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DOI:

[10.1177/1046878117690947](https://doi.org/10.1177/1046878117690947)

Document Version

Peer reviewed version

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Citation for published version (APA):

Curry, J., Ruggiero, D., Sabin, P. A. G., & Young, M. (2017). Modelling the Outcomes of International Crises Using Confrontation Analysis. *Simulation & Gaming*, 48(3), 314-328. <https://doi.org/10.1177/1046878117690947>

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1 219_v5_FINAL_Confrontat-analysis

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6

7 **Title** Modelling the Outcomes of International Crises Using Confrontation Analysis

8 **Abstract**

9 Aim To explore the professional application of Professor Nigel Howard's 1998 **Confrontation**
10 **Analysis** method of modelling political conflicts.

11 Case Study The **Confrontation Analysis** methodology was applied to the design of a political-
12 military (pol-mil) game held at the UK's Defence Academy in 2011 to examine the future course
13 of the then current Libyan Civil War.

14 Methodology **Confrontation Analysis** provides a structured schema to help identify the parties
15 involved in a dispute, highlight the differences in their narratives, find the subsequent dilemmas
16 and attempt to resolve them to move the situation on. This helps provide rigour to analysis,
17 negotiation and decision making as it clearly documents initial policy positions and subsequent
18 changes through the use of cards which summarise each stakeholder's position at each stage.

19 Value The methodology, used in conjunction with **role-play** and multi-player teams, was found
20 to have some utility, not in **forecasting** detailed outcomes, but in highlighting key aspects of the
21 potential development of the situation. This research concluded that **Confrontation Analysis** can
22 make a significant contribution to understanding and analyzing **international crises** as well as
23 assisting in formulating successful national policy. **Confrontation Analysis** can be also be an
24 invaluable part of a learning process for analysts and key decision makers facing real crises.

25 Keywords Confrontation Analysis; dilemma analysis; drama theory; international crises;
26 forecasting; gaming; game theory; role-play; serious games; serious gaming; simulation;
27 wargaming; wargames.

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28 **Word Count 4801**

29

30 **Introduction: Free Kriegsspiel and Committee Wargames**

31 Since the Prussian Kriegsspiel games of the 19th century, wargaming has been an important part
32 of military training (Allen, 1989; Perla, 2011; Sabin, 2012; Smith, 2010). Training wargames
33 have usually emphasised operational movement and combat aspects of warfare, rather than
34 political aspects of confrontations (Smith, 2010). At the start of the Cold War in 1945 there were
35 a variety of manual wargames focusing on testing command and control facilities, training or
36 developing better war-fighting strategies. Many of the American games such as
37 THEATERSPIEL looked at war between NATO and the Warsaw Pact in central Europe (Allan,
38 1989; Perla, 2011). These games subsequently included various mathematically based computer
39 models of an all-out thermo-nuclear exchange between the Soviet Union and United States.

40 In the 1950s, the US government recognised the limitations of existing wargaming techniques
41 and started to develop new wargaming methodologies. These started with strategic games
42 focussing on modelling high level crises rather than the actual hostilities (Bennett, 1988; Wilson,
43 1968). The American government's methods are worth examining in detail because in many
44 ways the methodology of crises games has not evolved much since these early games. When
45 events indicated that a situation had potential to develop into a confrontation, a team of seven to
46 eight military officers carried out an investigation by interviewing staff operations and
47 intelligence officers, and other specialists inside and outside of government, especially in
48 universities (Hansen, 2013; Wilson, 1968). The relevant United States ambassador, with current
49 political knowledge of some of the states involved, would be included in these interviews. The
50 team aimed to generate a fact book covering the combat potential of the forces involved, relevant
51 geography and other resources. This work was supported by a written paper on *Problems, Issues*
52 *and Questions* that included different views of the situation; based on these sources, the scenario
53 was generated and the game prepared.

