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## Implications of an Assigned Devil's Advocate Role in a Negotiations Context

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## Implications of an Assigned Devil's Advocate Role in a Negotiations Context

### Abstract

This paper seeks to examine the implications of an assigned devil's advocate role on group dynamics such as group trust, cohesion, and accuracy. 148 participants were recruited through the Wharton Behavioral Lab and randomly assigned to a group of four, either with or without an assigned devil's advocate. Individually, participants prepared a Lost at Sea survival task. Then, each group was tasked with coming up with a single group solution as preparation for a negotiation against another group, with the assigned devil's advocates acting as such. The participants then individually reported on perceived group trust and cohesion. This study found that assigned devil's advocacy has significant effects on group cohesion and accuracy, with the presence of devil's advocates lowering reported group cohesion levels but enhancing accuracy of group solutions, with no significant impact on reported trust levels. These findings suggest that devil's advocacy may be more appropriate for one-time group interactions, as opposed to ongoing relationships.

### Disciplines

Business

IMPLICATIONS OF AN ASSIGNED DEVIL'S ADVOCATE ROLE IN A NEGOTIATIONS  
CONTEXT

By

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An Undergraduate Thesis submitted in partial fulfillment of the requirements for the  
WHARTON RESEARCH SCHOLARS

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## **ABSTRACT**

This paper seeks to examine the implications of an assigned devil's advocate role on group dynamics such as group trust, cohesion, and accuracy. 148 participants were recruited through the Wharton Behavioral Lab and randomly assigned to a group of four, either with or without an assigned devil's advocate. Individually, participants prepared a Lost at Sea survival task. Then, each group was tasked with coming up with a single group solution as preparation for a negotiation against another group, with the assigned devil's advocates acting as such. The participants then individually reported on perceived group trust and cohesion. This study found that assigned devil's advocacy has significant effects on group cohesion and accuracy, with the presence of devil's advocates lowering reported group cohesion levels but enhancing accuracy of group solutions, with no significant impact on reported trust levels. These findings suggest that devil's advocacy may be more appropriate for one-time group interactions, as opposed to ongoing relationships.

## INTRODUCTION

Negotiations are fundamental to achieving collective outcomes, whether in public policy, corporate deal making or everyday dyadic agreements. It is a context ideal for behavioral research, as there are countless manipulations and research questions to be studied within the negotiations field. This paper seeks to examine the implications of an assigned devil's advocate role on group dynamics such as group trust, cohesion, and accuracy, in a negotiations context. In this study, 148 participants were recruited through the Wharton Behavioral Lab and randomly assigned to a group of four, either with or without an assigned devil's advocate. Individually, participants prepared a Lost at Sea survival task, ranking 15 survival items. Each group was then tasked with coming to a group consensus, as preparation for a negotiation against another group. The assigned devil's advocates were given instructions and told to act as such during the group negotiation preparation stage. The participants then independently reported on perceived group trust and cohesion. This study found that assigned devil's advocacy has significant effects on group cohesion and accuracy, with the experimental group (with an assigned devil's advocate) having lower reported group cohesion levels but more accurate group results than the control group (without an assigned devil's advocate), with no significant impact on reported trust levels. There were no significant differences between reported trust and cohesion of the devil's advocates themselves and the other group members in the experimental condition. These findings suggest that devil's advocacy may be more appropriate for one-time group interactions, as opposed to ongoing relationships. With an ongoing relationship, such as a future negotiation, devil's advocacy could potentially create long-lasting rifts that could hinder group efficiency.

## LITERATURE REVIEW

This literature review will cover existing work in three main subject areas: 1) partisanship in a negotiation context, 2) devil's advocacy, and 3) group dynamics.

