict point" (the future that would occur if each character carried out its sanction). Furthermore it was realised that the corresponding strategic map only needed to include improvements from these scenarios since the sanctions were included in the conflict point itself. Both simplifications arose from practical work with client organisations, but were subsequently given theoretical justification in the context of the growing body of theory. They created further distance from other approaches such as the Theory of Moves (Brams, 1994) and the Graph Model (Kigour et al., 1987; See the chapter by Kilgour and Hipel, this volume) also developing at that time.

A final conceptual development that was part of this developmental phase of drama theory was the use of "general" positions implying that there could be elements of a frame on which a character might be undecided. This extension was prompted by analysis of confrontations in Bosnia and the need to better represent and understand compatibility between the various scenarios that characters might co-create (Murray-Jones and Howard, 2001) but it has proved to be of far wider value.

By the beginning of the 21st century therefore there had been a full decade during which drama theory had evolved from its origins in metagame analysis into a rounder conceptual framework with its own distinct features. While some theoretical development continued, the field entered a period of consolidation in which practical applications came to the fore, and so this is an appropriate point in this chapter at which to provide a fuller description of the theory as it then was, not least because the vast majority of publications to date make use of the same formulation as given here. A word of caution however: as explained later, some important simplifications first suggested in 2007 have led to a tighter and more elegant framework and this is explained in a later section.

The Dramatic Episode

Drama theory proposes an episodic model (Fig. 1, based on Bryant and Howard, 2007) whereby situations unfold. Early versions of this model (Howard, 1994) were amended to clarify the distinction between conflictual and co-operative situations. The initial conditions are usually established by previous interactions that together with contextual changes create the setting within which certain issues must be settled by certain parties. While those involved will recognise the possible relevance of events, individuals, opportunities and threats in the environment, in order to cope with the complexity of the challenges facing them, their attention will be limited to interactions with a relatively narrow set of others, and their mental models of what is going on will be correspondingly simple. So the participants in an episode collectively determine who else is significant: this self-selected set of participants is referred to as the *cast list* for the episode and its members are called *characters*. While some characters

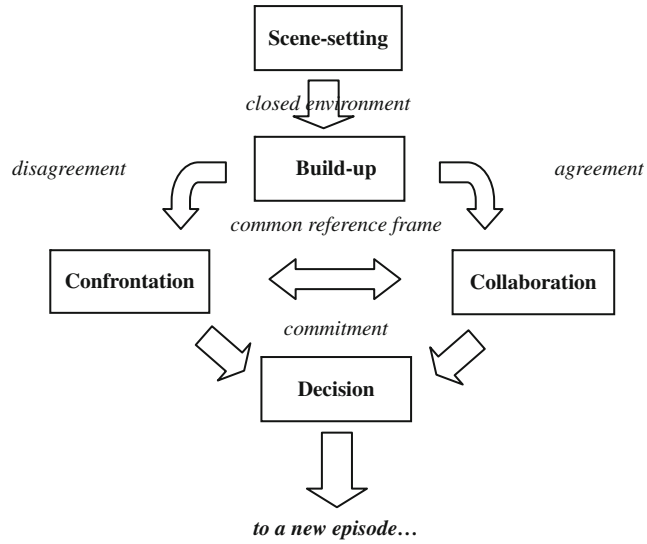


Fig. 1 Model of an episode

could be individual people, they will often be groups, organisations or even coalitions. Furthermore any character can itself house a drama: that is, there may be sub-characters contesting lower-level issues within a character, and the outcome of these interactions may determine the character's stance in its own interactions at the higher level. The overall process of "bracketing out" from the ongoing stream of everyday events is of course purely provisional and characters will be open to the possible need for reframing, but for both practical and theoretical exploration of an episode it is necessary instantaneously to isolate it and to regard it as informationally closed. This is *scene-setting*.

In the next, *build-up* phase, characters communicate to create a *common reference frame*. This is a shared understanding of "what is going on" and the sharing comes about through communication between them which enables them each to understand the others' aspirations, proposals and potential for getting their own way. In particular, each character will have a view about the resolution of whatever is happening, and will suggest this solution to the others: this is its *position*. A character's position not only includes a statement of what it will do, but it also expresses what it would have others do. Normally the positions of the cast do not coincide; indeed it is unlikely that they will even be compatible. However, regardless of whether there is nascent agreement, characters must still be ready for any contingency. They will therefore indicate, either explicitly or implicitly, what they are prepared to do, given everyone's positions. Depending on circumstances, these *stated intentions* may represent a threat or a promise, but in either case they set out a fallback action for the character (which, for example, could just involve "sticking to its guns" and carrying out the action it proposes in its own position, regardless of the fact that others might not contribute to bring this position about). Taken together, the stated intentions of all the characters create a distinct outcome called the *fallback future*. The build-up phase ends when all characters have managed to communicate their positions and stated intentions: this is the *moment of truth*.

Usually characters face paradoxes of belief and credibility at a moment of truth. This is because they or other characters must make or accept incredible threats or promises in order to get their way. The emotional temperature rises as each seeks to reinforce what it is saying or to disarm others' intent. At this *climax* of the episode emotion may enable a character to shift its view so that it is prepared to act against its own *preferences* (i.e. to act irrationally). For example a character may be so incensed that it becomes willing to countenance the fallback future as preferred to the position that another character is proposing. This creates a dilemma for the second character that is momentarily impotent to persuade its angry protagonist against implementing its threat: until perhaps it in turn hostilely aggravates its own stated intentions thus escalating the conflict and maintaining the impasse. The "heat of the moment" stimulates the creativity

of all characters and forces them to reappraise what is going on. This accords with other thinking (e.g. Martinovski in this Handbook) about the part played by emotions in restructuring and reframing problem representation and solution. While preference change, as just suggested, may be one possibility, more radical transformations of the frame, for instance by involving fresh characters or by inventing novel options, can as readily occur. These developments cannot be predicted, since they involve redefining the boundary of the scene. This interest in the development of new options is shared with other approaches to group decision support (e.g. Ackermann and Eden in this Handbook).

There are two sorts of climax: conflictual and collaborative. At the former the problem is to create agreement. The difficulty is that characters want different outcomes and are uncompromising in pressing their own solutions. The dilemmas that they face are in making incredible threats, in dissuading others from implementing sanctions, and in convincingly rejecting others' proposals. At a collaborative climax the problem is to sustain agreement. Characters have difficulty in persuading others that they will keep their own promises, or in believing that others will not renege on a deal. Both positive and negative emotion (crudely stated, love or hate) is used to cope with disagreement; positive emotion to cement agreement. Nevertheless the plausibility of these communicated changes is always uncertain.

The verbal exchanges end. Characters must independently and soberly decide whether they should actually implement the actions to which the process has brought them. The initial frame may have changed substantially, and a character may be staring into an abyss of wasteful destruction: does it really wish to press through with its threats? Another character may be rueing the generous promises that it made in order to secure an alliance with someone else. In either case they may be tempted to back down from their decisions. To help them decide what to do at this point drama theory assumes that the characters will see the situation game theoretically: that is they will make rational choices to achieve the best possible result. Possibly a decision to flunk the conflict, renege on the promise, engage in hostilities or fulfil the agreement is too hard to face and a character will try to reopen conversations with others, thereby re-entering the build-up phase. But if implementation does indeed occur then the situation is irreversibly changed and the characters find themselves in a new episode.

Confrontation Analysis

A core idea in drama theory is that attempts to act rationally create dilemmas for characters. Precisely what these dilemmas are and how they arise will be explored in this section through a presentation of the method of confrontation analysis. This method will be put into the context of practical applications in subsequent sections of this chapter.

The method uses as elements for analysis the characters involved in a situation together with their positions and fallback actions. These are concisely portrayed using a tabular device called the *options board*. This representation facilitates the comparison of outcomes, which are represented as columns in the table, while the rows include the various opportunities for action open to the characters. Each action might or might not be taken and so it might be expected that the body of the table would be Boolean in content. However, drama theory also allows a character to have an undeclared/undecided view about an option. In different drama theory publications the taking, not-taking or ambivalence about an action in an outcome respectively has been denoted by 1/0/-, by Y/N/-, by ✓/✗/∼ or by ■/□/▪. The latter convention is adopted in this chapter. The concept of the Options Board is the same as that of the table used in the Analysis of Options (Howard, 1971) but differs in that the only outcomes normally included are the characters' positions and their stated intentions.

