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**DOI:** <https://doi.org/10.1037/pspi0000129>

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### Citation

SCHAERER, Michael; SCHWEINSBERG, Martin; and SWAAB, Roderick I.. Imaginary alternatives: The impact of mental simulation on powerless negotiators. (2018). *Journal of Personality and Social Psychology*. 115, (1), 96-117. Research Collection Lee Kong Chian School Of Business.

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**Imaginary Alternatives:  
The Effects of Mental Simulation on Powerless Negotiators**

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***R&R at Journal of Personality and Social Psychology***

***(do not circulate)***

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### **Abstract**

The present research demonstrates that negotiators can act powerfully without having power. Researchers and practitioners advise people to obtain strong alternatives prior to negotiating to enhance their power. However, alternatives are not always readily available, often forcing negotiators to negotiate without much, or any, power. Building on research suggesting that subjective feelings of power and objective outcomes are disconnected and that mental simulation can increase individuals' aspirations, we hypothesized that the mental imagery of a strong alternative could provide similar psychological benefits to having an actual alternative. Our studies demonstrate that imagining strong alternatives causes individuals to negotiate more ambitiously and provides them with a distributive advantage: negotiators reached more profitable agreements when they either had a strong tendency to think about better alternatives (Study 1) or when they were instructed to mentally simulate an attractive alternative (Studies 3-4). Mediation analyses suggest that mental simulation boosts performance because it increases negotiators' aspirations which translate into more ambitious first offers (Studies 2-4), but only when the simulated alternative is attractive (Study 2b). Our findings further show that mental simulations are only beneficial when there is sufficient room in the negotiation to reach a profitable agreement, but backfire in settings where negotiators' positions are difficult to reconcile (Study 5). An internal meta-analysis of the file-drawer produces effect size estimates free of publication bias and demonstrates the robustness of the effect. Our findings contribute to research on social power, negotiations, and mental simulation.

**Keywords:** negotiation, alternatives, power, ambition, first offer, mental simulation, impasse

Social conflict is ubiquitous. One of the most common ways to resolve conflict is through negotiation. Negotiation can be defined as a discussion aimed at resolving a perceived divergence of interests between two or more parties (Pruitt & Carnevale, 1993), which can include individuals, groups, organizations, or even countries. For example, individuals negotiate their job offers, groups divide a pool of resources, organizations negotiate mergers and acquisitions, and countries negotiate trade agreements or peace accords. Negotiating parties are usually interested in securing profitable agreements. To help negotiators achieve their goals, scholars and practitioners recommend to identify strong alternatives before the negotiation because alternatives provide the necessary power to ask for more (Fisher, Ury, & Patton, 2011; Thompson, 2011). Even negotiators themselves prefer having strong alternatives over weak or no alternatives (see Schaerer, Swaab, & Galinsky, 2015). The notion that having alternatives is beneficial is also supported by empirical evidence: Decades of negotiations research shows that negotiators with strong alternatives often secure more profitable agreements than negotiators with weak or no alternatives (e.g., Malhotra & Bazerman, 2007; Pinkley, Neale, & Bennett, 1994; Thompson, 2011; Thompson, Wang, & Gunia, 2010).

Despite the benefits of strong alternatives, negotiators are not always able to obtain outside options. In fact, more often than not, negotiators have no alternative at all. For example, 60% of psychology students graduate college without any job offer (NACE, 2014) and many business school graduates need to negotiate jobs in the absence of an outside offer (GMAC, 2015; Grant, Nurmohamed, Ashford, & Dekas, 2011). This poses significant challenges for negotiators as the absence of alternatives lowers their aspirations (Wong, 2014), feelings of confidence (Schaerer et al., 2015), and willingness to negotiate (Magee, Galinsky, & Gruenfeld, 2007) – all of which are critical for achieving a profitable agreement. Unfortunately, little research has investigated how negotiators can overcome the lack of a strong alternative.

Examining this question would address an important theoretical gap in the social power literature, which has focused almost exclusively on the benefits of powerfulness at the expense of understanding whether and how the powerless can compete successfully (Schaerer, du Plessis, Yap, & Thau, 2016a). An answer to this question would also be of practical importance because a lack of alternatives causes negotiators to settle on suboptimal outcomes (Pinkley et al., 1994; Thompson & Hrebec, 1996). For example, a job candidate who does not have an alternative offer (compared to a candidate who has an alternative) may be more likely to think that negotiating a job offer is inappropriate, even if doing so could make both candidate and recruiter better off.

Negotiators who lack alternatives typically fail to secure profitable agreements because they do not set sufficiently high aspirations, preventing them from making ambitious offers (Galinsky, Ku, & Mussweiler, 2009; Zetik & Stuhlmacher, 2002). This implies that if negotiators without alternatives were able to set more ambitious aspirations, they could demand more from their opponent and overcome the disadvantages of being powerless. The present research investigates a mechanism that could motivate powerless negotiators to do so: *the mental simulation of having an attractive alternative*. We propose that the mental simulation of an attractive alternative causes negotiators to set higher aspirations when they lack an actual alternative. Higher aspirations, in turn, motivate negotiators to demand more from their opponent and improve their final agreements. Thus, negotiators may not necessarily need to possess actual alternatives to benefit from the psychological advantages these alternatives typically offer.

The current studies contribute to the literatures of negotiation, mental simulation, and social power in important ways. First, the majority of power research has focused on the consequences of being high in power (Schaerer et al., 2016a), at the expense of understanding powerlessness. The current research advances the psychology of powerlessness by proposing a novel mechanism through which those in a seemingly disadvantaged position can perform more

effectively in competitive interactions. Second, while past research has assumed that identifying alternatives is the best way to strengthen one's power to gain a distributive advantage (see Thompson et al., 2010), the present research suggests that the mental simulation of an alternative can provide negotiators with a similar psychological advantage as the possession of an actual alternative. Third, the present research extends the functional view of mental simulation (Epstude & Roese, 2008; Roese, 1994), by demonstrating that mental simulation can lead to a distributive advantage in competitive social interactions, establishing negotiator aspiration and first offer size as a behavioral mechanism of mental simulation, and identifying relevant boundary conditions of the effect.

### **The Power of Alternatives**

The negotiation literature suggests that the most important source of power is a negotiator's alternatives and that negotiators with no alternatives will find it hard, if not impossible, to achieve profitable agreements because powerlessness undermines their aspirations. Negotiation power is typically conceptualized as the quality of a negotiator's alternative, or BATNA (Best Alternative to a Negotiated Agreement, see Fisher et al., 2011). Negotiators with better BATNAs set higher aspirations (Pinkley et al., 1994; Wong, 2014), demand more from their opponent (De Dreu, 1995), and behave more agentically to achieve their goals (Magee et al., 2007). In addition, negotiators with better BATNAs use more threats (Lawler, 1992), experience competitive interactions more as a challenge than as a threat (Scheepers, de Wit, Ellemers, & Sassenberg, 2012), take more risk (Anderson & Galinsky, 2006), claim larger shares of total payoffs (Komorita & Leung, 1985; Pinkley et al., 1994), and are influenced less by their counterparts' emotions (Van Kleef, De Dreu, Pietroni, & Manstead, 2006). Thus, not having a BATNA makes it challenging for negotiators to be ambitious and engage in behaviors that help them to secure profitable agreements.

The idea that obtaining alternatives is a precondition to negotiating ambitiously and securing profitable agreements is rooted in the assumption that the functional value of alternatives primarily lies in the power they provide. For example, alternatives can help put pressure on the counterpart or signal one's worth in the marketplace (e.g., Kim, Pinkley, & Fragale, 2005; Pinkley, 1995; Pinkley et al., 1994). In contrast to this assumption, however, recent research has suggested that negotiation alternatives serve a dual role: they not only provide power but also act as salient anchors that influence negotiators' decision-making (Schaerer et al., 2015). This implies that the absence of structural power does not necessarily prevent one from setting high ambitions. Indeed, Schaerer and colleagues (2015) found that, despite feeling less powerful, negotiators without any alternative secured more profitable agreements than negotiators with a weak alternative. This occurred because weak alternatives served as low anchor values that weighed down negotiators' aspirations and the value of their first offer. Thus, powerful negotiators do not always make aggressive first offers and powerless negotiators do not always open modestly.

### **Acting Powerfully without Power**

The research reviewed above suggests that negotiators may be able to take advantage of the disconnect between power and ambition and behave *as if* they were powerful, without having an actual alternative. Specifically, we propose that *mentally simulating* an attractive alternative (i.e., thinking about what it would be like to have a strong alternative) should cause negotiators to set higher aspirations, demand more from their opponent, and in turn help them claim a larger piece of the negotiation pie. The idea that the mental image of an alternative causes people to set higher aspirations is based on mental simulation research (Kahneman & Miller, 1986; Roese, 1997). Mental simulation involves the construction of hypothetical possibilities, or counterfactuals, that highlight the usefulness of a particular action, which is then translated into a

corresponding behavioral intention and goal-directed behavior (Epstude & Roese, 2008). For example, students who were asked to generate hypothetical thoughts about performing better on a recent exam subsequently reported greater intentions to engage in performance-facilitating behavior for future exams (Roese, 1994). Mental simulation can even affect task performance. In one study, participants who imagined performing well on an anagram task expected to be more successful and, as a result, also performed better in a subsequent anagram task (Sherman, Skov, Hervitz, & Stock, 1981). Thus, the imagery of a possibility is a precursor to expectancy and expectancy is a precursor to reality.

Mental simulations also play an important role in negotiations. For instance, negotiators who had their first offer immediately accepted (compared to those who had to negotiate) were less satisfied after the negotiation because they engaged in greater counterfactual thinking, mental simulations about “what might have been” if they made a different offer (Galinsky, Seiden, Kim, & Medvec, 2002). Likewise, negotiators who negotiated more (vs. fewer) issues felt worse about their outcome because their preoccupation with more issues generated more counterfactual thoughts imagining better possible outcomes (Naquin, 2003). Other research investigating the influence of mental simulation on negotiation outcomes has focused on learning from a negotiation that has already happened and on the relative performance of different types of counterfactuals (Kray, Galinsky, & Markman, 2009; Wong, Haselhuhn, & Kray, 2012). For example, Kray and colleagues (2009) found that negotiators who generated additive counterfactuals about a past negotiation (e.g., ‘If only I had made the first offer...’) gained a competitive advantage over those who generated subtractive counterfactuals (e.g., ‘If only I had not made the first offer...’) because the former facilitated learning. Despite these insights, it remains unclear whether mental simulations a) afford negotiators a distributive advantage, b) affects performance on an upcoming negotiation without having to rely on a salient experience



from a recent negotiation, c) operates through routes other than learning, and d) whether mental simulations also has potential downsides.