### *Partisanship*

The first topic explored will be partisanship, with a focus on the context of negotiations. Partisanship, in this paper, is not necessarily political; instead, it will be treated as a synonym for any sort of bias that an individual holds (Thompson 1995). Studies have looked at the negative implications of partisan perceptions in various settings. One manifestation of partisanship is the incompatibility error, the belief that the other party's interests are completely opposed to one's own in a negotiation situation, when in fact, the other party's interests are completely compatible with one's own (Thompson 1995). Puccio (2003) argues that opposing partisans in ideological debates tend to overestimate the gap between their views due to a failure in recognizing common ground. Puccio's dissertation references ways to overcome this "false polarization," such as having opposing partisans present to each other the convincing and salient arguments of the other side. Such engagement results in more favorable interpersonal perceptions and ultimately in more successful negotiating outcomes (Puccio 2003).

Partisanship, or bias, is especially influential in the focused context of the bargaining table. Existing literature reveals insights about the psychology and culture behind negotiations that can better inform further work in this area. For example, a common bias at the bargaining table is "naïve realism," or the conviction that one always considers issues and events objectively. This naivety adds more misunderstanding to disagreement, leading opposing partisans to feel that other reasonable people should share their views (Ross 2013). Studies have shown that self-serving negotiation biases are especially prevalent in the United States and other individualistic

cultures, as opposed to collectivistic cultures such as in Japan (Gelfand et al. 2002). These biases affect all stages and aspects of a negotiation, from impasses (Babcock and Lowenstein 2005) to the compromise phase.

Partisan perceptions also affect the accuracy of the judgements of negotiation observers; in a classic study in this field, partisan observers of a negotiation made less accurate judgements than nonpartisan observers, especially when held accountable (Thompson 1995). These intuitions are often brought to the bargaining table, limiting the extent to which negotiators can be successful, even with proper intentions (Cohen et al. 2007). Literature suggests that the quality of negotiation outcomes would improve if negotiators acted more rationally (Neale and Bazerman 1999).

#### *Devil's Advocacy*

The second topic explored will be devil's advocacy. Devil's advocacy is defined as critiquing the prevailing plan, criticizing it but offering no explicit counterplan (Schwenk 1990). Schwenk found that devil's advocacy is superior to an expert-based, no-conflict approach to decision making. That is, having a devil's advocate in a negotiation yields better results, on average, than simply having experts convene and reach a group consensus (Schwenk 1990). This phenomenon may be explained by the theory of groupthink, which states that extreme pressures for unanimity can build in a cohesive group, causing decision makers to censor any misgivings they may have, ignore outside information, and overestimate the group's chances of success (Peterson, Owens, Tetlock, Fan, and Martorana 1998). All else equal, team members whose recommendations are uncorrelated or negatively correlated provide more value as a unit than do team members whose recommendations are correlated high and positive (and hence redundant) (De Dreu and Weingart 2003).

One could consider devil's advocacy as a form of perspective taking, or the "cognitive capacity to consider the world from other viewpoints" (Galinsky, Maddux, Gilin, and White 2008). Scholars have found that perspective taking increases individuals' ability to succeed at the bargaining table, with success defined as discovering hidden agreements and both creating and claiming resources at the bargaining table. Perspective taking, scholars argue, increases chances of negotiation success even more than empathy does (Galinsky, Maddux, Gilin, and White 2008).

There is inadequate literature on whether devil's advocacy is truly effective when considering long-term quality of outcomes, however. Chip Heath's novel Decisive discusses the elimination of the devil's advocate role in the Catholic Church's canonization decisions by John Paul II. This process of determining who is deemed a saint initially had an explicit devil's advocate role. John Paul II's elimination of the position led to a twenty-fold increase in rate of canonization of saints, but still debatable are potential consequent changes in the quality of saints (Heath and Heath 2013).

There is also a gap in the literature regarding the impact of devil's advocacy on group dynamics. There are studies on the relationship between conflict and team effectiveness, but the current literature does not focus on the specific type of conflict created by an assigned devil's advocate. The conflict literature finds that when in conflict, people confront issues, learn to take different perspectives, and need to be creative (De Dreu and Weingart 2003). At the same time, as conflict intensifies, the cognitive system shuts down, information processing is impeded, and team performance is likely to suffer. The increase in cognitive load associated with high conflict, such as in a competitive, hostile negotiation, decreases cognitive flexibility and creativity substantially (De Dreu and Weingart 2003).

