Modeling confrontations using Options Boards

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The article provides a brief overview of a technology for managing confrontations – the Options Board. Some background knowledge of Confrontation Management[1] is assumed.

Introduction

Options Boards are tfhe main analytical tools for modeling confrontations and, consequently, developing courses of action for "winning" the confrontation. While confrontations can be modeled less formally, applying the basic concepts in a conversational form, the use of Options Boards brings rigor to the process and minimizes the potential for ambiguity and misunderstanding.

Planning a confrontation using an Options Board is akin to planning an operation using a map. Maneuvers could be planned using the staff's familiarity with a certain geographical area, but the use of a map aids communication and reduces the chance of making errors. Similarly, confrontations should be planned using Options Boards, wherever possible.

Components of an Options Board

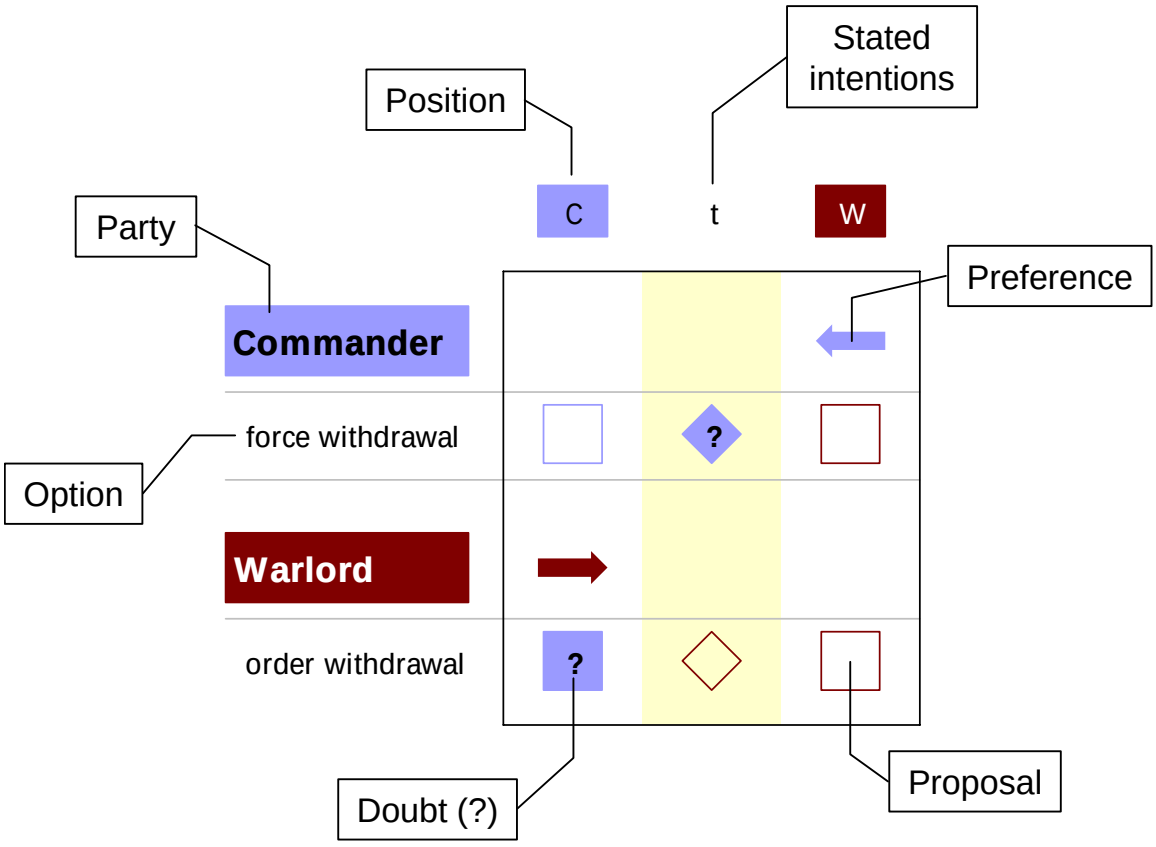

Figure 1: Components of an Options Board

Figure 1 illustrates the components of an Options Board. These are defined as follows:

[1] Also known as Confrontation and Collaboration Analysis (CCA).