We propose that mental simulation can improve negotiators' performance by cognitively changing a negotiator's expectations. Specifically, the link from mental simulation to expectancy is driven by activating a script, or knowledge, that guides the pursuit of relevant goals (Epstude & Roese, 2008; Roese & Olson, 1993). For example, Smallman and Roese (2009) demonstrated that counterfactual judgments (compared to control judgments) reduced the reaction times to respond to content-specific prompts, suggesting that counterfactual judgments made such knowledge more readily accessible. Such activated knowledge, in turn, can cause people to anchor on a goal-relevant reference point and encourages them to pursue this goal more strongly (Chapman & Johnson, 1999). This process tends to be more effective when the reference points that people focus on are more attractive (Epstude & Roese, 2008; Roese, 1994).

Thus, negotiators who generate cognitions about what it would be like to have a strong alternative activate information (e.g., "*a strong alternative would allow me to negotiate more successfully*") that should translate into higher expectations (e.g., "*I should be more ambitious*"). In negotiations, such expectations are usually reflected in a negotiator's aspiration price – the best outcome that a negotiator can reasonably hope to achieve (Walton & McKersie, 1965). Together, this research suggests that negotiators who mentally simulate a strong alternative would set higher aspirations than those who do not engage in mental simulation (Hypothesis 1).

Negotiators with higher aspirations, in turn, should make more ambitious first offers. Aspirations can have a strong influence on how individuals approach negotiations (e.g., White & Neale, 1994). For example, negotiators who focus on their (high) aspiration price tend to open the negotiation more assertively by making higher first offers compared to those who focus on their (low) walkaway point (Galinsky & Mussweiler, 2001; Schaerer et al., 2015). Thus, we further

predicted that negotiators who mentally simulate a strong alternative would make higher first offers than those who do not engage in mental simulation (Hypothesis 2) and that this relationship is mediated by their aspirations (Hypothesis 3).

These predictions have important implications for the remainder of the negotiation. Past research has established strong correlations between the value of the first offer and the final negotiation outcome (see Loschelder, Trötschel, Swaab, Friese, & Galinsky, 2016 for a review) such that more ambitious first offers result in a larger piece of the bargaining pie (Galinsky et al., 2009). Although the first mover advantage emerges in both single and multi-issue negotiations (Gunia, Swaab, Sivanathan, & Galinsky, 2013), it is driven by how much negotiators demand from the distributive issues (i.e., issues for which the parties hold opposing interests and that are of similar importance to each party), not by how much they ask on the integrative issues (i.e., issues for which parties hold opposing interests of differing importance that allow trade-offs) or compatible issues (i.e., issues of mutual interests). Thus, negotiators who mentally simulate a strong alternative should claim more value from the distributive issues than those who do not engage in this simulation (Hypothesis 4) because they make more demanding first offers (Hypothesis 5).

### **The Dark Side of Imaginary Alternatives**

The idea that mental simulation can boost negotiators' aspirations and therefore provide a distributive advantage hinges on a critical assumption; namely, that higher aspirations always enable one to claim more value. This is not uniformly true across all negotiation contexts. In some negotiations, parties' walkaway-points for a particular issue do not overlap sufficiently, making agreement challenging, or even impossible (e.g., Galinsky, Maddux, Gilin, & White, 2008; Maddux, Mullen, & Galinsky, 2008; Sinaceur, Maddux, Vasiljevic, Nüchel, & Galinsky, 2013). In these cases, high aspirations and offers may become a liability. Indeed, when the

bargaining zone (i.e., the distance between negotiators' walkaway-points) for a particular issue is negative, setting high aspirations and making ambitious offers increases the difficulty of finding an agreement because negotiators are unlikely to accept offers below their walkaway-points (e.g., Pruitt & Rubin, 1986; Thompson, 1995). Instead, negotiators have to be creative and identify additional integrative issues to transform negative bargaining zones on an issue into mutually beneficial agreements. This is less likely to happen when negotiators have very high aspirations and make very demanding offers that only set the parties' positions further apart.

The idea that mentally simulating alternatives can be detrimental in negotiations with a negative bargaining zone is consistent with prior research suggesting that negotiators who are too aspirational and too strongly focused on the outer boundaries of settlement are likely to lose sight of solutions that benefit themselves as well as their opponent (White & Neale, 1994). For example, past research showed that overly ambitious negotiators are more likely to end negotiations in impasses than less ambitious negotiators (e.g., Huber & Neale, 1987; Korobkin, 2002; Morris, Nadler, Kurtzberg, & Thompson, 2002). Similarly, negotiators assuming the role of real estate agents were less likely to reach an agreement when they made aggressive versus moderate demands to potential tenants (Schweinsberg, Ku, Wang, & Pillutla, 2012). Thus, because boosting aspirations through mental simulation has the potential to intensify the perceived distance between the two parties' positions, we predicted that imagining strong alternatives would be detrimental in integrative contexts where negotiators have to reconcile their seemingly incompatible preferences (Hypothesis 6).

### **Overview of the Present Research**

We test our predictions in five studies that both measured and manipulated the mental simulation of good alternatives to explore their impact on different types of mixed-motive interactions: tasks with differing preferences and priorities (Study 1), competitive zero-sum

interactions (Studies 2-4), and tasks with conflicting positions that mask the compatibility of underlying interests (Study 5). Specifically, Study 1 validates a scale measuring the extent to which people imagine strong alternatives in their negotiations and correlates this with negotiators' ability to claim value during an interactive, face-to-face negotiation including multiple issues. Study 2 examines whether actively imagining alternatives prior to the negotiation can lead to negotiators to make more ambitious first offers because it increases their aspirations (Hypotheses 1-3). Study 2 also examines whether these effects emerge when negotiators imagine *any* alternative or only when they imagine an *attractive* alternative. Study 3 uses a professional sample and an interactive email negotiation to manipulate imagining alternatives and test whether the effects of first offers extend to final agreements (Hypotheses 4-5). Study 4 constructively replicates Study 3 in a different negotiation context and establishes the external validity of the effects by manipulating the absence of an alternative through a sequential negotiation design. Finally, Study 5 examines whether the high aspirations generated by imagined alternatives backfire when negotiators' positions are difficult to reconcile in an interactive, face-to-face negotiation (Hypothesis 6).

### **Study 1: Imaginary Alternatives and Value Claiming**

Study 1 assessed the extent to which negotiators have a tendency to simulate better alternatives and whether this tendency is associated with the amount of value claimed in a multi-issue negotiation. Given the empirical evidence that demonstrates that higher aspirations help negotiators claim value (e.g., Freshman & Guthrie, 2009; Galinsky & Mussweiler, 2001; Thompson, 1995; Van Poucke & Buelens, 2002; White & Neale, 1994), we predicted that negotiators who mentally simulate better alternatives would negotiate better agreements on distributive issues. The negotiation task in Study 1 also contained integrative issues with a positive bargaining zone and compatible issues. Because integrative and compatible outcomes are

not affected by aspirations (Huber & Neale, 1987) and first offers (Gunia et al., 2013), we did not expect mental simulations to affect these issues.

### **Participants.**

Participants were 91 professionals (mean age = 29.33;  $SD = 2.09$ ; 31.9% female) enrolled in a negotiation course as part of their Master of Business Administration program. Participants were randomly matched with a negotiation partner at the beginning of their interactive, face-to-face negotiation.

### **Procedure.**

Once assigned to their dyad, participants either took the role of a candidate or a recruiter in the *New Recruit* negotiation (Neale, 1997). *New Recruit* is a multi-issue negotiation in which parties negotiate the terms of a new employment contract. Negotiators' preferences were created by assigning points to each of eight issues and participants received a scoring system detailing the point structure (see Appendix A). Two issues were distributive (e.g., the candidate wanted a higher and the recruiter a lower salary), two issues were compatible (e.g., both parties wanted the job to be in San Francisco), and the remaining four issues were integrative (e.g., bonus was more important to the candidate and vacation time to the recruiter; as a result, both negotiators could benefit from a large bonus packaged with little vacation time). Negotiators did not have an alternative (i.e., an impasse resulted in zero points) and could negotiate a maximum of 13,200 points. Participants were given confidential role instructions one week before the negotiation and were allowed 45 minutes to negotiate a deal face-to-face in individual breakout rooms. After the negotiation, participants reported their outcomes to the course instructor and were debriefed.

### **Measures.**

*Imaginary alternatives.* The extent to which negotiators engaged in mental simulation of attractive alternatives was measured in an unrelated survey at the end of the negotiation course

several weeks apart from the actual study. We developed a five-item measure (see Appendix B) to capture this construct. Participants rated their tendency to imagine alternatives (e.g., “*When I negotiate, I think about what it would be like to have a better offer.*”) on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). A pilot study with 100 participants recruited from across the United States via Amazon’s Mechanical Turk (mean age = 33.55;  $SD = 12.00$ ; 54.0% female) confirmed that the scale was internally reliable ( $\alpha = .83$ ;  $M = 4.94$ ;  $SD = 1.19$ ).

To assess discriminant validity from other constructs that influence aspirations and negotiation outcomes, we analyzed how participants’ imaginary alternative score correlated with Sense of Power (Anderson, John, & Keltner, 2012), optimism (Revised Life Orientation Test; Scheier, Carver, & Bridges, 1994), and the Big 5 personality markers (Gosling, Rentfrow, & Swann, 2003). None of these constructs correlated highly with our imaginary alternatives scale (all  $r_s < .13$ ; see Table 1).

To assess convergent validity, we examined to what extent participants’ imaginary alternatives score correlated with their maximization tendencies (Schwartz et al., 2002). The maximization scale should covary with the imaginary alternatives scale as some items of the maximization scale assess how satisfied people are with their current situation and/or to what extent they hold themselves to high standards (Nenkov, Morrin, Schwartz, Ward, & Hulland, 2008). Indeed, there was a small correlation between the two constructs ( $r = .26$ ,  $p = .01$ ). To confirm that the imaginary alternatives scale and maximization tendencies are distinct constructs, we conducted an exploratory factor analysis with varimax rotation. Neither the maximization scale (nor any of the other constructs) cross-loaded highly with the imaginary alternatives factor as the primary factor, or vice versa (all loadings  $< .46$ ). However, all five imaginary alternatives items loaded highly onto a single factor (all loadings  $> .71$ ).