Consider the game of "chicken": a game in which each player wants to win, but in which, if both attempt to do so, then they achieve their worst outcome. It would appear foolhardy for anyone to play such a game, but in practice most of us do so daily! Walking along a sidewalk or corridor how is it that we avoid colliding with someone coming in the opposite direction? We do so by successfully playing "chicken" for we each have a choice of swerving out of the way: if both swerve then we have merely conducted a harmless but silly manoeuvre; if neither swerves we experience the embarrassment of collision; but if we "read each other" correctly then one swerves and the other gratefully proceeds.

Game theorists would look for an equilibrium of this game: an outcome which, given the other's decision, neither player can better. The logic dictates that rational players will choose an equilibrium. However in "chicken" there are two equilibria, each liked by one of the players, and there is no point of convergence. Guided by game theory a player might try to force his most preferred outcome (wherein the other player swerves) but too late realise that the other player is doing the same: disaster! We share Sycara's misgivings (Sycara in this Handbook) about such an approach.

Drama theorists recognise the same possibilities in this game but instead of scanning the four possible outcomes for an equilibrium they consider what the characters are communicating. It may be objected that the parties do not have to communicate with each other before a play of the game: but even in that case they will each assume some default communication. And recognise that communication may always be implicit (e.g. through some action) rather than explicit: so a character in chicken might send a "no swerve" message with a glare of steely determination.

With this appreciation of the encounter, an options board for chicken can now be constructed. It could appear as in Table 1where the impasse facing two individuals Alf and Bet is depicted. Each has the option of swerving, and whether or not they do so is their own choice. These options are listed under each character in the leftmost column. For the purposes of this illustration the additional option "mum" has been shown as available to Bet: this means that this character also has the possibility (and Alf knows this) of telling other people about what went on in their encounter, or of staying "mum" (i.e. silent) about it. Assume for the sake of illustration, that the two characters each communicate proposals that the other should swerve whilst they proceed. These clearly incompatible solutions are shown in the second and third columns of the options board: so Alf does not take his "swerve" option but requires Bet to take hers; and vice versa for Bet. Alf's position – the column headed Alf – also indicates that he wants Bet to stay mum about their encounter. Looking at Bet's position, she doesn't care whether or not she keeps quiet about what goes on between them as long as Alf agrees to swerve. Alf and Bet's stated intentions are both set down in the leftmost column (it is conventional to bring them together in a single column in this way – the column captures what has been referred to above as the fallback future, but which in the case of a disagreement, as here, is sometimes called the *Threatened Future*). Both say that they will not swerve. However note the undeclared intention against Bet staying mum. This means that Bet isn't saying whether she will stay mum or not: Alf will just have to guess what she'll do. Contrast this with the meaning of a dash in a position column where it means that the character does not care either way as to whether an option is carried out (i.e. the character takes no position on it).

Clearly Alf and Bet are stuck here, but what dilemmas do they face? Their problem is that each of them would actually prefer to give way to the other character than face the unpleasantness of a collision; since both know this, they both have difficulty in advancing an argument that the other person should concede. Called an *Inducement Dilemma* in earlier writings on drama theory, this is now termed a *Rejection Dilemma*. For characters facing a rejection dilemma the other party's position is at least as good for them as the fallback future. The dilemma is how plausibly to *reject* the other party's proposal.

Drama theory does not specify a particular way of resolving a rejection dilemma. Rather it says that at such a moment the characters will "think out of the box" as they experience internal pressure to escape from the discomfort of the dilemma. How might they do this? Clearly the dilemma a character faces would disappear if the other party perceived them as preferring the threatened future to its own position. Suppose in our example that Alf, trying to escape his own rejection dilemma, expresses this view to Bet: what then? Most likely Bet would not believe him: she would

Table 1 Characters' stands in "chicken"

	Intentions	Alf	Bet
Alf			
Swerve	□	□	■
Bet			
Swerve	□	■	□
mum	-	■	-

think, "he's just saying that so he can get his own way". To convince her Alf must do more. One possibility would be to show her that the attractiveness of her position to him is less than she'd previously thought (e.g. that if he lets her get her way he will be totally humiliated in the eyes of his mates and they'll probably beat him up as well); another that the disadvantages of the threatened future to him are less than she'd supposed (e.g. that he doesn't mind a face-to-face confrontation as he's physically stronger than her and thinks he'll come out of a scuffle on top). In either case a negative or neutral tone of communication would be required to make such altered views credible. Clearly such an approach could be carried to extremes with Alf exhibiting such rage that Bet fears he is mentally unhinged and prepared to stop at nothing, but this is a risky strategy for Alf lest his bluff (or the police!) is called. An alternative approach for Alf would be to adopt a conciliatory tone pointing out their common interest in averting collision. He would be well advised to probe behind Bet's position to understand her underlying interests so that he can send messages that take these interests into account. His communications with her need to be made in a friendly manner and to suggest modifications of both their positions so that they become compatible (e.g. he could suggest that they adopt a rule that each keeps to the left). If all this sounds familiar then this is because mutual rejection dilemmas are commonplace: the stalled merger or supply chain negotiation with "no deal" as the threatened future are business examples, while of course the Cold War provides the most dramatic case.

This is an appropriate point to comment that the process of making threats and promises credible is not "cheap talk" (Farrell, 1987) – costless pre-play communication that is not binding on their actions – since although characters may act as independent gameplayers, who are free to flunk threatened actions or renege on promises once the game has been settled, during the pre-play phase with which drama theory is concerned the slim possibility of shifting from some obstinate confrontation rests solely in persuading someone else that you are in earnest about binding yourself to some new intentions.

If Alf were to choose to overcome his rejection dilemma by escalating the conflict with Bet, then he gives her a *Persuasion Dilemma* (called a *Deterrence Dilemma* in some earlier publications). Her dilemma is that she feels unable convincingly to *persuade* him not to carry out his threat. This is because she sees that he now prefers the threatened future to implementing her position. Like Alf, her task in defusing this dilemma can be handled in either a confrontational or a conciliatory manner. The former would require her to try to persuade Alf that her position has previously unrecognised attractions for him; or that the threatened future could harm him more than he suspects. For either of these messages to be communicated in a plausible manner they would need to be delivered in a congruent style: with positive or negative emotion respectively. The other route for Bet is to refrain from putting more pressure on Alf, but to initiate an amicable conversation with him to work together in the search for a new position that is compatible with both their needs. Of course alternatively she could eliminate her persuasion dilemma by abandoning her position, which she would do with a sense of resignation, but this is unlikely to be an attractive alternative as we must assume that her position is not just a frivolous choice, but the consequence of some deeply held beliefs.

It is worth observing that in this example Alf's escalation of the conflict to eliminate his own rejection dilemma, not only leaves him free of dilemmas, but compounds Bet's existing difficulties, for as well as having to handle the persuasion dilemma that we have just been investigating, she still has her own rejection dilemma to address. Although these dilemmas may appear similar in their impact, their sources are quite different: the persuasion dilemma is a matter of Alf's preferences (and eliminating it may mean changing *his* mind) whereas the rejection dilemma stems from Bet's own preferences (and eliminating it means credibly changing *her* mind).

There are two other dilemmas of confrontation. The first is the so-called *Threat Dilemma* faced by a character that cannot make others believe its threat. Although this could coincide with the rejection dilemma, it is not the same since it occurs when a character cannot even trust itself to carry out its stated intention. Typically this means that a character thinks that faced with putting into practice a threat made during unsuccessful negotiations with another party, the latter will not believe that this threat will be implemented. So if the chicken characters Alf and Bet fail to agree, Alf faces a threat dilemma if Bet goes away with the impression that when the time comes, he will (perhaps at the very last moment) shrink from a possible collision. While he could attempt to overcome this dilemma

in much the same way as he could have handled the rejection dilemma above, it might also be done by appeals to a more abstract sense of honour or principle: in other words by communicating that he regards it as a challenge to his core values to balk at the prospect of collision. If Alf has fostered a reputation for never shrinking from such a challenge, so much the better for him. An alternative approach might be to show Bet that he is irreversibly committed to pursuing his intention (e.g. by shutting his eyes as he proceeds directly ahead!).

