

The Power of Lost Alternatives in Negotiations

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Abstract

Having attractive alternatives is often seen as a *sine qua non* for negotiator success. Given that alternatives are not set in stone and are thus inherently probabilistic in nature, what happens if an alternative is lost? Across seven experiments ($N = 2538$), we demonstrate that losing an attractive alternative carries advantages compared to never having had this alternative. Specifically, negotiators who lose an attractive alternative set more aggressive aspirations, first offers, and obtain better outcomes. These advantages appear to result from negotiators anchoring their aspirations and first offers on the lost alternative. At the same time, because the attractive alternative is used as a reference point to evaluate the outcome, negotiators who lost an attractive alternative are less satisfied with the better outcome they obtain. The present research highlights the powerful influence lost alternatives have on how negotiators prepare, behave, feel, and perform in a negotiation.

Keywords: Negotiation, Alternative, Anchoring, First Offer, Aspiration, Satisfaction

Introduction

Negotiations permeate many aspects of business life and often constitute critical decision points that affect long-term outcomes. Whether an important deal is closed, an attractive job is secured, or a rare opportunity is seized often depends on the outcome of a negotiation. In light of this paramount importance, it should not be surprising that negotiators have a keen interest in maximizing their success at the bargaining table. How can they do so? Which strategies can they use to strengthen their position, enhance their chances to seize attractive offers, and convert them into favorable deals?

The literature on negotiation has many sound pieces of advice to offer. One recommendation that is almost universally accepted is to seize the power of alternatives. Before entering a negotiation, the advice holds, secure attractive alternative offers. Doing so will strengthen your bargaining position and ultimately yield better outcomes. This message echoes loud and clear from practitioner books (e.g., Fisher, Ury, & Patton, 2011), as well as empirical research papers (for reviews, Galinsky, Schaerer, & Magee, 2017; Schaerer, Teo, Madan, & Swaab, 2020).

Having alternatives in negotiations

Research to date has repeatedly demonstrated that having an attractive alternative brings with it a number of cherished advantages at the bargaining table, simply because it reduces the dependency on one's counterpart (Emerson, 1962; Kim & Fragale, 2005). The ability – even if never acted upon – to walk away from a given negotiation or to accept an alternative offer, allows negotiators to influence a negotiated outcome in the direction of their ideal outcome (Galinsky et al., 2017). In line with this notion, for example, negotiators with more attractive BATNAs (*Best Alternative to a Negotiated Agreement*) set more ambitious aspirations (Pinkley, Neale, & Bennett, 1994; Pinkley, 1995; Raiffa, 1982), defined as “*goals* that a party is striving for... or minimal *standards* that a party aspires to meet or exceed”

(Rubin, Pruitt, & Kim, 1994, p.16). Indeed, research has found that attractive BATNAs lead to more aggressive reservation prices and target prices (Pinkley et al., 1994). Also, negotiators with attractive BATNAs are more risk-taking (Anderson & Galinsky, 2006) and agentic (Magee, Galinsky, & Gruenfeld, 2007) in working towards their goals, more likely to initiate a negotiation, and more likely to make the first offer (Magee et al., 2007). Negotiators with attractive BATNAs not only demand more of themselves, they also demand more of their counterparty (De Dreu, 1995). In combination, these influences on negotiators' behavior ensure that negotiating with an attractive alternative usually leads to superior outcomes at the bargaining table (Galinsky & Mussweiler, 2001; Galinsky, Mussweiler, & Medvec, 2002; Galinsky et al., 2017; Pinkley et al., 1994). This effect of alternatives is so robust that it even holds for alternatives that are not guaranteed (Pinkley et al., 2019) or indeed are purely imaginary (Schaerer, Schweinsberg, & Swaab, 2018).

In light of their potency and robustness, it is not surprising that having an attractive alternative is often seen as a *sine qua non* for negotiating successfully.

Losing alternatives in negotiations

The negotiation literature to date has predominantly focused on one important characteristic of any given alternative -- its value -- and has only recently started to develop an interest in a second fundamental characteristic, namely its expectancy or likelihood of being realized (Conlon, Pinkley, & Sawyer, 2014; Pinkley et al., 2019; Schaerer et al., 2018). This is in stark contrast to how decision makers typically think about potential events. Rather than just focusing on the value of an event that may materialize, decision makers also take into account the likelihood that it actually will materialize (Dawes & Corrigan, 1974). The same is likely to occur at the bargaining table, where negotiators will take into account the likelihood with which an alternative will materialize. In line with this notion, recent research demonstrates that negotiators do indeed take the value as well as the likelihood of an

alternative into account (Pinkley et al., 2019). In fact, BATNA likelihood was found to influence negotiators' power perceptions as well as their performance. In light of these recent findings, BATNAs are best conceptualized as a product of their value and expectancy.

This perspective on alternatives points to an important and unexplored facet of the role alternatives play in negotiations. If we presume that alternatives are inherently probabilistic, not guaranteed until a deal has been completed (Conlon et al., 2014; Pinkley et al., 2019), then what happens if a given alternative is rescinded? What happens if in the course of a negotiation, for example, a party withdraws a previously made offer? In a world of highly competitive and dynamic markets, our intuition was that such withdrawals are a frequent occurrence in real world negotiations. To validate this intuition, we asked two different sets of participants about their experiences with losing alternatives in the course of a negotiation. The first set consisted of MBA students at a UK business school with an average of more than six years of work experience. The second set was comprised of UK business professionals with an average of more than 20 years of work experience, who indicated having negotiated as part of their current or prior work roles. Of the 66 MBA students we asked, 59% indicated that they had experienced the withdrawal of an offer during negotiations in the past. Of the 394 business professionals, 64% indicated that they had experienced such a loss of an offer. Losing an alternative thus appears to be a frequent real-world experience.¹

How does this experience of losing an alternative influence the process and outcome of a negotiation? From a rational perspective, negotiators who lose an alternative are in the same position as those who never had that alternative in the first place; neither party has an

¹ Details of the data collection and descriptive statistics can be found in the supplementary materials (1).

alternative. Logically, one may thus expect a lost alternative to have little effect on negotiation processes and outcomes. However, previous research has demonstrated that negotiators' past experiences – such as reaching an impasse in a preceding negotiation – powerfully influence the intentions with which they approach a subsequent negotiation as well as the outcomes they obtain (O'Connor & Arnold, 2001; O'Connor, Arnold, & Burris, 2005). In fact, such effects of prior negotiation experiences appear to hold for repeated negotiations with the same partner (Curhan, Elfenbein, & Eisenkraft, 2010) as well as for sequential negotiations with different partners (Becker & Curhan, 2018). In light of this research, we hypothesized that losing an alternative constitutes a prior negotiation experience that shapes subsequent negotiation processes and outcomes. To what effect?

To date, the negotiation literature on the power of alternatives does not offer much of an answer to this question (Brett & Thompson, 2016; Galinsky et al., 2017; Thompson, Wang, & Gunia, 2010). The present research was designed to fill this gap and shed light on the power of lost alternatives. To do so, we first consider the underlying cognitive mechanism associated with having an alternative and assess its potential impact if the alternative is lost. We then use this to derive predictions regarding the implications of losing an alternative on subsequent negotiation processes and outcomes.

Alternatives as anchors

Why do alternatives give such an apparently powerful and robust boost to negotiator performance? It appears that the mechanisms driving this effect are mostly cognitive in nature. One particularly powerful mechanism appears to be anchoring (Tversky & Kahneman, 1974), which may well be the most robust phenomenon in human judgment and decision-making more generally (Klein et al., 2014). Anchoring captures the influence that considering a numeric standard (the anchor) has on subsequent judgments (Mussweiler & Strack, 2000a). Anchoring effects emerge across a broad array of different judgmental

domains, such as general knowledge questions (Epley & Gilovich, 2001; Strack & Mussweiler, 1997; Tversky & Kahneman, 1974; Wegener, Petty, Detweiler-Bedell, & Jarvis, 2001), price estimates (Mussweiler & Strack, 2000a; Northcraft & Neale, 1987), probability assessments (Chapman & Johnson, 1994; Plous, 1989), legal judgments (Chapman & Bornstein, 1996; Englich, Mussweiler, & Strack, 2006), and negotiation (Bhatia & Gunia, 2018; Galinsky & Mussweiler, 2001; Gunia, Swaab, Sivanathan, & Galinsky, 2013; Lee, Loschelder, Schweinsberg, Mason, & Galinsky, 2018; Loschelder, Stuppi, & Trötschel, 2014; Mason, Lee, Wiley, & Ames, 2013).

In the context of negotiations, it has been suggested that alternatives serve as powerful anchors, impacting negotiator aspirations, first offers, and ultimately the negotiated agreement (Schaerer, Swaab, & Galinsky, 2015; Schaerer, Loschelder, & Swaab, 2016). Indeed, because negotiators anchor on their alternatives when generating targets and first offers, those with better alternatives set more ambitious target prices and first offers, which then leads them to obtain better outcomes (Galinsky, Ku, & Mussweiler, 2009; Galinsky et al., 2017; Galinsky & Mussweiler, 2001; White & Neale, 1994).

Losing your anchor

As our survey of working professionals indicates -- alternatives frequently evaporate. If an alternative is lost, it is no longer relevant as an anchor, so will it still exert an effect on negotiators? Surprising as it may seem, the anchoring literature suggests that once an alternative has been considered, it will still have some effect on the negotiation, even if it is ultimately lost. This is the case because anchoring is a remarkably robust phenomenon that can persist even if the anchor is uninformative or irrelevant for the judgment at hand. For example, anchoring has been demonstrated for anchors that are uninformative because they were randomly selected (Cervone & Peake, 1986; Englich et al., 2006; Tversky & Kahneman, 1974) or implausibly extreme (Chapman & Johnson, 1994; Mussweiler & Strack,

2000a). They are also robust to differences in judges' motivation (Wilson, Houston, Etling, & Brekke, 1996) or expertise (Englich et al., 2006; Northcraft & Neale, 1987) and even prevail in light of explicit instructions to correct (Wilson et al., 1996). This robustness also holds in the context of negotiations in which anchors that are irrelevant (because they ostensibly resulted from a misunderstanding or were immediately replaced; Bhatia & Gunia, 2018; Whyte & Sebenius, 1997) still have an effect. In light of this extraordinary robustness of anchoring, the effects of considering an alternative are likely to be similarly persistent. That is, just as having considered an uninformative anchor influences a subsequent numeric judgment, having considered an alternative that no longer exists is likely to influence the process and outcome of a negotiation.