54 Such crisis games normally included as players a committee of five to ten participants
55 representing each country (Hansen, 2013). These committees collectively made decisions in the
56 best interests of the country they are playing, but with no representation of in-fighting within
57 teams (as could happen by making different members of the team take on specific roles, such as
58 service chiefs, and giving each of them *individual* as well as *team* objectives). The teams
59 representing the United States were expected to pursue whatever policies best helped the United
60 States achieve her national interest, but other teams were expected to act in a way that reflected
61 the American interpretation of the national interest or ideologies of the countries they were
62 playing (Howard, 1998; Wilson 1968).

63 Over the course of the three real days allocated to each game, the committees spent four hours
64 each day discussing the options, then outlined to the game moderator their plan for the next two
65 to seven days in game-time (Hansen, 2013; Wilson, 1968). The outcomes of the different plans
66 were then arbitrated by the Game Director using their experience along with advice from
67 specialists, in a manner reminiscent of the free kriegsspiels of 19th Century Germany (Allen,
68 1989; Smith, 2010). (In free kriesspiels combat outcomes are based on the recent combat
69 experience of the senior game moderators (Curry, 2008). Therefore, the realism of the game
70 outcomes was critically dependent on the skill and knowledge of the game moderators.) The
71 post-game debrief was collated into a thirty minute short film enlivened with archive shots of
72 riots, ships and troop movements consistent with the game's storyline.

73 The American government recognised the value of these games for training; Griffin (1965)
74 reported that the games gave specialists a view outside their own field and participants learnt
75 about the pressures real world foreign policy operates in. The military reported that the games
76 gave them insights into problems that might otherwise have been overlooked. Thomas Schelling,
77 a Nobel Prize-winning academic who directed a number of games in the 1960's pioneered the
78 concept of bargaining in strategic behaviour (Schelling 1960 and 1966). Schelling said, "One
79 thing games could teach... was how little strategy, or even war was military; how it was less
80 concerned with the application of force than with the exploitation of potential forces. They could
81 teach the importance of communicating with one's opponents, not only by what one said, but by
82 what one did." Wilson (1968, p71).

83 Since these early games, seminar wargames (or committee games as they are referred to in the
84 UK) have become an integral part of American planning and training regimes, even into the
85 Internet age (Smith, 2010; Perla, 2011). The underlying game methodology of the American
86 Department of Homeland Security's biennial cyber warfare exercise CYBER STORM is based
87 on those same principles. As many of these games integrate political manoeuvres alongside
88 military actions they are commonly referred to as pol-mil games. Although modern pol-mil
89 wargaming frequently is supported by computers and the resources of the Internet, it is still
90 essentially driven by committees making decisions, with outcomes arbitrated by game
91 moderators (Hansen, 2013); they can be viewed as *free kriegsspiels with added multimedia*.

92 **Development of Confrontation Analysis**

93 Howard, (1971) criticised the use of the existing seminar/committee game wargame
94 methodology for assessing national security matters because it gave too much scope to
95 unorthodox behaviour; too often participants became bored and did things out of curiosity to see
96 what would happen. He argued that such committee games tended to produce non-replicable
97 results in which the actual process by which decisions were made was difficult to record, and the
98 group dynamics within each committee were impossible to model. Howard reasoned that a
99 structure was needed to help produce more plausible player behaviour, and proposed the
100 technique of *metagame analysis* (Fraser and Hipel, 1980). *Metagame analysis* involved making
101 a game out of a problem, where the players attempt to achieve their objectives based on the
102 options open to them. Subsequent analysis of a metagame may give insight into potential
103 strategies when faced by such problems. In the 1990s, Howard developed metagame analysis
104 into a new technique that he called Confrontation Analysis (also known as *Drama Theory* and
105 *Dilemma Analysis*).

106 Confrontation Analysis is a method that can be used to structure, think through and understand
107 complex multi-party interactions (Howard, 1998). Howard intended the method as a challenge to
108 game theory. Game theory is a method of mathematically modelling conflict between *rational*
109 decision makers in which gains and losses are defined numerically and determined by the
110 interaction of *strategies* chosen by each player, expressed in a decision/payoff matrix (Neumann
111 and Morgenstern, 1944). Confrontation Analysis assumed that rather than behaving in ways
112 consistent with the tenets of classical game theory, the actors involved in such complex
113 interactions actually attempted to re-define the rules of the game when interacting during a crisis.
114 In practise this means the players generate new options for actions they can take *during* the
115 game, with each option potentially changing the situation, often making it more complex.