The remaining dilemma to be considered here is the *Positioning Dilemma*. This is experienced by a character that whilst trying to advance its own position, actually prefers the position held by the other party. Unexpected as this might appear, such dilemmas are by no means uncommon. For example, a character may feel this way when it has recently relinquished a position, still held by erstwhile colleagues, and accepted a compromise with others that it does not prefer. Sometimes a character reluctantly argues for a "realistic" solution, while really preferring an "ideal" position shared with former allies. Perhaps Bet belongs to a women's group that regards all concessions to men as unacceptable. Then if she were to agree to some deal with Alf – Alf's conciliatory solution to his rejection dilemma – she could well experience a positioning dilemma in her interaction with her female friends.

Suppose now that Alf and Bet have reached an agreement: that Alf will behave like a "gentleman" and give way to Bet, provided that she consents to keep quiet about the arrangement, because Alf doesn't want to be ridiculed by his loutish friends. Then their joint position coincides with Bet's original position amended to include a commitment by her to stay mum. Is this the end of the story? Perhaps. It depends upon whether Alf is really convinced that Bet will keep her mouth shut. Maybe unsettled by the tension that she feels as a result of her estrangement from her women friends (the postulated positioning dilemma above) she may be tempted to tell them about her minor triumph over Alf, which could go some way to rehabilitating her in their eyes. If Alf senses from Bet's attitude that this could be the case then he will be fearful that their agreement could be broken by Bet blabbing about it to her friends. Note that there may be no explicit communication between them on this point; Bet's demeanour may communicate her views only too clearly. If that is how Alf now feels, then he has a *Trust Dilemma* with Bet. A trust dilemma faces a character that doubts a stated intention by another character that is part of the first character's position. The character with the dilemma would like to trust the other party but cannot do so.

If two characters hold the same position and the first has a trust dilemma with the second, then the second has a *Cooperation Dilemma* with the first. A character faces this when another character doubts that it (the first character) will implement its own position. So in our example, Bet has a cooperation dilemma with Alf because she realises that Alf doesn't think she will stay mum as she agreed. While the trust and the cooperation dilemmas both concern the stability of an agreement, they are not the same thing: it is a dilemma for me that I cannot trust you, but your inability to be trustworthy is your dilemma. Furthermore the dilemmas can occur in the absence of a common position, in which case a trust dilemma does not need to have a counterpart in a cooperation dilemma for someone else.

How can these dilemmas be eliminated? Clearly one possibility in dealing with either dilemma is for a character to abandon its own position. Accompanied by rationalizations as to why this is not such a bad move, together with a sense of regret at giving up what was previously a firmly held position this strategy is quite a familiar one. Bet would have this slight sense of sorrow if she binds herself firmly to keeping mum about her arrangement with Alf. How else could she get Alf to believe her incredible promise to stay mum? Clearly by making her promise credible. She could accomplish this by explaining to Alf why she has decided to change her mind and not tell a soul about their agreement; but to do this convincingly she would also need to demonstrate goodwill and friendship towards him (she might even need to show that she has distanced herself from her women friends and their extreme views) or her claim would have little chance of being believed.

It might be argued that Bet is cynically manipulating Alf by pretending to a commitment that doesn't exist. And of course this *could* be a fair accusation. Howard (1999) derived the following theorem: "no-one should ever believe anyone, because if you tell me something, I can deduce that you want me to believe it, which gives me a reason not to, since presumably you would want me to believe it whether it were true or not." This is why reason and evidence are required to reinforce the effects of emotion in sustaining credibility: they help overcome disbelief. So Bet needs to draw

on the interests that she and Alf share in their peripatetic relationship, perhaps to do with their common preference for rapid unimpeded movement around the narrow corridors of the apartment block that they both occupy. This, she would assert, is of more relevance to both of them on an everyday basis than the niceties, however fundamental, of gender politics.

Turning briefly in conclusion to Alf's trust dilemma, this would of course be removed if he were to abandon the (possibly over-optimistic) hope that Bet will stay mum. Given the possible consequences hinted at above, Alf would probably have a deep sense of despair at this course of action. He might feel a bit better about it if he reluctantly decided to tell his mates himself about his deal with Bet: at least he can spin the story in a way that suits him then. Alternatively he might look for a way of removing Bet's temptation to defect from their deal. Maybe he could warn her, but in a friendly, even jocular manner, that if she were to renege on the deal to stay mum and not tell her friends, that he would hint to them that she had persuaded him to comply in a manner that would severely compromise her feminist credentials.

From DT1 to DT2

Dilemma analysis, as the core of confrontation analysis has sometime been called, is based upon assessments that the characters make of each others' preferences for the different outcomes under consideration. Indeed the dilemmas can be depicted in terms of these preferences as shown in Fig. 2. In the generic 2-character confrontation depicted in the figure the coded arrows show each character's preference between the two outcomes that they link and are labelled by the dilemma that such a preference would introduce. This dependence upon preferences carried over quite naturally from metagame analysis and indeed from the routine use of preferences in game theory. But as long ago as 1995 the need for direct, explicit preference judgements was

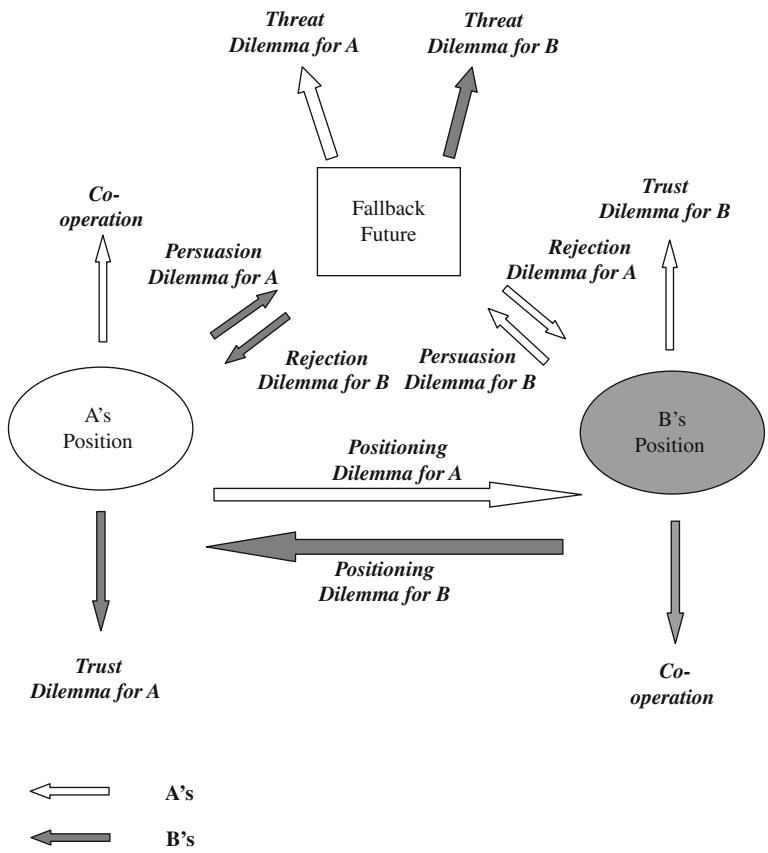


Fig. 2 Dilemmas consequent on preferences

being questioned. After all preferences are not of use in themselves; they simply allow us to make deductions about the credibility of threats and promises. If a character has a reason not to carry out a threat or a promise then they have a dilemma. So preference information tells us why characters suspect each others' threats or promises and so have dilemmas. However if this is the case, then it would be much more direct simply to ask characters what suspicions they harbour about others.