But why would this be the case? To answer this question, it is helpful to consider the psychological mechanisms that produce anchoring effects in the first place. The last two decades have seen a surge of research and debate on the exact mechanisms. A variety of different psychological mechanisms have been proposed, including conversational inferences (Grice, 1975; Jacowitz & Kahneman, 1995; Zhang & Schwarz, 2013), insufficient adjustment (Epley & Gilovich, 2001; Tversky & Kahneman, 1974), scale distortion (Frederick & Mochon, 2012), numeric priming (Wong & Kwong, 2000), elaboration (Wegener et al., 2001) and selective accessibility (Chapman & Johnson, 1999; Mussweiler & Strack, 1999a, 2000a, 2001; Strack & Mussweiler, 1997). An emerging consensus appears to be that given the multifaceted nature of anchoring, each of these mechanisms contributes to anchoring to varying degrees under different boundary conditions and captures different characteristics of the phenomenon (e.g., Chapman & Johnson, 2002; Jacowitz & Kahneman, 1995; Mussweiler, Englich, & Strack, 2004; Mussweiler & Strack, 1999a, 2001; Simmons, LeBoeuf, & Nelson, 2010).

While several of these mechanisms may well work in tandem to ultimately produce the effects of losing an alternative, one mechanism that has been specifically developed and tested to explain the robustness of anchoring is selective accessibility (Mussweiler & Neumann, 2000; Mussweiler & Strack, 1999a, 1999b). From this perspective, anchoring effects – despite being produced by considering a numeric value – are driven by mechanisms that are semantic in nature (Chapman & Johnson, 1999; Mussweiler & Strack, 1999b, 2000a, 2001; Strack & Mussweiler, 1997). More specifically, anchoring is seen as being produced by anchor-consistent information about the target quantity that is selectively activated while considering the anchor value. For example, judges who are asked to estimate the average value of a German car and are provided a high anchor (€40,000) will selectively generate semantic information that is consistent with this anchor. That is, they retrieve examples of relatively high-end German cars, but ignore relatively low-end ones (Mussweiler & Strack, 2000a). The opposite is true for a low anchor (€20,000). This semantic information becomes cognitively accessible so that judgments of the average price of German cars will be higher when a high anchor is provided compared to a low anchor - the typical anchoring effect (Kahneman, 2011). Importantly, because the critical semantic information has been generated by judges themselves and is thus not seen as biased (Mussweiler & Neumann, 2000; Mussweiler & Strack, 1999a), it is unlikely to be discounted or corrected for (Wilson & Brekke, 1994) so that anchoring effects are very robust (Wilson et al., 1996). Once anchor-consistent information has become cognitively accessible, it will influence subsequent judgments, even if the anchor itself is discredited or lost.

The implications of this perspective on anchoring for the case of losing an alternative are straightforward. Specifically, the anchoring potential of any alternative is determined by the anchor-consistent information that is activated while considering it. A negotiator who considers an attractive offer, including a high anchor, will generate anchor-consistent

information that sheds a positive light on his or her bargaining position. For a seller, for example, this may include information about the high quality or scarcity of the negotiated entity. This will induce him or her to set higher aspirations and make more demanding first offers. Importantly, from a selective accessibility perspective, this influence on the negotiator's behavior is not driven by the offer itself, but by the information about the bargaining position that is activated vis-à-vis that offer. If the offer is lost, that information will remain accessible and will thus unfold its influence on the negotiation. In sum, through the anchoring mechanism, losing an attractive alternative offers an advantage compared to never having had an alternative. A negotiator who lost an attractive alternative should set more aggressive aspirations and make more aggressive first offers than a negotiator who never had the alternative to start with.

Stated formally:

Hypothesis 1. Compared to negotiators who never had an alternative, those who lose an attractive alternative set more aggressive aspirations for the ensuing negotiation.

Hypothesis 2. Compared to negotiators who never had an alternative, those who lose an attractive alternative make more aggressive first offers in a negotiation.

In addition to examining these primary effects on aspirations and first offers, we designed the present studies to shed light on their downstream consequences as well as their interconnections. Past research has established that the aspirations with which negotiators enter a negotiation (Pinkley et al., 1994; Pruitt, 1991; White & Neale, 1994) and the initial first offers they make (Chertkoff & Conley, 1967; Galinsky & Mussweiler, 2001; Liebert, Smith, Hill, & Keiffer, 1968; Schaerer et al., 2015) are particularly powerful determinants of negotiator success. Specifically, negotiators who enter a negotiation with higher aspirations typically make higher first offers (Galinsky & Mussweiler, 2001; Loschelder, Trötschel, Swaab, Friese, & Galinsky, 2016; Schaerer et al., 2016, 2015) which in turn leads to better

outcomes (Galinsky & Mussweiler, 2001; Galinsky et al., 2017; Loschelder et al., 2016). In line with this research, we hypothesize:

Hypothesis 3. Compared to negotiators who never had an alternative, those who lose an attractive alternative obtain better outcomes in a negotiation.

Furthermore, this research suggests the following full pathway by which losing an attractive alternative affects outcomes:

Hypothesis 4: Because losing an attractive alternative leads negotiators to set more aggressive aspirations, they will make more aggressive first offers, which in turn leads to better outcomes.

Compensating for a lost alternative

These hypotheses focus on the potential desirable consequences of losing an alternative. Importantly, however, losing an alternative does not necessarily or exclusively yield such beneficial consequences. For one, the lost alternative may be unattractive and thus constitute a low anchor leading to lower aspirations, first offers, and outcomes (Schaerer et al., 2015). Negotiators could then be at a disadvantage when they lose an unattractive alternative. Furthermore, negotiators may be at a disadvantage if their counterpart lost an attractive alternative and thus enters the negotiation with higher aspirations and more aggressive first offers. These potential detrimental effects call for an effective corrective device that allows negotiators to undo the effects of lost alternatives.

How does one de-anchor from a lost alternative? The anchoring literature suggests using a considering the opposite strategy (Lord, Lepper, & Preston, 1984)-- taking into account evidence that is inconsistent with initial beliefs (see also Griffin, Dunning, & Ross, 1990; Koriat, Lichtenstein, & Fischhoff, 1980)-- successfully reduces the magnitude of anchoring effects (Adame, 2016; Chapman & Johnson, 1999; Mussweiler, Strack, & Pfeiffer, 2000). Asking experienced car dealers who were anchored on a high selling price to list

arguments that speak against this price (i.e., anchor) for a rusty old car, for example, led them to make lower estimates of the car's value than car dealers with no instruction for considering the opposite. Although findings like these are no litmus test for the operation of selective accessibility (Mussweiler & Strack, 1999b, 2000a; Strack & Mussweiler, 1997) they are in line with this conceptual perspective: If anchoring effects are -- at least partly -- driven by the anchor-consistent information about the target that judges spontaneously generate when considering the anchor, inducing them to generate information that counteracts its implications should indeed reduce anchoring. In much the same way, asking participants to generate information that speaks against the value of the lost alternative, should reduce its effects. Considering the opposite thus promises to be an effective corrective strategy against the influences of lost alternatives. Stated formally:

Hypothesis 5: The effect of a lost alternative on aspirations, first offers, and outcomes will be weaker for negotiators who generate arguments that speak against the lost alternative compared to negotiators who do not generate arguments against the lost alternative.

Using your anchor as a reference point for satisfaction

The present perspective suggests that lost alternatives powerfully shape negotiators' aspirations, first offers, and objective outcomes. Specifically, we hypothesize that negotiators who lose an attractive alternative will anchor on the value of this alternative, which ultimately allows them to reach a more favorable agreement at the bargaining table. Interestingly, better objective negotiation outcomes do not necessarily translate into better subjective outcomes, such as feeling more satisfied (e.g., Oliver, Balakrishnan, & Barry, 1994). One might expect that the better negotiators perform -- the more they obtain at the bargaining table -- the more satisfied they are with their outcome. In contrast to this intuition, however, research in social judgment in general (Eiser, 1990; Kahneman, 1992; Kahneman & Miller, 1986; Mussweiler & Strack, 2000b) and negotiations in particular (Curhan et al.,

2010; Curhan, Elfenbein, & Xu, 2006; Curhan, Neale, Ross, & Rosencranz-Engelmann, 2008; Galinsky et al., 2002; Oliver et al., 1994; Schaerer, Schweinsberg, Thornley, & Swaab, 2020) suggests that those who achieve more because they set high aspirations often feel worse about their superior outcomes.

This is the case because the anchors that influence negotiations so powerfully play different roles for aspirations and judgments of satisfaction. *Ex ante*, they act as standards to which aspirations are assimilated. *Ex post facto*, they act as reference points from which evaluations of satisfaction are contrasted away (e.g., Mossholder, 1980). In one study on letter search performance, for example, participants who were given a high-performance anchor performed better than those given a low-performance anchor because the high anchor induced a more aggressive performance goal (Mussweiler & Strack, 2000b). When asked to evaluate their satisfaction with that performance, however, participants used the same anchor as a reference point against which they evaluate their performance. Because high anchors are less likely to be achieved, participants who had a high anchor reported lower levels of satisfaction with their outcome than those with a low anchor. The same pattern emerges in the context of negotiations. For example, participants who focus on their target price-- a high anchor -- do better in a dyadic negotiation than those focusing on their reservation point -- a low anchor (Galinsky et al., 2002). At the same time, those who focused on their target price feel worse about their objectively superior performance than those who focused on their reservation point.

In much the same way, lost alternatives are likely to have diverging effects on outcomes and satisfaction. Specifically, lost alternatives that induce negotiators to set higher aspirations, make more aggressive first offers and ultimately obtain better outcomes, are likely to be used as contrasting reference points when evaluating satisfaction with the obtained outcome. We hypothesize, therefore, that attractive lost alternatives will trigger

lower levels of satisfaction than no alternatives do, even though the outcomes are objectively better.

Hypothesis 6: Compared to negotiators who never had an alternative, those who lost an attractive alternative feel less satisfied with their objectively better outcomes.

The Present Research

The present research was designed to test these hypotheses empirically. Study 1 examines how losing an attractive alternative influences aspirations and first offers. Studies 2a and 2b extend this initial finding by testing for a downstream consequence on negotiated outcomes. Studies 3 to 5 shed light on the underlying psychological mechanism of anchoring by contrasting attractive vs. unattractive lost alternatives (Study 4), comparing lost vs. existing alternatives (Study 3), testing the full process model including aspirations, first offers and outcomes (Studies 2a, 3, 5, and 6), and testing for potential additional mechanisms (Study 4). In addition, Study 5 explores a “considering the opposite” strategy (Lord et al., 1984) as a way to compensate for the loss of an alternative. Finally, Study 6 examines how losing an attractive alternative influences objective negotiated outcomes vs. subjective satisfaction with these outcomes.