116 Whilst classical game theory treats an entire interaction on the basis of a single decision matrix
117 and attempts to resolve it, usually by choosing the decision that minimizes the opponent's
118 maximum gain, Confrontation Analysis treats interactions as a sequence of changes to the
119 decision matrix as negotiations progress.

120 During a game based on the principles of Confrontation Analysis, the parties involved discuss
121 the situation until they have made their initial positions clear; these positions could be visualised
122 as a *card table* (also referred to as an options board). The term *card table* was coined because the
123 participants had each option summarised in front of them on a card, which they could bring into
124 play on the table. The use of such option cards to mediate interactions produced precisely-
125 defined dilemmas in terms of contradictory options. These well-defined dilemmas then become
126 the subject of negotiations as each party attempts to eliminate their own dilemmas (Azar,
127 Khosravani, & Jalali, 2014; Howard, 1998).

128 Summary of Confrontation Analysis Gaming Process

129 Research game topic



131 Design cards



133 Layout initial cards



135 Cards changed to eliminate dilemmas



137 When no dilemmas are remaining or no further changes are made to cards, the game is
138 resolved

139 Worked Example of Confrontation Analysis from the Bosnian Confrontation (1995)

140 This example is taken from the work of British General Rupert Smith, drawing on his experience
141 during NATO interventions in Bosnia and Kosovo (1995 and 1999). The concept also formed
142 some of the theoretical background behind his 2006 book *The Utility of Force*. General Rupert
143 Smith placed great credence on the method, but due his retirement and the death of Nigel Howard,
144 the method lost traction in the military and there was no evidence of its continued use in actual
145 military procedures as proposed by Smith (2001). However, outside the military, the method has
146 occasionally been used for defence, political, legal, financial and commercial applications (Smith,
147 2006, Young, 2011). This example is a *theoretical* representation of the interaction between the
148 Bosnian Serbs and the United Nations over some of the safe areas in the former Yugoslavia.
149 Historically, the Bosnian Serbs had surrounded UN enclaves with forces poised to attack. Each
150 side had a position about what they wanted to happen; this is summarized in diagram 1. NATO,
151 on behalf of the United Nations, opted to use artillery and airstrikes to change the Bosnian Serb
152 position. General Smith argued that if the tool of Confrontation Analysis had been used, NATO

153 could have achieved the same outcomes, without the actual use of the artillery and airstrikes.
 154 Clearly, this would have been a better solution.

155 **Diagram 1: Initial Card Table of Bosnia Example**

156

Threatened Future ↓			Bosnian Serbs' position ↓	United Nations' position ↓
✓	Bosnian Serbs	attack the enclaves	✓	✗
✗	Bosnian Serbs	withdraw heavy weapons from the enclaves	✗	✓
✓	Bosnian Serbs	take hostages	-	✗
✓	United Nations	use air strikes against the Bosnian Serbs	✗	-

157

158 Looking at the column titled Bosnian Serbs' Position we see that they wanted:

- 159
- To be able to attack the enclaves (shown by a tick in the box on row 1).
 - 160 • NOT to withdraw heavy weapons from next to the enclaves (cross on row 2).
 - 161 • For the UN NOT to use air strikes (cross in row 4).
 - 162 • Note that the Serbs were ambivalent about taking hostages (row 3), they were willing to
 - 163 do so if they needed to, particularly if the UN employed air strikes..

164 The UN wanted:

- 165
- The Bosnian Serbs NOT to attack the enclaves.
 - 166 • The Bosnian Serbs to withdraw their heavy weapons away from the enclaves.
 - 167 • The Bosnian Serbs NOT to take hostages.

168 If no further changes were made in the situation then what the sides were saying would happen is
169 shown in the Threatened Future Column:

- 170 • The Bosnian Serbs said they would attack the enclaves.
- 171 • The Bosnian Serbs said they would NOT withdraw their heavy weapons.
- 172 • The Bosnian Serbs said they would take hostages if the UN uses air strikes.
- 173 • The UN said it would initiate air strikes.