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Insert Table 1 about here  
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*Negotiation outcome.* We measured negotiators' *individual* outcomes based on the total number of points achieved across all issues (i.e., total value claimed) as well as the points achieved on the distributive, integrative, and compatible issues, respectively.

*Control variables.* To address potential endogeneity concerns, we also controlled for whether negotiators were in the buyer or seller role, their age, and their gender. To account for within-dyad effects and rule out concerns over non-independence of individual observations, we clustered negotiators in their respective dyads and controlled for it using a Generalized Estimated Equations (GEE) regression model with multilevel structure.

## Results

All dyads reached an agreement. We regressed negotiators' total value claimed on the extent to which they engaged in mental simulations of better alternatives. As predicted, negotiators who engaged more strongly in mental simulations of attractive alternatives claimed more value,  $b = .24$ ,  $SE = .10$ ,  $Wald(1) = 5.96$ ,  $p = .015$ . (Model 1, Table 2). This effect remained robust when we included the control variables (Model 2, Table 2).

We then analyzed negotiators' outcomes for each issue type. If our theorizing that mentally simulating alternatives boosts negotiators' aspirations is correct, we should only find increased performance on the distributive issues, but not on the integrative or compatible issues where aspirations tend to be unrelated to individual success. This is exactly what we found. Negotiators' imaginary alternatives score positively predicted value claimed on the distributive issues,  $b = .16$ ,  $SE = .06$ ,  $Wald(1) = 6.07$ ,  $p = .014$  (Model 3, Table 2), but neither predicted performance on the integrative issues ( $p = .90$ ; Models 5-6, Table 2) nor on the compatible issues

( $p = .15$ ; Models 7-8, Table 2). These effects remained unchanged when we included the control variables (Models 4, 6, and 8, Table 2).

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Insert Table 2 about here  
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## **Discussion**

Study 1 found that negotiators who lacked an actual alternative claimed more value from their negotiation counterparts the more strongly they engaged in mental simulations of attractive alternatives. Moreover, Study 1 found that this effect was driven by negotiators' performance on the distributive issues rather than on the integrative or compatible issues. However, Study 1 did not *manipulate* the mental simulation of alternatives, leaving open the possibility of alternative explanations. In addition, Study 1 did not allow us to examine the underlying mechanisms because we could not measure aspirations and first offers. Study 2 addressed these issues by manipulating the mental simulation of alternatives in the absence of an alternative and examining its effects on negotiators' aspirations and subsequent first offers.

### **Study 2a: Manipulating Imaginary Alternatives**

The aim of Study 2 was to a) establish a causal link between the mental imagery of strong alternatives and negotiators' first offers and b) to show that this relationship is mediated by negotiator aspirations.

#### **Participants and Design**

Three hundred and six participants (mean age = 34.33;  $SD = 10.35$ ; 42.8% female) were recruited on Amazon's Mechanical Turk in exchange for US\$.50. Participants were randomly assigned to a strong alternative condition, a no alternative condition, or an imaginary alternative condition.



Two participants took part twice (i.e., duplicate IP addresses), two participants failed the attention check, and fourteen participants reported extreme values ( $\pm 3$ SDs) for aspirations and/or first offers and were thus excluded from the analyses, leaving 288 participants in our final sample. These exclusion criteria were determined before data collection and applied consistently across all studies using online participants.

### **Procedure and Experimental Manipulation**

Participants were instructed to sell a second-hand CD and were informed that a potential buyer asked them to make a first offer. Participants then received information about the alternative offers that they had secured or not. In the *strong alternative* condition, participants read: “You also know that another buyer has offered you \$8 for the CD. Thus, if you can’t reach an agreement in the current negotiation, you will get \$8 for the CD.” Participants in the *no alternative* condition read: “You also know that nobody else has offered you money for the CD. Thus, if you can’t reach an agreement in the current negotiation, you won’t get any money for the CD”. Participants in the imaginary alternative condition received the same instructions as those in the no alternative condition, but also encountered an additional page of instructions asking them to complete a short thought exercise. Specifically, they were told:

Imagine yourself in a situation in which you have already secured a strong alternative offer from another buyer before entering the negotiation. Imagine what this strong alternative offer would look like, how it would feel like, and how it would affect your upcoming negotiation.

### **Dependent Measures**

***First offer and aspiration price.*** Following the manipulation, participants made a first offer to the buyer and indicated their aspiration price (i.e., the ideal price they would like to achieve in the negotiation).

**Manipulation check.** To check the effectiveness of the manipulation, participants answered the question “While completing the task, I was instructed to imagine an alternative offer that I did not have” on a scale from 1 (*completely disagree*) to 7 (*completely agree*).

Finally, participants completed an attention check developed for online studies (Oppenheimer, Meyvis, & Davidenko, 2009) and reported demographic information.

## Results

**Manipulation check.** The manipulation was successful. Participants in the imaginary alternative condition focused more strongly on having an alternative offer that they did not have ( $M = 5.51, SD = 1.95$ ) than those in the strong alternative condition, ( $M = 3.07, SD = 2.35$ ),  $t(285) = 7.32, p < .001$ , and those in the no alternative condition, ( $M = 3.20, SD = 2.55$ ),  $t(285) = 6.97, p < .001$ . The latter two conditions did not differ ( $p = .71$ ).

**Aspiration price.** As predicted, negotiators in the imaginary alternatives condition had higher aspirations ( $M = 9.72, SD = 5.81$ ) than those in the no alternative condition ( $M = 7.45, SD = 4.81$ ),  $t(285) = 3.54, p < .001, d = .71$ . Those who had a strong alternative also set higher aspiration prices ( $M = 10.08, SD = 2.29$ ) than those who had no alternative,  $t(285) = 3.46, p = .001, d = .91$ . The strong alternative and imaginary alternative conditions did not differ ( $p = .92$ ).

**First offer.** Also as predicted, negotiators in the imaginary alternatives condition made higher first offers ( $M = 11.20, SD = 6.53$ ) than those in the no alternative condition ( $M = 8.65, SD = 5.67$ ),  $t(285) = 3.44, p = .001, d = .42$  (see Figure 1). Those who had a strong alternative also made higher first offers ( $M = 10.68, SD = 2.17$ ) than those who had no alternative,  $t(285) = 2.75, p = .006, d = .47$ , but did not differ from those in the imaginary alternative condition ( $p = .49$ ).

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Insert Figure 1 about here

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**Mediation analysis.** Next, a mediation analysis tested the prediction that imagining a strong alternative would lead to higher first offers *because* negotiators had higher aspirations. Because the independent variable was multicategorical, we used the indicator coding recommended by Hayes and Preacher (2013). The indirect effect of the indicator for the imaginary alternatives condition (1 = imaginary alternatives condition; 0 = all other conditions) was tested while controlling for a second indicator (1 = strong alternatives condition; 0 = all other conditions).<sup>1</sup> Negotiators' aspiration price mediated the effect of simulating an alternative on first offers. A bootstrapping procedure with 5,000 resamples and a 95% bias-corrected bootstrap confidence interval (Preacher & Hayes, 2004) confirmed that there was a significant indirect effect,  $CI_{95} [.8173; 3.758]$  (see Figure 2).

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Insert Figure 2 about here  
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## Discussion

Study 2a establishes that instructing negotiators to imagine attractive alternatives when they do not have any actual alternatives causes them to set higher aspirations and, as a result, make more ambitious first offers. Thus, this study demonstrates for the first time that actively imagining an alternative provides similar benefits to the possession of an actual alternative.

### Study 2b: Attractive vs. Unattractive Alternatives

Study 2b extends Study 2a by examining whether thinking about *any* alternative (even an unattractive one) boosts aspiration and first offers. Although thinking about any alternative (attractive or not) could potentially increase confidence and competitive behavior, we argued that

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<sup>1</sup> There was also a significant indirect effect when the strong alternatives condition was dropped and only the no alternatives and the imaginary alternatives conditions were compared,  $CI_{95} [.8336; 3.797]$ .

the aspiration boost of mental simulation should only emerge for attractive alternatives but not for unattractive ones. This notion is consistent with prior research showing that upward mental simulation (e.g., thinking about how things could be better) is more likely to generate goal pursuit than downward simulation (e.g., thinking about how things could be worse; Epstein & Roese, 2008; Roese, 1994). Study 2b tested this assumption directly by adding a condition in which negotiators mentally simulated an unattractive alternative. We predicted that aspiration prices and offers would only improve when negotiators focus on having better (but not worse) alternatives.

Second, focal negotiators in the previous study always opened the negotiation by making a first offer, leaving it unclear whether mental simulations also benefit negotiators who receive the first offer. This is an important question to examine because the first offer has a particularly strong anchoring effect (Galinsky & Mussweiler, 2001) and can cause negotiators to pay less attention to their alternatives when making a counteroffer (Schaerer, Loschelder, & Swaab, 2016b). Thus, Study 2b tested the robustness and generalizability of the imaginary alternatives effect for negotiators who move second in a negotiation.

### **Participants and Design**

Three hundred and twenty-four participants (mean age = 34.63;  $SD = 10.71$ ; 51.9% female) were recruited on Amazon's Mechanical Turk in exchange for US\$.50. Participants were randomly assigned to a no alternative condition, an attractive imaginary alternative condition, or an unattractive imaginary alternative condition. We excluded twelve participants because they took part twice (i.e., duplicate IP addresses;  $N = 1$ ), failed an attention check ( $N = 6$ ), or reported extreme values ( $\pm 3SDs$ ,  $N = 5$ ) for aspirations and/or first offers, leaving 312 observations for our analyses.

### **Procedure and Experimental Manipulation**

Participants were instructed to sell an old car and received detailed information about the car (color, purchase year, new price, mileage, etc.). All participants were told that they had no offer for the car and that they should not expect any money for the car. Specifically, they were told that “Unfortunately, you haven't been able to reach an agreement with a buyer so far. Since it's been four weeks, you don't think that you will get any money for the car. You will probably just hand it over to the dealer to recycle when you pick up your brand new electric car.” To be sure that all participants understood that they did not have any alternatives, we asked them to indicate whether they reached an agreement with a buyer so far (yes / no). Six participants responded incorrectly to the attention check and were dropped from the study (see above).