In summary, the present research was designed to shed light on the power of lost alternatives. We set out to establish whether losing an alternative provides an advantage at the bargaining table. To ensure the generalizability of our research findings, we examined these questions in the context of a variety of different negotiation paradigms (sale of a car and a manufacturing plant, and the purchase and sale of a coffee mug). Moreover, we employed a wide range of methods, including scenarios (Study 1), pre-scripted negotiations (Studies 3 - 6), and actual person-to-person interactions (Studies 2a and 2b). Finally, we examined the effects on buyers (Studies 2b) as well as sellers (Studies 1, 2a, 3 - 6).

Together, these studies seek to make at least five important theoretical contributions. First, we seek to provide the first evidence in support of the possibility that losing an attractive alternative may be beneficial for a negotiator. Second, we examine for the first time a central implication of the probabilistic nature of alternatives (Pinkley et al., 2019), namely their potential to be lost. To date, the little research that has treated alternatives as probabilistic has focused on the probability that an alternative may materialize (Pinkley et al., 2019; Schaerer et al., 2018). We examine what happens if an alternative that has materialized is then rescinded. Third, we further emphasize how powerfully alternatives influence negotiations by demonstrating that their effects transcend their existence. Even alternatives that are lost and are thus no longer relevant for the negotiation powerfully shape how negotiators prepare for, behave and perform in, and feel about a negotiation. Fourth, our studies add to the literature on negotiator satisfaction by demonstrating that objective negotiation outcomes and subjective satisfaction with these outcomes can diverge even for irrelevant reference points. Fifth, we highlight the importance of negotiator's bargaining histories (O'Connor et al., 2005) by demonstrating for the first time that losing an alternative has consequences that carry over to subsequent negotiations (Becker & Curhan, 2018). Data, syntax, and materials can be accessed at:

https://osf.io/3z68e/?view_only=0ba8290d99e24a8b8fc4824264011ce8

Study 1

The process of preparing for a negotiation has been shown to exert powerful effects on the way the negotiation unfolds and the outcome that is reached (Brett & Thompson, 2016; Fisher et al., 2011; Pruitt, 1991; Thompson et al., 2010). Two key constructs that negotiators consider before interacting with their counterparts are the minimum acceptable offer, after which they would walk away (reservation point), and the most they hope to achieve in the negotiation (target price). Together, these two values constitute a negotiator's aspirations

(Rubin et al., 1994). Past research has established that higher aspirations typically lead to better negotiated outcomes, which is typically mediated by more aggressive first offers (Galinsky, Leonardelli, Okhuysen, & Mussweiler, 2005; Galinsky & Mussweiler, 2001; Gunia et al., 2013; Loschelder et al., 2016). Using a sample of experienced negotiators, Study 1 examines how losing an attractive offer influences negotiators' aspirations as well as their first offers.

To do so, we ask our participants to engage in a car-selling scenario: They are on their way to a negotiation with a potential buyer, when those in the lost alternative condition are informed that an attractive offer they had previously negotiated was withdrawn. Participants in the no alternative condition never had that attractive offer. In a scenario like this, there is some ambiguity with regards to potential other alternatives. Does losing an alternative mean that there are no others? Does the fact that no alternative was mentioned mean that none exists? In fact, previous research suggests that participants for whom no alternative was mentioned may well construct one on the fly (Schaerer et al., 2018). To control for and explore the effects of this ambiguity, half of our participants were explicitly instructed that no alternative offers exist (anymore), whereas for the other half, there was no explicit mention of (further) offers.

Method

We pre-registered the methods and analyses for this study.²

Participants and design. We conducted a power analysis to determine an adequate sample size to capture our predicted effect by estimating a medium effect size, $f = 0.25$, and a

²<https://aspredicted.org/blind.php?x=uk5tz6>

desired power of .80. This effect size was estimated based on existing data we had collected.³ The power analysis revealed a minimum required sample size of 128. We expected to exclude some participants based on our a priori exclusion criteria, so we set a target of recruiting 200 participants through the Prolific online platform. In order to restrict our sample to experienced negotiators, we applied a Prolific custom prescreening question, “Do you have experience of negotiation in the course of your work? (For example, buying or supplying services or products to another organization, relationship management, negotiation, make-or-buy decisions etc.).” In response, 201 participants based in the United Kingdom completed the study. In line with our preregistration and prior research (Schaerer et al., 2015), we excluded 111 participants, many of whom were excluded because they reported in the study that, unfortunately, they did not in fact have negotiation experience.⁴ This left us with 90 observations to be used for analysis (54% female; $M_{age} = 44.72$, $SD_{age} = 12.00$, $M_{Full-Time\ working\ experience} = 22.99$, $SD_{Full-Time\ working\ experience} = 11.65$).

Study 1 had a four-cell, between-participants design: alternative (lost attractive vs. none) X no alternative message (stated vs. not stated).

Materials and procedure. Participants were asked to imagine that they are selling a VW Golf that they had purchased a few years ago. The negotiation materials included information about the car such as the make and model. Participants were told that their own

³ We pre-registered and ran two studies looking at the impact of lost attractive alternatives on reservation price and target price to demonstrate that the effects can emerge independently. Please see supplementary materials (2) for a summary of these studies.

⁴ Participants were removed due to duplicate I.P addresses (2), those who failed the attention check question (2), those who indicated they did not have prior negotiation experience (61), and those that qualified as an outlier for at least one of the dependent measures (46).

market research valued the car at £10,100 and that they were on their way to negotiate with an interested buyer, Taylor.

Participants in the lost attractive alternative condition were informed that last week they had met another potential buyer, Brad. Brad made a £12,706 offer for the car and that the offer was non-negotiable. Participants in the no lost alternative condition did not receive additional information and were advanced to the next page.

To operationalize the experience of preparing for a negotiation with or without an alternative, we asked participants to think about how they would approach the negotiation with Taylor. Specifically, they were given a text box to write down their preparations and the page could not be advanced before 30 seconds. Next, participants in the lost attractive alternative condition were informed of the following, “On your way to the negotiation with Taylor, Brad called and said that he is no longer interested in buying the car.”

Participants then either did or did not receive a “no alternative” message, depending on their condition. Those who received the message read: “You do not have any alternative offers for the car right now.” Those for whom the “no alternative” message was not stated simply continued to the dependent measures.

Finally, participants indicated their reservation price, target price, and first offer.

Measured variables. Participants were asked to indicate their reservation price (“What is the lowest price you would be willing to accept for the car in your negotiation with Taylor?”) and target price (“What is the ideal price you would like to receive for the car in your negotiation with Taylor?”). In line with Rubin, Pruitt, and Kim’s (1994) definition of a negotiator’s aspirations, which captures target price and reservation price, we z-transformed the negotiators’ reservation and target prices and averaged their scores to compute aspiration level, $r(90) = .47, p < .001$. Any means and standard deviations which are not reported in the results section can be found in Appendix A.

First offer was captured by asking, “Imagine that at the start of the negotiation, Taylor asks, ‘How much do you want for the car?’ What’s the price you would ask for?”

Results

Descriptive statistics and correlations among study variables are presented in Table 1.

Aspiration level. We predicted that participants who lost an attractive alternative would set more aggressive aspiration levels than those who never had an alternative in the first place. A 2 X 2 analysis of variance (ANOVA) revealed, consistent with our prediction, a significant main effect of alternative condition, $F(1, 86) = 71.29, p < .001, \eta^2_p = 0.45$ ($M_{lost\ attractive\ alternative} = 0.83, SD = 0.51; M_{no\ alternative} = -0.40, SD = 0.69$).

There was no main effect of “no alternative” message condition, $F(1, 86) = 0.87, p = .35, \eta^2_p = 0.01$. The main effects were not qualified by a significant interaction, $F(1, 86) = 0.01, p = .92, \eta^2_p < 0.001$.

First offer. We predicted that participants who lost an attractive alternative would give more aggressive first offers than those who never had an alternative in the first place. A 2 X 2 analysis of variance (ANOVA) revealed, consistent with our prediction, a significant main effect of alternative condition, $F(1, 86) = 67.89, p < .001, \eta^2_p = 0.44$, ($M_{lost\ attractive\ alternative} = 11,806.90, SD = 695.23; M_{no\ alternative} = 10,591.80, SD = 594.99$).

There was no main effect of “no alternative” message condition, $F(1, 86) = 0.02, p = .90, \eta^2_p < 0.001$. The interaction was also not significant, $F(1, 86) = 0.12, p = .73, \eta^2_p = 0.001$.

Indirect effect. Finally, we predicted aspiration levels would drive the relationship between alternative conditions and negotiator first offers. This represents a subset of Hypothesis 4 (we did not test for negotiation outcomes in this study). Using PROCESS macro 4 (Hayes, 2012; $k = 10,000$), we found that losing an attractive alternative led negotiators to set more aggressive aspiration levels for the upcoming negotiation, leading

sellers in the lost attractive alternative condition to give more advantageous first offers, $b = 750.40$, $SE = 350.50$, $CI_{95\%} [207.28, 1559.87]$.

Discussion

Study 1 demonstrates that losing an attractive alternative leads to higher aspirations and more aggressive first offers. Furthermore, the effect on first offers is driven by aspirations. To ensure generalizability, we pre-registered a study to replicate the effects with a diverse sample of business school students with a range of backgrounds in terms of experience, ethnicity, and professional specialization. While this additional experiment, reported in the supplementary materials, was somewhat compromised by the emerging Covid-19 pandemic, it replicates the basic pattern.⁵

Importantly, the “no alternative” message manipulation suggests that these effects occur independently of potential ambiguities regarding the existence of potential further offers. These findings provide initial support for our Hypotheses 1, 2, and 4. How do these effects on the level of aspirations and first offers shape the outcome of a negotiation? According to our Hypothesis 3, negotiators who lost an attractive alternative should obtain better outcomes than those who never had an alternative in the first place. Study 2 was designed to examine this possibility.

Studies 2a and 2b

To do so, we engaged participants in real interactive negotiations that were carried out either face-to-face (Study 2a) or online (Study 2b). We adapted a paradigm that has successfully been used in previous research (Schaerer et al., 2015, 2016): the sale of a

⁵ Analysis can be found in the supplementary materials (3).

collector's Starbucks mug. In both studies, about half of our participants lost an attractive offer right before they started negotiating, whereas the other half never had this alternative in the first place. Would losing the attractive alternative allow sellers (Study 2a) and buyers (Study 2b) to obtain better prices for the mug?

Study 2a

Study 2a explored this question in the context of an interactive face-to-face negotiation.

Method

Participants and design. We estimated a medium effect size of $d = 0.58$ for this study.⁶ For a desired power of .80, this requires a minimum sample size of 96 (i.e., a total sample of 192, since we needed to recruit for both roles). Because we expected exclusions, we set a target of recruiting 220 participants. Data collection was halted at 192 participants, due to the lab closing in light of the developing Covid-19 pandemic.