- A **party** is one of the parties to the confrontation – i.e. an individual or group that is confronting other parties.
- Parties have **options** – actions they can undertake without the agreement of other parties.
- Parties make **proposals** about options – their own options and those controlled by other parties. A party may propose that an option is adopted (represented by a solid square) or rejected (represented by an empty square)[2].
- A party's proposals about each option on the Options Board comprise its **position**. Positions are represented by (titled) columns. In Figure 1 the Commander's position is represented by the left-most ("C") and the Warlord's position is represented by the right-most column ("W"). The Commander is proposing that the Warlord "order withdrawal" so he (the Commander) will *not* have to "enforce withdrawal". Conversely, the Warlord is proposing that he should *not* "order withdrawal" and the Commander should *not* respond by "enforcing withdrawal".
- While a party makes certain proposals that represent its position, it also has **stated intentions** – e.g. what it will do if its position is not agreed to by the other parties. When the parties are in disagreement (i.e. hold incompatible positions), their combined stated intentions represent the threatened future (otherwise the stated intentions represent the agreement). The stated intentions of the parties are represented by the column second from the left ("t" – for "threatened future"). Stated intentions are represented in a similar manner to proposals – although diamonds are used, instead of squares, to emphasize the distinction.
- When modeling confrontations, parties' proposals and stated intentions are subject to **doubts** – e.g. they might be lying. Doubts are represented by placing a question mark ("?") in the relevant proposal or stated intention.
- Parties have **preferences** between the various positions and the threatened future. A party's preferences are represented by arrows directly across from it on the Options Board – i.e. the upper arrow in Figure 1 represents the Commander's preference. The column in which the arrow is displayed determines the position for which the preference is being expressed. Finally, if the arrow points toward the threatened future column, the party prefers the threatened future to the position. Similarly, if the arrow points *away from* the threatened future, the party prefers the *position* to the threatened future.

[2] Parties may also refuse to make a proposal with regard to one or more options. This is represented by a "dash".

Analyzing an Options Board

The planning challenge presented by an Options Board is to switch all the preference arrows so that they point toward your position. Doubts in your position or stated intentions, or preference arrows that point away from your position, highlight weaknesses (dilemmas) that undermine your position.

There are five potential dilemmas[3] that must be eliminated to reach a stable agreement. Elimination of these dilemmas is *necessary and sufficient* for achieving a stable agreement. These dilemmas are:

- Threat dilemma – ensure your threat is credible (dilemma generally exists when you have a doubt in your stated intentions).
- Persuasion dilemma – ensure that your threat is *sufficient* (dilemma generally exists when another party prefers the threatened future to your position).
- Rejection dilemma – ensure that threats against you are *insufficient* (dilemma generally exists when you prefer another party's position to the threatened future).
- Cooperation dilemma – ensure that promises embodied in your plan are credible (dilemma generally exists when, under a tentative agreement, other parties have doubts about your stated intentions – as part of an agreement).
- Trust dilemma – ensure that others, including allies, can be trusted to carry out their undertakings under your plan (dilemma generally exists when, under a tentative agreement, you have doubts about another party's stated intentions).

In Figure 1, the Commander has Threat, Persuasion and Trust dilemmas. The Threat dilemma is denoted by the "?" in column "t", the Persuasion dilemma by the lower preference arrow, and the Trust dilemma by the "?" in column "C". Software[4] exists to fully automate the process of identifying dilemmas (and suggesting resolution strategies).

Courses of action (COA) are developed through the process of eliminating dilemmas. Individual dilemmas are eliminated through the creation of messages designed to remove doubts or change preference. For example, for the Commander to eliminate his Threat dilemma, he must send a message to the Warlord that achieves one of the following effects:

1. shows that the costs or difficulties Commander would incur in carrying out his threat are less, or less credible, than Warlord supposes;
2. shows that the advantages the Commander would gain from carrying out his threat are greater, or more credible, than the Warlord supposes; or

[3] Strictly, there are six dilemmas, but the "Positioning dilemma" can be ignored for the purposes of this introductory article.
[4] Confrontation Manager (see http://www.ideasciences.com for more information).