When the first professional software package for confrontation analysis appeared in 2005 (Idea Sciences, 2005) preferences were also depicted (as arrows) in the computerised options board: Fig. 3 shows part of a screen shot from a Confrontation Manager^{TM} model of the chicken example of the last section. However the software development process prompted a revival of the arguments sketched above concerning characters' suspicions. Clearly preferences are an expression of doubt about positions or intentions. For example, if a character thinks that another character is bluffing, and so is unlikely to implement a threat that it is wielding, then while this could be expressed in terms of the bluffer preferring some other outcome to the threatened future, it would be neater and more direct to express it as a doubt on the part of the sceptical character about the intentions of the bluffer. The software was therefore designed to capture these doubts directly, using a question mark (?) to signify uncertainty about doubted elements in a character's intention or position.

In 2005 Nigel Howard launched an internet forum which provided a focus for the exchange of ideas between people working with and wanting to learn about the drama theory framework. It proved a powerful means of sharing experience and of developing ideas through debate – frequently vigorous – between members. In mid-2007 some exchanges about the possibility of a character doubting its own intentions led to a radical redefinition of the dilemmas in terms of doubts rather than of preferences. Using the earlier example, previously Alf was said to have a persuasion dilemma with Bet if Bet prefers the threatened future to Alf's position. In the new formulation, Alf's persuasion dilemma is defined as the set of intentions that are controlled by Bet, not doubted by Alf and that flout Alf's position: so Alf has a persuasion dilemma with Bet if he believes that she can and certainly will block his position. The rejection and threat dilemmas became one under reformulation: Alf's rejection dilemma with Bet consists of those intentions of Alf's that are doubted by Bet and that flout Bet's position. The trust dilemma was also restated. So Alf's trust dilemma with Bet is the set of Bet's intentions that

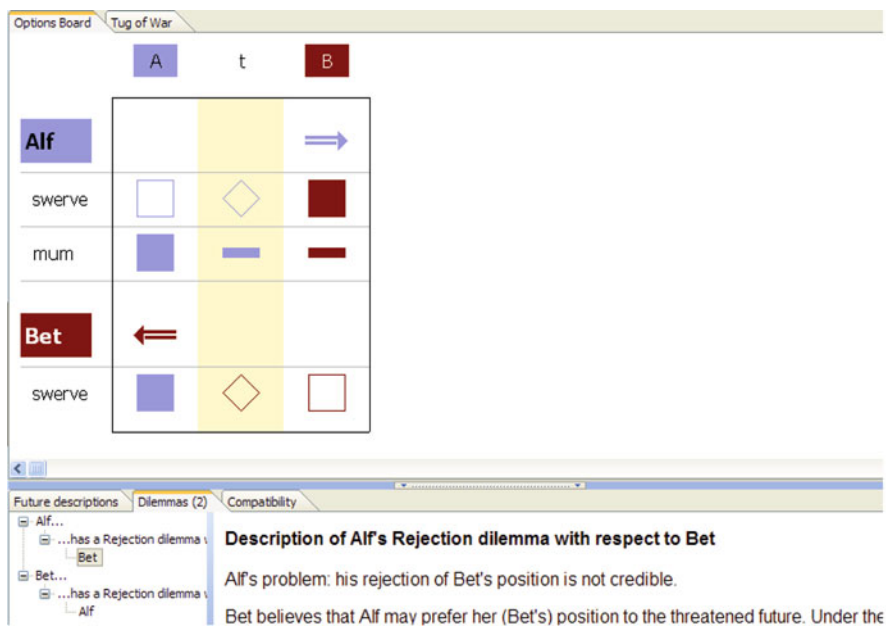


Fig. 3 Partial screen shot from confrontation manager^{TM}

meet Alf's position, but that are doubted by Alf. Not only was this reformulation – referred to as DT2, to contrast it with the earlier version now dubbed DT1- less oblique, since it only required judgements about doubts (which are observable, in the sense that they are communicated between the characters), but it was also more precise because the question as to whether a dilemma arises is asked of each option, rather than being based on questions involving the comparison of frequently complex outcomes.

The difference between the two versions of confrontation analysis is most clearly shown using an example. Consider the following situation:

> Under increasing pressure because of a failing economy, a government's only hope of retaining power is to come to a deal with a radical party. However the government's supporters would only countenance this if the radicals moderate their political agenda. The unstated threat is that if agreement cannot be achieved then an election will have to be called; the likelihood is that the opposition would be returned to power, leaving the radicals again on the margins.

The option table shown in Table 2 captures this confrontation. The approach to modelling used here is itself worth noting. Only one option is openly referred to: the radical's option to moderate their agenda. The Government's position is publicly stated as "You (the Radicals) must moderate your agenda". Nothing else is said. But several things are communicated without being said:

- The Government has an option to call an election
- The Radicals position is that the Government shouldn't call an election as this would most likely leave both parties powerless
- The Radicals position (unless and until they say or act differently) is that they shouldn't moderate their agenda
- That is also the Radicals stated intention (again until they say or act differently)
- The Government's stated intention (credible or not) is to call an election and lastly:
- The Government's position on the "call election" issue is contingent on the Radical's decision about compliance.

Observe this final element. The Government "threat" is left open in its position as this expresses its contingency (generally an option used like this as a threat or promise should be left "open" in the position of the character making the threat or promise).

Also included in the table are some assumptions about character's preferences:

- The arrow in the Gov row pointing away from the middle (threatened future) column means that the Government are assumed to prefer the Radicals position to the threatened future
- The arrow in the Rad row pointing towards the middle column means that the Radicals are assumed to prefer the threatened future to the Government's position

And one doubt is also shown:

- The question mark against the "call election" option that forms part of the Government's intention indicates that the Radicals are doubtful as to whether the Government will carry out this threat.

Analysis of the model shown in Table 2 reveals that the Government faces three dilemmas, while the Radicals face none. The dilemmas are:

1. A rejection dilemma. The Government's rejection of the Radicals position is not credible, as the latter believe that the Government would prefer the Radical's position to the threatened future
2. A persuasion dilemma. The Radicals are rejecting the Government position. They prefer the threatened future under which they do not moderate their agenda
3. A threat dilemma. The Radicals doubt the Government's resolve in the event that the present impasse persists. The Government must make its threat credible.

Table 2 Coalition management: modelled in DT1

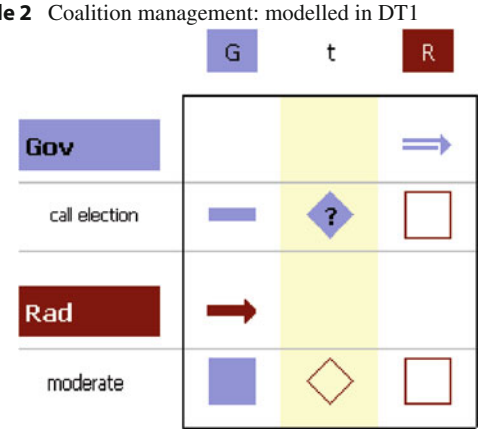
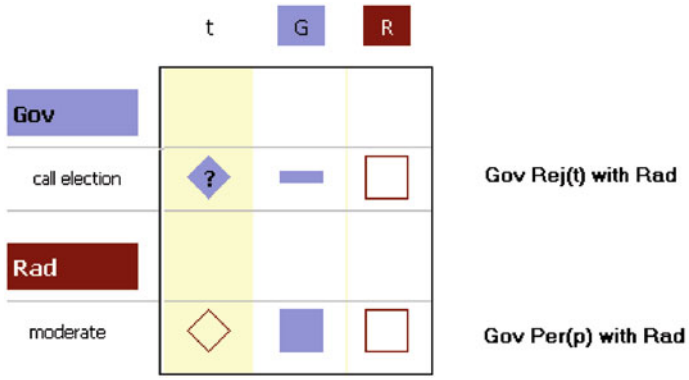


Table 3 Coalition management: modelled in DT2



These are distinct, separate challenges for the Government. The choice of which to address first and how each should be addressed is not a straightforward one and would need to be investigated by tracking through the branches of the episodic tree that could develop from this frame as its root. This will not be done here. Instead we turn to the alternative formulation using DT2 presented in Table 3.

Several features of the option board should be noted before any analysis is carried out. First, the columns have been re-ordered so that the threatened future is (and always is) the leftmost one. This avoids the rather arbitrary separation of one character's position from the remainder in the previous table. Second, there are no arrows. Only doubts are now being recorded. These are stated in the same manner as before, by question marks in relevant cells. Third, the dilemmas arising are noted to the right of the table against the specific options that prompted them.