Participants then read that just as they decided to give up on looking for a buyer, they received a first offer from a buyer who was willing to negotiate. Participants were randomly assigned to one of three conditions. Participants in the *no alternative* condition received no additional instructions, while participants in the two treatment conditions were asked to mentally simulate having either an attractive or unattractive alternative. Specifically, participants in the *attractive imaginary alternative* conditions read:

Imagine yourself in a situation in which you have also secured an attractive alternative offer in addition to the one you just received. Imagine what this attractive alternative offer would look like, how it would feel like, and how it would affect your upcoming negotiation with the buyer who made you an offer.

Participants in the *unattractive imaginary alternative condition* received identical instructions, except that the word “attractive” was replaced by “unattractive.”

## **Dependent Measures**

**Counteroffers and aspiration.** Following the manipulation, participants made a counteroffer to the buyer and indicated their aspiration price (i.e., the ideal price they would like to achieve).

**Manipulation check.** To check the effectiveness of the manipulation, participants answered the questions “To what extent did you imagine an attractive alternative offer that you did not have?” and “To what extent did you imagine an unattractive alternative that you did not have?” on a scale from 1 (*not at all*) to 7 (*to a great extent*).

Finally, participants reported demographic information.

## Results

**Manipulation check.** The manipulation was successful. Participants in the attractive imaginary alternative condition indicated that they imagined having an *attractive* alternative offer ( $M = 5.50, SD = 1.33$ ) more than those in the no alternative condition, ( $M = 3.94, SD = 1.77$ ),  $t(309) = 6.72, p < .001$ , and more than those in the unattractive imaginary alternative condition, ( $M = 3.51, SD = 2.17$ ),  $t(309) = 8.34, p < .001$ . There was also a marginally significant difference between the no alternative and unattractive alternative conditions,  $t(309) = 1.73, p = .084$ .

Similarly, participants in the unattractive imaginary alternative condition imagined having an *unattractive* alternative offer to a greater extent ( $M = 5.17, SD = 1.77$ ) than those in the no alternative condition, ( $M = 4.01, SD = 1.65$ ),  $t(309) = 5.85, p < .001$ , and than those in the attractive imaginary alternative condition, ( $M = 2.64, SD = 1.68$ ),  $t(309) = 10.65, p < .001$ . The no alternative and attractive alternative conditions also differed,  $t(309) = 4.93, p < .001$ .

**Aspirations.** Replicating Study 2a, negotiators in the attractive imaginary alternatives condition set higher aspiration prices ( $M = 934.33, SD = 584.61$ ) than those in the no alternative condition ( $M = 587.38, SD = 338.11$ ),  $t(309) = 5.20, p < .001, d = .73$ . Importantly, imagining attractive alternatives also led to higher aspirations than imagining unattractive alternatives ( $M =$

597.82,  $SD = 502.28$ ),  $t(309) = 4.97$ ,  $p < .001$ ,  $d = .62$ . There was no difference between the no alternative and the unattractive alternative conditions ( $p = .88$ ).

**Counteroffers.** Negotiators in the attractive imaginary alternatives condition also made more ambitious counteroffers ( $M = 1,011.78$ ,  $SD = 552.63$ ) than those in the no alternative condition ( $M = 685.56$ ,  $SD = 417.24$ ),  $t(309) = 5.32$ ,  $p < .001$ ,  $d = .67$ , and than those in the unattractive imaginary alternatives condition ( $M = 542.87$ ,  $SD = 336.56$ ),  $t(309) = 7.54$ ,  $p < .001$ ,  $d = 1.02$  (see Figure 3). Imagining an unattractive alternative even led to a negative effect compared to the no alternative condition,  $t(309) = 2.31$ ,  $p = .022$ ,  $d = .38$ .

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 Insert Figure 3 about here  
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**Mediation analysis.** Similar to Study 2a, we tested whether aspirations mediated the effect of imaginary alternatives on counteroffers. We estimated the indirect effect of the attractive imaginary alternatives condition (1 = attractive imaginary alternatives condition; 0 = all other conditions) while controlling for a second indicator (1 = unattractive imaginary alternatives condition; 0 = all other conditions).<sup>2</sup> Negotiators' aspiration price mediated the effect of imaging strong alternatives on counteroffers. A bootstrapping procedure with 5,000 resamples and a 95% bias-corrected bootstrap confidence interval (Preacher & Hayes, 2004) confirmed that the indirect effect was significant,  $CI_{95} [137.74; 327.55]$  (see Figure 4).

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 Insert Figure 4 about here  
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<sup>2</sup> There was also a significant indirect effect when the unattractive imaginary alternative condition was dropped and only the no alternatives and the attractive imaginary alternative conditions were compared,  $CI_{95} [180.75; 388.04]$ .

## **Discussion**

Study 2b replicates the findings from Study 2a showing that imaginary alternatives cause negotiators to demand more from their opponent because they set higher aspirations. Importantly, Study 2b also rules out the possibility that simply thinking about *any* alternative can cause this effect. Aspirations and counteroffers only increased when negotiators mentally simulated an attractive alternative, but not when they simulated an unattractive one. In addition, Study 2b establishes the generalizability of the effect by showing that mentally simulating an attractive alternative creates the necessary conditions for a distributive advantage – even when second-moving negotiators are exposed to the strong anchoring forces of their opponent’s first offer.

### **Study 3: Negotiation Outcomes**

The purpose of the third study was to replicate the effects on first offers in an interactive email negotiation between experienced professionals and to test whether the mental image of a better alternative would be sufficient to lead to advantageous negotiation outcomes.

#### **Participants and design**

Participants were 338 professionals (mean age = 29.79;  $SD = 2.33$ ; 29.4% female) pursuing an Master of Business Administration degree. The negotiation was part of an introductory leadership class in the first semester of the program. Participants completed the negotiation in dyads as part of their class preparations. The resulting 169 dyads were randomly assigned to one of three conditions: strong alternative, no alternative, or imaginary alternative. Twenty-one dyads that did not follow the instructions (i.e., first offer order; created additional



negotiation issues;  $N = 17$ ) or reported extreme values ( $\pm 3SDs$ ,  $N = 4$ ) for first offers and/or final agreements were excluded, leaving 148 dyads for the analyses.<sup>3</sup>

### **Procedure**

Participants were randomly assigned to the role of a job candidate or a recruiter in a single-issue negotiation of a bonus payment (Galinsky & Mussweiler, 2001). Both parties were told that they had already agreed on most terms of the job offer (salary, starting date, benefits), but that the signing bonus was yet to be discussed. Participants had five days to complete the negotiation over email and were allowed to exchange as many emails as they wanted to.

### **Experimental Manipulation**

Participants in the candidate role were randomly assigned to the three alternatives conditions. Candidates in the *strong alternative condition* were told that they had secured a job offer at a comparable firm with a signing bonus of €20,000. Candidates in the *no alternatives condition* were told that they had secured a job offer at a comparable firm but without a signing bonus. Candidates in the *imaginary alternative condition* read the same information as those in the no alternative condition but were also instructed to complete a mental exercise:

Imagine yourself in a situation in which you have already secured another, comparable job offer with a very high bonus from another company before entering the current bonus negotiation. Imagine what this strong alternative job offer would look like, how it would make you feel, and how it would affect your upcoming bonus negotiation.

Participants in both roles (recruiter and candidate) were told that bonuses averaged €12,000 in the past. Recruiters were instructed that they should pay as little as possible and that they would prefer to hire another candidate if they cannot settle on a bonus less than €30,000.

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<sup>3</sup> When all dyads were analyzed, first offers ( $p = .045$ ) and outcomes ( $p = .055$ ) in the imaginary alternative condition were still higher than in the no alternative condition.

Candidates always opened the negotiation with a first offer for the bonus to the recruiter.

### Dependent Measures

Upon completion of the negotiation, dyads reported their first offers and negotiation outcomes to the course assistant.

### Results

**Impasses.** Of the 148 dyads, seventeen dyads did not reach an agreement, 8 dyads were in the strong alternative condition, 4 in the no alternative condition, and 5 in the imaginary alternative condition. These differences were not significant,  $\chi^2(2, N = 148) = 1.30, p = .52$ . Because participants were given different alternatives across conditions, dyads who reached an impasse were excluded from the analyses (Tripp & Sondak, 1992).

**First offer.** As predicted, candidates in the imaginary alternatives condition made higher first offers ( $M = 26,995, SD = 15,925$ ) than those in the no alternative condition ( $M = 20,937, SD = 10,228$ ),  $t(128) = 2.40, p = .018, d = .47$  (see Figure 5). Those with a strong alternative ( $M = 31,744, SD = 7,868$ ) made slightly higher first offers than those in the imaginary alternatives condition,  $t(128) = 1.88, p = .063, d = .38$ , and significantly higher first offers than those in the no alternatives condition,  $t(128) = 4.30, p < .001, d = 1.19$ .<sup>4</sup>

**Final agreement.** We hypothesized similar patterns for final agreements and the results supported these predictions (see Figure 5). Candidates in the imaginary alternatives condition negotiated higher bonuses ( $M = 17,941, SD = 5,594$ ) than candidates in the no alternative condition ( $M = 15,744, SD = 4,953$ ),  $t(128) = 2.05, p = .046, d = .42$ . Those with a strong alternative ( $M = 21,687, SD = 4,390$ ) made higher first offers than those in the imaginary

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<sup>4</sup> Because first offer values could still be recorded in the case of an impasse, we also re-ran the analyses including dyads with an impasse. Those who imagined to have an alternative made higher first offers than those who had no alternative,  $t(145) = 2.30, p = .023, d = .41$ . Also, those with a strong alternative made marginally higher first offers than those in the imaginary alternatives condition,  $t(145) = 1.83, p = .069, d = .35$ , and significantly higher first offers than those in the no alternatives condition,  $t(145) = 4.18, p < .001, d = 1.06$ .

alternatives condition,  $t(128) = 3.49$ ,  $p = .001$ ,  $d = .75$ , and higher first offers than those in the no alternatives condition,  $t(128) = 5.58$ ,  $p < .001$ ,  $d = 1.27$ .

