

Kluwer Mediation Blog

Revisiting Game Theory and Mediation

Charlie Woods (Core Solutions Group / Scottish Universities Insight Institute) · Friday, October 8th, 2021

John Sturrock and I recently had the pleasure of contributing a session on game theory and mediation to a workshop on global conflict and dispute resolution hosted by the Delhi Metropolitan Education College. Preparing for the event led me to reflect further on game theory and its relationship to mediation.

In summary, game theory analyses strategies that rational players take to secure the best outcomes in interactive, interdependent ‘games’, where the outcome for each participant depends on the actions of all. The players don’t know what each other will do but know what they could do.

Thomas Schelling (one of those credited with establishing the Washington – Moscow ‘hot line’ communication link, designed to prevent a nuclear war starting as a result of a misunderstanding) described game theory as: “an attempt to formalize any kind of study of strategic behavior where people are trying to affect or anticipate the behavior of others”.

Games can be one-off or repeated. When games are purely one-off players may be tempted to take a more transactional approach, worrying less about ongoing implications. In real life however, things are unlikely to be completely sealed; in other words, how you behave in one negotiation may well leak out, and your reputation could precede you. In repeated games relationships can develop as more is learned by those involved about how people play. In experiments by [Robert Axelrod](#) the most successful strategies in repeated games involved cooperation developing between players.

Games can produce a number of outcomes:

- zero sum – where one person’s gain is another’s loss (there is a tendency for many negotiations to be perceived as zero sum, indeed this is [recognized](#) as a cognitive bias)
- negative sum – where all lose, even the apparent ‘victors’ (for example in wars where people are killed and injured and assets destroyed on all sides)
- positive sum where value is created that can be shared by all players

Perhaps the most famous ‘game’ is ‘The Prisoners’ Dilemma’ in which two suspects are arrested on suspicion of committing a crime and locked in separate rooms with no communication allowed between them. There are three possible outcomes to the game:

- one confesses and one doesn’t – the confessor is pardoned and the other imprisoned for 5 years

- both confess – both imprisoned for 12 months
- both maintain innocence – both imprisoned for 1 month

The most likely outcome is that both confess to reduce the risk of the worst possible outcome. In doing so they select a worse outcome than if both had maintained their innocence.

This is sometimes called a ‘Nash dilemma’, after the pioneer of game theory John Nash, defined as a situation where neither side can independently change their strategy without ending up in a less desirable position. One [obituary](#) of Nash highlighted “*there is at least one Nash equilibrium lying in wait to trap us in every situation of competition or conflict where the parties are unwilling or unable to communicate*”.

The ability to communicate effectively transforms most ‘games’. Communication can be both explicit (written, verbal etc.) or implicit (interpreting actions, tone, body language etc.). A productive dialogue and exchange between participants is crucial. As Deirdre N. McCloskey, points out: “*the oldest and most obvious point in game theory...is that the rules of a game can be modified by conversation...allowing experimental subjects to establish relationships through conversation radically increases the degree of cooperation*”.

This is where a mediation process and the skills and experience of a mediator come in. They can provide a framework and the opportunity for much better conversations to take place between participants in a negotiation. This will help the ‘game players’:

- develop a better understanding of different perspectives and each other’s needs and interests
- understand potential cognitive biases that may be clouding understanding and judgement
- distinguish between what messages have been transmitted and what messages have been received by each participant
- generate and share options for moving forward which are more positive sum in nature, thus adding value before distributing it
- evaluate and reality test options
- frame and exchange offers and proposals to meet needs and interests

Seen in this context mediation becomes much more than simply a dispute resolution process. It can play a vital role in enhancing the relationships and conversations that underlie all forms and stages of negotiation and, critically, in helping those playing the ‘game’ to make it more positive sum in outcome.

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