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Effects of Power on Negotiation Outcomes: The Moderating Role of Creativity

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Abstract

Negotiation power has long been assumed to be one of the most important drivers in the context of negotiations. Research attests that a powerful negotiator behaves differently than a powerless negotiator in many aspects, such as which negotiation strategy they choose. However, it has not yet been clear how power affects the outcome of a negotiation exactly and under which conditions. Indeed, sometimes high power does not translate to high outcomes automatically, and sometimes powerless negotiators can still maximize their gains regardless of being low in power. I propose that the level of creativity a negotiator holds will moderate the effect of negotiation power on negotiation outcomes, such that higher creativity leads to higher negotiation outcomes. Furthermore, I argue that the cognitive bias fixed-pie perception mediates the relationship between negotiation power and negotiation outcomes, and that creativity will moderate this mediated relationship. An experiment was conducted (N = 152), using a real-time, online-based negotiation game, in which negotiation power (high versus low) was manipulated within, and creativity (high versus low) was manipulated between negotiation dyads. The results of the study showed that powerful negotiators achieved higher individual negotiation outcomes than did powerless negotiators. No evidence was found for the moderating role of creativity nor for the mediating role of fixed-pie perception. I conclude that power is still the most important factor in the context of negotiations. Theoretical and practical implications of the findings are discussed.

Keywords: power, creativity, fixed-pie perception, negotiation

Effects of Power on Negotiations Outcomes: The Moderating Role of Creativity

Negotiation power is one of the major determinants of any negotiation. Power in the context of negotiations has been defined as the likelihood that a negotiator can stir the negotiation toward their desired outcome (Schaerer et al., 2015; Simon, 1953), and therefore it plays a big role, for example, in social relationships, at work, or in the political landscape. It is therefore of great interest not only to the scientific domain but also to practitioners what kind of factors influence negotiations and how exactly they are working.

When it comes to negotiation power, research has been inconclusive about its effects on negotiation outcomes (Schaerer et al., 2020). Ample literature shows that high-power negotiators gain higher outcomes than low-power negotiators (Kurtzberg, 1998) and that they are generally dominating the negotiation (Schaerer et al., 2016; Van Kleef et al., 2004, 2006). But there is also research indicating that the relationship between negotiation power and outcomes is not that simple (De Pauw et al., 2011). For instance, Anderson & Thompson (2004) found that positive affect was predictive of joint gains for powerful negotiators. Other research showed that individual differences explained a significant percentage of negotiation performance in a mixed-motive bargaining exercise (Elfenbein et al., 2008).

Adding to the current state of negotiation research, the study at hand aims to explore the conditions under which different levels of power influence negotiation outcomes, since it has not been entirely understood yet how this mechanism works (Brett & Thompson, 2016; Schaerer et al., 2020). More specifically, in the current work, the moderating role of creativity in the relationship between negotiation power and negotiation outcomes will be investigated. Creativity has been found to directly influence negotiation outcomes and therefore, this paper hypothesizes that creativity will influence the relationship between negotiation power and negotiation outcomes (Kurtzberg, 1998; Ogilvie & Simms, 2009).

Finally, to further illuminate the issue, the mediating role of the cognitive bias fixed-pie perception (FPP) will be examined, which is understood as a situation in which a negotiator perceives the outcome as fixed from the start (Bazerman et al., 1999; Thompson & Hastie, 1990). I hypothesize that FPP will mediate the effect of negotiation power on

negotiation outcomes since a fixed mindset about the negotiation hinders people to negotiate effectively to begin with. This bias could, however, be overcome once people engage in creative bargaining as creativity can stimulate cognitive flexibility (De Dreu et al., 2011; Lin et al., 2014; Nijstad et al., 2010), which in turn could mitigate FPP.

Literature Review

Integrative and Distributive Negotiation Outcomes

In many aspects of life, people are negotiating with each other. Most scientific articles understand negotiation as the 'communication between two or more parties with divergent interests to reach an agreement' (De Pauw et al., 2011). A classic example from everyday life would be the bargaining between someone who wants to sell their old car and a buyer who would like to purchase it for a low price. At first, the object of the bargaining might be the condition, equipment, and mileage of the car. However, the potential buyer could offer the seller to mow their lawn with their brand-new lawnmower to get the car owner to go down with the price in return. In this case, the two parties would have found a creative alternative solution to the negotiation. When negotiators can see the potential of finding a solution that satisfies both parties' needs, research uses the term integrative outcome to describe such a mutual agreement (De Dreu, 2004, p.115). On the other side, negotiations can also end with one person taking as much as they can. This is commonly understood as a distributive outcome, and it reflects a situation in which existing resources are being divided between parties so that one person gains a bigger share of the outcome at the expense of the other party (De Dreu, 2004, p.115). Negotiation outcomes have served many researchers as a measurement of how successful a person or a dyad negotiated (De Dreu et al., 2006; De Pauw et al., 2011; Harinck et al., 2000; Van Kleef et al., 2006). In sum, a negotiation can be either in favor of one party or in favor of both (or none of) the parties.

The Role of Power

Crucial to any negotiation is the concept of power. How a negotiation unfolds tends to be determined by the level of power that each of the parties might or might not have (Giebels et al., 2000; Schaerer et al., 2020; Van Kleef et al., 2006). In the context of negotiations,

power should not be seen as something that lies within an actor only. Of course, party A might have alternatives that party B is lacking, but B might have a different resource that gives them leverage over A. From this point of view, power could be seen as a relational concept (Deutsch, 1973, pp. 84-85). For the purposes of this study, however, the construct will be understood as negotiation power. That is, power arises with a resource advantage of negotiator A over negotiator B or vice versa (Kim et al., 2005; Lewicki et al., 2020, pp. 278-279). Having more or qualitatively better resources than the other party is commonly termed as having the best alternative to a negotiated agreement, (BATNA) (Pinkley et al., 1994). In the example about negotiating the car price, the potential buyer would have an attractive BATNA if they had one or even multiple other offers available, such as similar secondhand car offers or buying a modern e-bike. In other words, the buyer would not depend on closing the deal due to a lack of alternatives. Therefore, alternatives are a focal point of any negotiation. Throughout this paper, I use BATNA interchangeably with the term negotiation power.