We manipulated the materials of participants in the seller role ($N = 96$). We used the same exclusion criteria as in Study 1 to exclude a total of 25 participants.⁷ The remaining 71 observations (62% female; $M_{age} = 30.00$, $SD_{age} = 11.40$) were used for analysis: 25 were South Asian (e.g. Indian, Pakistani), 13 were White Other, 12 were White British, 6 were Black/African Caribbean, 6 were East Asian (e.g. Chinese, Japanese), 2 were Hispanic, 1 was Middle Eastern, and 6 indicated mixed or other ethnic backgrounds.

⁶ We extrapolated this medium effect size from the negotiated outcomes from Study 2b, which was run prior to Study 2a. We selected a slightly more conservative effect size of $d = 0.58$, as opposed to $d = 0.65$, to account for changes in procedure and sample.

⁷ Participants were removed who gave responses that qualified as an outlier for at least one of the dependent measures (20), participants who failed the attention check (3), and for not following experimental procedures (2).

Study 2a had a two-cell, between-participants design: alternative (lost attractive vs. none).

Materials and procedure. In this study, participants negotiated over the sale of a Starbucks Coffee mug adapted from prior research (Schaerer et al., 2015, 2016). Buyers were first taken to a separate room and told that they were mug collectors who found someone willing to sell a discontinued, limited-edition Starbucks Logo Mug that had an average market price of £10. They were also told that their objective was to pay as little as they could for the mug. The experimenter next gathered the sellers in a separate room and introduced them to their role as mug collectors who owned a limited-edition Starbucks Mug, which was then given to the negotiators, with an average market value of £10 and that their objective was to sell the mug for as much as they could. Sellers were also told that, prior to the negotiation, they would receive a call from another interested buyer that could potentially give them leverage in the face-to-face negotiation (Schaerer et al., 2015).

All participants were given 10 minutes to prepare for the upcoming negotiation. Sellers received a phone call from a male confederate who posed as an interested buyer. Sellers in the lost attractive alternative condition were told the following, “Hi, I’m a buyer and I am calling about the limited-edition coffee mug you are offering. I’m interested in your mug, and my offer for your mug is £14.50. I am unable to pay more than £14.50. Have a nice day.” Participants in the no alternative condition were told, “Hi, I’m a buyer and I am calling about the coffee mug you are offering. I’m not interested in buying your mug, so I cannot make you an offer. Have a nice day.” Five minutes after the calls had been made, the confederate called the sellers in the lost attractive alternative condition and said, “Hi again. I called earlier to offer you £14.50 for your mug. I’m no longer interested in buying the mug, so I’m taking back my offer. Sorry about that.”

All participants completed a planning sheet on which they indicated their reservation price, target price, and for the sellers, their planned first offer. After completing the planning document, buyers were brought to their paired seller's room and told that the seller would begin the negotiation by stating how much they would like to sell their mug for—the first offer. Participants were given 10 minutes to come to an agreement.

To increase engagement in the negotiation, participants were informed that based on their performance in the negotiation, they would receive lottery tickets that would give them a chance to win a £200 Amazon gift card. Failure to reach an agreement would result in the participant not being enrolled in the lottery.

Measured variables. Reservation price was captured by asking, “What is the lowest price you would be willing to sell the mug for?” To measure target price, we asked: “What is the ideal price you would sell the mug for?” Reservation price and target price were z-transformed and then averaged to compute aspiration level, $r(71) = .69, p < .001$. Any means and standard deviations which are not reported in the results section can be found in Appendix A.

First offers were assessed by asking participants to indicate, after the negotiation, “What was the value of the seller's first offer?” Outcomes (selling price of the mug) were assessed by the experimenter when terminating the negotiation and cross-referenced with the information provided by participants individually during the computerized debrief.

Results

Descriptive statistics and correlations among study variables are presented in Table 2.

Aspiration level. We predicted that participants who lost an attractive alternative would set more aggressive aspirations than those who never had an alternative in the first place. The results of an independent-samples 2-tailed t-test supported this prediction, $t(69) =$

3.48, $p = .001$, $d = 0.84$ ($M_{lost\ attractive\ alternative} = 0.37$, $SD = 0.84$; $M_{no\ alternative} = -0.34$, $SD = 0.86$).

First offer. We predicted that participants who lost an attractive alternative would give more aggressive first offers than those who never had an alternative. The results of an independent-samples 2-tailed t-test did not support this prediction, $t(69) = 0.28$, $p = .78$, $d = 0.07$ ($M_{lost\ attractive\ alternative} = 18.49$, $SD = 6.06$; $M_{no\ alternative} = 18.97$, $SD = 8.15$).

Negotiation outcome. Three dyads in the analysis failed to reach a negotiated agreement. We predicted that participants who lost an attractive alternative would achieve better negotiated outcomes than those who never had an alternative in the first place. The results of an independent-samples 2-tailed t-test showed that this difference was not statistically significant, $t(66) = 1.47$, $p = .15$, $d = 0.36$, although the means were in the expected direction ($M_{lost\ attractive\ alternative} = 13.27$, $SD = 3.75$; $M_{no\ alternative} = 11.49$, $SD = 5.85$) (Figure 1).

Indirect effect. We predicted that negotiator aspiration levels and first offers would drive the relationship between alternative conditions and negotiated outcomes. To test the serial indirect effect hypothesis, we used PROCESS model 6 ($k=10,000$). We found support for the hypothesis: losing an attractive alternative led negotiators to set higher aspiration levels, which in turn led to aggressive first offers and better outcomes, $b = 1.18$, $SE = 0.67$, $CI_{95\%} [0.15, 2.73]$.

Discussion

Study 2a provided partial support for our hypothesis. While we find evidence for our predictions regarding aspirations and the full process model, there were no significant differences when separately analyzing first offers and negotiated outcomes. This may be

related to the smaller than initially planned number of participants that we had to accept as a consequence of the lab's closure in the context of the emerging Covid-19 pandemic.⁸

To this point, Study 2b provides an additional test of these hypotheses with more participants. Furthermore, it seeks to extend Study 2a by examining how losing an attractive alternative influences buyers (rather than sellers) in an online (rather than face-to-face) interactive negotiation.

Study 2b

Method

Participants and design. Past research on the effect of imagined alternatives in live negotiations found an effect size of $d = 0.84$ (Study 4- Schaerer et al., 2018). Given that our study was conducted online, we made a somewhat more conservative estimate of $d = 0.55$. For a desired power of .80, this requires a minimum required sample size of 106 (i.e., a total sample of 212, since we needed to recruit for both roles). Because we expected exclusions, we set a target of recruiting 240 participants through Amazon Mechanical Turk. In response, 234 U.S participants completed the survey. We only manipulated the materials of participants in the buyer role and thus focused our analyses on buyers ($N = 121$). We used the same exclusion criteria as in prior studies to exclude a total of 11 participants.⁹ The remaining 110 observations were used for analysis (58% female; $M_{age} = 35.12$, $SD_{age} = 11.71$).

Study 2b had a two-cell, between-participants design: alternative (lost attractive vs. none).

⁸ Later studies in this paper (Studies 3, 5 and 6) consistently show that aspirations yield the largest effect size, followed by outcomes and lastly first offers. The pattern here is similar. Therefore, increasing the power of the study considerably may have yielded a significant result.

⁹ 11 participants were excluded for having responses that qualified as an outlier across at least one of the dependent measures.

Materials and procedure. Participants were informed they would be engaging in a live negotiation with another participant and assigned to either the role of a buyer or seller. We used the online interactive platform chatplat, which links participants via online platforms like Qualtrics and facilitates participant interaction via a text box (Wolf, Lee, Sah, & Brooks, 2016). As in Study 2a, participants negotiated over a Starbucks Mug. The case materials were modified such that participants were informed that they were mug collectors and would be negotiating over a discontinued mug with an average market price of \$20. Participants were randomly assigned to either the no alternative condition with no mention of a previous alternative or the lost attractive alternative condition. All participants then indicated their aspiration levels for the upcoming negotiation and proceeded to negotiate.

To manipulate the lost attractive alternative, participants read the following, “Last week you were speaking with another seller who had the Starbucks Coffee Mug you are looking for and offered to sell you their mug for a value of \$8.” After correctly indicating the value of the seller’s offer, buyers were informed that two days after receiving this seller’s offer, the seller decided not to sell the mug and instead sell another item.

We incentivized all participants by informing them that five negotiators would be selected at random and would receive a bonus payment determined by how much they were able to buy/sell the mug for.

Measured variables. Reservation price was captured by asking, “What is the highest price you would be willing to pay to buy the mug?” To measure target price, we asked: “What is the ideal price you would purchase the mug for?” Reservation price and target price were z-transformed and then averaged to compute aspiration level, $r(110) = .75, p < .001$. Any means and standard deviations which are not reported in the results section can be found in Appendix A.

To assess outcomes (selling price), participants were asked to indicate whether they had reached an agreement, and if so, to report the value of the agreement, which was cross-checked with negotiation transcripts.

Results

Descriptive statistics and correlations among study variables are presented in Table 3.

Aspiration level. We predicted that participants who lost an attractive alternative would set more aggressive aspirations than those who never had an alternative in the first place. Note that for the participants in the buyer role that we examine here, lower numbers indicate more aggressive aspirations. The results of an independent-samples 2-tailed t-test supported this prediction, $t(108) = 9.77, p < .001, d = 1.88$ ($M_{lost\ attractive\ alternative} = -0.69, SD = 0.44; M_{no\ alternative} = 0.59, SD = 0.84$).

Negotiation outcome. Forty-seven dyads in the analysis failed to either reach a negotiated agreement or were unable to negotiate as their partner never arrived, or arrived and then immediately left the chat. We predicted that participants who lost an attractive alternative would achieve better negotiated outcomes than those who never had an alternative in the first place. The results of an independent-samples 2-tailed t-test supported this prediction, $t(61) = 2.55, p = .01, d = 0.65$ ($M_{lost\ attractive\ alternative} = 17.28, SD = 3.58; M_{no\ alternative} = 19.81, SD = 4.17$) (Figure 2).

Indirect effect. We predicted that negotiator aspiration levels would drive the relationship between alternative conditions and negotiated outcomes. To test this, we used PROCESS macro 4 ($k = 10,000$) and found support for the hypothesis: losing an attractive alternative led negotiators to set more aggressive aspiration levels for the upcoming negotiation, which explains why buyers in the lost attractive alternative condition were able to achieve a lower purchasing price, $b = -2.23, SE = 0.93, CI_{95\%} [-4.12, -0.45]$.