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 Insert Figure 5 about here  
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**Mediation analysis.** To test whether first offers mediated the effect of imaginary alternatives on final agreements, we ran a similar analysis as in the previous two studies and tested the indirect effect for the imaginary alternatives condition (1 = imaginary alternative condition; 0 = all other conditions) while controlling for a second indicator (1 = strong alternative condition; 0 = all other conditions).<sup>5</sup> Candidates' first-offer amount mediated the effect of the imaginary alternatives manipulation on final agreements. A bootstrapping procedure with 5,000 resamples and a 95% bias-corrected bootstrap confidence interval (Preacher & Hayes, 2004) confirmed a significant indirect effect,  $CI_{95} [222.96; 2,859.23]$  (see Figure 6).

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 Insert Figure 6 about here  
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## Discussion

Study 3 shows that an experimental manipulation of imaginary alternatives also improves negotiation outcomes. Mentally simulating alternatives led job candidates to make more ambitious bonus offers and, as a result, achieve more attractive job offers. Together, Studies 1–3 provide consistent evidence for our prediction that imagining alternatives can help negotiators overcome a lack of structural power. Negotiators who imagined having attractive alternatives set

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<sup>5</sup> There was also a significant indirect effect when the strong alternatives condition was simply dropped and only the no alternatives and the imaginary alternatives conditions were compared,  $CI_{95} [223.71; 2,886.62]$ .

higher aspirations, made more extreme first offers (Studies 2a, 2b, and 3) and claimed more value from the negotiation (Studies 1 and 3). The final two studies were designed to simulate a more realistic experience of not having negotiation alternatives (Study 4) and to examine whether mentally simulating alternatives can also backfire (Study 5).

#### **Study 4: Sequential Negotiations**

The goal of Study 4 was to provide a more conservative test of our hypothesis that imagining alternatives leads negotiators to demand more when they lack actual alternatives. The previous studies all embedded information about negotiators' alternatives in their role instructions, which may evoke a weaker experience of powerlessness than actually lacking an alternative. To increase the external validity of our findings, Study 4 had negotiators complete two subsequent negotiations where the outcome of the first negotiation served as participants' alternative (or lack thereof). To do so, negotiators first received an offer from another negotiator (strong alternative condition) or not (no alternative and imaginary alternative conditions). All participants then completed another negotiation and participants in the imaginary alternative condition mentally simulated having an alternative before starting this second negotiation. We predicted that negotiators who imagine alternatives would reach more profitable agreements than those who do not and that this process is mediated by more ambitious first offers.

#### **Participants and Design**

Participants were 154 individuals (mean age = 34.21;  $SD = 9.37$ ; 48.1% female) recruited on Amazon's Mechanical Turk in exchange for US\$1.50. Participants were randomly assigned to a strong alternative condition, a no alternative condition, and an imaginary alternative condition. We excluded duplicate IP addresses ( $N = 1$ ), extreme values for first offers and outcomes ( $\pm 3SDs$ ;  $N = 2$ ), and participants who indicated that the (simulated) negotiation counterparts were not real people ( $N = 2$ ), resulting in a final sample of 149 participants.

### **Procedure and Experimental Manipulation**

The study was advertised as an interactive negotiation with other participants. At the start of the study, participants entered a simulated waiting room where a counter indicated the number of participants who were presumably waiting for the study to begin. After about 30 seconds the counter indicated that 20 participants had arrived in the waiting room at which point the participants proceeded to the following page where they read their role instructions. Participants were informed that they would conduct several rounds of negotiations with other participants and entered a screen name that ostensibly would be shown to their negotiation partners. They then entered another waiting room, where they were matched with their first opponent and randomly assigned to the seller or buyer role (in reality, all participants assumed the role of the seller).

Participants then received seller-specific information. They were told that their task was to sell a “Starbucks© Logo Mug”, that the average market price for such mugs was approximately \$5, and that in each round they could decide between making a counteroffer or leaving the negotiation by accepting the opponent’s current offer. The system then ostensibly selected either them or their opponent to make an initial offer. In reality, the simulated opponent always made the opening offer. In the *strong alternative condition*, opponents offered \$8 for their mug, along with the following message: “hey. I’m interested in your mug and my offer for it is \$8.00. I’m unable to pay more than \$8.00. this is my final offer – take it or leave it!” In the *no alternative condition* and the *imaginary alternative condition*, the simulated opponent made no offer: “hey. Unfortunately, I am unable to make you an offer for your mug. sorry!”

Participants were then told that the first negotiation had ended and that they would be randomly matched with a different opponent for their second negotiation. This time, all participants were “randomly” selected to make the first offer. Before making a first offer, participants in the *imaginary alternative condition* were instructed to imagine having an attractive

alternative. Thereafter, all participants made a first offer to the simulated opponent. The negotiation opponent then made a counteroffer at a pre-determined percentage of the participant's first offer. The participant could then choose to accept this offer or make a counteroffer. The negotiation opponent was programmed such that there would be a maximum of 10 negotiation rounds (including one offer and counteroffer).<sup>6</sup> The counteroffer schedule also left open the possibility for negotiators to reach an impasse (six negotiations indeed ended with no agreement). The negotiation ended when a) a participant accepted the simulated opponent's offer, b) a participant's offer was lower than the simulated opponent's pre-programmed offer in the next round, or c) after no offer had been accepted after 10 rounds.

After the negotiation, participants reported their final agreements and completed a suspicion check. For each of the two negotiation partners they were asked what their overall impressions of their opponents were. Our simulated negotiation setting was experienced as realistic because only two participants mentioned that one or more of their opponents were not real. Finally, participants reported demographic information and were debriefed.

## Results

**Impasses.** Six of the 149 participants did not reach an agreement; four in the strong alternative condition, one in the no alternative condition, and one in the imaginary alternative condition. Impasses did not significantly differ across conditions,  $\chi^2(2, N = 149) = 3.23, p = .20$ .

**First offer.** As predicted, candidates in the imaginary alternatives condition made higher first offers ( $M = 8.27, SD = 5.62$ ) than those in the no alternative condition ( $M = 6.56, SD = 2.21$ ),  $t(140) = 2.40, p = .018, d = .41$ . Those with a strong alternative ( $M = 9.70, SD = 1.03$ ) made marginally higher first offers than those in the imaginary alternatives condition,  $t(140) =$

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<sup>6</sup> The counteroffer by the simulated opponent followed a logarithmic schedule with the first counteroffer reflecting 50 percent of the participant's first offer and the opponent's last (i.e., 10<sup>th</sup>) counteroffer reflecting 90 percent of the participant's first offer. The logarithmic counteroffer factor (.50, .62, .69..., .90) automatically rounded to the next tenth of a dollar (e.g., \$9.46 was rounded to \$9.50) to prevent suspicions that offers were calculated by a computer.

1.95,  $p = .054$ ,  $d = .35$ , and significantly higher first offers than those in the no alternatives condition,  $t(140) = 4.36$ ,  $p < .001$ ,  $d = 1.79$ .<sup>7</sup>

**Final agreement.** As predicted, sellers in the imaginary alternatives condition negotiated better agreements ( $M = 5.44$ ,  $SD = 3.57$ ) than sellers in the no alternative condition ( $M = 4.34$ ,  $SD = 1.70$ ),  $t(140) = 2.26$ ,  $p = .026$ ,  $d = .40$ . Those with a strong alternative ( $M = 7.30$ ,  $SD = 1.32$ ) made higher first offers than those in the imaginary alternatives condition,  $t(140) = 3.72$ ,  $p < .001$ ,  $d = .69$ , and significantly higher first offers than those in the no alternatives condition,  $t(140) = 6.03$ ,  $p < .001$ ,  $d = 1.93$  (Figure 7).

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 Insert Figure 7 about here  
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**Mediation analysis.** We applied the same indicator coding procedure as in Study 3 to test whether first offers mediated the effect of imaging alternatives on final agreements. As predicted, the amount of the first offer made by the seller mediated the effect of imaginary alternatives on final agreements. A bootstrapping procedure with 5,000 resamples confirmed a significant indirect effect,  $CI_{95} [.2128; 4.060]$  (see Figure 8).<sup>8</sup>

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 Insert Figure 8 about here  
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<sup>7</sup> These patterns did not change when we included impasse dyads. Those who imagined to have an alternative made higher first offers than those who had no alternative,  $t(146) = 2.42$ ,  $p = .017$ ,  $d = .40$ . Also, those with a strong alternative made higher first offers than those in the imaginary alternatives condition,  $t(146) = 2.00$ ,  $p = .047$ ,  $d = .35$ , and significantly higher first offers than those in the no alternatives condition,  $t(146) = 4.47$ ,  $p < .001$ ,  $d = .74$ .

<sup>8</sup> There was also a significant indirect effect when the strong alternatives condition was simply dropped and only the no alternatives and the imaginary alternatives conditions were compared,  $CI_{95} [.1044; 2.249]$ .

## Discussion

Study 4 replicates the positive effect of imaginary alternatives on first offers and final agreements documented in the previous studies in a more realistic context where powerless negotiators experienced not having an alternative more vividly. In sum, Studies 1-4 provide consistent evidence that mentally imagining having good alternatives is sufficient to significantly increase negotiators' aspirations, their first offers, and the value of their deals.

### Study 5: The Dark Side of Imaginary Alternatives

Across four studies we found that mental simulation of strong alternatives can substitute for a lack of power and lead to a distributive advantage by increasing negotiators' aspirations and first offers. However, we also predicted that more ambitious negotiation behavior would create a roadblock to agreement when the dominant issue in the negotiation is difficult to reconcile for the parties involved. To test this final hypothesis, Study 5 examined the impact of imagining alternatives on agreement likelihood in a negotiation with a negative bargaining zone.

### Participants and Procedure

Participants were the same Master of Business Administration students as in Study 1b, but assigned to a different negotiation partner and a different interactive, face-to-face negotiation task. Sample size ( $N = 97$ ) and demographic characteristics (mean age = 29.24;  $SD = 2.19$ ; 33.3% female) varied slightly compared to Study 1b due to differences in class attendance. Participants were randomly assigned to the role of the buyer or seller in the *Les Florets* negotiation (negotiationexercises.com), which involved the sale of a restaurant. The negotiation made it impossible to reach a deal based on sale price alone because it involved a negative bargaining zone such that the buyer's reservation price (the maximum he or she was authorized to pay) was lower than the seller's reservation price (the minimum he or she was willing to accept). Although the bargaining zone was negative for the sales price, the two parties actually had a common



underlying interest that made agreement possible (but difficult). Specifically, the buyer wanted to hire a qualified manager to run the restaurant, and the seller needed a job upon return from a trip around the world. Thus, the two parties could agree to a sale price below the seller's reservation price as long as the buyer would provide future employment to the seller. However, reaching this deal was challenging because it required participants to discover this alternative solution during the negotiation process. Participants were given their confidential role instructions one week before the negotiation and were allowed 35 minutes to negotiate a deal in individual breakout rooms.