Looking at power in the context of negotiations is not a new idea. It has been shown before that a bigger difference between power levels in a negotiation typically leads to more distributive outcomes (Mannix & Neale, 1993; Wolfe & McGinn, 2005). This idea is further corroborated by the finding that in teams with imbalanced power dispersion, power was negatively related to conflict resolution; however, this effect was mediated by the prevalence of power struggles (Greer & van Kleef, 2010). Conversely, when power levels in a negotiation are about equal this will lead to more integrative outcomes (Wolfe & McGinn, 2005). Giebels and colleagues showed that having a one-sided exit alternative to a negotiation gave that negotiator a better alternative, that is, a higher power level, and that this led those negotiators, on average, to more distributive outcomes (2000). Other research indicates that having alternatives in a negotiation increases both individual as well as joint outcome and that the size of the individual benefit relates proportionally to the quality of the alternatives (Pinkley et al., 1994). Taken together, it seems that powerful negotiators have the upper hand in various aspects of a negotiation. This leads me to ask the research question: Does higher

power result in higher negotiation outcomes? Looking at the direct effect of power on negotiation outcomes is an approach that has not been tried before and might therefore contribute to the current state of research.

Given the importance of power it is surprising that, despite a huge body of research on the role that power plays in a negotiation, it is currently not clear how power relates to negotiation outcomes precisely (Saorín-Iborra et al., 2013; Schaerer et al., 2020). To examine the mechanism of power on negotiation outcomes, it is imperative to look for factors that are suitable to explain the underlying mechanism. One of those factors is the level of creativity that a negotiator has. In the current paper, creativity will be investigated to understand under which conditions a high- or low-power negotiator achieves higher negotiation outcomes.

The Moderating Role of Creativity

In most research negotiation is being conceptualized as that research most a task that requires a creative approach toward solving a conflict of interest. Therefore, it has been argued that creativity must play an important role in the process of negotiation (De Pauw et al., 2011; Wilson & Thompson, 2014). Creativity can be defined as ‘a behavior resulting from constellations of personal characteristics, cognitive abilities, and social environments’ (Amabile, 1983). The outcome of this behavior is the generation of novel ideas (Runco, 2004). Wilson and Thompson reviewed the literature on creativity in negotiations and found that creativity was almost not considered at all; yet the key factors for a successful negotiation and the precursors for creative output are surprisingly similar (Wilson & Thompson, 2014). In his influential work on creative collaboration in groups, Osborn defined four rules for coming up with creative ideas (which can also be thought of as brainstorming rules). First, criticism about ideas should be exchanged after the idea generation to avoid production blocking (Nijstad et al., 2003). Second, the more unique the idea, the better, since it is easier to limit an idea than to make it more interesting later. Third, the more ideas can be generated the better because it increases the likelihood that one of the ideas is useful. Fourth, after idea generation, building on each other’s ideas is a good way to achieve the best possible idea (Osborne, 1953, pp. 300).

Research generally reports a positive relationship of creativity on negotiation outcomes. Scott et al. conducted a quantitative meta-analysis and found that people who are being trained in creativity tend to negotiate more successfully (2004). To further corroborate this, one intervention study found that negotiators who were trained in creative thinking were better at reaching integrative outcomes than participants who received the usual negotiation training (Ogilvie & Simms, 2009). Early research has shown that dyads' creative abilities such as fluency, flexibility, and originality positively predicted integrative outcomes (Kurtzberg, 1998). Interestingly, the creativity of only one individual in the dyad was an even stronger and sufficient predictor for joint gain (Kurtzberg, 1998). Making use of a negotiation task and payoff matrices, a more recent study showed that creativity had a direct effect on negotiation outcomes (Schei, 2013). Taken together, research firmly attests that creativity is of great importance when it comes to negotiating.

Since creativity seems to play an important role in the context of negotiations, it is imperative to take a closer look at potential interdependencies with power. Surprisingly, no previous study has investigated the potential moderation of creativity on negotiation outcomes. Keeping in mind the inconclusive state of the research about how negotiation power influences negotiation outcomes, I suggest that the level of creativity of negotiators will help to explain this relationship. The underlying assumption behind this is that creative people might be able to find a solution that maximizes negotiation outcomes, even if they have little to no power. For example, someone who has low negotiation power but is creative might still be able to find a solution to maximize the negotiation outcome. Accordingly, I argue that a high level of creativity enables low-power negotiators to gain higher negotiation outcomes. Thus, the central research question this paper asks is: Does the level of creativity in a negotiation moderate the relationship between negotiation power level and negotiation outcomes?

The Mediating Role of Fixed-Pie Perception

In this paper, I investigate how the mechanism between power and negotiation outcomes can be explained by the cognitive bias fixed-pie perception (FPP). While FPP could

explain why sometimes there is an effect of power and sometimes not, I suggest that the mechanism will be contingent on the level of creativity.

Sometimes, people think that a negotiation could prove difficult or even be futile because they assume that the other party has oppositional goals. Fixed-pie perception, also known as fixed-sum error, describes a situation in which a negotiator considers the outcome of a negotiation as fixed – before, throughout, and even after the negotiation has ended (Bazerman et al., 1999; Thompson & Hastie, 1990). Someone who perceives a negotiation outcome as fixed assumes that whatever might be good for the other party must be bad for them, which could lead to focusing on distributive outcomes. However, the subjective perception of a fixed outcome is almost always wrong as most negotiations have the potential for an integrative bargaining outcome (Thompson & Hastie, 1990).

Nevertheless, it is very well possible to breach a cognitive barrier like FPP. For example, information exchange is considered a key ingredient to integrative negotiations because it decreases the odds that a negotiator will perceive an outcome as fixed if combined with the expectation that integrative outcomes are possible (Pinkley et al., 1995; Thompson & Hrebec, 1996). It has also been shown before that negotiators who can adjust their mental model about the negotiation are more successful (Liu et al., 2015). Being able to adjust mentally is very similar to the concept of cognitive flexibility. This construct has been defined as the ‘ease with which people can switch to a different approach or consider a different perspective’ (Nijstad et al., 2010), or the ‘mental ability to (...) overcome fixed association patterns, and to make new associations’ (Müller et al., 2016). It could be argued that cognitive flexibility can be facilitated by creativity since the precursors for being creative require cognitive flexibility in turn (see previous explanation about the four rules of creativity). A possible relationship between creativity and cognitive flexibility has been hypothesized before (De Dreu et al., 2011; Lin et al., 2014; Müller et al., 2016; Nijstad et al., 2010). Based on their research on how meditation increased cognitive flexibility, Müller et al. (2016) suggested that being cognitively flexible might lead to an increase in creativity. In this regard, creativity, and a cognitive bias like FPP could be seen as opposing poles on a high-to-

low spectrum of cognitive flexibility. Following this logic, it seems sensible to assume that the FPP bias could be overcome once negotiators engage in creative bargaining. An example of how this mechanism is hypothesized to work might help to make this point clearer.