Discussion

Studies 2a and 2b provide consistent support of the positive effect of losing an attractive alternative on aspirations, and on how this ultimately carries downstream consequences for first offers and outcomes. In Study 2a, although losing an attractive alternative (versus never having had one) did not exert a significant direct effect on first offers and outcomes, it did affect outcomes through aspirations and first offers (a significant two-step indirect effect). Study 2b, a more highly-powered study, showed that losing an attractive alternative directly effects both aspirations and outcomes in a beneficial way. Furthermore, it is because losing an attractive alternative affects aspirations that it also affects outcomes.

Study 3

Studies 1 and 2 demonstrate just how powerful lost alternatives are in a negotiation. Although negotiators who lost their only alternative are objectively in the exact same bargaining position as those who never had an alternative in the first place, they obtain better outcomes. How far does this advantage go? Will a lost attractive alternative, for example, be as beneficial as an attractive alternative that is still available? In many ways, this seems unlikely to be the case because having an attractive alternative is associated with a number of benefits that go beyond the hypothesized anchoring benefits of a lost alternative. Most centrally, negotiators who have an attractive alternative are objectively in a better bargaining position because they do not have to accept offers that are below their alternative (Fisher et al., 2011). This should allow participants who have an attractive alternative to obtain even better outcomes than those who lost such an alternative. Study 3 was designed to test this possibility.

Method

We pre-registered the methods and analyses for this study.¹⁰

Participants and design. We conducted a power analysis to determine an adequate sample size to capture what we predicted would be the weakest effect: the first offer. This effect varied considerably in size across our studies, so we estimated an $f = 0.13$ here. For a desired power of .80, we required a minimum total sample size of 576. Because we expected to exclude some participants, we set a target of recruiting 650 participants. In response, 650 U.S. participants completed an online-simulated negotiation through Amazon's Mechanical Turk platform. Using the same pre-registered exclusion criteria as in prior studies, we excluded 155 participants.¹¹ The remaining 495 observations were used for analysis (51% female; $M_{age} = 37.94$, $SD_{age} = 13.00$).

Study 3 had a three-cell between-participants design: alternative (have attractive vs. lost attractive vs. none).

Materials and procedures. Participants were told that they would be engaging in a negotiation with another participant online. Actually, participants negotiated with a pre-set offer script.

Following previous research (e.g., Blader & Chen, 2012; Galinsky & Mussweiler, 2001; Gunia et al., 2013; Mehta, Mor, Yap, & Prasad, 2015; Schaerer, Tost, Huang, Gino, & Larrick, 2018; To, Leslie, Torelli, & Stoner, 2020), we adapted the popular Synertech-Dosagen negotiation case for our experimental materials. All participants were instructed to take the role of the seller of a pharmaceutical plant, namely the Chief Financial Officer (CFO) for Dosagen, a pharmaceutical company. They would negotiate the selling price of a

¹⁰ <https://aspredicted.org/blind.php?x=nz9n6m>

¹¹ 155 participants were excluded for having responses that qualified as an outlier for at least one of the dependent measures.

pharmaceutical plant with an interested buyer—Synertech. Participants were told that their company had purchased the pharmaceutical plant three years ago for a bargain price of \$15 million, that the local real estate market had declined 5% since the purchase, and that if they were unable to come to an agreement in the negotiation, the plant would be stripped for the value of the equipment netting an estimated \$17 million.

In addition to this information, participants in the *have attractive alternative* and *lost attractive alternative* conditions received confidential information informing them that they had negotiated a deal with another company, Inergy, for \$24 million prior to their upcoming negotiation. Participants in the *lost attractive alternative* condition were then informed that Inergy withdrew their \$24 million offer. Prior to entering the negotiation, participants indicated their aspiration levels.

Participants were then told they would be negotiating with another participant and were asked to provide the opening offer. Although negotiators were led to believe they were negotiating with another person, in reality this was not the case as all participants exchanged offers with a pre-set script. In response to their opening offer, participants received a counter-offer from the ostensible counterpart. The first counter-offer the script gave was \$16.50 million, followed by \$17.50 million, \$19 million, \$19 million, \$20.10 million, and \$21.25 million. The final offer in round 7 was a take it or leave it offer worth \$24.5 million. After each pre-set offer was received by participants, they had the option to either accept or reject it (and then make a counter-offer). If the participant rejected an offer (e.g., \$17.50M) and then provided an offer that had a value below the pre-set value for the next round (e.g., \$18M, which is lower than \$19M), the participant was informed that their counterpart had accepted the offer and the negotiation had ended.

We incentivized participants as in Study 2b.

Measured variables. Reservation price was captured by asking, “What is the lowest price you would be willing to accept from Synertech?” To measure target price, we asked: “What price would you ideally like to obtain in this negotiation?” We z-transformed the negotiators’ reservation and target prices and averaged their scores to compute aspiration level, $r(495) = .69, p < .001$. Any means and standard deviations which are not reported in the results section can be found in Appendix A. First offers were measured via the opening offer given in the negotiation. Negotiated outcomes were recorded as either (a) the offer from Synertech that was accepted by participants or (b) the offer participants made that was below the next pre-set Synertech offer.

Results

Descriptive statistics and correlations among study variables are presented in Table 4.

Aspiration level. We predicted that participants who had an attractive alternative would report the highest aspirations, followed by those who had lost an attractive alternative, followed by those who never had an alternative. A one-way ANOVA indicated a significant difference across the conditions, $F(2, 492) = 187.42, p < .001, \eta^2_p = 0.43$. Planned comparison analyses indicated that negotiators who lost an attractive alternative had significantly higher aspiration levels ($M = -0.23, SD = 0.52$) than negotiators who never had an alternative ($M = -0.65, SD = 0.86$), $t(492) = 5.40, p < .001, d = 0.49$. Further, negotiators who had an attractive alternative had significantly higher aspiration levels ($M = 0.77, SD = 0.66$) than negotiators who lost an attractive alternative, $t(492) = 13.15, p < .001, d = 1.19$.

First offer. We predicted a similar pattern for first offers, with those who had an attractive alternative making the most aggressive first offers, followed by those who lost an attractive alternative, followed by those who never had an alternative. A one-way ANOVA indicated a significant difference across the conditions, $F(2, 492) = 58.28, p < .001, \eta^2_p = 0.19$. Planned comparison analyses showed negotiators who lost an attractive alternative

made significantly more aggressive first offers ($M = 24.28$, $SD = 4.57$) than negotiators who never had an alternative ($M = 22.19$, $SD = 6.23$), $t(492) = 3.39$, $p = .001$, $d = 0.31$.

Negotiators who had an attractive alternative made significantly more aggressive first offers ($M = 28.49$, $SD = 5.52$) than negotiators who lost an attractive alternative, $t(492) = 7.04$, $p < .001$, $d = 0.63$.

Negotiated outcomes. 11 participants failed to reach a negotiated outcome. Again, we predicted the same pattern with participants who had an attractive alternative obtaining better outcomes than participants who lost an attractive alternative, who in turn would do better than those who never had an alternative. A one-way ANOVA indicated a significant difference across the conditions, $F(2, 481) = 79.63$, $p < .001$, $\eta^2_p = 0.25$. Planned comparison analyses showed negotiators who lost an attractive alternative obtained significantly better negotiated outcomes ($M = 19.03$, $SD = 1.55$) than negotiators who never had an alternative ($M = 17.88$, $SD = 2.18$), $t(481) = 4.32$, $p < .001$, $d = 0.39$. Negotiators who had an attractive alternative obtained significantly better negotiated outcomes ($M = 21.10$, $SD = 3.01$) than negotiators who had lost an attractive alternative, $t(481) = 8.02$, $p < .001$, $d = 0.73$ (Figure 3).

Indirect effects. We predicted that negotiator aspiration levels and first offers would drive the relationship between alternative conditions and negotiated outcomes. To test the serial indirect effect hypothesis, we used PROCESS macro 6 ($k = 10,000$). We applied the indicator distinction given the multi-categorical nature of the independent variable. Indicator coding was used to create the two indicator variables X1 [Lost Attractive Alternative = 0, Have Attractive Alternative = 0, No Alternative = 1] and X2 [Lost Attractive Alternative = 0, Have Attractive Alternative = 1, No Alternative = 0]. Thus, the Lost Attractive Alternative condition was the reference group. We found support for our hypothesis, in that not having an alternative (vs. losing an attractive alternative) led negotiators to set lower aspiration levels,

leading to less aggressive first offers, which in turn led to worse outcomes, $X1\ b = -0.57$, $SE = 0.12$, $CI_{95\%} [-0.82, -0.35]$. Additionally, having an attractive alternative (vs. losing an attractive alternative) led negotiators to set higher aspiration levels, to make more aggressive first offers, which in turn led to better outcomes, $X2\ b = 1.21$, $SE = 0.15$, $CI_{95\%} [0.93, 1.53]$.

Discussion

These results replicate those of Studies 1 and 2. Again, negotiators who had lost an attractive alternative set higher aspirations, made more aggressive first offers, and obtained better outcomes than those who never had an alternative. The consistent pattern we find across Studies 1 – 3 emphasizes the benefits of lost attractive alternatives. At the same time, the present findings put these benefits into perspective. Losing an attractive alternative is better than never having had that alternative. But, keeping the attractive alternative is better yet. Indeed, negotiators who still had an attractive alternative set the highest aspirations, made the most aggressive first offers, and obtained the best outcomes.

Having thus established the limits of lost alternative benefits by contrasting them with the benefits of having an alternative, our remaining studies were designed to develop a better understanding of the underlying psychological dynamics and consequences of losing an alternative.

Study 4

More specifically, Study 4 takes a closer look at the psychological mechanisms that underlie the effects of losing an alternative. For one, we measure potential psychological mechanisms on the interpersonal, motivational, and affective level and examine to what extent they contribute to the effects of lost alternatives. First, on the interpersonal level, having an alternative imbues negotiators with a sense of power (Lammers, Galinsky, Gordijn, & Otten, 2012; Magee et al., 2007; Schaerer et al., 2015) which in turn reduces concerns with losses (Inesi, 2010) as well as emotional dependence on others (Anderson & Thompson,

2004; Lelieveld, Van Dijk, Van Beest, & Van Kleef, 2012; Waytz, Chou, Magee, & Galinsky, 2015) and increases risk-taking (Anderson & Galinsky, 2006) as well as a sense of control (Fast, Gruenfeld, Sivanathan, & Galinsky, 2009; Inesi, Botti, Dubois, Rucker, & Galinsky, 2011). In combination, these consequences of experiencing a sense of power allow negotiators to set higher aspirations and first offers and ultimately obtain superior outcomes (Magee et al., 2007; Pinkley et al., 1994; Schaerer et al., 2018; Schaerer et al., 2015). Losing an alternative, and hence the associated sense of power, may thus lead negotiators to feel less powerful than if they had never had an offer in the first place. According to this logic, negotiators who lose an alternative would set lower aspirations, make lower first offers and obtain inferior outcomes compared to those who never had an alternative. Although this pattern is not in line with the pattern we have obtained so far, we will assess the impact of a negotiator's sense of power to develop a more complete picture of its role in the effects of lost alternatives.