There are some critiques of testing devil's advocacy in experiments. Some argue that studies that force participants into role-playing a devil's advocate role are inherently flawed, due to difficulties in cloning authenticity (Nemeth, Brown, and Rogers 2010). However, there is also evidence to support that participants are willing and able to adopt assigned roles. In Kronzon and Darley's 1999 study, participants were led to regard ethically ambiguous behaviors as more or less morally acceptable based on which perspective they were assigned to take in a subsequent negotiation: perpetrator or victim.

### *Group Dynamics*

The final topic explored will be group dynamics, specifically trust and cohesion, two factors believed to be key to any group negotiation.

Trust is essential for almost every social relationship. When trust levels are low, there is often friction, due to consumption with minimizing the risk of being exploited. Those who lack trust are likely to become more competitive and even combative (Galinsky and Schweitzer 2015). Therefore, in a negotiation context, group trust should be crucial. Trust mediates the effects of conflict, both task and relationship, on performance; that is, a trusting group is more likely to successfully combat the hindrances of intra-group conflict (Rispen, Greer, and Jehn 2007). Tanis and Postmes (2005) find that trusting behavior involves relinquishing control over outcomes valuable to the self, with the proximal determinant of trusting behavior being the expectation that the other will reciprocate. McAllister (1995) argues, in addition, that the principal forms of interpersonal trust are affect- and cognition-based trust; that is, there is both an emotional and a logical basis behind perceived trust.

Group cohesion can be defined as the "tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective

needs” (Rozell and Gundersen 2003). Group cohesion influences both socio-emotional and task-related aspects of group performance (Yoo and Alavi 2001); researchers have linked group cohesion to heightened performance and effective group communication, key parts of a negotiation, especially during the preparation phase (Rozell and Gundersen 2003). Increased task performance by cohesive groups is due primarily to more frequent and less inhibited task-related communication (Yoo and Alavi 2001).

The following paper will focus on a gap in the literature: implications of devil’s advocacy for group dynamics, with the background of partisan perceptions as important context for a study in a negotiations environment.

## **RESEARCH QUESTION AND HYPOTHESIS**

**Objective:** To examine the implications of an assigned devil's advocate (DA) role on levels of group trust, cohesion, and accuracy in preparation for a negotiation.

### **Questions:**

1. Will a group with an assigned DA have lower levels of trust and cohesion than a group without a DA?
2. Will a group with an assigned DA generate more accurate solutions than a group without a DA?

### **Hypotheses:**

1. A group with an assigned DA will have lower levels of trust and cohesion than a group without a DA.
2. A group with an assigned DA will generate more accurate solutions than a group without a DA.

## METHODOLOGY

### *Participants*

This study was conducted in the Wharton Behavioral Lab, as undergraduate students are prime candidates for partisanship study (Thompson 1995). There were twelve sessions over four days, with a goal of recruiting 16 participants for each session. There were 12.3 participants on average in each session, with a total number of 148 participants. The sessions were open to the public, with sign-ups functioning on a first-come, first-serve basis.

Participants' median age was 22, with a 68% female and 32% male makeup.

### *Procedure*

The lab coordinator organized the participants in a randomly ordered line, and the participants were then seated in numbered cubicles, in line order. As they walked into the lab, participants were handed a blank piece of paper for note-taking and a group number. Cubicles 1-4 were assigned to Group 1, cubicles 5-8 were Group 2, cubicles 9-12 were Group 3, and cubicles 13-16 were Group 4. If not enough participants showed up for a full Group 4, all "remainder" participants were paid a show-up fee and asked to leave; this was done in an effort to keep group size consistent.

Half of the groups (typically Groups 1 and 2) were control groups with no assigned DA. The other half (typically Groups 3 and 4) were experimental groups with an assigned DA.