When a person who is low in power negotiates with a person who holds the negotiation power, this low power negotiator might perceive the outcome as fixed because to them it seems pointless to negotiate if they have no leverage over the other person. However, this stalemate might be overcome if approached with sufficient creativity. A low-power negotiator who is creative might see potential solutions to a seemingly fixed outcome after all. For example, someone with a limited budget who wants to buy specific computer hardware from another person would have low power in a demand-driven market. The potential seller only wants to sell for a fixed price and has many requests from potential buyers. In this scenario, the potential buyer with a limited budget would be likely to perceive the negotiation outcome as fixed. Yet, hypothetically, the buyer could offer their computer expertise to assist the seller with fixing a software issue on another device and purchase the computer for a lower price in turn. Thus, the buyer would be less likely to perceive the outcome as fixed. The effect of negotiation power on negotiation outcome would be explained by the fixed-pie perception, contingent on the level of creativity of the low power negotiator, which would moderate the mediator FPP.

To date, research about the relationship between FPP and creativity or power is virtually non-existent. This is rather surprising since there is abundant research on the relationship between FPP and negotiation outcomes available in general. Influential articles in this area focused on reducing FPP during negotiations and examined factors like information exchange, ability, and processing (Pinkley et al., 1995; Thompson, 1991), the context of the issue (Harinck et al., 2000), emotional expressions (Pietroni et al., 2008), goal orientations (Katz-Navon & Goldschmidt, 2009), negotiation techniques (Klaming et al., 2009), and mental-model adjustments (Liu et al., 2015) as ways to deal with the cognitive bias.

To shed light on this issue, I formulate the research question: Does creativity moderate the mediated relationship between negotiation power on negotiation outcomes? Based on the literature review above I state the following hypotheses:

Hypotheses

Hypothesis 1: High power negotiators will achieve higher individual negotiation outcomes as opposed to low power negotiators.

Hypothesis 2: Creativity will moderate the relationship between negotiation power and negotiation outcomes such that in the high (as opposed to low) creativity condition powerful and powerless negotiators will achieve joint (more equal) negotiation outcomes.

Hypothesis 3: Fixed-pie perception will mediate the relationship between the effect of power on negotiation outcomes and this will, in turn, be moderated by the level of creativity, such that negotiators will report lower fixed pie perception when in the high creativity condition (as opposed to the low creativity condition). See Appendix A for a visualization of the hypothesized model.

Overview of the Study

Frequently, the outcome of a negotiation is measured on a continuous scale. Some studies provide participants with issue charts where possible negotiation outcomes correspond with a certain number of points (De Dreu et al., 2006, Van Kleef et al., 2006), others deploy a settlement price as an economical negotiation outcome (De Pauw et al., 2011), yet others make use of multiple negotiation topics and consider the frequency of agreements as a valid measure for negotiation outcome (Harinck et al., 2000). How negotiation outcomes are being operationalized greatly depends on the design of the study. For example, it is not sensible to measure the frequency of concessions if there are only two negotiation topics.

In this study, participants will negotiate with each other on a real-time basis. Creativity will be randomly manipulated by including a creativity prime in the explanation of the idea generation phase of the experiment. Power will be randomly manipulated by the role allocation such that each dyad has, in principle, a power imbalance. Pay-off schedules will be

used to inform participants about the allocation of points, like the issue charts that previous research utilized (De Dreu et al., 2006; Van Kleef et al., 2006). Specifically, the negotiators are forced to transform their real-time negotiation outcomes to a set of multiple-choice items, each of which yields a certain number of points. These points will be used as the outcome variable. That way, individual, as well as joint negotiation outcomes can be analyzed. The higher the number of points, the higher the individual negotiation outcome and vice versa.

Method

Participants

A total sample size of 169 participants was collected. After data inspection 9 cases were removed from the data set due to very short or very long times of being in the survey, leaving a total sample size of 160 participants, forming 80 dyads. Four participants indicated that their data was non-usable, thus, 4 dyads had to be excluded from the data set, leaving a final sample size of $N = 152$. G*Power indicated that a sample size of $n = 153,72$ would yield a power-level of $1 - \beta = .73$ for an effect size of $f = .25$. From those participants, the average age was $M_{age} = 36.89$ with a standard deviation of $SD_{age} = 10.55$. The age of the participants ranged from 19 to 63 years. There were 77 female participants and 75 male participants. 136 participants were employed. 72 participants indicated being employed in a managerial role. Most of the sample $n = 96$ indicated that holding a university/college degree, with a master's degree $n = 26$ being the second most common degree. All the participants were of British nationality.

Procedure

Participants were recruited online using Prolific which is a web service for launching studies and gathering participants. The survey was designed on Qualtrics. Participants needed to be sufficient English speakers and were all based in the UK. Since the dyadic study design required participants to negotiate with each other on a real-time basis, the location requirement was restricted to the UK. Being in the same time zone and speaking the same language would object to the negotiation as little bias as possible. The participants were paid £2.50 for participating in the survey.

Participants were matched up automatically. They were informed that they had to play a negotiation task with another person with whom they would be randomly matched. Participants were matched in negotiation dyads, and they negotiated two issues. The survey started with a general introduction to the content of the experiment and an informed consent. After that, participants were instructed to assume the role of a co-worker in a company who wants to go on vacation. A conflict arose when another co-worker (the other participant) also wanted to go on vacation during the same period. They were informed that their boss told them that one of them had to work throughout the period, leaving open the opportunity of splitting the time between them. The participants were then informed that they were supposed to negotiate with their counterparts about 1) when they would go on vacation and 2) for how long (for details, see Appendix B).

At the end of this introduction part of the survey, participants were randomly assigned to either a high or a low negotiation power condition within their dyads. Each dyad was also randomly assigned to a high or low creativity condition. Thus, power was manipulated within dyads, whereas creativity was manipulated between dyads. The randomization process was automated in Qualtrics.

After the manipulations, the two negotiators were able to write in a text box and exchange their ideas in real-time with each other. Participants were then asked to combine their ideas to come up with a joint solution to the two issues at hand. They were then given some time to think about the result of their discussion and asked in the following to propose a concrete offer and send it to their co-worker. In the next step, dyads were introduced to a payoff schedule (like the one used in Fousiani et al., 2021; see also Schei, 2013) which indicated which solution corresponded with the number of points that could be earned (Appendix B). Negotiators were told that their decisions must be based on the payoff schedule. In the last interaction step, the negotiating parties were then asked to chat with each other and to agree on a joint solution based on the payoff schedule. Finally, each of the participants needed to indicate which option they decided on by picking a multiple-choice item that corresponded to the options in the payoff schedule.