Second, on the motivational level, losing an alternative is likely to trigger a prevention focus (Appelt & Higgins, 2010; Galinsky et al., 2005; Higgins, 1998; Peng, Dunn, & Conlon, 2015) which again leads negotiators to make lower first offers and obtain inferior outcomes (Galinsky et al., 2005). Finally, on the affective level, losing an alternative is likely to trigger negative affective experiences which are likely to influence the negotiation process (e.g., Overbeck, Neale, & Govan, 2010; Van Kleef, De Dreu, & Manstead, 2004). Thus, Study 4 examined negotiator's regulatory focus, affective state, and sense of power, and examined their role in the effects of losing an alternative.

In addition to exploring these alternative mechanisms on the interpersonal, motivational and affective level, we will take another look at anchoring as the hypothesized mechanism underlying the effects of lost alternatives. Following the logic applied by Schaerer et al., (2015), the anchoring hypothesis holds that alternative offers will only yield

advantageous effects if they constitute high anchors to which aspirations and outcomes can be assimilated upward. Unattractive offers that constitute low anchors, however, should induce downward assimilation that ultimately yields less advantageous outcomes. Study 4 tests this reasoning by manipulating the attractiveness of the lost alternative.

Method

Participants and design. Prior research on weak alternatives tested in an online context found an effect size of $d = 0.16$ (Study 5- Schaerer et al., 2018). Given the differences in study design and phenomenon, we estimated a more conservative effect size of $f = 0.10$. For a desired power of .80, we required a minimum total sample size of 969. Because we expected to exclude some participants, we set a target of recruiting 1,200 participants. In response, 1,235 U.S. participants completed an online-simulated negotiation through Amazon's Mechanical Turk platform. Using the same pre-registered exclusion criteria as in prior studies, we excluded 257 participants.¹² The remaining 978 observations were used for analysis (55% female; $M_{age} = 37.19$, $SD_{age} = 11.79$).

Study 4 had a three-cell between-participants design: alternative (lost attractive vs. lost unattractive vs. none).

Materials and procedures. Participants were told that they would be engaging in two different negotiations with fellow MTurk participants. We used the same mug design as in Study 2b, however, the average market value in this negotiation was stated as \$5. Participants were told that regardless of the first negotiation outcome, they would negotiate with a second buyer before deciding on the offer they would like to accept. Additionally, participants were

¹² Participants were excluded for responses that qualified as an outlier for at least one of the dependent measures (209), failed the attention check (42), and or had a duplicate I.P address (6).

told that the negotiations would be conducted by either text messages (which would include numerical offer amounts as well as any other relevant information) or by exchanging numerical offers only. In fact, all participants first negotiated with text messages and second with numerical offers.

Lost alternative manipulation. For the first negotiation, participants were told that their counterpart would provide the first offer. After reporting their aspiration levels for the first negotiation, participants received one of three messages that were adapted from previous studies using non-interactive discussions related to the selling of the Starbucks mugs (Schaerer et al., 2015). In the *lost attractive alternative* condition, participants read, “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 *lost unattractive alternative* condition, participants were provided with an offer valued at \$2.00 with the same text. In the *no alternative* condition, participants read, “Hey. Unfortunately, I am unable to make you an offer for your mug.” Participants were given the opportunity to reply via text message. Subsequently, they engaged in a filler personality task (Cooper, Smillie, & Corr, 2010), which was introduced as a means to ostensibly allow all participants to finish their negotiation. After completing the filler task, participants in the lost attractive and unattractive alternative conditions received a message from the first negotiation partner informing them, “Hey. Unfortunately, I am going to have to take back that offer I made for your mug. I’ve decided to negotiate over something else. Sorry!” All participants were then asked to indicate their aspiration levels for the second negotiation.

For the second negotiation - in which negotiators would communicate by exchanging numerical offers only - the counterpart’s offers were pre-set. As in Study 3, after each offer, the participant had the option to either accept or reject the pre-set offer. If they rejected the offer, they were given the opportunity to counter-offer. If the participant provided an offer

that was less than the programmed response for the following round, the offer would be accepted.

Participants were again informed that their negotiation counterpart was assigned to make the first offer. The first offer was \$2.50 and increased to \$2.75, \$3.00, \$3.00, \$3.50, \$3.75, \$4.25, \$5.00, \$5.75; and if the negotiation lasted up to a tenth round, participants received a final take it or leave it offer worth \$6.50.

We incentivized participants as in Study 2b and Study 3.

Measured variables. Reservation price was captured by asking, “What is the lowest price you would be willing to sell the mug for?” To measure target price, we asked: “What is the ideal price you would sell the mug for?” We z-transformed We z-transformed the negotiators’ reservation and target prices and averaged their scores to compute aspiration level, $r(978) = .59, p < .001$. Any means and standard deviations which are not reported in the results section can be found in Appendix A.

Negotiated outcomes were recorded as either (a) the offer participants accepted or (b) the offer participants made that was below the next pre-set offer.

We also measured five potential mechanisms: sense of power, promotion focus, prevention focus, positive affect, and negative affect. Sense of power was measured using a four-item scale. Participants indicated the extent to which they felt powerful, in control, confident, and strong for the upcoming negotiation ($\alpha = .92$; 1 = Not at all to 7 = Extremely; Schaerer et al., 2015). Regulatory focus (i.e. promotion focus and prevention focus) was measured using a two-item scale (Galinsky et al., 2005). Participants reported their promotion focus by indicating during the negotiation, “how focused were you on making future gains?” and prevention focus by, “how focused were you on avoiding losses?” (1 = Not very focused to 6 = Very focused). Affective responses were captured using the Positive and Negative Affect Schedule scale (Watson, Clark, & Tellegen, 1988). Positive affect was captured by

indicating how interested, excited, strong, enthusiastic, and determined the negotiator felt ($\alpha = .88$). Negative affect was captured by indicating how distressed, upset, hostile, irritable, and nervous the negotiator felt ($\alpha = .89$; 1 = Very slightly or not at all to 5 = Extremely).

Results

Descriptive statistics and correlations among study variables are presented in Table 5.

Aspiration level. We predicted a significant difference in aspiration levels across our three conditions. Specifically, we predicted that participants who lost an attractive alternative would set more aggressive aspiration levels than those who never had an alternative in the first place. We also predicted that participants who lost an unattractive alternative would set less aggressive aspiration levels than those who never had an alternative in the first place. A one-way ANOVA indicated significant differences across the three conditions, $F(2, 975) = 116.34, p < .001, \eta^2_p = 0.19$. Planned comparison analysis indicated that negotiators who lost an attractive alternative set higher aspiration levels ($M = 0.46, SD = 0.95$) than negotiators who never had an alternative ($M = -0.09, SD = 0.79$), $t(975) = 9.06, p < .001, d = 0.58$. Furthermore, negotiators who lost an unattractive alternative set lower aspiration levels ($M = -0.50, SD = 0.57$) than negotiators who never had an alternative, $t(975) = 6.33, p < .001, d = 0.41$. Controlling for aspirations for the first negotiation does not affect these results.

Negotiated outcomes. Seven participants failed to reach a negotiated outcome. We predicted that participants who lost an attractive alternative would achieve better negotiated outcomes than those who never had an alternative in the first place. Furthermore, we expected that participants who lost an unattractive alternative to achieve worse negotiated outcomes than those who never had an alternative. A one-way ANOVA found a significant difference in outcomes across the conditions, $F(2, 968) = 110.07, p < .001, \eta^2_p = 0.19$. Planned comparison analyses indicated negotiators who lost an attractive alternative obtained better negotiated outcomes ($M = 4.34, SD = 1.33$) compared to negotiators who never had an

alternative ($M = 3.60$, $SD = 0.95$), $t(968) = 9.45$, $p < .001$, $d = 0.61$. Furthermore, negotiators who lost an unattractive alternative obtained worse negotiated outcomes ($M = 3.15$, $SD = 0.54$) compared to negotiators who never had an alternative, $t(968) = 5.43$, $p < .001$, $d = 0.35$ (Figure 4).

Indirect effects. We predicted that negotiator aspiration levels would drive the relationship between alternative conditions and outcomes. Although we did not measure first offers, we used PROCESS macro 4 ($k = 10,000$) to test a subset of this full model. We applied the indicator distinction given the multi-categorical nature of the independent variable. Indicator coding was used to create the two indicator variables X1 [No Lost Alternative = 0, Lost Unattractive Alternative = 0, Lost Attractive Alternative = 1] and X2 [No Lost Alternative = 0, Lost Unattractive Alternative = 1, Lost Attractive Alternative = 0]. Thus, the No Lost Alternative condition was the reference group. We found support for the hypothesis, in that losing an attractive alternative (vs. having no alternative) led negotiators to set higher aspiration levels, which in turn led to better outcomes as compared to the no lost alternative condition, X1 $b = 0.33$, $SE = 0.05$, $CI_{95\%} [0.24, 0.42]$. Additionally, losing an unattractive alternative (vs. having no alternative) led negotiators to set lower aspiration levels, which in turn led to worse outcomes, as compared to the no lost alternative condition, X2 $b = -0.26$, $SE = 0.04$, $CI_{95\%} [-0.34, -0.19]$.

Alternative mechanisms. To examine the potential contribution of the alternative mechanisms of sense of power, regulatory focus, and affect, we conducted a test of indirect effects that simultaneously included all of the alternative explanatory variables (Figure 5). We again found an indirect effect of losing an attractive alternative on negotiated outcome via aspirations, X1 $CI_{95\%} [0.24, 0.42]$. However, we did not find evidence that any of the alternative mechanisms drove the effect of alternative condition on the negotiated outcome. The indirect effects of sense of power $CI_{95\%} [-0.03, 0.01]$, promotion focus $CI_{95\%} [-0.01,$

0.02], prevention focus $CI_{95\%}$ [-0.004, 0.02], positive affect $CI_{95\%}$ [-0.01, 0.03], and negative affect $CI_{95\%}$ [-0.02, 0.01] were all not significant.

Similarly, for X2, we still found support for the indirect effect via aspiration levels when we control for alternative mechanisms, X2 $CI_{95\%}$ [-0.33, -0.19]. However, the indirect effects of a sense of power $CI_{95\%}$ [-0.04, 0.01], promotion focus $CI_{95\%}$ [-0.02, 0.003], prevention focus $CI_{95\%}$ [-0.02, 0.01], positive affect $CI_{95\%}$ [-0.01, 0.03], and negative affect $CI_{95\%}$ [-0.02, 0.01] were all not significant.