To begin with the table is checked to see whether it depicts a conflict point or a co-operation point. This is done by comparing the stated intentions (SI) column with each character's position. If there are *any* instances where the intended actions contradict (ignore any comparison involving an option that is "left open") then the SI column represents a disagreement: here may be found rejection and persuasion dilemmas. If there are none, then the SI represents an agreement: however there may still be trust dilemmas. Table 3 clearly represents a disagreement: there are contradictions in both rows.

The search for dilemmas is made row-by-row, but it may be simpler to work through the rows several times each time looking for a different sort of dilemma, than to look at once for all the dilemmas associated with a given option. The former is the approach illustrated now. First then look for dilemmas that arise because of characters SIs. These are of two sorts: first a character may have SIs about which other characters are sceptical; second there may be SIs over which a character is clearly resolute.

Begin by looking for the dilemmas that arise because characters are sceptical about others' SIs. Work down the table row-by-row checking each option. To make it easier to refer to the characters involved, call the character having the option at which we are looking its *owner.* The present search is for those instances where there is doubt about a SI, identified by question marks in the SI column. When a doubt is thus encountered the question is asked: "Do any of those who doubt this SI hold a different position on this option from the owner?" If by checking across the row the answer is "yes" then the owner has a rejection dilemma "in threat mode" – denoted Rej(t) with the doubting character. This is because the owner's SI is not believed by the doubter and so the owner finds it impossible convincingly to reject the doubter's position. Having noted one dilemma the search for other dilemmas is continued first by scanning across the other characters in this row (the owner may have Rej(t) dilemma with several characters over a single option) and then working on down the other rows. In Table 3 this is how the Government's Rej(t) dilemma over the "call election" option was identified.

Next a search would be made for the dilemmas that arise because characters are sure about others' Stated Intentions. Once again each option in turn is assessed, working steadily down the table row-by-row. This time the question is whether the character holds the same position as the owner's SI on this option. This requires

a straightforward comparison of the two cells. If the two are different (and assuming that the proposals are not left open) then those other characters who don't doubt the owner's SI face a persuasion dilemma "in threat mode" (denoted Per(t)) with the owner. This is because the owner's SI is wholly credible to them and so they have no hope of persuading the owner to support their position. Such dilemmas – and there may be several of them – are noted as before. If the option owner's SI and position are the same then conventionally only the Per(p) dilemma (see below) is recorded.

Further dilemmas may be present, for a check must now be made in each of the position columns. The routine is very similar to the sequence of steps used to test against the SI column. For ease of presentation call the character whose position is being examined the *holder*. As before each option (i.e. row) must be checked in turn. Beginning with the dilemmas that arise because characters are doubtful about others' positions (i.e. doubtful as to whether these actions would be carried out) the procedure is to go down the holder's position column, looking for those instances where a doubt has been marked. When a question mark is encountered the question asked is "Do any of the doubters hold a different position from the holder on this option?" The answer is found by checking across the row to see the stance taken on the option by each of the characters whose doubt the question mark signified. If the answer is "yes" then the holder has a rejection dilemma in position mode (denoted Rej(p)) with the doubting character. This is because the holder's position does not seem credible to the doubter(s) and so the holder will find it impossible to argue against the position held by the doubter(s). There are no Rej(p) dilemmas in Table 3.

The final set of dilemmas of confrontation to be identified are persuasion dilemmas in position mode (denoted P(p)). These might arise because characters are not unsure about others' positions: that is, they have no doubt that some constituent proposals would be carried out. This time the procedure is to work down the holder's position column, looking for those instances where no doubt has been marked for those options that it controls (i.e. in those rows where the holder is the owner). When this is the case a comparison is made with the holder's SI on this option. If there is no difference (i.e. the holder has the same SI and position on this option) then those other characters who don't doubt the SI and whose position differs, have the dilemma we are seeking with the holder. This is because the holder's SI is believable; the doubter(s) cannot persuade the holder to retract. In Table 3 the Government is in no doubt that the Radicals will refuse to moderate their agenda and this conflicts with the Government's own wishes.

The dilemmas identified in Table 3 are familiar from the previous analysis with DT1, and were broadly described in the earlier discussion of Table 2. However it is worth observing that the new definition of the dilemmas has collapsed the Government's previous rejection and threat dilemmas into one Rej(t) dilemma. Generally, DT2 simplifies the analysis and usually brings up fewer dilemmas. It does this in part by omitting dilemmas that don't matter such as the positioning dilemma in DT1. The two dilemmas – each in two modes – encountered at a conflict point can be summarised as follows:

When A's intention conflicts with B's position:

- A has a *persuasion dilemma* with B if:
  - A does not doubt B's intention to flout A's position
    i.e. *either* B won't say whether it will support A's position
    or B says it won't and A doesn't doubt it (if required by B's position then B's intention is a contrary position and this is a Per(p) dilemma; if not it's a threat – an explicit threat provided the option is not left open – and this is a Per(t) dilemma)
- A has a *rejection dilemma* with B if:
  - B doubts A's intention to flout B's Position
    i.e. B doesn't believe A's assertion that A will carry out its contrary intention (either a contrary position in which case it's a Rej(p) dilemma or an explicit threat in which case it's a Rej(t) dilemma)

The way in which these dilemmas could be addressed by the characters has already been outlined in the case of DT1. In DT2 the possibilities are essentially the same and involve the character having the dilemma either "giving in" or "contesting" the circumstances. So the possibilities for a character facing a persuasion dilemma include either abandoning its own position ("giving in") a move it would make in

a spirit of depressed resignation or ratcheting up for the other character ("contesting") the costs of not supporting its position. The pathways for the dissipation of these dilemmas are outlined in the flow diagrams of Figs. 4 and 5. Note that some of these routes lead to the creation of new dilemmas for one or other of the characters.

Suppose now that the characters have addressed their dilemmas so that they are at now at a co-operation point (i.e. their positions and intentions are