Following the interaction part of the survey, the manipulation checks for both power and creativity were placed. After that, participants were asked to fill out several scales. The survey also checked whether Covid-19 had influenced the way participants responded. Finally, participants received a debriefing about the purpose of the study and received a completion code with which they were able to claim their compensation.

Design

A mixed design was applied. While power (high vs. low) was manipulated within dyads, creativity (high vs. low) was manipulated between dyads, constituting a 2 x 2 mixed design.

Manipulation of Negotiation Power. Power was manipulated via BATNA, similarly to van Kleef et al. (2006), by telling the negotiators that, if they would not reach a mutual agreement, their boss would either prioritize their request over their colleague's (high power condition, see Appendix B) or prioritize their colleague's request over theirs (low power condition, see Appendix B).

Manipulation of Creativity. Following power instructions, the negotiators were asked to come up with ideas about how to solve both issues. In this section, creativity was manipulated by making the concept salient or not. Participants in the high creativity (Appendix B) condition were asked to imagine what a creative negotiator would do if they were in their position. Additionally, the four rules of creativity were made salient. More specifically, participants were encouraged to show a non-judgmental attitude, to think outside of the box, to put on quantity before the quality of ideas, and to build on each other's ideas (Osborne, 1953, pp. 300). Participants in the low creativity condition (Appendix B) did not receive this instruction and were instead asked to write down as many American fast-food chains as possible (filler task) once they were done with the idea generation. Importantly, the generated ideas were not sent to the corresponding counterpart yet.

Measures

Manipulation Checks for Power. A scale consisting of four items was included to check whether the power manipulation had the intended effect, similar to Van Kleef et al.

(2006). Examples of items were: 'I was in an advantageous position compared to my colleague', or 'My colleague was in a better negotiation position than me'. The individual items were assessed by employing a 7-point-Likert scale, ranging from 1= totally disagree to 7 = totally agree (Appendix B). The values of item 3 were inversed in the analysis because it was a reversed-scored item. Reliability checks for the items showed that $\alpha = .86$ for the overall scale.

Manipulation Checks for Creativity. A scale consisting of five items was included to check whether the creativity manipulation had the intended effect. The first item was utilized to see if the manipulation brought the participants to be more creative. The remaining items were based on Osborn's (1957, pp. 300) four guidelines of brainstorming to determine whether participants engaged in the brainstorming activity they were given, for example: 'I was encouraged to think creatively during this negotiation', or 'I was encouraged to think 'out of the box' while generating ideas for possible solutions'. Reliability checks for the items showed that $\alpha = .90$ for the overall scale.

Fixed-Pie Perception. The scale for FPP was self-developed yet inspired by Liu et al. (2012). It consisted of four items. An example item for this scale is 'To what extent did you feel that your colleague's interests/desires were directly opposed to your own?'. All items were assessed on a 7-Point Likert Scale, ranging from one (not at all) to seven (to a great extent). Reliability checks for the items showed that $\alpha = .82$ for the overall scale.

Payoff Schedule. The payoff schedule was a representation of the alternatives as suggested by the negotiators' boss. The payoff schedule had two versions for the two negotiators, one for each power condition. As described earlier, every dyad had to reach an agreement on which option on the payoff schedule they chose. However, the points for the options yielded a different number of points for each of the individual negotiators. To illustrate this: For the first negotiation topic (exact period off) agreeing on option three would award the high-power negotiator with 300 points, but the low-power negotiator with 100 points only. In this example, the high-power negotiator could achieve 500 points maximum, while the low-power negotiator could achieve 250 points maximum. This scheme was

reversed for the second negotiation topic. This way, agreeing on an overall 50/50 split-up between the negotiators was still possible, but only if they negotiated creatively. However, not agreeing would have resulted in the high-power party receiving 300 points compared to 150 points for the low-power party.

Individual negotiation outcomes were computed by adding up each of the negotiator's points into a newly created composite scale. For each dyad, a joint negotiation outcome was computed by adding up these individual total outcomes into a newly created scale.¹

Both visual inspection and statistical analysis of the two scales showed that the responses were approximately normally distributed as Levene's test for equality of variances was non-significant for both high-power and low-power responses. In addition, Box's test of equality of variances matrices yielded a value of *Box's M* = .903 at $p = .832$. Thus, the covariance matrices between the groups could be seen as equal and satisfied the assumptions of a repeated measures ANOVA. Sphericity was not an issue since there were only two levels for power and creativity, respectively. Repeated measures ANOVA was then carried out to test for main effects of power and creativity and their potential interaction effect.

Results

Manipulation Checks

Manipulation checks for power and creativity were analyzed by means of univariate ANOVAs. For the power manipulation, the analysis yielded a main effect of negotiation power on perceived negotiation power $F(3, 148) = 53.08, p < .001, \eta_p^2 = .48$. Participants who were in the high-power condition ($M = 4.81, SD = .12$) rated their perceived power higher than those in the low-power condition ($M = 2.83, SD = .13$). The creativity prime did not have a significant effect on perceived power $F(1, 148) = 1.5, p = .222, \eta_p^2 = .01$. The interaction between power condition and creativity condition was non-significant $F(1, 148) = .486, p = .487, \eta_p^2 = .003$. A main effect of creativity on perceived creativity was found $F(3, 148) = 38.05, p < .001, \eta_p^2 = .31$. Participants who received a creativity prime ($M = 5.62, SD =$

¹ Additional scales were idea evaluation and conflict perception. These scales were not introduced up until now because the study design was made so that several students could include the scales that were important to their hypotheses. Hence, the scales are not considered in the current paper.

.14) rated their perceived creativity higher than those in the low power condition ($M = 3.89$, $SD = .17$). The power condition did not have a significant effect on perceived creativity $F(1, 148) = .63$, $p = .43$, $\eta_p^2 = .004$. The interaction between power condition and creativity condition was non-significant $F(1, 148) = 3.725$, $p = .145$, $\eta_p^2 = .014$. Given these results, it can be concluded that both manipulations worked as intended.