Discussion

The main goal of Study 4 was to shed further light on the psychological mechanisms that produce the effects of losing an alternative. We find that aspirations and outcomes are assimilated towards the lost alternative. As a consequence, lost attractive alternatives lead to higher aspirations and better outcomes than lost unattractive alternatives. While such a pattern does not constitute a litmus test for the operation of anchoring, it appears to be more in line with anchoring than with the alternative mechanisms that are tested in parallel. Furthermore, our analyses do not find sufficient support for any of the alternative mechanisms, namely sense of power, regulatory focus, and affect. This suggests that anchoring may well be the primary force driving the effects of lost alternatives.

Study 5

This notion of anchoring as an underlying mechanism also constitutes a useful starting point for the development of a potential corrective device for the effects of lost alternatives. How does one de-anchor from a lost alternative? To explore this question, we tested whether the consequences of losing an alternative can be mitigated by employing a manipulation that prior research has shown to alter anchoring effects more generally (Mussweiler et al., 2000). To the extent that anchoring is driven by the anchor-consistent information that judges spontaneously generate when considering the anchor (i.e., the

selective accessibility mechanism; Mussweiler & Strack, 1999a, 2000a; Strack & Mussweiler, 1997), inducing them to generate information that *counteracts* its implications should reduce anchoring effects. For example, asking car dealers who were presented with a high anchor for the value of a used car to generate arguments indicating that this anchor is too high, reduced anchoring (Mussweiler et al., 2000). Study 5 applies this logic to the realm of negotiations by asking negotiators to generate reasons why the alternative is unrealistic. Doing so, we predict, will moderate the effects demonstrated in the earlier studies.

Method

We pre-registered the methods and analyses for this study.¹³

Participants and design. We estimated an effect size of $f = 0.14$ for this study.¹⁴ For a desired power of .80, this requires a minimum sample size of 495. Because we expected exclusions, we set a target of recruiting 600 participants. In response, 601 U.K. and Ireland based participants completed an online-simulated negotiation through Prolific online platform. Using the same pre-determined criteria as in prior studies, we excluded 126 participants.¹⁵ The remaining 475 observations were used for analysis (64% female; $M_{age} = 34.81$, $SD_{age} = 13.11$).

Study 5 had a three-cell between-participants design: alternative (lost attractive vs. lost attractive de-anchored vs. none).

Materials and procedures. The method for Study 5 was largely similar to that employed in Study 3, in which participants negotiated the sale of a pharmaceutical plant. In

¹³ <https://aspredicted.org/blind.php?x=zx8jt3>

¹⁴ We determined this effect size from an earlier study that can be found in the supplementary materials (4).

¹⁵ Participants were excluded for responses that qualified as an outlier for at least one of the dependent measures (102), did not follow experimental procedure (22), and or had duplicate IP addresses (2).

addition to the basic information, participants in the *lost attractive* and *lost attractive de-anchored* conditions were informed that they had negotiated a deal with another company (Inergy) for £24 million prior to their upcoming negotiation.

Participants in the *lost attractive de-anchored* condition were then asked to actively generate at least three arguments or reasons that would contradict the value of the current £24 million offer. Specifically, participants were told, “Some may see the value of the £24 million alternative as being too high. What would you say speaks for a lower valuation of the plant?”

Participants in the *lost attractive* and *lost attractive de-anchored* conditions were then informed that Inergy withdrew their £24 million offer. Prior to entering the negotiation, participants indicated their aspiration levels.

As in Study 3, negotiators encountered the same pre-set offers (which they thought were from a live counterpart), however in this negotiation, the final offer was £23 million instead of £24.5 million.

We incentivized participants as in Study 2b, 3, and 4.

Measured variables. Reservation price was captured by asking, “What is the lowest price you would be willing to accept from Synertech?” To measure target price, we asked: “What price would you ideally like to obtain in this negotiation?” We z-transformed the negotiators’ reservation and target prices and averaged their scores to compute aspiration level, $r(475) = 0.55, p < .001$. Any means and standard deviations which are not reported in the results section can be found in Appendix A. First offers were determined by the opening offer given in the negotiation. Negotiated outcomes were recorded as either (a) the offer from Synertech that was accepted by participants or (b) the offer participants made that was below the next pre-set Synertech offer.

Results

The descriptive statistics and correlations among study variables are presented in Table 6.

Aspiration level. We predicted that participants who lost an attractive alternative would set more aggressive aspiration levels than both those who never had an alternative as well as those in the de-anchoring condition. A one-way ANOVA indicated a significant difference across the conditions, $F(2, 472) = 75.09, p < .001, \eta^2_p = 0.24$. Planned comparison analyses revealed that negotiators who lost an attractive alternative set higher aspiration levels ($M = 0.51, SD = 0.83$) than negotiators who never had an alternative ($M = -0.50, SD = 0.83$), $t(472) = 12.06, p < .001, d = 1.11$. Further, negotiators in the de-anchoring condition set lower aspiration levels ($M = -0.12, SD = 0.59$) than negotiators in the lost attractive alternative condition, $t(472) = 7.29, p < .001, d = 0.67$.

First offer. We predicted that participants who lost an attractive alternative would make higher first offers than both those who never had an alternative as well as those in the de-anchoring condition. A one-way ANOVA indicated a significant difference across conditions, $F(2, 472) = 19.44, p < .001, \eta^2_p = 0.08$. Planned comparison analysis revealed that negotiators who lost an attractive alternative gave higher first offers ($M = 24.99, SD = 4.46$) than negotiators who never had an alternative ($M = 23.02, SD = 5.34$), $t(472) = 4.05, p < .001, d = 0.37$. Further, negotiators in the de-anchoring condition gave lower first offers ($M = 21.96, SD = 3.12$) than those in the lost attractive alternative condition, $t(472) = 6.05, p < .001, d = 0.56$.

Negotiated outcome. Seven participants failed to reach a negotiated outcome. We predicted that participants who lost an attractive alternative would achieve better negotiated outcomes than both those who never had an alternative as well as those in the de-anchoring condition. Indeed, a one-way ANOVA indicated a significant difference across conditions, $F(2, 465) = 14.80, p < .001, \eta^2_p = 0.06$. Planned comparison analysis reveal that negotiators

who lost an attractive alternative achieved better negotiated outcomes ($M = 19.88$, $SD = 1.96$) than negotiators who never had an alternative ($M = 18.82$, $SD = 1.88$), $t(465) = 5.15$, $p < .001$, $d = 0.48$. Further, negotiators in the de-anchoring condition achieved lower negotiated outcomes ($M = 19.05$, $SD = 1.76$) than those in the lost attractive alternative condition, $t(465) = 3.90$, $p < .001$, $d = 0.36$ (Figure 6).

Indirect effects. We predicted that negotiator aspiration levels and first offers would drive the relationship between alternative conditions and negotiated outcomes. To test the multi-categorical serial indirect effect hypothesis, we used PROCESS model 6 ($k=10,000$). Indicator coding was used to create the two variables X1 [Lost Attractive Alternative = 0, Lost Attractive Alternative De-Anchored = 1, No Lost Alternative = 0] and X2 [Lost Attractive Alternative = 0, Lost Attractive Alternative De-Anchored = 0, No Lost Alternative = 1]. Thus, the Lost Attractive Alternative condition was the reference group. We found support for our predictions: having no alternative (X1 $b = -0.69$, $SE = 0.11$, $CI_{95\%} [-0.92, -0.49]$) and de-anchoring an attractive lost alternative (X2 $b = -1.15$, $SE = 0.15$, $CI_{95\%} [-1.46, -0.87]$) led to lower aspiration levels, less aggressive first offers, and worse outcomes compared to having an attractive lost alternative (Figure 7).

Discussion

The results of Study 5 suggest a simple corrective device against the effects of lost alternatives. Anchoring effects are strikingly robust so that finding a successful cure is difficult (Wilson et al., 1996). One correction strategy that has proven to be successful, however, is engaging a considering the opposite mechanism (Lord et al., 1984). Consistent with previous anchoring research (Chapman & Johnson, 1999; Mussweiler et al., 2000), the present findings demonstrate that inducing negotiators to generate arguments that are inconsistent with the lost alternative reduces its effects on aspirations, first offers, and outcomes. In light of the fact that losing an alternative can potentially also yield detrimental

effects -- either because a negotiator lost an unattractive alternative or an opponent lost an attractive one – a corrective device for unwanted consequences of losing an alternative is a useful tool to have in the negotiator’s toolbox.

Study 6

Studies 1 – 5 have provided consistent evidence that negotiators who lose an attractive alternative do better in negotiations. They not only set higher aspirations and make more aggressive first offers, but they also obtain better objective outcomes. Negotiators who lose an attractive offer thus do better at the bargaining table. However, do they also feel better about these objectively superior outcomes? Previous research shows a counterintuitive and striking disconnect between objective and subjective negotiation outcomes (Becker & Curhan, 2018; Galinsky et al., 2002; Oliver et al., 1994). In the context of lost alternatives, it seems possible that the outcome benefits associated with lost alternatives may paradoxically be linked to lower levels of satisfaction. Our final study was designed to test this possibility.

Method

We pre-registered the methods and analyses for this study.¹⁶

Participants and design. We conducted a power analysis to determine an adequate sample size to capture the prediction that the lost attractive alternative condition will have significantly different effects on satisfaction and outcome (i.e., an interaction effect). To be conservative, we assumed a small effect size, $f = 0.10$. Based on prior research, we assumed an $r = .25$ correlation between negotiation outcome and satisfaction (Curhan, Elfenbein, & Xu, 2006). To achieve a power of .80, we needed a minimum required sample size of 298.

¹⁶<https://aspredicted.org/blind.php?x=h4sj4u>

We expected to exclude some participants based on our a priori exclusion criteria, so we set a target of recruiting 400 participants through Amazon Mechanical Turk. In response, 399 U.S. participants completed an online-simulated negotiation through Amazon's Mechanical Turk platform. Using the same pre-determined criteria as in prior studies, we excluded 80 participants.¹⁷ The remaining 319 observations were used for analysis (58% female; $M_{age} = 40.01$, $SD_{age} = 13.12$).

Study 6 had a two-cell between-participants design: alternative (lost attractive vs. none).

Materials and procedures. Participants engaged in the same procedures as in Studies 3 and 5, where participants negotiated the sale of a pharmaceutical plant. Participants in the lost attractive alternative condition were informed that they had negotiated a deal with another company (Inergy) for \$24 million prior to their upcoming negotiation and that it was later withdrawn.

Both conditions were then told that if they were unable to come to an agreement in the upcoming negotiation, they would strip the plant and sell the equipment for an estimated value of \$17 million. Prior to entering the negotiation, participants indicated their aspiration levels. Following the conclusion of the negotiation, participants were asked to indicate their level of satisfaction with the negotiation outcome. We incentivized participants as in Study 2b, 3, 4, and 5.