174 The initial confrontation analysis identified four problems, known as dilemmas in Confrontation
175 Analysis, as shown on the card table. A dilemma can be identified on any row, where there one of
176 the parties does not want a threatened future to happen. For example, row 1 shows the Bosina
177 Serbs are threatening to attack the enclaves. The action, attack the enclaves, has a tick under the
178 threatened future column. The UN does not want this to happen, as shown by a cross under their
179 position in column 5. The next stage involved the parties attempting to change the card table to
180 eliminate some or all of these dilemmas. This illustrated part of the power of the method, as it
181 forced the stakeholders to think in term of clearly defined objectives.

182 In the situation illustrated in diagram 1, the Bosnian Serbs had one dilemma (UN air strikes
183 against them), but the UN had three. Three of those dilemmas revolved around the need to dissuade
184 the Bosnian Serbs from taking three actions (attacking the enclaves, keeping the heavy weapons
185 in the enclave, taking hostages).

186 Faced with these dilemmas, the UN modified the card table to its advantage by taking two
187 actions within its control. First, it withdrew its forces from the positions where they were
188 vulnerable to being taken hostage. This eliminated the Bosnian Serbs' option to take hostages (i.e.
189 it deleted the third row from the table). The second action was to create a new card *Use Artillery*
190 *against Bosnian Serbs*. The UN had a Rapid Reaction military force moving into a position where
191 it could use artillery against the Bosnian Serbs. This modified the card table to that shown in
192 diagram 2.

193 **Diagram 2: Second Card Table of Kosovo Example.**

194 The UN has eliminated the hostage card and introduced the credible *Use Artillery* card changing
195 the situation in their favour. The Bosnian Serbs now have two dilemmas (the threat of airstrikes
196 and use of artillery against them).

197

Threatened Future ↓			Bosnian Serbs' position ↓	United Nations' position ↓
✓	Bosnian Serbs	attack the enclaves	✓	✗
✗	Bosnian Serbs	withdraw heavy weapons from the enclaves	✗	✓
✓	United Nations	use artillery against Bosnian Serbs	✗	-
✓	United Nations	use air strikes against the Bosnian Serbs	✗	-

198

199 The Bosnian Serbs were faced with the situation in which they could still attack the enclaves and
 200 not withdraw their heavy weapons, but the UN could respond by using artillery and air strikes
 201 against them (which would interfere with their ability to attack/ keep their heavy weapons). Faced
 202 with this new situation, the Bosnian Serbs modified their position to that shown in the final card
 203 table, diagram three.

204

205 **Diagram 3: Final Card Table of Kosovo example**

206 The card table shows that the Serbs would not attack and they would move their weapons away
 207 from the enclaves. In return, there would be no UN airstrikes or artillery used against them. This
 208 illustrates how Confrontation Analysis could have been used to identify and clearly resolve
 209 dilemmas the UN faced. Confrontation Analysis does not necessarily produce a *win-win*
 210 situation, but it is an analytic technique for identifying dilemmas and can help predict how the
 211 parties will attempt to change the decision table itself.

Threatened Future ↓			Bosnian Serbs' position ↓	United Nations' position ↓
X	Bosnian Serbs	attack the enclaves	-	X
✓	Bosnian Serbs	withdraw heavy weapons from the enclaves	-	✓
X	United Nations	use artillery against Bosnian Serbs	X	-
X	United Nations	use air strikes against the Bosnian Serbs	X	-

212

213

214

215 **The Future of Libya Game Using Confrontation Analysis**

216 In 2011 the Defence Academy of the UK wanted to examine the future course of the then current
217 Libyan Civil War using a pol-mil wargame. Confrontation Analysis became the basis for the
218 game-design structure because it imposed a particular framework on what might otherwise have
219 been a standard free-play seminar/committee game.