Once seated, participants began the Qualtrics survey specific to their group. All were presented with the Lost at Sea survival task (see Appendix for worksheet), a variation of the popular Arctic Survival task commonly used in Management courses to teach principles of group decision-making (Nemiroff and Pasmore 2001). Individually, participants prepared the case for three minutes, reading the case and coming up with their own solution, ranking the 15 survival

items by importance. After the three minutes, participants were presented with their group task, with instructions indicating each group would be escorted to a Group Study Room (GSR) to come to a group consensus solution in preparation for a negotiation against another group. On this same screen, one member of each experimental group was notified that he or she had been assigned to be DA, with guidelines for behavior.

The Qualtrics surveys were then password-locked, and each group was brought to a reserved GSR for a ten-minute negotiation preparation period. The groups worked to come to consensus, with each DA first informing the other members of his or her assigned role.

After the ten minutes, a lab coordinator went to each GSR and announced the end of the ten minutes. Groups were also told that due to time constraints, the actual negotiation would not take place. Participants then returned to the lab and were given the password to individually move on to the next section of the Qualtrics. Each participant then was asked to record his or her group's final ranking of the survival items. Then, they were all asked about group trust, using McAllister's affect- and cognition-based trust scale (1995). This study presented six trust scale items, to which participants responded on a 7-point agreement scale from 1 (strongly disagree) to 7 (strongly agree). Then, participants were asked about group cohesion, using Rozell and Gundersen's group cohesion factor analysis (2003) based on Rosenfeld and Gilbert's Classroom Cohesion Scale (coefficient alpha of .96) and DeStephen and Hirokawa's consensus and communication instrument (reliability estimates of .94). Eleven items were presented, with participants again responding on a 7-point scale from "strongly disagree" to "strongly agree." Lastly, members of the experimental groups were asked if they would choose to have an assigned DA in a future negotiation, and all participants answered demographic questions.

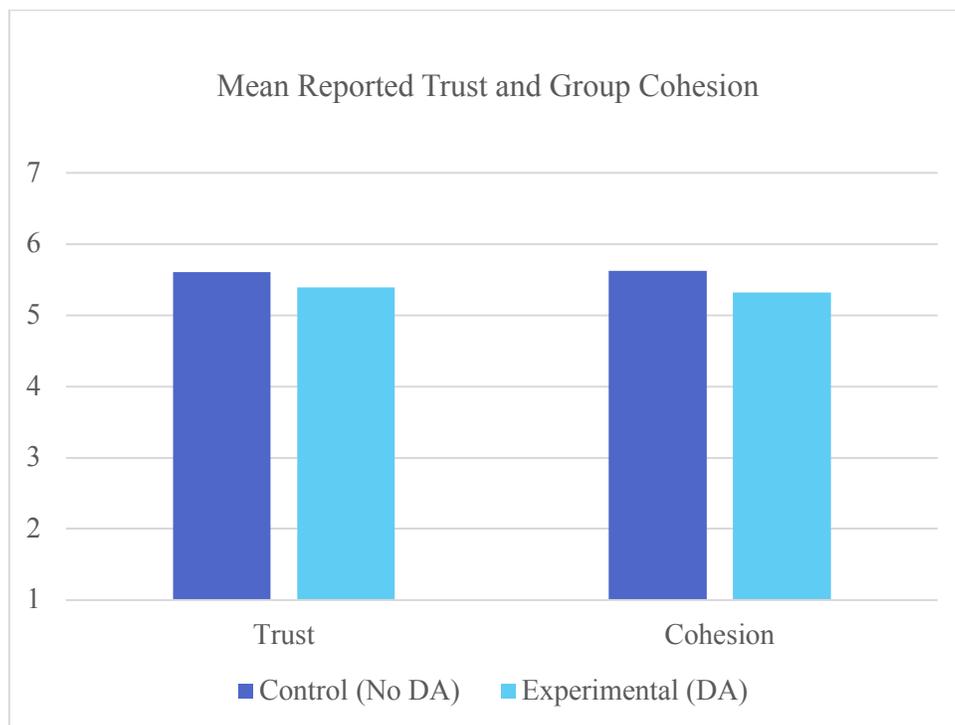
Post-study analysis looked at the three dependent variables: group trust, cohesion, and accuracy. Significance tests were conducted in efforts to discover meaningful differences between the groups with a DA and the groups without.