Hypothesis Testing

Accordingly, a 2 (power: high/ low) by 2 (creativity: high/ low) ANOVA with repeated measures was conducted where the first factor was the within-subjects factor, and the second factor was the between-subjects factor (see Appendix A). Negotiation power had a significant main effect on the negotiation outcomes $F(1, 74) = 38.86$, $p < .001$, $\eta_p^2 = .344$ with high-power negotiators $M = 232.6$, $SD = 71.3$ having achieved higher negotiation outcomes than low-power negotiators $M = 114.8$, $SD = 112.3$. These results provide support for Hypothesis 1.

There was no significant main effect of creativity on negotiation outcomes $F(1, 74) = .501$, $p = .481$, $\eta_p^2 = .007$. The interaction between negotiation power and creativity was found to be non-significant $F(1, 74) = 1.683$, $p = .199$, $\eta_p^2 = .022$. These results do not support Hypothesis 2.

To test for potential mediation of FPP, a univariate ANOVA was conducted where FPP was the dependent variable, and the negotiation power and creativity conditions were the fixed factors. Neither the main effect of power $F(1, 148) = .543$, $p = .462$, $\eta_p^2 = .004$, nor the main effect of creativity $F(1, 148) = .073$, $p = .788$, $\eta_p^2 = 0$ or the interaction between them $F(1, 148) = .111$, $p = .739$, $\eta_p^2 = .001$ came out significant. These results do not support Hypotheses 2 and 3.

Discussion

In this study, the effect of negotiation power on negotiation outcomes was investigated. The hypothesis was that higher power would initially lead to higher negotiation outcomes since high-power negotiators are dominating the negotiation in several ways, be it through positive affect (Anderson & Thompson, 2004), instrumentalizing anger to be more assertive (Overbeck et al., 2010), or by threatening the other party (De Dreu, 1995). Further,

the moderating effect of creativity was examined. Creativity was thought to moderate the effect of negotiation power on negotiation outcomes because creative negotiators with low power might find an integrative outcome and therefore achieve better results than powerless negotiators without the creative approach. This was hypothesized because if people engage in creative thinking, this can lead to higher integrative outcomes (Ogilvie & Simms, 2009; Wilson & Thompson, 2014). Finally, creativity was hypothesized to moderate the relationship between negotiation power and negotiation outcomes when FPP mediated this relationship. The effect of negotiation power on negotiation outcome would be explained by the fixed-pie perception, contingent on the level of creativity of the low power negotiator since increasing cognitive flexibility could hypothetically reduce FPP (Liu et al., 2015; Müller et al., 2016).

The results yielded evidence for the main effect of negotiation power on negotiation outcomes and provided support for H1. That is, negotiators with high negotiation power achieved higher negotiation outcomes compared to their low negotiation power counterparts. This result is in line with previous research which pointed in the direction of a positive relationship between power and negotiation outcomes (Kurtzberg, 1998; Pinkley et al., 1994).

Contradicting hypothesis 2, creativity did not moderate the relationship between negotiation power and negotiation outcomes. Creativity did not have a main effect on negotiation outcomes and could therefore not be considered a viable moderator. This finding is surprising because creativity has been found to positively affect negotiation outcomes before (Kurtzberg, 1998; Schei et al., 2013). The absence of a main effect of creativity may be due to the experimental design of the study. Although the creativity manipulation worked as intended, the fact that negotiators had to transform their generated ideas to pay-off schedules could potentially have corrupted the creative aspect of the negotiation. It is important to highlight again that participants were asked to choose between different options provided by their boss. The underlying idea behind this step in the survey was to simulate a real-world scenario. While this might have improved the external validity of the experiment, construct validity might have suffered under this way of measuring creativity.

The results do not support hypothesis 3, since neither power nor creativity had a significant effect on fixed-pie perception, thus rendering FPP unusable for mediation. Yet, FPP should not be disregarded in the context of negotiations, since other studies already established its importance (Harinck et al., 2000; Kern et al., 2020; Klaming et al., 2009; Liu et al., 2015).

Limitations and Future Directions

As mentioned before, the way that negotiation outcomes were measured is a limiting factor in this study. While measuring how well negotiators did by using a payoff schedule is a practical solution to measuring negotiation and is assumingly higher in external validity, it also has adversary results. Negotiation outcomes were hypothesized to be influenced by negotiation power and creativity; however, the level of creativity was not ideally translated toward negotiation outcomes. While negotiators were asked to negotiate creatively according to Osborn's four rules (1953, pp. 300) in the high creativity condition, this effort of generating unique solutions to the two issues was then translated to a payoff schedule. It could be that forcing creative output into a fixed set of six multiple-choice options did not reflect the creative effort of the participants sufficiently. This might have led the negotiators to just agree on an alternative simply because they had to do it to complete the survey successfully. Future research could therefore focus on finding a way of allowing creativity to influence negotiation outcomes more directly. For example, instead of treating creativity as a categorical variable, researchers could instead attempt to code creative outlet by rating it on each of the four dimensions of creativity. Adding up the points for each of the categories, the level of creativity could be measured continuously, based on how De Pauw et al. (2011) applied the Torrance Figural Test of Creative Thinking (Torrance, 1998). The effect of this composite score on negotiation outcomes could be interpreted more meaningfully and construct validity could be improved.

Another explanation to why creativity did not have an effect could be the strong focus on the power condition in the study design. Sligte et al. (2011) suggested that powerless negotiators are thinking more creatively only when the power hierarchy is unstable (i.e. when

a powerful negotiator can become powerless, and a powerless negotiator can become more powerful). This could be one of the reasons why creativity was not found to moderate the relationship between negotiation power and negotiation outcomes since power hierarchy was stable in this design. Throughout the survey, it was salient who had negotiation power. In the study design, power was stable, and negotiators were reminded about this multiple times. Future research could try to conceptually replicate the current study by adding a condition with an unstable power hierarchy (a 2 x 2 x 2 mixed design) to see if this would then allow powerless negotiators to engage in creativity and therefore attain higher negotiation outcomes.

Another limitation of the study is that age was not considered. Given that the age range of the sample was 44 years, it seems sensible to assume that differences in (creative) negotiation might occur. Age has been a well-researched factor and is thought to have a curvilinear relationship with creativity (Rietzschel et al., 2016). Moreover, younger negotiation dyads seem to be more apt than older dyads or age-heterogeneous dyads in maximizing joint outcomes as well as being more inclined to come forth with more integrative solutions (Kappes et al., 2020). Not considering age differences could explain the absence of an effect of creativity, rendering it ill-suited for moderation analysis. Controlling for age in a secondary analysis could have added to the literature in so far as to see whether the age of participants was responsible for the absence of the effect of creativity. Future research would be well-advised to investigate these potential age differences when it comes to negotiations.