220 At the time of the game being run in July 2011, the rebellion against Colonel Gaddafi, the ruler
221 of the North African state of Libya, had been ongoing for six months. The background to the
222 civil war has been analysed (Bhardwaj, 2012; Chen, 2014; Huband, 2013; Joffre, 2011) and
223 should be seen in the context of wider regional discontent in the Middle East.

224 The military situation in Libya had become a stalemate and international military commentators
225 were not predicting a military solution to the situation (Steel, 2011). Despite NATO bombing,
226 the various rebel forces seemed unable to defeat the forces loyal to the regime and its leader
227 Colonel Gaddafi. During the game, five major factions in the civil war were directly played by
228 teams; Colonel Gaddafi and his immediate supporters, the international community (France,
229 Italy, UK and the UAE were most committed militarily and politically), the National Transitional
230 Council (NTC, the recognised opposition), the Tripoli Citizens (50% of the population) and the
231 Berbers. Further details of the political situation, including the briefings and maps used during
232 the game are available online (www.decisionworkshops.com, 2016).

233 The real-world situation involved multiple stakeholders with a range of potential options and was
234 therefore suitable for modelling using Confrontation Analysis. The game was run by Decision
235 Workshops, a company specialising in analysing confrontations, and was hosted at the Defence
236 Academy of the United Kingdom with the support of Cranfield University. The participants
237 included those with military experience, businessmen, academics with experience in simulations
238 of international crises and specialist input by those directly affected by the civil war in Libya.

239 **Summary of the Game Narrative**

240 The various teams were given a set of options, embodied in the cards, which they could then play
241 to represent actions they might take during play. For example, Gaddafi could *leave the country*
242 or *withdraw from Tripoli*; the NTC could *agree to a ceasefire with the Gaddafi forces* and the
243 UN could *launch bombing operations in support of the NTC and/ or the Berbers*. The players
244 were also empowered to create their own cards to represent actions not provided by the game
245 designers; this was particularly useful as the game evolved from the starting positions. The
246 technique helped moderate the free rein of individual player personalities by establishing at least
247 a starting framework for their actions, which was more tightly controlled by the designers than is
248 usually the case in free-play seminar games.

249 The key element of the game was changing the table itself by adding or removing options. At
250 each stage of the game, the player teams discussed potential options amongst themselves,
251 sometimes after consultation with the game moderator or other subject matter experts who were
252 available. The teams presented their ideas to add or remove options on the table, with the game
253 moderator adjudicating discussion of the feasibility of their proposals. The outcomes of the
254 contest for mutual leverage with these competing strategic initiatives being codified in the

255 options table. The outcome on each row was determined by the side with agency in each case,
 256 unless that side was ambivalent, in which case the other *recessive* preferences triumphed.

257 Diagram 4: Illustration of the Card Table for options for the International Community

258 The International Community had the option of bombing Tripoli and threatened to do it. The
 259 table shows that Gaddafi did *not* want this future to happen (shown by an X), but the
 260 International Community and the Tripoli Citizens' did (shown by a tick). The NTC did not mind
 261 if Tripoli was bombed or not (shown by a dash). The Berbers' position was blank as they had not
 262 yet expressed any preference about this potential future. The detail of the game has been
 263 published (Curry and Young, 2017).

Threatened Future ↓			Gaddafi's position ↓	International Community's position ↓	Tripoli Citizens' position ↓	NTC's position ↓	Berbers' position ↓
✓	International Community	bomb in support of NTC	X	✓	✓	✓	
✓	International Community	bomb Tripoli	X	✓	✓	-	
✓	International Community	air support to Berbers	X	✓			✓
X	International Community	intevene with ground troops	X	X	X	X	-

264

265 The course and outcome of the game was different from the way events developed in the real
 266 world. While there were many similarities, the key difference was that after extensive
 267 negotiations, the Gaddafi player offered to withdraw from Tripoli in exchange for a ceasefire.
 268 The proposal was beneficial to all parties, except apparently Gaddafi. The Gaddafi player had
 269 extensive experience of gaming this sort of pol-mil game and they concluded they were not
 270 going to win the current military confrontation, therefore they identified the next best possible
 271 strategy. This was to obtain a ceasefire which would allow them relocate their remaining forces
 272 to their geographical stronghold. In return for this withdrawal, The NTC would agree a ceasefire
 273 with Gaddafi's forces; both sides consent was required before the ceasefire card could be played.