## RESULTS

This paper examined the influence of devil's advocacy on group trust, cohesion, and accuracy. ANOVAs and t-tests were used to test for significant differences between 1) groups with a DA and 2) groups without a DA.

### *Group Trust*

Having an assigned DA had no significant effect on reported group trust levels ( $p=.22$ ), as seen in Figure 1. There were also no significant trust differences between the devil's advocates themselves and the other members of the DA groups ( $p=.60$ ).

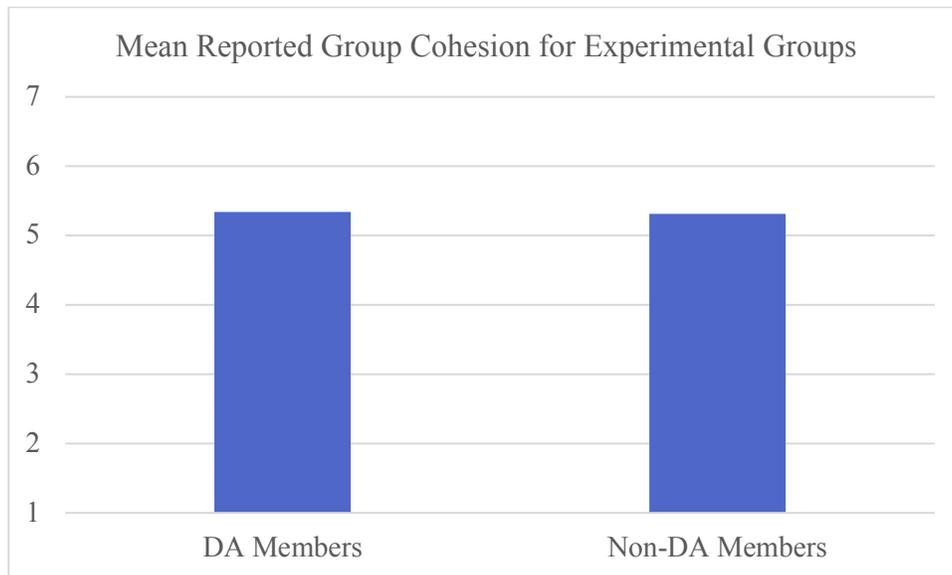


**Figure 1:** This chart presents differences in mean reported trust and group cohesion on a 1-7 scale, comparing the control and experimental groups. The absolute difference in trust of .207 is not statistically significant, but the absolute difference in group cohesion of .304 is significant at the 10% alpha level.

### *Group Cohesion*

Having an assigned DA had significant effects on reported group cohesion at the 10% alpha level. Groups with a DA had lower levels of group cohesion than groups without a DA ( $p=.07$ ), as

seen in Figure 1. This result is consistent with this paper’s hypothesis regarding group cohesion. There were no significant differences in reported cohesion between the devil’s advocates and the other members of the DA groups ( $p=.92$ ), as seen in Figure 2 below.



**Figure 2:** This chart presents differences in mean reported group cohesion on a 1-7 scale, comparing DAs and non-DAs in the experimental groups. The absolute difference in cohesion of .033 is not statistically significant.

### *Accuracy of Group Solutions*

Each group’s Lost at Sea survival task rankings were compared to the optimal solution, which has been established by the United States Coast Guard. Comparisons were then drawn between groups with a DA and groups without a DA. The groups with a DA were closer to the optimal solution for 9 of the 15 items, with five of these differences being significant at the 5% alpha level. By contrast, the groups without a DA were significantly closer to the optimal solution for only 2 of the 15 items. These results are shown in Figure 3 below.