A strength of the current study is its new and innovative real-time online negotiation design. To the best of the author's knowledge, this was a novel approach compared to what previous research has applied. That the approach seemed to work was also apparent in the participants' feedback that the researchers encountered after the study had been run. Participants were generally very fond of the type of research design, praising it for the interactive component that made it easier for them to take the survey seriously, which in turn increased the validity of the study.

Theoretical and Practical Implications

The current study has implications for both theory and practice. Regarding theoretical implications, this study has shown the effect of negotiation power on negotiation outcomes and confirms previous research that pointed into this direction (Kurtzberg, 1998; Mannix & Neale, 1993; Pinkley et al., 1994; Schaerer et al., 2016). Specifically, high power negotiators were able to gain higher individual negotiation outcomes compared to low power negotiators, and this was independent of their level of creativity or fixed-pie perception. In contrast to the creativity research which made an argument for creativity having a positive influence on negotiation outcomes (Schei, 2013; Wilson & Thompson, 2014), the study at hand did not find any evidence for this idea. As discussed before, however, this might be due to the experimental design of this study. Hence, it remains to be seen whether creativity has an impact on negotiation outcomes. Looking at FPP, the non-significant results make further research necessary. In particular, the relationship between creativity and FPP should be investigated since FPP and creativity may be significantly correlated. High cognitive flexibility is probably needed for tasks that demand high creativity, such as coming up with an alternative solution to a complex negotiation.

For practical purposes, the results of this study corroborate the importance of having alternatives in a negotiation setting. Alternatives to a negotiated agreement (BATNA), or exit options, are what makes a negotiator powerful. This means for everyday life that being mindful about coming up with alternatives before a negotiation starts might be a good idea since it is unclear whether a creative effort during the bargaining always works.

Conclusions

In sum, the results provided evidence that powerful negotiators achieve higher outcomes than low-power negotiators. Although participants came up with creative solutions on both sides, it seems the effect of creativity cannot make up for the difference in negotiation power. The level of power a negotiator holds still seems to be one of the most important determinants of a successful negotiation for the individual.

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Appendix A

Table 1
Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^c
Power	Pillai's Trace	.344	38.856 _b	1	74	.000	.344	38.856	1.000
	Wilks' Lambda	.656	38.856 _b	1	74	.000	.344	38.856	1.000
	Hotelling's Trace	.525	38.856 _b	1	74	.000	.344	38.856	1.000
	Roy's Largest Root	.525	38.856 _b	1	74	.000	.344	38.856	1.000
Power * CreaDum	Pillai's Trace	.022	1.683 _b	1	74	.199	.022	1.683	.249
	Wilks' Lambda	.978	1.683 _b	1	74	.199	.022	1.683	.249
	Hotelling's Trace	.023	1.683 _b	1	74	.199	.022	1.683	.249
	Roy's Largest Root	.023	1.683 _b	1	74	.199	.022	1.683	.249

- a. Design: Intercept + CreaDum
Within Subjects Design: Power
b. Exact statistic
c. Computed using alpha = .05

Table 2
Tests of Between-Subjects Effects

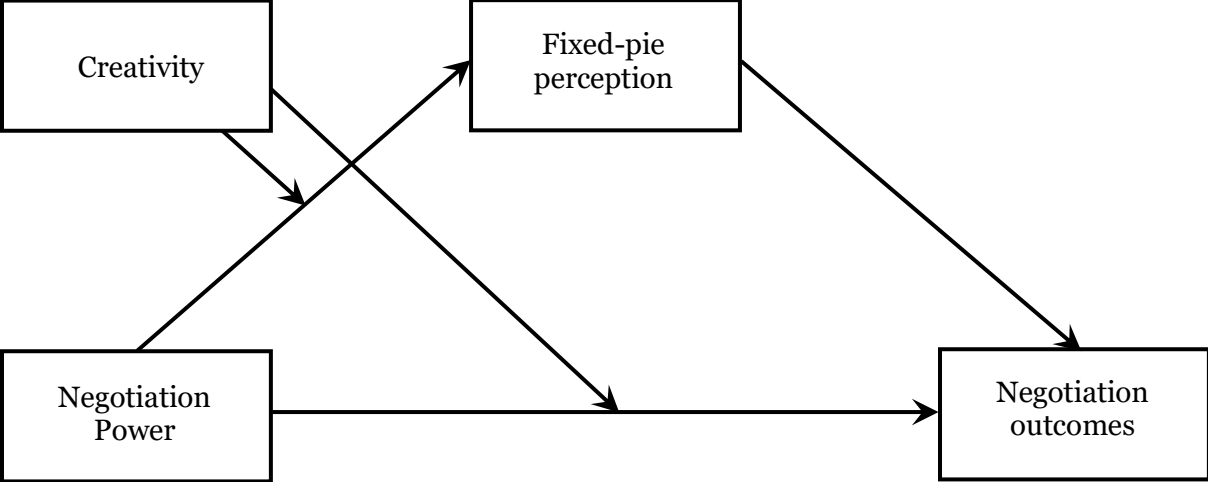
Dependent Variable: recoded_MEAN_FPP

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1.351 ^a	3	.450	.239	.869	.005
Intercept	1222.548	1	1222.548	648.000	.000	.814
PowerDum	1.025	1	1.025	.543	.462	.004
CreaDum	.137	1	.137	.073	.788	.000
PowerDum * CreaDum	.209	1	.209	.111	.739	.001
Error	279.224	148	1.887			
Total	1576.063	152				
Corrected Total	280.575	151				

- a. R Squared = .005 (Adjusted R Squared = -.015)

Figure 1

The Hypothesized Model



Appendix B

Introduction and Informed Consent

Dear participant,

Welcome and thank you for taking the time to participate in this research project! Before you proceed, please ensure that you remain undisturbed during the time it takes to complete this study (approx. 30 minutes).

The study consists of three parts:

1. General information and instructions
2. An experiment in which you are asked to negotiate with another person in a real-time chat
3. Concluding questions

There are no anticipated risks for this study and participation is completely voluntary. You can stop participating at any point, should you wish to.

The data obtained are treated anonymously and kept confidential, thus you cannot be personally identified through them.

Should you experience any technical issues during the experiment please contact negotiationstudy@rug.nl for trouble shooting. For questions regarding the study itself, you can email the main investigators: dr. Kyriaki Fousiani (k.fousiani@rug.nl), or dr. Kiki de Jonge (k.m.m.de.jonge@rug.nl).