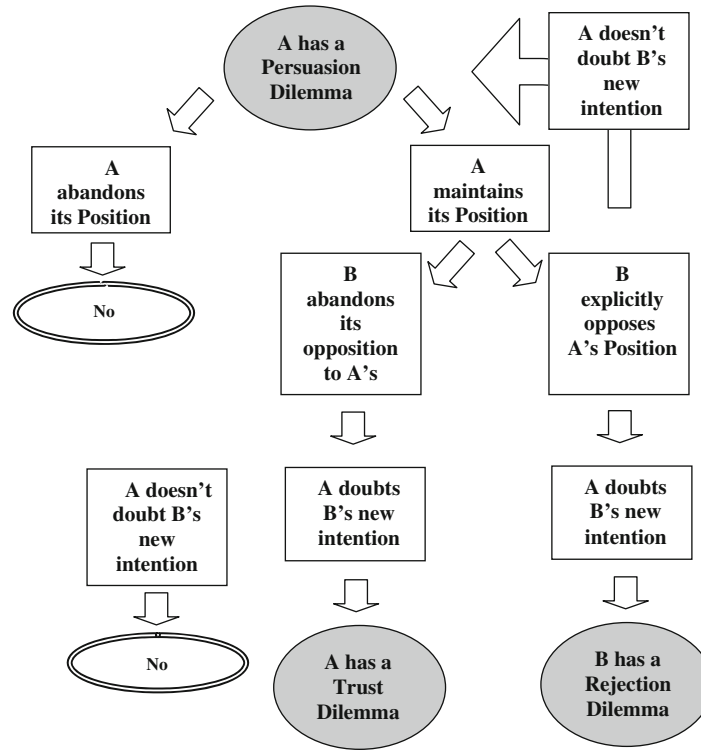


Fig. 4 Handling a persuasion dilemma

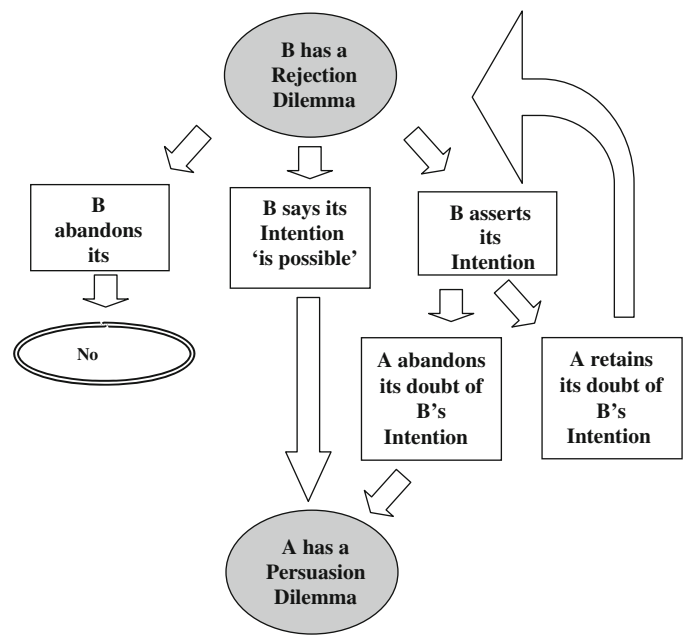


Fig. 5 Handling a rejection dilemma

compatible). While this would ideally be the end of the story, unfortunately it cannot be, as there is always the possibility that the agreement reached will not hold.

Returning briefly to the example used above of the Government seeking a deal with the Radical group, suppose that as a response to the pressure of the dilemmas of confrontation noted above, a new option has been generated whereby the Government offer to incorporate some of the Radical's political thinking into the current legislative programme. This is shown as the option "adopt" in the revised options board of Table 4. However note that the Radicals still harbour suspicions about the government's sincerity in this which is why a doubt is recorded against the corresponding intention. Such scepticism is quite realistic as it could well surface as a consequence of internal arguments between factions within the Radical party over the extent to which they should dilute their vision through a compromise with the Government. Then whilst the board represents a co-operation point it includes a trust dilemma for the Radicals. This is detected by working down the table row-by-row and this time noting whether there is a doubt about the owner's SI for the corresponding option. If there is, then a check is made as to whether any of those who doubt this intention hold the same position on this option. If they do, then they will have a trust dilemma with the owner, because they would like the intended action to be implemented but cannot rely upon the owner to do this.

Generally this can be expressed as:
When A's intention is compatible with B's position:

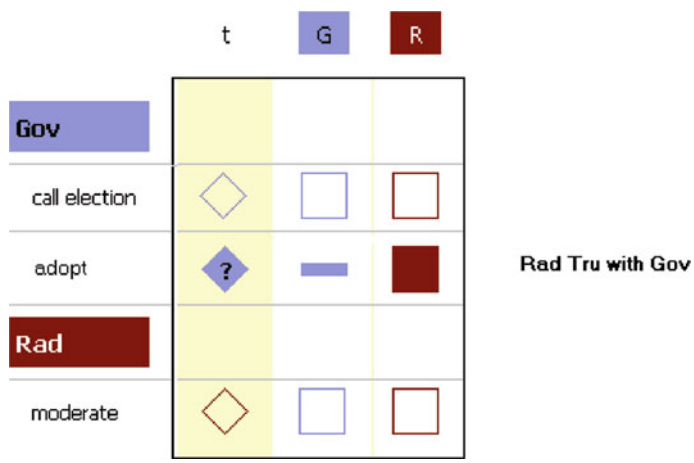
- A has a *trust dilemma* with B if:
  - A doubts B's intention to support A's position
    i.e. A doesn't trust B to carry out B's promise

Note that the cooperation dilemma of DT1 is no longer included in DT2, since it is simply a reaction by the character that is mistrusted to another party's attempt to eliminate its trust dilemma.

The pathways for handling such a dilemma are outlined in Fig. 6. In the example therefore the Government for instance could make a public statement (that it would be hard to retract) that it will take on board key elements of the Radical's manifesto.

The explicit consideration of doubts as an element of the analytical framework in DT2 instead of the earlier use of preferences in DT1, led to a reformulation of the theory itself and new proofs of its fundamental theorems (Howard, 2008). These were recast using the new concept of a character's *stand*. This is what a character tries to make credible: its position, stated intentions, and expressed doubts. Character's stands are "observable": their elements would be overheard or spotted by a third party observing the exchange between them. Of course it is perfectly possible that any element of a character's stand may be a falsehood (it may lie about its position, its stated intention may be a bluff, and its expressed doubt about an intention

Table 4 Coalition management: putative agreement



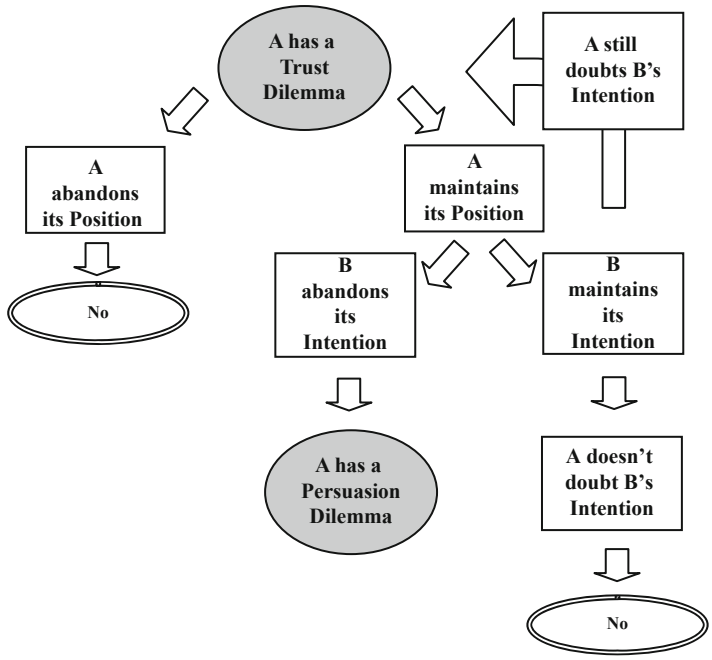


Fig. 6 Handling a trust dilemma

may be insincere), but that doesn't matter: the stands are a form of common knowledge.

Communication between characters builds common knowledge (CK). This is necessary to meaningful interaction between them: if I think that you are terrorist with a concealed gun whereas you are a journalist with a bulky pocket notebook then we are destined for trouble. CK is distinct from mutual knowledge (something that each party knows) because the latter implies nothing about what, if any, knowledge either party attributes to the other. Having adequate CK is not a concern for social beings in rule-bound situations (e.g. sports) or even in executing familiar activities (e.g. buying a newspaper) but becomes problematic in other interactions (e.g. in human resource management) where the assumptions to be made are unclear. To engage in an interaction that could be modelled as a game, drama theory posits that intending players must first share their stands – their positions, stated intentions and expressed doubts – with each other. Thus drama theoretic modelling is based upon *communicated common knowledge* (CCK) – what characters tell one another – which may differ from common knowledge (CK) because characters may practice deception. There is no way of distinguishing CK from CCK by observing communications as the former cannot be accessed, but hints of a discrepancy appear in the form of doubts that characters may communicate about others' stands; these doubts are of course part of CCK.

The preceding discussion also clarifies the relationship between drama theory and game theory. There are two distinct but related challenges faced in any human interaction. The first is to establish, possibly to define, amongst those involved "what is going on"; the second is to decide "how then to deal with it". Finding an answer to the latter question assumes some degree of common knowledge (i.e. parties know "what the game is", know that each other knows what it is; and so on). Drama theory helps to explain how parties achieve this common knowledge by modelling the strategic communication between those involved. Through these exchanges some subset of the characters will realise that they face one or more of a number of explicitly defined "dilemmas". The theory proposes that discomfited by these dilemmas, the characters will tend to act so as to eliminate them. This may involve changing their stands or transforming the game-yet-to-be-played by drawing in (or excluding) other characters or options. There may be a succession of transformations of this kind until no dilemmas remain or characters' arguments for redefinition fail to convince others. The game – and it is at this point valid to refer to it as such – that is then actually played can now properly be analysed using game theory. The same

distinction was expressed by Howard (1986) as being between "political" planning and "technical" planning, the prime purpose of the former being not to solve problems, but to improve decision-making.