### Measures

*Imaginary alternatives.* Our independent variable was the same imaginary alternatives scale as in Study 1b.

*Impasses.* The dependent variable measured whether negotiators declared an impasse (1) or reached a deal within the boundaries of the role instructions (0).

*Control variables.* As in Study 1, we controlled for negotiator role, age, and gender. To account for within-dyad effects and rule out concerns over non-independence of individual observations, we clustered negotiators in their respective dyads and controlled for it using a multilevel regression model.

### Results

We predicted that impasses would be more likely for negotiators who think more strongly about better alternatives. Forty-nine out of 78 dyads (or 62.8%) declared an impasse. Because the individual negotiators were nested in dyads and the dependent measure was dichotomous, we analyzed the data using multi-level General Linear Equations (GLE) model with a binomial distribution and logit link. As predicted, we found that impasses were more likely the more negotiators' reported to engage in mental simulation of alternatives,  $b = .55$ ,  $SE = .18$ ,  $Wald(1) =$

9.49,  $p = .002$  (Model 1, Table 3). This effect remained robust when we controlled for role, age, and gender (Model 2, Table 3).

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 Insert Table 3 about here  
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## **Discussion**

Study 5 supports our prediction that mentally simulating better alternatives not only facilitates claiming value, but also decreases the likelihood of an agreement when the focal issues are difficult to reconcile. When negotiation issues involve a negative bargaining zone, high aspirations and offers that result from mental simulations hurt – rather than help.

### **Internal meta-analysis**

To test the robustness of our effects and generate an effect size estimate free of publication bias, we conducted a meta-analysis (e.g., Cumming, 2014) of the four experimental studies reported in this manuscript and an additional 6 confirmatory studies not included in the current version of the manuscript (e.g., studies that were underpowered or tested additional moderators). A fixed-effects meta-analysis comparing the average standardized mean difference between the baseline condition (no alternative) and the experimental condition (imaginary alternative) revealed a significant effect of mental simulation on first offers,  $k = 10$ ,  $d = .41$ , 95% CI [.31, .52],  $Z = 7.83$ ,  $p < .001$ , and negotiation outcomes,  $k = 4$ ,  $d = .31$ , 95% CI [.13, .49],  $Z = 3.39$ ,  $p < .001$ . These findings speak to the robustness of our reported effects and corroborates the idea that simulating alternatives enables powerless negotiators to compete more effectively.

### **General Discussion**

Practitioners, scholars, and people's lay perceptions all suggest that negotiators should obtain alternatives, because an alternative is the most important source of power in a negotiation.

Despite the well-documented benefits of strong alternatives, negotiators are not always able to generate these. In fact, negotiators are often unable to obtain strong alternatives, which causes them to lower their aspirations (Wong, 2014), decreases their willingness to negotiate (Magee et al., 2007), and leads to less profitable agreements (Pinkley et al., 1994). Counter to this assumption, we proposed that powerless negotiators are not destined to fail and can still set higher aspirations, make more extreme first offers, and reach more profitable agreements when they mentally simulate attractive alternatives.

Across five simulated and interactive negotiations conducted online, via email, and face-to-face, we found that both measured and manipulated mental simulations of attractive alternatives can help negotiators overcome their disadvantaged position. Our studies provide compelling evidence for when and why the mental simulation of alternatives is desirable. First, we found that negotiators who simulated attractive alternatives more strongly also claimed more value in integrative negotiations (Study 1). Second, we found that these mental simulations led to higher aspirations and more extreme first offers (Study 2), which mediated the effects on value claiming (Studies 3 and 4). Importantly, our final study showed that the aspiration-boosting effect of imaginary alternatives could also hurt when negotiators' positions are already difficult to reconcile.

### **Theoretical Contributions**

The present research makes important contributions to the literature on social power (e.g., Anderson & Brion, 2014; Galinsky, Rucker, & Magee, 2015) by answering a call for more research on powerlessness (e.g., Kopelman, Hardin, Myers, & Tost, 2016). Past power studies have primarily been concerned with investigating the cognitive, motivational, and behavioral implications of being *powerful* but have neglected to more thoroughly examine the psychology of being *powerless* (Schaerer et al., 2016a). Thus, the present studies extend this research by

illuminating the mechanisms that allow powerless individuals to gain power in mixed-motive interactions. These findings also align with a growing body of work (e.g., Mishra, Barclay, & Lalumière, 2014; Pitesa & Thau, 2013; Zitek, Jordan, Monin, & Leach, 2010) investigating the psychological experiences associated with being powerless and identifying ways in which the disadvantaged negotiate hierarchical differences. Our studies suggest that mental imagery of what it would be like to be in a better position can be a powerful way for powerless individuals to compete more effectively.

In addition, the present research advances our understanding of the influence of alternatives on negotiator cognition and behavior. Specifically, it shows that some of the benefits that alternatives provide can also be achieved through different means. Research on power and negotiations assumes that alternatives are a prerequisite to negotiating successfully (Kim et al., 2005; Magee et al., 2007; Pinkley, 1995; Pinkley et al., 1994; Thompson et al., 2010). That is, actual alternatives are perceived as an instrument that enables negotiators to exercise pressure on their opponents and serves as a safety net that protects against a bad deal. Yet, more recent research has begun to highlight the dual nature of alternatives: strong alternatives not only provide leverage, but also serve as salient anchors that cause negotiators to make more ambitious first offers (Schaerer et al., 2015). Thus, alternatives offer both power and cognitive benefits. According to this logic, negotiators need not have actual alternatives to reap the cognitive benefits that strong alternatives provide. The present studies are consistent with this insight by showing that negotiators can generate their own ambitious aspiration prices through mental simulations, which eventually translate into higher offers and more profitable agreements when negotiators' interests overlap. Thus, negotiators can act powerfully without having power.

The present research also contributes to the existing theoretical literature on the social psychology of mental simulations in competitive interactions. First, our findings extend the

functional view of counterfactual thinking (e.g., Epstude & Roese, 2008) by providing a clear example of how counterfactual thoughts increase economic gains in mixed-motive interactions. We also extend research on the link between counterfactuals and negotiation behavior (Kray, Galinsky, & Markman, 2009), which has contrasted the relative strength of different types of counterfactual thinking (i.e., additive vs. subtractive counterfactuals) by examining reflections about past negotiation. However, this research did not show whether mental imagery could result in economic advantages over baseline participants. The present studies show that it does. Second, our research establishes a novel mechanism through which mental simulations affect negotiations. Prior research has primarily argued that counterfactual reflections allow negotiators to learn from their past experiences and negotiate more effectively as a result (Kray et al., 2009; Wong et al., 2012). The current studies extend these findings by uncovering a cognitive, aspiration-based route through which counterfactual thoughts influence outcomes. In addition, our studies also show that counterfactual thoughts are an antecedent of first offer extremity. This is an important contribution to research on first offers in negotiations which has focused predominantly on their consequences rather than its antecedents (see also Schaerer et al., 2016b). Finally, the present studies are the first to show that mental simulation can backfire in mixed-motive interactions. When the situation makes it hard for negotiators to reconcile their preferences and positional behavior may not prove useful as a primary strategy, mental imagery may pose a roadblock to agreement. This finding qualifies prior research that has established a positive link between counterfactual thoughts and value creation (Wong et al., 2012).

### **Strengths, Limitations, and Future Directions**

The present research has a number of strengths. First, in examining the influence of imaginary alternatives on negotiator cognition, behavior, and outcomes, we systematically replicated our effect across different scenario studies, laboratory experiments, and negotiations

between experienced professionals. This not only enabled us to establish the existence of the effect, but also allowed us to demonstrate the generalizability of the distributive advantages mental simulations can have. Second, we conducted an internal meta-analysis including the file-drawer to provide both a more *precise* (i.e., narrower confidence intervals) and a more *accurate* (i.e., free of publication bias) estimate of the effect. In doing so, we not only demonstrate the robustness of our findings but also respond to a call for more meta-analytic research and unlocking the file-drawer (Cumming, 2014; Franco, Malhotra, & Simonovits, 2014) to provide more conservative effect size estimates (Ioannidis, 2008). Third, we go beyond prior negotiation research by manipulating the presence of alternatives through a sequential study design in which a first negotiation outcome serves as the power manipulation for a second negotiation rather than providing this information through artificial point systems or reservation prices presented in the task materials (Galinsky & Mussweiler, 2001; Pinkley, 1995; Pinkley et al., 1994). We show that the benefits of imaginary alternatives hold when a more externally valid and vivid manipulation of power(lessness) is used.

The current research also has limitations that provide exciting opportunities for future research. First, a potential downside of boosting one's aspirations through mentally simulating attractive alternatives could be that it ultimately lowers satisfaction with the negotiation outcome. Evaluations are often contrastive (Kahneman, 1992) and so whether a particular outcome is perceived as a gain or loss depends on a reference point's relative position. Individuals who compare their outcomes to a low reference point tend to be more satisfied than those who compare their outcome to a high reference point (Galinsky, Mussweiler, & Medvec, 2002; Medvec, Madey, & Gilovich, 1995; Medvec & Savitsky, 1997). Thus, negotiators who mentally simulate aspirational alternatives may end up feeling less satisfied about a financially better outcome. Since negotiators tend to care strongly about both objective and subjective outcomes

(Curhan, Elfenbein, & Xu, 2006), future research could investigate whether negotiators would prefer an objectively better but dissatisfying outcome over an objectively less attractive but more satisfying outcome, and how this would affect their propensity to engage in mental simulation.