Important: Note that you might be unable to complete the survey via your phone, thus laptop or computer browsers are recommended.

Instructions

Imagine that you are working for a company and it's time to plan your summer holiday absence!

Holiday policy: In your company, the holiday period is between 1st of July and 15th of September while the duration of employees' holidays ranges between 9 and 14 days (14 days in a row is the maximum one can get).

Your problem: The problem is that both you and a colleague of yours would like to go on holiday exactly at the same period, namely during the 1st and 2nd week of July. This is a problem because your boss cannot approve your leave even if slightly it overlaps with the leave of another colleague.

Moreover, both you and your colleague wish to take a leave for 14 days at once. However, your boss cannot grant 14 days of holidays to both of you simultaneously as this would cause delays in several projects. You can only take 14 days of holidays if your colleague accepts to take fewer days off. Otherwise, you will have to take fewer days off.

In the following step, you are invited to negotiate with your colleague and see whether you can reach an agreement.

You reach an agreement only if both of you agree a) on the exact period of your summer holidays and b) on the exact duration of your holidays.

Manipulations

Manipulation of Low Power

Important to know before you start negotiating:

In the unfortunate event that you do not reach an agreement with your colleague, your boss will have to decide for the both of you...

Your boss is willing to prioritize your colleague's request over yours on the basis that your colleague has a large family and is rather inflexible regarding holidays.

In that case, neither your colleague nor you will get a leave exactly when you want it and for your preferred duration. However, your boss's decision will be to some extent adjusted to your colleague's preferences. This is a big disadvantage for you. Therefore, you might be better off if you negotiate and try to reach an agreement with your colleague.

Manipulation of High Power

Important to know before you start negotiating:

In the unfortunate event that you do not reach an agreement with your colleague, your boss will have to decide for the both of you...

Your boss is willing to prioritize your request over your colleagues' on the basis that you have a large family and you cannot be very flexible regarding holidays.

In that case, neither your colleague nor you will get a leave exactly when you want it and for your preferred duration. Thus, even though your boss's decision will be to some extent adjusted to your preferences, which is a big advantage for you, you might be better off if you negotiate and try to reach an agreement with your colleague.

Manipulation of High Creativity

We believe it is important for you, negotiators, to first brainstorm and think of many possible ideas before discussing the issues with your counterparts.

The issue is: 'Both me and my colleague want to have holidays a) during the same period (1st and 2nd week of July), and b) for as long as possible (14 days in a row). This is not possible for both of us.'

Please think of many possible ideas on how to resolve both topics of disagreement (time and duration of absence) and write your ideas down. For this:

Try to come up with as many ideas, solutions, or suggestions as you can think of. This increases the chances that you think of creative ideas to solve both issues.

Aim to think out-of-the-box: try to come up with new, wild or seemingly unfeasible ideas.

Such original ideas are actually very helpful to solve negotiation issues!

No idea is too strange or weird at this point, let all your ideas flow to come to new ideas. Do not criticize your own ideas.

Try to combine your ideas and build on them to come to new ones.

Keep in mind that what you write will not be sent to your colleague.

You have up to 6 minutes for this task. After 6 minutes, you are automatically referred to the next page. After 5 minutes, the 'next' button will appear and you can manually proceed to the next page, if you want to, where you will chat with your colleague. During the chat, you'll be able to see the ideas you've written down.

Manipulation of Low Creativity

Please try to come up with one possible solution concerning the disagreement with your colleague on both topics (time and duration of holidays) and write it down below.

After you are done with this task, we would like to ask you to do something different: Please, think of as many American food-chains as possible that exist in Europe and type the names of the food-chains in the same box with your proposed solution (the names of the food chains should follow your proposed solution).

Keep in mind that what you write will not be sent to your colleague.

You have up to 6 minutes for this. After 6 minutes, you are automatically referred to the next page. After 5 minutes, the 'next' button will appear and you can manually proceed to the next page, if you want to, where you will chat with your colleague.

Payoff Schedules A & B

In real life it is not always possible to implement our ideas or proposed solutions. Instead, we are often presented with fixed alternatives, and we are invited to choose among them.

Therefore, to simulate this real-life issue, we will now present you with certain options, that you can see in the payoff schedule below. Imagine that these are the alternatives that your boss proposes...

You have to discuss with your colleague and agree on one single option per topic!

Instructions on how to use the payoff schedule:

- 1) Each option of the payoff slip corresponds to earned points. Your goal is to earn as many points as possible, while arriving at a consensus on both negotiation topics.
- 2) The points in your colleague's payoff schedule might differ from yours, however it is still possible to find options that fulfil both colleagues' wishes.

Essentially, you will first discuss the options with your colleague and agree on one of them.

After that, you are asked to enter the number from the payoff schedule that corresponds to the option that you and your colleague jointly selected.

After 3 minutes in the chat, you are automatically referred to the next page.

Please take some time to read the payoff schedule very carefully so that you know how many points each alternative per topic might give you.

Negotiation issue 1

Exact period of time off	
Alternative	
1) You take time off during the 1st & 2nd week of July and your colleague takes off during the 1st & 2nd week of September	500
2) You take time off during the 2nd & 3rd week of July and your colleague takes off during the 3rd & 4th week of August	400
3) You take time off during the 3 rd & 4th week of July and your colleague takes off during the 2nd & 3rd week of August	300
4) You take time off during the 2nd & 3rd week of August and your colleague takes off during the 3rd & 4th week of July	200
5) You take time off during the 3rd & 4th week of August and your colleague takes off during the 2nd & 3rd week of July	100
6) You take time off during the 1st & 2nd week of September and your colleague takes off during the 1st & 2nd week of July	0

Negotiation issue 2

Exact duration of time off	
Alternative	
1) You take 14 days off and your colleague takes 9 days off	250
2) You take 13 days off and your colleague takes 10 days off	200
3) You take 12 days off and your colleague takes 11 days off	150
4) You take 11 days off and your colleague takes 12 days off	100
5) You take 10 days off and your colleague takes 13 days off	50
6) You take 9 days off and your colleague takes 14 days off	0