Applications

Drama theory has developed through dialectic between practice and theory involving application in a range of arenas. Since it is essentially an account of how people interact to resolve differences, it has wide relevance and some of these contexts are mentioned below. However the purposes to which it has been put also vary. These fall into two broad areas which will be discussed in more detail in the remainder of this section:

- Analysing Confrontation. The construction of drama theoretic models to expose the sources of tensions faced by characters in a situation. Potential routes for resolution may also be explored.
- Simulation. The creation of role-playing simulations of situations intended to provide participants with the opportunity of experiencing both the cognitive and the emotional pressures of novel confrontations.

Analysing Confrontation

The general approach to analysing a confrontation (by which is meant any situation that may move between conflict and collaboration) using drama theory has been described above. Since human life is predominantly about such interactions there is no restriction on the applicability of drama theory in this way, but some distinctions can be made between analysing different sorts of situation.

Firstly some situations may be fictional while others are "real". So drama theory has been used to analyse the storyboard of novels, stage plays and film scripts: see for example Howard (1996) which explains the contrasting denouements of the films "Pulp Fiction" and "Reservoir Dogs". The reverse process has also been employed. Howard made use of drama theory as a means of building and sharing the script of a film, so that all those involved in its production had a rounded understanding of their roles and of the overall story arc. Real confrontations in the health service were analysed by Bryant (2002), demonstrating the challenges of inter-organisational working. Similar issues in the very different setting of military operations in a post-war zone were examined in Howard (1999), which was based upon "live" analysis conducted with the UN forces of situations in Eastern Europe during the 1990s. The latter led to the innovative concept of a C2CC system – a system for command and control of confronting and collaborating – that could be used to co-ordinate the way that hierarchical organisations handle their diverse relationships with other parties by relating nested confrontation models (Stubbs et al., 1999), an idea extended to the civilian sector in Bryant and Howard (2007).

A second distinction concerns the nature of the "client" for or with whom the analysis is undertaken. Normally drama theory, like its antecedents, would be used on behalf of one party in a confrontation to support its dealings with others. Indeed this sort of intervention is described in a number of sources (Bryant, 1997; Bryant and Howard, 2007; Howard, 1999, 2001) though presented in an anonymised form because of the sensitivity of the information used and the "political" ramifications of the negotiations. Incidentally, this very confidentiality explains why accounts of the applications of drama theory are relatively scarce. Sometimes drama theory has been used, especially by academics, for impartial, post hoc analysis of conflict situations (Obeidi and Hipel, 2005) but while this may be illuminating in the context of a research programme, it cannot proceed much beyond the identification of the dilemmas. A more promising mode of application is in mediation where professionals have not been slow to enquire what drama theory offers. While the principle that a CC model – a drama theoretic model of a Confrontation leading to Collaboration – cannot be shared between the parties involved (Bryant and Howard, 2007), that does not prohibit the use of drama theory for sharpening the mediation process. The principle is that the mediator asks questions of a character, not as to whether its promise/threat is credible, but of other parties as to whether they find the character's promise/threat credible. The burden of conviction is on the doubted party to make their position or intention credible to others. Of course if the incredulity

itself is open to question then the onus is upon the character that is doubted to ground the conviction; and so on. Informal applications in mediation have been undertaken but not yet made available in publications.

A further distinction concerns the arena of application. Most of the applications cited above concerned relationships between formal organisations. However it has always been recognised that the ideas could be applied to the investigation of interpersonal relationships and indeed to some of the fundamentals questions in human psychology. The former has been addressed in essays using drama theory carried out in the field of human resource management (e.g. about the psychological contract) as well as in discussion with counsellors and others offering support to individuals facing traumatic personal problems. The latter questions about human behaviour have been investigated using experimental methods (Murray-Jones et al., 2002), with drama theory providing a predictive framework within which subject's choices could be assessed.

How is the type of analysis described here conducted in practice? The 4-R process (*Regard – Represent – Review – Rehearse*) described in Bryant (2003) provides a template. Clearly the need is to articulate the essence of the core confrontation(s) in the format of an options board, for this device provides the most precise and telling summary of the interaction and, through the procedures described above, enables the dilemmas facing characters to be readily exposed. However, some preliminary scoping and structuring of the situation – the *Regard* stage – is normally necessary, not least because there is usually a complex of interrelated issues involved engaging a cast list that can number tens of characters. Capturing the broader picture before selecting a focal area is normal practice with most problem structuring methods (Rosenhead, 1989) and in drama theory may be done in several ways. Perhaps the most apposite is the use of a PPS diagram (Bennett et al., 1989) in which icons representing characters are joined by lines representing interactions: this can easily be elaborated to show "dramas within dramas". A different perspective is highlighted by the Power-Interest grid, a framework commonly used in strategic analysis (Johnson et al., 2005) in which subjective estimates of the relative power and interest that different characters have about a focal issue are set down along these two dimensions. Whether one of these or some other approach is used it is vital to begin analysis from this broad view, not only to concentrate attention but also so that the relationships between contested arenas (and possible tradeoffs by characters between them) can be explored. At the same time, since the models created in the next, *Represent*, stage are supposed to mimic the mental models of the protagonists, undue complexity must be eschewed.

Modelling, using the options board notation can take place once the focus is decided (and clearly the latter is always provisional, the entire analytical cycle being intended as a learning process with flexible movement in any direction between stages). Elicitation of the constituents of characters' stands is not always straightforward. Sometimes, for example, aspects of one character's stated intention are recognised when analysis of another character's position is being conducted. The key principle is that the options set against each character are genuinely choices for action which are available to them. In practice the construction of the options board with a client may be one of the most insightful processes offered by a consultant using drama theory.

The *Review* stage of the analysis involves enumerating and then assessing the dilemmas facing each character. This is greatly simplified by the use of bespoke software tools (see next section) but the routine explained in the last section can clearly be used on compact options boards. The Tug-of-War diagram (Howard, 2004) is a recent graphic device for illustrating these pressures on each character, and could in principle be adapted for use in cases involving more than two parties. Dependent upon whether characters are at a conflict point or are tentatively collaborating, different pathways for dispersing the dilemmas will be identified. However it must always be remembered that it is only by breaking out of the straightjacket that the model represents that the characters will achieve resolution and so creative thinking is essential at this stage.

Rehearsal is simply stated as being about exploring the episodic tree: the potential development pathways for a confrontation. No prescriptions can be given for this but, for example, if analysis is being undertaken for one party to assist it in its interactions with others, then routes that will eliminate its own dilemmas will be sought. Examples of virtuoso analysis that brilliantly illustrate this principle can be found in some of the "plays" written by Howard (1989, 1999 and 2001).

A "quick fix" approach to analysis on behalf of one character in an interaction has been proposed by Tait (2006) under the evocative title of "Speed Confrontation Management". This provides a structured route to producing a coherent argument that the character could use in its strategic conversation with others.

Simulation

If drama theory can be used, as its proponents would argue, to achieve beneficial outcomes in multi-party situations, then the development of simulations to prepare people to put these ideas into practice is a natural next step. Such involving experiences help individuals to appreciate at affective as well as at a cognitive level, the challenges that they may face. However in many situations something more open-ended that implementation of "solutions" is required. This is the need that "immersive drama" has been developed to fill.

The immersive drama approach is to cast people as specific characters in a situation. They are then required to interact in role with others, usually to attain mutually negotiated ends. Immersive drama sounds very much like group simulation (Cambridge Foresight, 1999), one of a range of approaches for engaging with the future that works by placing people in a "world" in which they must learn how to operate effectively. The approach is reliant upon a carefully crafted scenario drawing out peoples' experiences and judgement to create personal learning; but it can misfire and leave people demoralised through their inability to cope with the demands of their roles. However, immersive drama differs from simulation in a number of ways.