Second, although Study 3 was conducted with a culturally diverse sample of MBA students, we could not systematically examine whether the effects of imaginary alternatives would generalize across cultures. Power has been shown to have diverging effects on people from different cultures (Zhong, Magee, Maddux, & Galinsky, 2006). Similarly, the timing and function of first offers also changes across different cultural contexts. For example, one study found that Japanese negotiators tend to make a first offer much earlier than negotiators from the United States (Adair, Weingart, & Brett, 2007), which could render mental simulation of alternatives even more effective for Japanese negotiators. On the other hand, the same study also found that Japanese negotiators tend to share less information before making a first offer than Americans, which could make them also more susceptible to reaching an impasse when reconciliation is only possible through the exchange of information. Testing this and related predictions concerning the role of culture offer potentially worthwhile opportunities for future research.

### **Conclusion**

Although there is little doubt that strong alternatives are key to bargaining success, more often than not, negotiators come to the negotiation table without an alternative. The studies reported here, however, suggest that the mental imagery of an attractive alternative can afford negotiators a distributive advantage and compensate for this lack of power. Mental simulation proved to be a subtle way for negotiators to escape their powerless situations when there was room for more ambitious offers to translate into more profitable agreements.

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**Table 1***Convergent and discriminant validity of Imaginary Alternatives Scale.*

Predictor	<i>r</i> (zero-order correlation)
<i>Maximization</i>	.26**
<i>Sense of Power</i>	.06
<i>Optimism</i>	-.10
<i>Big 5 Personality Dimensions</i>	
<i>Extraversion</i>	.13
<i>Emotional stability</i>	.02
<i>Openness to experience</i>	.05
<i>Agreeableness</i>	-.01
<i>Conscientiousness</i>	-.06

*N* = 100. \*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$



**Table 2**

*Multilevel general linear model predicting overall negotiation outcomes and points achieved by issue type.*

Dependent variable:	Overall outcome (z-scored points)		Distributive issues (z-scored points)		Integrative issues (z-scored points)		Compatible issues (z-scored points)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Baseline	Incl. controls	Baseline	Incl. controls	Baseline	Incl. controls	Baseline	Incl. controls
<i>Imaginary alternatives</i>	.24* (.10)	.21* (.09)	.16* (.06)	.14* (.06)	-.00 (.01)	-.00 (.01)	.10 (.07)	.09 (.06)
<i>Role</i>		.32 (.24)		.09 (.18)		.04 (.03)		.12 (.16)
<i>Age</i>		.02 (.04)		.01 (.03)		-.00 (.01)		.01 (.02)
<i>Gender</i>		.04 (.24)		.01 (.15)		-.06 (.04)		.10 (.15)
<i>Intercept</i>	-1.16* (.48)	-1.61 (1.38)	-.77* (.32)	-1.01 (.81)	.01 (.06)	.03 (.19)	-.47 (.38)	-.80 (.74)
Observations	91	89	72	71	72	71	72	71
QICC	87.68	89.95	26.74	31.66	5.29	11.19	37.74	43.35

Note. General linear model with nested dyads, normal distribution, and identity link. Regression coefficients are standardized. Standard errors are reported in parentheses. The number of observations is lower in Models 2-8 due to missing values. A smaller QICC score indicates a better goodness of fit. \*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$

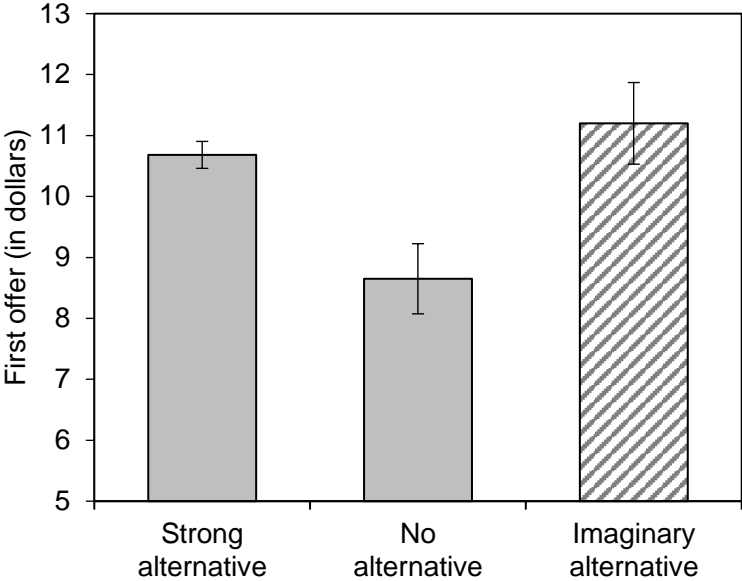
**Table 3***Multilevel general linear model predicting impasses.*

Dependent variable: Impasses	Baseline ( <i>Model 1</i> )	Including controls ( <i>Model 2</i> )
<i>Imaginary alternatives</i>	.55** (.18)	.56** (.20)
<i>Role</i>		-.02 (.25)
<i>Age</i>		.20 (.13)
<i>Gender</i>		-.09 (.40)
<i>Intercept</i>	-1.84* (.89)	-7.75 (4.01)
Observations	97	93
QICC	118.56	117.18

Note. General linear model with nested dyads, binomial distribution, and logit link. Regression coefficients are unstandardized. Standard errors are reported in parentheses. The number of observations is lower in Model 2 due to missing values for the control variables. A smaller QICC score indicates a better goodness of fit. \*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$

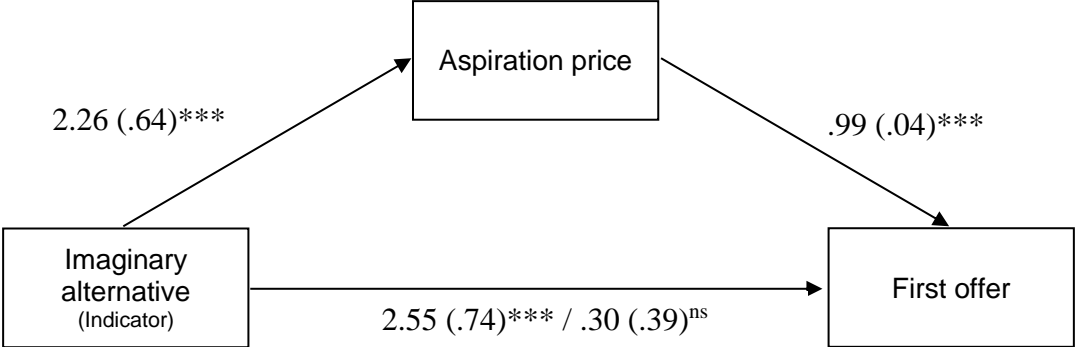
**Figure 1**

*Negotiators in the imaginary alternative condition made higher first offers than those in the no alternative condition. Error bars indicate  $\pm 1$  SEM.*



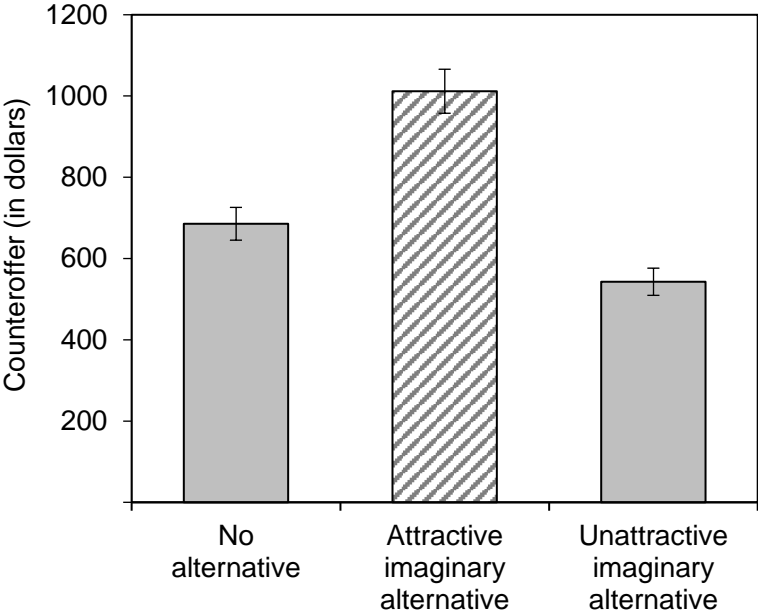
**Figure 2**

*Aspiration price mediated the relationship between the imaginary alternatives manipulation and first offers. Regression coefficients are unstandardized and SEs in parentheses. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .*



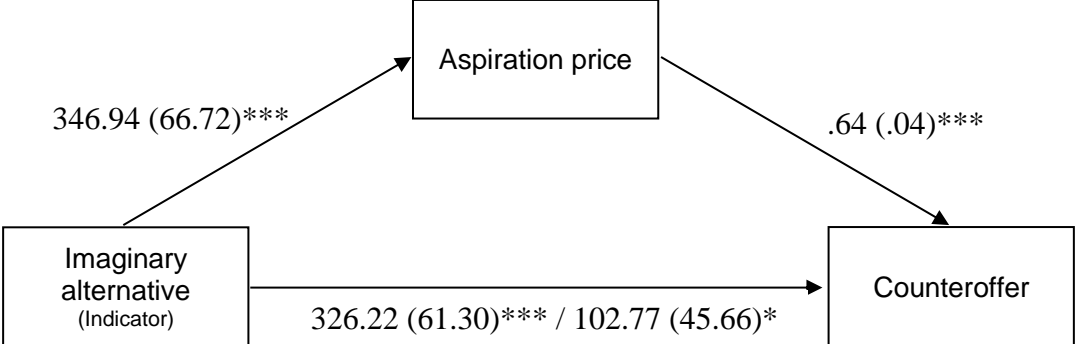
**Figure 3**

*Negotiators in the attractive imaginary alternative condition made higher counteroffers than those in the no alternative condition. Imagining unattractive alternatives yielded no benefits. Error bars indicate  $\pm 1$  SEM.*