Negotiation issue 1

Exact period of time off	
Alternative	
1) Your colleague takes time off during the 1 st & 2 nd week of July and you take time off during the 1 st & 2 nd week of September	0
2) Your colleague takes time off during the 2 nd & 3 rd week of July and you take off during the 3 rd & 4 th week of August	50
3) Your colleague takes time off during the 3 rd & 4 th week of July and you take off during the 2 nd & 3 rd week of August	100
4) Your colleague takes time off during the 2 nd & 3 rd week of August and you take off during the 3 rd & 4 th week of July	150
5) Your colleague takes time off during the 3 rd & 4 th week of August and you take off during the 2 nd & 3 rd week of July	200
6) Your colleague takes time off during the 1 st & 2 nd week of September and you take off during the 1 st & 2 nd week of July	250

Negotiation issue 2

Exact duration of time off	
Alternative	
1) Your colleague takes 14 days off and you take 9 days off	0
2) Your colleague takes 13 days off and you take 10 days off	100
3) Your colleague takes 12 days off and you take 11 days off	200
4) Your colleague takes 11 days off and you take 12 days off	300
5) Your colleague takes 10 days off and you take 13 days off	400
6) Your colleague takes 9 days off and you take 14 days off	500

1st Offer (High Power)

For the issue ‘Exact period of time off’, both I and my colleague selected the following alternative:

(Remember your points only count if you have both agreed on the same alternative). Please scroll down if you want to see the payoff schedule again.

- 1) You take time off during the 1st & 2nd week of July and your colleague takes off during the 1st & 2nd week of September
- 2) You take time off during the 2nd & 3rd week of July and your colleague takes off during the 3rd & 4th week of August
- 3) You take time off during the 3rd & 4th week of July and your colleague takes off during the 2nd & 3rd week of August
- 4) You take time off during the 2nd & 3rd week of August and your colleague takes off during the 3rd & 4th week of July

5) You take time off during the 3rd & 4th week of August and your colleague takes off during the 2nd & 3rd week of July

6) You take time off during the 1st & 2nd week of September and your colleague takes off during the 1st & 2nd week of July

We did not agree on a solution (this alternative gives you 300 points for this issue)

1st Offer (Low Power)

For the issue "Exact period of time off", both I and my colleague selected the following alternative:

(Remember your points only count if you have both agreed on the same alternative). Please scroll down if you want to see the payoff schedule again.

1) Your colleague takes time off during the 1st & 2nd week of July and you take time off during the 1st & 2nd week of September

2) Your colleague takes time off during the 2nd & 3rd week of July and you take off during the 3rd & 4th week of August

3) Your colleague takes time off during the 3rd & 4th week of July and you take off during the 2nd & 3rd week of August

4) Your colleague takes time off during the 2nd & 3rd week of August and you take off during the 3rd & 4th week of July

5) Your colleague takes time off during the 3rd & 4th week of August and you take off during the 2nd & 3rd week of July

6) Your colleague takes time off during the 1st & 2nd week of September and you take off during the 1st & 2nd week of July

We did not agree on a solution (this alternative gives you 0 points for this issue)

Final Decision (High Power)

For the issue 'Exact duration of time off', both I and my colleague selected the following alternative:

1) You take 14 days off and your colleague takes 9 days off

2) You take 13 days off and your colleague takes 10 days off

3) You take 12 days off and your colleague takes 11 days off

4) You take 11 days off and your colleague takes 12 days off

5) You take 10 days off and your colleague takes 13 days off

6) You take 9 days off and your colleague takes 14 days off

We did not agree on a solution (this alternative gives you 150 points for this issue)

Final Decision (Low Power)

For the issue 'Exact duration of time off', both I and my colleague selected the following alternative:

(Remember your points only count if you have both agreed on the same alternative)

1) Your colleague takes 14 days off and you take 9 days off

2) Your colleague takes 13 days off and you take 10 days off

3) Your colleague takes 12 days off and you take 11 days off

4) Your colleague takes 11 days off and you take 12 days off

5) Your colleague takes 10 days off and you take 13 days off

6) Your colleague takes 9 days off and you take 14 days off

We did not agree on a solution (this alternative gives you 0 points for this issue)

Manipulation Checks and Scales

Manipulation Check Experienced Power

Please choose the most suitable answer from the following.

'Based on my boss's intentions about how to deal with the holiday issue...'

I was in an advantageous position compared to my colleague.

I was in a better negotiation position than my colleague.

My colleague was in a better negotiation position than me.

My colleague was in a disadvantaged position compared to me.

Manipulation Check Creativity

During the negotiation...

I was encouraged to generate as many creative ideas as possible on how to address the issues at hand.

I was encouraged to think of one possible solution on how to address the issues at hand.

I was encouraged to think creatively during this negotiation.

I was encouraged to combine the solutions that I generated with the solutions that my colleague proposed to me.

I was encouraged to come up with even strange and unusual ideas while thinking of possible solutions.

I was encouraged to think out of the box while generating ideas for possible solutions.

Fixed-pie Perception

While negotiating the two issues...

To what extent did you feel that your colleague's interests/desires were directly opposite to your own?

To what extent was making a deal with your colleague feasible in your opinion?

To what extent did you feel that your interests/desires in this negotiation were compatible (=aligned/similar) to those of your colleague?

To what extent did you perceive your interests/desires to be opposite to those of your colleague?

Age

What is your age?

Gender

To which gender identity do you most identify?

Female

Male

Other

Nationality

What is your nationality?

British

Irish

Other (please indicate your nationality)

Profession

What best describes your current employment status?

Student

Employee

Self-employed/Freelancer

Currently not working/looking for work

Retired

Other

Status

Work role:

At my work I have a managerial role (e.g., I supervise other people who are below me).

Yes

No

This question is not applicable to me

Education

Highest achieved education at this point in time:

No formal education

High school diploma

University/college

Master's degree

PhD

Other

Honesty

You have reached the end of the survey. However, we have one more important question for you.

Looking at how serious you were during your participation in this research, and how easy it was for you to follow the rules of the negotiation game... In your honest opinion, do you think your data is useable?

Yes

No

Debriefing

We would like to inform you what the study was about:

In this study, we were interested in understanding the interplay between people for the prediction of negotiation outcomes, and conflict management behavior. Your counterpart was a real participant.

We hypothesize that giving negotiators the possibility to be creative while negotiating with another individual increases the chances that the negotiation outcome is more beneficial for all members involved. However, this might depend on whether one member has more negotiation power than the other. We expect that negotiators, who are in a weaker position, might benefit more from creativity opportunities during negotiation. Please do not hesitate to reach out to us if you want to know more about our study and results.

Whom can I contact for more information?

If you are interested in the study findings or have any additional remarks, please send an email to

negotiationstudy@rug.nl

Thanks again for your support!