Correct Solution	Average Control Group Ranking	Average Experimental Group Ranking
15	7.7	8.8
1	9.1	8.1
<b>3</b>	<b>1.1</b>	<b>1.4</b>
14	10.7	9.7
<b>4</b>	<b>2.6</b>	<b>4.2</b>
<b>13</b>	<b>7.1</b>	<b>8.5</b>
9	10.9	10.1
<b>2</b>	<b>11.5</b>	<b>10.0</b>
12	6.3	4.9
10	10.4	10.9
5	8.9	9.1
11	10.3	10.1
8	9.1	9.4
6	9.3	8.5
<b>7</b>	<b>5.0</b>	<b>6.2</b>

*Figure 3: This table presents the correct survival item ranking solution. It also shows the average ranking of each item for the control and experimental groups. The five items for which the experimental groups (with a DA) ranked significantly closer to the optimal solution (at an alpha level of 5%) are bolded.*

## DISCUSSION

### *Study Discussion*

This study sought to uncover the effects of devil's advocacy on group dynamics, specifically group trust, cohesion, and accuracy.

Having an assigned DA in a group negotiation context seems to yield more accurate solutions without sacrificing intra-group trust. However, an assigned DA appears to negatively impact group cohesion.

These results offer implications for the field of group dynamics. If a group solely is focused on creating the most accurate product, perhaps assigning one member to be devil's advocate is wise. Similarly, devil's advocacy may be most effective for one-time group interactions, such as a single, transactional negotiation where group relationships are less crucial. On the other hand, devil's advocacy, with its associated negative effects on group cohesion, may create long-lasting rifts that could hinder group productivity in ongoing relationships.

At the same time, it is interesting that there were no significant trust or cohesion differences between the devil's advocates themselves and the other members of the DA groups. This suggests being the devil's advocate does not create a vastly different experience from being another member of the DA group, when it comes to perceived group dynamics.

It is important to note that this study is preliminary with room for improvement and further analysis. For follow-up studies, a larger sample with an even gender split could produce more accurate results. Having the inter-group negotiations actually take place could also lead to deeper insights on devil's advocacy's impact on ongoing group dynamics.

### *Future Research*

This paper paves the way for future research, as other research questions naturally emerge. For example, it is unknown if group trust and cohesion significantly increase after the group is informed that its solution was accurate. In addition, future studies could actually run the post-preparation negotiation and assess whether the groups with a DA 1) are averse to working together again and/or 2) perform worse due to lower levels of perceived group cohesion. Another question is whether regularly rotating the DA role amongst group members increases cohesion over time; perhaps with this solution, devil's advocacy could become effective for ongoing group relationships. Lastly, a rich area for future research is the interplay of task and relationship conflict with devil's advocacy and its implications for group performance.

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## APPENDIX

### Lost at Sea Worksheet:

*Instructions:* You are adrift on a private yacht in the South Pacific. As a consequence of a fire of unknown origin, much of the yacht and its contents have been destroyed. The yacht is now slowly sinking. Your location is unclear because of the destruction of critical navigational equipment and because you and the crew were distracted trying to bring the fire under control. Your best estimate is that you are approximately one thousand miles south-southwest of the nearest land.

Following is a list of fifteen items that are intact and undamaged after the fire. In addition to these articles, you have a serviceable, rubber life raft with oars. The raft is large enough to carry yourself, the crew, and all the items in the following list. The total contents of all survivors' pockets are a package of cigarettes, several books of matches, and five one-dollar bills.

Your task is to rank the fifteen items that follow in terms of their importance to your survival. Place the number 1 by the most important item, the number 2 by the second most important, and so on through number 15, the least important.

- \_\_\_\_\_ Sextant
- \_\_\_\_\_ Shaving mirror
- \_\_\_\_\_ Five-gallon can of water
- \_\_\_\_\_ Mosquito netting
- \_\_\_\_\_ One case of U.S. Army C rations
- \_\_\_\_\_ Maps of the Pacific Ocean
- \_\_\_\_\_ Seat cushion (flotation device approved by the Coast Guard)
- \_\_\_\_\_ Two-gallon can of oil-gas mixture
- \_\_\_\_\_ Small transistor radio
- \_\_\_\_\_ Shark repellent
- \_\_\_\_\_ Twenty square feet of opaque plastic
- \_\_\_\_\_ One quart of 160-proof Puerto Rican rum
- \_\_\_\_\_ Fifteen feet of nylon rope
- \_\_\_\_\_ Two boxes of chocolate bars
- \_\_\_\_\_ Fishing kit