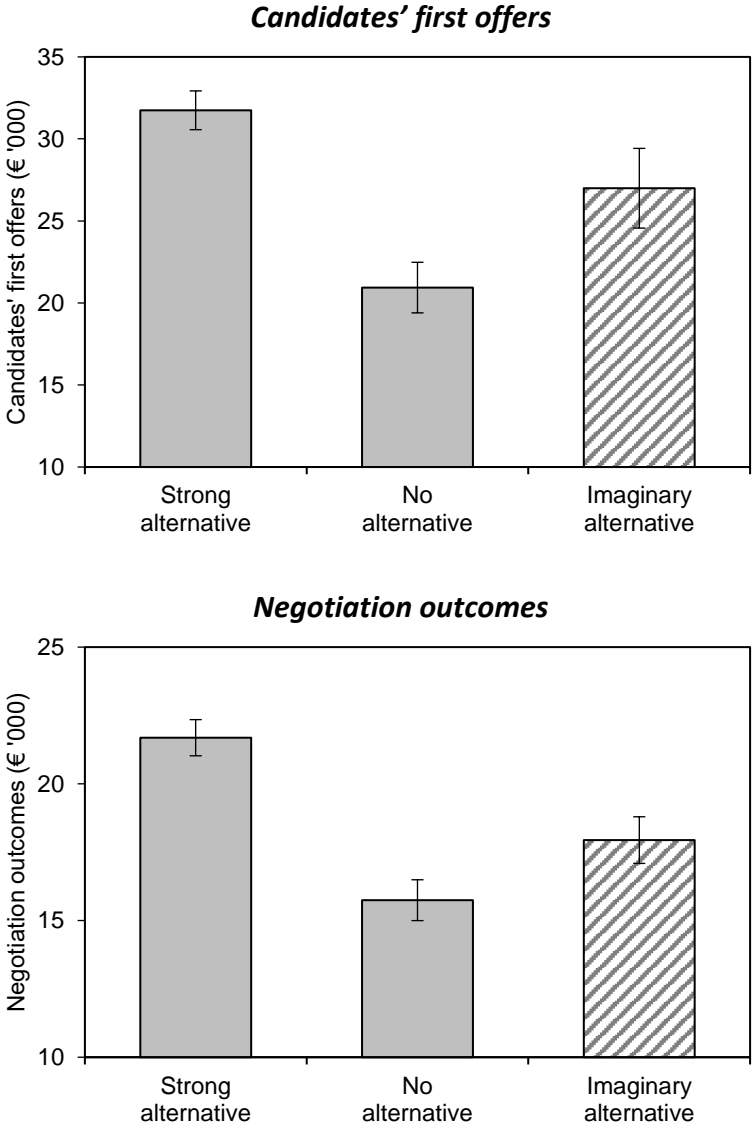
**Figure 4**

*Aspiration price mediated the relationship between the attractive imaginary alternatives manipulation and counteroffers. Regression coefficients are unstandardized and SEs in parentheses. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .*



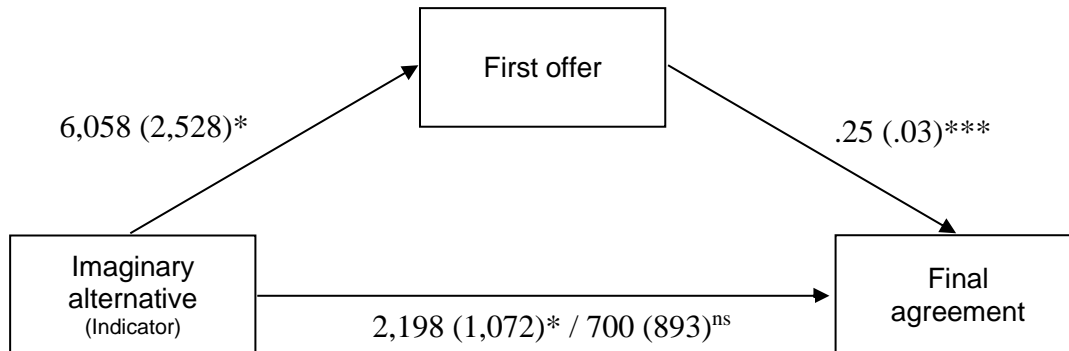
**Figure 5**

*Candidates in the imaginary alternatives condition made higher first offers (top panel) and reached better agreements (bottom panel) than those in the no alternatives condition. Error bars indicate  $\pm 1$  SEM.*



**Figure 6**

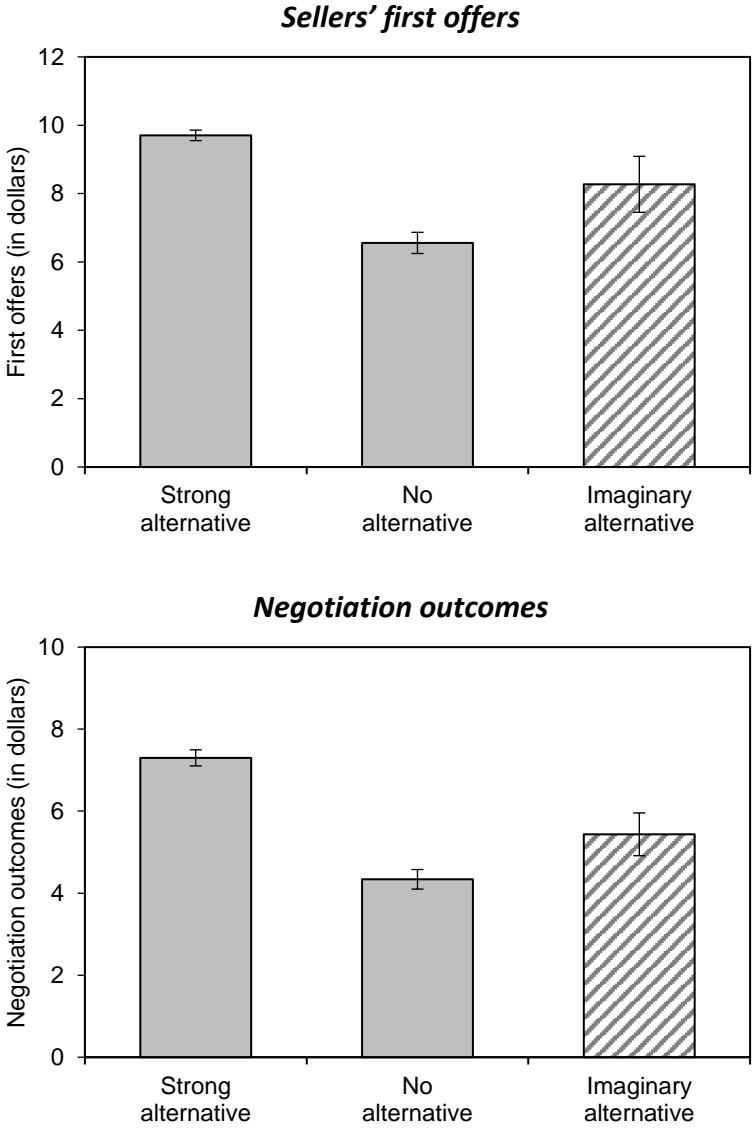
*First offer size mediated the relationship between the imaginary alternatives manipulation and final agreements. Regression coefficients are unstandardized and SEs in parentheses. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .*





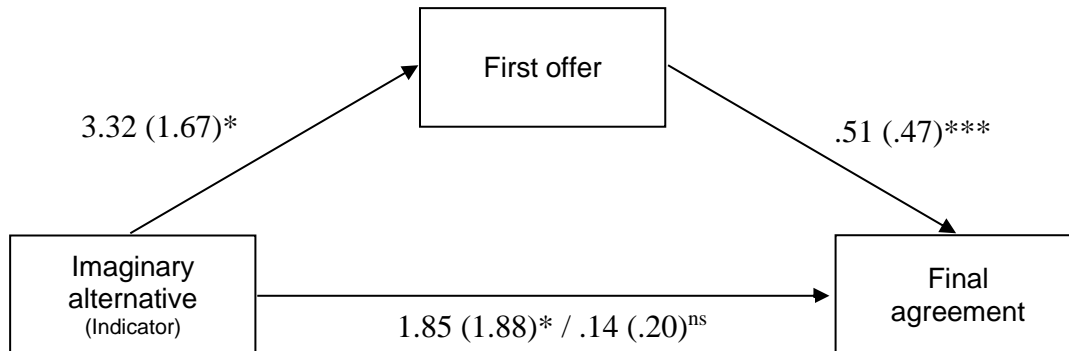
**Figure 7**

*Sellers in the imaginary alternatives condition made higher first offers (top panel) and reached better agreements (bottom panel) than those in the no alternatives condition. Error bars indicate  $\pm 1$  SEM.*



**Figure 8**

*First offer size mediated the relationship between the imaginary alternatives manipulation and final agreements. Regression coefficients are unstandardized and SEs in parentheses. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .*



## Appendix A

## Scoring scheme used in Study 1

<i>ISSUE</i>	<i>OPTIONS</i>	<i>RECRUITER (points)</i>	<i>CANDIDATE (points)</i>
<b>Bonus</b>	10%	0	4000
	8%	400	3000
	6%	800	2000
	4%	1200	1000
	2%	1600	0
<b>Job Assignment</b>	Division A	0	0
	Division B	-600	-600
	Division C	-1200	-1200
	Division D	-1800	-1800
	Division E	-2400	-2400
<b>Vacation Time</b>	25 days	0	1600
	20 days	1000	1200
	15 days	2000	800
	10 days	3000	400
	5 days	4000	0
<b>Starting Date</b>	June 1	0	2400
	June 15	600	1800
	July 1	1200	1200
	July 15	1800	600
	August 1	2400	0
<b>Moving Expenses Coverage</b>	100%	0	3200
	90%	200	2400
	80%	400	1600
	70%	600	800
	60%	800	0
<b>Insurance Coverage</b>	Plan A	0	800
	Plan B	800	600
	Plan C	1600	400
	Plan D	2400	200
	Plan E	3200	0
<b>Salary</b>	\$90,000	-6000	0
	\$88,000	-4500	-1500
	\$86,000	-3000	-3000
	\$84,000	-1500	-4500
	\$82,000	0	-6000
<b>Location</b>	San Francisco	1200	1200
	Atlanta	900	900
	Chicago	600	600
	Boston	300	300
	New York	0	0

Source: Neale (1997)

## Appendix B

### Imaginary Alternatives Scale

Think about how you usually negotiate and how you tend to behave during such situations. By negotiation, we mean situations in which you try to resolve opposing interests and come to an agreement with another person. (1 = *strongly disagree*; 7 = *strongly agree*)

1. When I negotiate, I think about what it would be like to have a better offer.
2. When I negotiate, I dream about alternatives that I don't have.
3. When I negotiate, I try to picture how it would feel like to have a strong alternative.
4. When I negotiate, I think about what it would be like to be in a stronger position.
5. When I negotiate, I visualize alternatives that I don't currently have.