274 The NTC were so focussed on the prize of occupying Tripoli, they agreed. Gaddafi then used
 275 the ceasefire (and the suspension of air attacks) to move into the south of the country (the desert
 276 region near Chad) effectively going into internal exile, and his son Saif moved the remains of the
 277 army to Gaddafi's home town of Sirte. As the ceasefire became effective, it became apparent that
 278 although the majority of the population of Libya was now outside Gadhafi's control, Gaddafi
 279 still maintained control of a large area of desert in the south (Fezzan and Sirte). The International
 280 community team were surprised that although part of Libya had been liberated, Gaddafi was able
 281 to establish a new position of some strength.

282 With Gaddafi's forces no longer in Tripoli, the card *Suppress Tripoli revolt* that had been played
 283 by Gaddafi to prevent the Citizens of Tripoli from rising up, was removed from the card table.
 284 The Citizens of Tripoli then seized control of the city before the NTC forces arrived. The fact
 285 that Tripoli had freed itself, rather than being liberated by NTC or Berber forces, had significant

286 influence on the largely political struggles between the various parties to become dominant in the
287 government of post-civil war Libya.

288 **Player Experience and the Game Outcome**

289 A point to note was that the person playing Gaddafi had actually played the same role during a
290 rehearsal workshop a week before at the annual UK Conference of Wargamers (Wargame
291 Developments, 2011), and so it is reasonable to assume they had learnt from that rehearsal. This
292 practise prior to the second game had apparently improved the player's subsequent performance.
293 Rather than staying in Tripoli and struggling to maintain the current deadlock in the civil war,
294 they offered sufficient incentives to some of the other players to allow Gaddafi to move to a new
295 position that was far more sustainable in the long term. The game inadvertently identified the
296 best solution for Gaddafi, rather than potential solutions for the international community to
297 completely remove Gaddafi and his regime, as the game designer had anticipated.

298 **Multipolar Gaming**

299 The Bosnia game example presented earlier was a relatively simple bipolar situation with two
300 sides being represented (there were other stakeholders in the situation, but these had very limited
301 range of actions they could take). In contrast, the Libyan scenario was multipolar, with each side
302 having their own aims. This is more reflective of many current political confrontations. Such
303 situations can be visualised as a problem space, with an initial state connected by a game tree of
304 decision points to a set of goal states. Confrontation Analysis can take this very complex
305 situation and allows the players to generate new pathways through the issues which did not exist
306 at the start of the game, ways that may not have been foreseen without using this method. By
307 using the concept of the options table, the decision points that were the steps towards the final
308 state of the game space are recorded.

309 **Role Play in Confrontation Analysis**

310 Role playing within the conflict is considered a necessity within the scope of Confrontation
311 Analysis when run as a multi-player game for two main reasons; 1) the player has to take on the
312 priorities of their party, and 2) the dilemma concept supports the personalization of the
313 confrontation experience. Role playing within games has been demonstrated to support
314 engagement (Chen et al, 2006), motivation (Dickey, 2007), social interaction (Cole & Griffiths,
315 2007), and acquisition of content knowledge (Chan, 2012).

316 However, role playing within Confrontation Analysis also creates potential. The participants of
317 such a game are expected to come to the scenario with a certain amount of experience or
318 knowledge about the dilemma; play does not teach the participant how to best support their role.
319 This is different from the various role playing games where the participant creates their own
320 character based on personal attributes (Hou, 2012). Within each dilemma are variables that
321 create expectations for role playing; for example the team representing NATO needs to be aware
322 of the NATO's policy on using force in a civil war in a Confrontation Analysis scenario about
323 the Libyan Civil War. Personal attributes are not a consideration for the role playing within
324 Confrontation Analysis as they are in many of the popular role playing games that exist online
325 and within gaming communities.