In contrast to providing role-players with a descriptive briefing (typically setting down a character's history, personality, responsibilities, and resources), "immersive briefings" centre upon a character's relationships with others, the salient issues confronted, its aspirations and the challenge these pose for other parties. As Howard (1999) put it "it is a matter of knowing the life situation of the character you are acting …. what it is trying to achieve, and why and how, and what it thinks others are trying to achieve, and why and how". This is what gives immersive dramas their authenticity. The "bones of contention" become the main arenas for collaboration and conflict as the drama unfolds. Characters are given an initial stand on each issue and this provides the base from which they interact with others. Changing stance requires that a character convinces or persuades others that it has done so. For resolution, characters have to invent and agree (possibly reluctantly) upon solutions: this may mean modifying positions, retracting intentions, inventing options or reconfiguring coalitions. Interactions in an immersive drama are not prescribed in any way and role-players work with others as and when it is mutually agreeable.

The purpose of immersive drama is to provide insight into complex multi-participant situations, to develop a practical repertoire of skills and behaviours for coping in them, and to prepare people for the emotional costs of their interactions with others.

The enactment encourages divergence and creativity, rather than offering solutions or normative direction. The approach has been used in a number of fields. Two applications in health management illustrate contrasting approaches to the construction of the drama. In one (Bryant and Darwin, 2004), there was a "closed" design wherein other characters create the context for a role-players' deliberations; in the other (Bryant and Darwin, 2003) the design is "open" with role-players having to cope with the impact of exogenously generated events as well as with the need to work with other characters. However both cases demonstrate the way that the approach can be used to prepare managers and staff for future demands upon them: in Bryant and Darwin (2004) for example the intention was to reveal the inter-organisational tensions that might arise in a new service delivery structure, and to help those who would have to implement it to develop relationships that would support its introduction.

The impossibility of using drama analysis directly to clarify and defuse confrontations within a single organisation has been alluded to earlier when its potential role in mediation was discussed. A different escape from this dilemma to that suggested there is to make use of immersive drama to explore the confrontation. Even a thin veneer of fictionalisation suffices to distance role players from acknowledging that they are really playing through their own conflict in the exercise. In this way intra-organisational problems can be worked out by those directly involved in them.

Elsewhere, immersive drama has been employed to create authentic role-plays purely for the purpose of entertainment. Indeed this use of drama theory was amongst its earliest applications and enabled a handful of participants to gain the vicarious experience of "being" public figures engaged in contemporary news stories. Training simulations designed to deliver specific learning outcomes to student audiences could well have such an "edutainment" nature.

Software Support

The analytical demands of drama analysis are not as extreme as those posed by other approaches to strategic conflicts, such as the analysis of options or the graph model, but they still present a significant barrier for the use of the approach by novices or by those unused to the logical reasoning involved. For this reason a succession of software packages has been developed.

Historically the earliest was the CONAN software, written by Howard initially to support his version of the analysis of options. One distinctive feature of this was the facility to work with a strategic map of the situation, showing the improvements and sanctions from specified scenarios. Further useful functionality permitted the user to input an incomplete specification of the situation, since the program was often able to infer missing information (e.g. about preferences). In its later versions CONAN began to incorporate information about the emotional underpinning of conflict resolution strategies as well as the advice about actions to include in what it termed an "interaction strategy".

Bennett instigated the creation of a small software tool called INTERACT (Bennett et al., 1994) that specifically related to the analysis of options. This provided a user-friendly means of building and investigating a strategic map. However it also pointed the way towards a second generation of software that enabled modelling to become fully interactive. This new approach was strikingly exemplified by Howard's first "immersive soap" interface. Designed to support role-players in the immersive drama entertainments described in the last section, this clickable interface enabled a user to explore a drama-theoretic summary of the situation facing a character. Howard subsequently used the same format to feed back to consultancy clients the results of analyses he had conducted on their problems: an example is shown in Fig. 7. Note that each interface screen represents the situation as seen by a specific character; different characters would have differently worded interfaces. Bryant developed

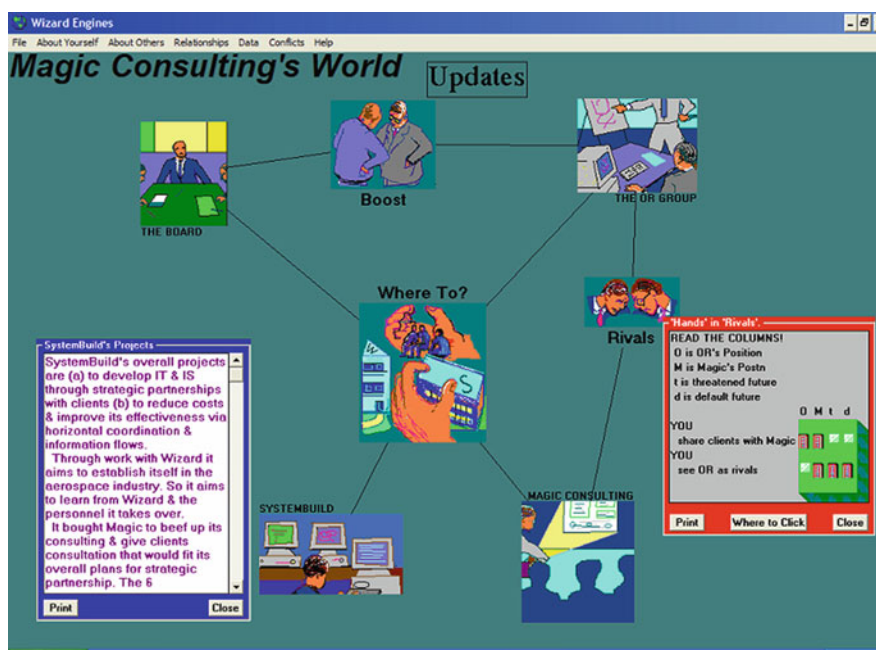


Fig. 7 Specimen role-player screen from immersive briefing

this concept further in a pair of software programs, AUTHOR and SCRIPT that respectively enabled a user to carry out a drama theoretic analysis and that presented the results of this analysis for immersive briefing. However none of these products achieved general distribution.

This all changed with the production of the Confrontation Manager™ software in 2005 (Idea Sciences, 2005). Largely written by Tait in close consultation with Howard, this program was the first enabling a user to model a set of nested confrontations using the options board notation and to use the distinctive drama-theoretic stress upon characters positions and intentions rather than a more general mapping of potential outcomes. An extract from a Confrontation Manager screen was shown earlier (Fig. 3). This software also identified the dilemmas (with a logic engine based upon DT1) facing characters and provided a narrative statement explaining to the user the various ways in which these dilemmas could be eliminated. Confrontation Manager was produced with defence applications in mind and has been used most extensively in that sector, but it is perfectly general in nature.

At the time of his death in 2008 Howard was working on a new software tool called OEDIPUS, to be made available online and incorporating DT2 logic. Until this or a similar product is released the only software package supporting DT2 analysis is STORYLINE, written by Bryant to augment his training courses in drama theory. The latter provides a ready means of developing and exploring the episodic tree by allowing a user to "try out" different routes for handling multiple dilemmas.

Conclusion

Drama theory has provided a new way of interpreting and supporting collaborative relationships. Much of its evolution has been in response to the practical requirements of interventions in organisations or of applications in complex decision-making environments. This chapter has outlined the theory from such a perspective with the express intention of providing a clear and direct introduction to its principles and practice. Whilst the mathematical expression of the theory has kept pace with its sometimes rapid development, this has not been included here but can be found elsewhere (e.g. Howard, 1999, 2008; Murray-Jones et al., 2002).

The most pressing need for the immediate future is for a consolidation of the framework around the conceptual base of DT2, a need that the present article seeks to initiate. In line with the twin traditions of "theorising practice" and "putting theory into practice" it would also be desirable for there to be much more extensive application of the ideas across a range of domains, to strengthen confidence in drama theory as a general framework for modelling human interaction. For the ideas to gain wider credibility in some disciplines (e.g. psychology and economics) experimental validation of some of the basic propositions of the theory will be required: this programme has as yet barely started (but see Murray-Jones et al., 2002). And a further measure to bring drama theory into the portfolio of accepted approaches is that the relationship with game theory should be enhanced. To date there has been a certain amount of unnecessary mutual suspicion; a wider view, suggested by the large world – small world complementarity introduced at the start of this chapter, would do much to allay these doubts and to provide the foundations for a constructive dialogue.

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