3. shows that he must inevitably carry out his threat.

The first effect might be achieved by “testing” hi-tech weaponry within the range of the Warlords “INTEL assets” – showing that the Commander would not need to risk troops to enforce a withdrawal. The third effect might be achieved by regular, unambiguous, statements from the UN/NATO/US that the current situation cannot be allowed to continue.

The set of messages required to eliminate all the Commander’s dilemmas represents his COA.

Creating an Options Board

The crucial thing to remember when modeling a confrontation using an Options Board is to let the Options Board (and process) guide the model building. The temptation is to try and develop a comprehensive list of parties and options before moving on to specifying positions, etc. This is partially a consequence of the dominance of decision-theoretic thinking in (Western) planning. The list of parties and options of potential significance to a real-world confrontation is practically infinite – which is one of the main reasons why decision-theoretic approaches have achieved limited results despite the amount of effort that has been expended on research in this area.

By starting with a model of the core confrontation and expanding it *as necessary* to reach an agreement, only information of relevance to achieving an agreement need be considered. Confrontation Management highlights the information that needs to be considered. Hence, Confrontation Management avoids the explosion of complexity that bedevils most real-world planning.

Keep it simple

To see how an Options Board can be used to model a confrontation *and* guide the search for relevant information, consider the construction of the Options Board in Figure 1. This Options Board would probably have sprung from a statement (from the Commander) such as “I want the Warlord to order his troops to withdraw.”

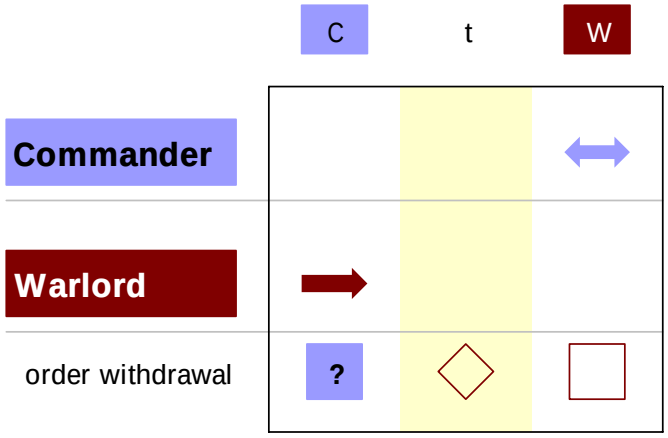

Figure 2: Initial Options Board

Figure 2 illustrates an Options Board that might be produced from that statement. Note that, at this stage, there will probably be a huge amount of background information underlying the Commander's statement. It is essential that the temptation to jump ahead and overanalyze statements be resisted. By sticking to the process, the inclusion of extraneous, confusing, information can be avoided.

An analysis of Figure 2 reveals that the Commander faces Persuasion, Rejection and Trust dilemmas[5]. One way of eliminating a Persuasion dilemma is to create a threatened future that is unpalatable to the other party. The Commander introduces his option of "enforcing withdrawal" leading to the Options Board in Figure 1.

Unfortunately, analysis of *this* Options Board reveals that the Warlord does not believe this threat (a Threat dilemma for the Commander) hence it is still not persuaded by the Commander's position. To eliminate his Persuasion dilemma through this option, the Commander will first need to eliminate his Threat dilemma.

As the Commander and his staff work to develop a COA through dilemma elimination, they will extend the Options Board to include the new options and parties that are (potentially) to be introduced into the confrontation. By eliminating all the Commander's dilemmas, the Commander and his staff will be confident that they have developed a comprehensive plan for resolving the confrontation. Obviously, as the situation develops, and new information comes to light, the Options Board will need to be updated and reanalyzed to reflect the (potentially) new confrontation.

Further reading

For a more detailed discussion of CCA, and additional references, see "A C2 system for 'winning hearts and minds': tools for Confrontation and Collaboration

[5] The Commander's "double-headed" preference arrow states that he has no preference between the Warlord's position and the threatened future. This is hardly surprising, as they are (in Figure 2) identical.

Analysis" available (in PDF format) from the DoD's Command and Control Research Program website:

http://www.dodccrp.org/events/2005/10th/CD/papers/361.pdf