326 **Controlling the Game Narrative**

327 Game moderators face a tension between keeping a game on the narrative track envisioned by the
328 game designer or letting the game's narrative emerge organically from player decisions. One of
329 the challenges of using Confrontation Analysis in gaming is moderating player inventiveness.
330 Allowing participants to discover unconventional strategies (so called *black swans*) can be
331 useful, but so can constraining the participants to explore some of the most likely options for
332 each role.

333 If the game space is visualised as an ever expanding branching tree network, occasional low
334 probability choices can move the game state into an entirely different branch. When gameplay
335 begins within a set construct, a series of tasks are assigned to each team and they embody their
336 roles within the session. At this point the game moderator retains control over the emerging
337 storyline, introducing new tracks and situations as they arise. Conflict begins to occur when the
338 narrative becomes a question of experience and opportunity. Players of Confrontation Analysis
339 games, drawn from the public sector, are likely to be by nature experienced in war, politics, and
340 government. However, well-constructed options cards can help players engage with the game
341 and keep track of the evolving situation.

342 **The Box Analogy.**

343 The game design creates the *sandbox* and hopefully makes its dimensions large enough to
344 contain where the players want to go. However, players being players, almost always push on the
345 boundaries of the box. Clever design can sometimes make those boundaries flexible enough to
346 stretch so the players can be directed naturally onto the central focus of the game without feeling
347 like the moderator has artificially constrained their choices of action. Those jumps are frequently
348 the source of important insights. The moderator then needs to find a way to expand the box to re-
349 contain the players, or alternatively find a way to pull them back in, which can be a real problem
350 if they have tried to make a major change to the game narrative. An example of this, in the
351 Libyan case study was the Berbers (a minority group opposed to Gaddafi), presenting an options
352 card "Offer Russia a port in Libya and oil concession, in return for immediate military
353 intervention". Without exploring the details in this article, it is easy to see that this would
354 completely change the dynamics of a game focused on the internal aspects of the civil war, into a
355 multi-national game involving Russia on one side and NATO on the other. The game moderator
356 constrained the players by applauding the idea, but saying the resolution would be a long term
357 issue, far beyond the game time scale of the current game.

358 **Conclusions**

359 Strategic games, dealing with political conflict short of all-out war, are a significant part of
360 national policy making. This research examined the use of Confrontation Analysis as a
361 methodology for designing games about pol-pil confrontations.

362 The evidence from the Libyan game was the use of the card table was an effective briefing tool
363 that proved useful in allowing non-subject specialists to rapidly grasp what they could do in the
364 game.

365 A central feature of Confrontation Analysis is the assumption of good communication between
366 the teams, allowing the positions of the parties on each option to be identified. The theory
367 assumes that confrontations and dilemma resolution stages are preceded by a *scene setting* stage
368 where each party makes its position clear to the world. In the past this could have been criticised
369 as simplistic, as a party could tell different stories to each of the other parties, but in the modern,
370 connected world this is a much harder position to sustain. A major advantage of Confrontation
371 Analysis is that it works from open source information, namely the actual things parties are
372 saying they could do (the options), who can do it (the participants), what the participants are
373 saying they want to happen (the ticks and crosses). Accurate quantifications of the much
374 analysed values of Game theory, are much harder to obtain, and may be in fact be more
375 subjective than analysts would like to admit.

376 The next step in this research is modelling other current world confrontations, such as the
377 situation in Syria, that are fraught with so many similar issues. Confrontation Analysis shows
378 promise as a structured approach to search out and identify potentially critical decision points
379 and options. Using existing information, experts could apply their judgment of the utility of
380 various courses of action and to map solutions that might offer a workable set of benefits to the
381 key parties involved so as to identify potentially workable compromises. The promise of finding
382 practical solutions to complex conflicts gives impetus to further investigation.

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469

470 **Acknowledgements**

471 The authors would like to thank Peter Perla for his support and encouragement in writing this
472 article.

473 **Declaration of Conflicting Interests**

474 The authors declared no conflicts of interest with respect to the authorship and/or publication of
475 this article.

476 **Funding**

477 The authors received no financial support for the research and/or authorship of this article.

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