Measured variables. Reservation price was captured by asking, "What is the lowest price you would be willing to accept from Synertech?" To measure target price, we asked:

¹⁷ Participants were excluded for responses that qualified as an outlier for at least one of the dependent measures (79) and/or did not follow experimental procedures (1).

“What price would you ideally like to obtain in this negotiation?” We z-transformed the negotiators’ reservation and target prices and averaged their scores to compute aspiration level, $r(319) = 0.64, p < .001$. Any means and standard deviations which are not reported in the results section can be found in Appendix A. First offers were determined by the opening offer given in the negotiation. Negotiated outcomes were recorded as either (a) the offer from Synertech that was accepted by participants or (b) the offer participants made that was below the next pre-set Synertech offer. Negotiator satisfaction was assessed using three items, “How happy are you with the final deal?”, “How satisfied are you with the final deal?” and “How pleased are you with the final deal?” ($\alpha = .97$; 1 = Not at all to 7 = Very much; Schaerer et al., 2020).

Results

The descriptive statistics and correlations among study variables are presented in Table 7.

Aspiration level. We predicted that participants who lost an attractive alternative would set more aggressive aspirations than those who never had an alternative in the first place. The results of an independent-samples 2-tailed t-test supported this prediction, $t(317) = 7.55, p < .001, d = 0.85$ ($M_{lost\ attractive\ alternative} = 0.34, SD = 0.64$; $M_{no\ alternative} = -0.37, SD = 1.00$).

First offer. We predicted that participants who lost an attractive alternative would make more aggressive first offers than those who never had an alternative in the first place. The results of an independent-samples 2-tailed t-test supported this prediction, $t(317) = 3.31, p = .001, d = 0.37$ ($M_{lost\ attractive\ alternative} = 23.74, SD = 3.97$; $M_{no\ alternative} = 21.89, SD = 5.92$).

Negotiated outcome. One participant failed to reach a negotiated outcome. We predicted that participants who lost an attractive alternative would have better outcomes than those who never had an alternative in the first place. The results of an independent-samples

2-tailed t-test supported this prediction, $t(316) = 5.29, p < .001, d = 0.60$ ($M_{lost\ attractive\ alternative} = 19.17, SD = 1.63; M_{no\ alternative} = 17.94, SD = 2.47$).

Indirect effect. We predicted that aspiration levels and first offers would drive the relationship between alternative conditions and negotiated outcomes. To test the serial indirect effect hypothesis, we used PROCESS model 6 ($k=10,000$). We found support for the hypothesis: losing an attractive alternative (vs. never having one) led negotiators to set higher aspiration levels, which in turn led to more aggressive first offers and ultimately better outcomes, $b = 0.90, SE = 0.16, CI_{95\%} [0.62, 1.23]$.

Negotiator satisfaction. We predicted that participants who lost an attractive alternative would be less satisfied with their outcome than those who never had an alternative in the first place. The results of an independent-samples 2-tailed t-test supported this prediction, $t(316) = 4.11, p < .001, d = 0.46$ ($M_{lost\ attractive\ alternative} = 5.09, SD = 1.24; M_{no\ alternative} = 5.67, SD = 1.29$). To test the prediction that the effect of outcome and satisfaction would interact with lost alternative conditions, we first transformed the negotiated agreement and the satisfaction ratings into separate z scores. The z scores were submitted to a 2 between-factor alternative (lost attractive vs. none) x 2 within-factor (negotiated outcome vs. negotiator satisfaction) mixed model ANOVA. A significant interaction emerged, $F(1, 316) = 42.09, p < .001, \eta^2_p = 0.12$. These results indicate that even though participants in the attractive lost alternative condition achieved better objective negotiated outcomes, they were less satisfied with their outcome (Figure 8).

Discussion

The results of our final experiment demonstrate that the better objective outcomes that are typically obtained by negotiators who lost an attractive alternative do not necessarily lead to higher levels of satisfaction. Instead, our findings are in line with previous research demonstrating that those who do better in negotiations because they set higher aspirations

often feel worse about their superior outcomes (Galinsky et al., 2002; Oliver et al., 1994; Schaerer et al., 2020). This finding adds more nuance to the effects of losing attractive alternatives. Yes, participants who lost an attractive alternative obtain more at the bargaining table. At the same time, however, they are less satisfied. In light of the fact that satisfaction with a negotiated outcome is an important precursor of a negotiators' engagement and success in future negotiations (Curhan et al., 2010; O'Connor et al., 2005), the benefits of losing an alternative do come with a cost.

General Discussion

The present research explored the power of lost alternatives in negotiations. Seven experiments with a total of $N = 2538$ participants demonstrated that losing an alternative powerfully shapes how negotiators prepare for a negotiation, how they act during the negotiation, and what outcomes they achieve. More specifically, losing an attractive alternative induces negotiators to set more aggressive aspirations (Studies 1-6), make more aggressive first offers (Studies 1, 3, 5, and 6), obtain better outcomes (Studies 2-6), and yet feel less satisfied (Study 6).

In addition to establishing these basic effects, the present research also sheds light on the pathway that leads from losing an attractive alternative to obtaining better outcomes, as well as the psychological mechanism that produces it. Indeed, taken together, the evidence we have collected is most consistent with an anchoring perspective on the effects of lost alternatives: Negotiators appear to anchor on the lost alternative when entering the negotiation so that aspirations (Studies 1-6) and first offers (Studies 1, 3, 5, and 6), are assimilated to the lost alternative, which jointly produces the effect on negotiated outcomes (Studies 2-6). In line with the anchoring perspective and consistent with the typical pattern in anchoring research (Chapman & Johnson, 2002), only attractive lost alternatives lead to higher aspirations, first offers, and outcomes. In contrast, unattractive lost alternatives lead to

lower aspirations and outcomes (Study 4). Furthermore, the effects of losing an alternative were mitigated by a de-anchoring manipulation (Chapman & Johnson, 1999; Mussweiler et al., 2000), which induced negotiators to activate offer-inconsistent information (Study 5).

The present research also tested for the potential contribution of alternative mechanisms. One mechanism that has received particular attention in previous research on the effects of alternatives is a sense of power (Magee et al., 2007; Schaerer et al., 2015). Here, we do not find evidence suggesting that the sense of power contributes to the effects of lost alternatives. First, the overall pattern of results showing assimilation of aspirations, first offers, and outcomes to the lost alternative is difficult to reconcile with a sense of power perspective. If anything, losing an alternative should reduce a negotiator's sense of power, which should lead to lower aspirations, first offers, and outcomes irrespective of the attractiveness of this offer (Schaerer, du Plessis, Yap, & Thau, 2018). Furthermore, our analyses do not find support for a sense of power as an underlying mechanism (Study 4). Taken together, the present evidence is most in line with anchoring as the underlying mechanism.

These findings were obtained across a variety of negotiation paradigms, using different manipulations of losing an alternative. Specifically, we varied whether losing an alternative happened in an actual person-to-person negotiation (Studies 2a & 2b) or scripted negotiation (Studies 3-6), and from the perspective of a buyer (Study 2b) or a seller (Studies 1, 2a, 3-6). The fact that losing an alternative reliably influenced negotiation processes and outcomes across such a variety of paradigms suggests that these effects are likely to be quite robust and widely generalizable.

Theoretical implications

These findings make a number of important contributions to the negotiation literature. First, they contribute to the growing literature demonstrating just how powerful and

ubiquitous the effects of alternatives are. Alternatives have been identified as one of the most powerful influences on negotiator behavior and success (Brett & Thompson, 2016; Fisher et al., 2011; Galinsky et al., 2017; Schaerer et al., 2020; Thompson et al., 2010). So robust are their effects that they even hold if alternatives are unlikely to materialize (Pinkley et al., 2019) or are purely imaginary (Schaerer et al., 2018). Extending these findings, the present research further demonstrates that the influence of alternatives can transcend their existence. Even alternatives that have been lost and cannot be realized any more powerfully influence how negotiators think about an upcoming negotiation, how they prepare for it, how they open it, and what they ultimately achieve in it.

Second, our findings highlight the importance of conceptualizing alternatives as a product of their value and their expectancy (Conlon et al., 2014; Pinkley et al., 2019). As is true for prospects in other contexts, alternatives in negotiations come with a likelihood of materializing. Not every offer that is made is acted upon. Rather, negotiators frequently withdraw or adjust offers they had previously made. In fact, across our two samples of experienced negotiators, more than 60% had experienced the loss of an alternative. To develop a complete understanding of how alternatives influence negotiations, we have to take this fundamental insight into account. We need to examine not only what happens if an alternative becomes available but also what happens if it is lost. Research to date has primarily focused on the consequences of gaining an alternative (Pinkley et al., 2019), even if they are merely imagined rather than actually existing (Schaerer et al., 2018). The present research takes a step towards a more complete understanding of the power of alternatives by examining the psychological dynamics and consequences that unfold if an alternative is lost.

Third, the present findings contribute to an emerging and more nuanced perspective on the costs and benefits of alternatives in negotiations. Traditionally, the negotiation literature – both in its more theoretical and its more practical variants – has emphasized the

benefits of generating alternatives. In fact, one of the basic tenets of the negotiation literature has been that having an alternative is pivotal to negotiator success (Schaerer et al., 2015) as they bring with them a host of benefits: Alternatives elevate negotiator's aspirations (Pinkley et al., 1994), diminish the influence of counterparties' emotional expressions (Van Kleef, De Dreu, Pietroni, & Manstead, 2006), lead to more concession making from counterparties (De Dreu, 1995), encourage more agentic behaviors (Magee et al., 2007), and – more generally -- lead to better negotiated outcomes (Pinkley et al., 1994). More recent research, however, has begun to highlight the potential costs of generating alternatives. For instance, investing time to develop an alternative can increase a negotiator's sense of entitlement, which may result in more opportunistic behavior (Malhotra & Gino, 2011) and can distort perceptions of the zone of possible agreements available (Schaerer et al., 2016). Furthermore, not all alternatives have the potential to evoke beneficial consequences. To the contrary, if an alternative is unattractive, it may ultimately harm the negotiated outcome because it leads negotiators who anchor on the value of the alternative to enter the negotiation with low aspirations (Schaerer et al., 2015).

Our research extends these findings to the case of lost alternatives. As is true for alternatives that remain in place, whether a lost alternative helps or harms a negotiator depends on the quality of the alternative. Typically, negotiators will attempt to generate attractive alternatives. The present findings demonstrate that such attractive alternatives are indeed beneficial, even if lost. They lead to higher aspirations, more aggressive first offers, and ultimately better outcomes. Unattractive alternatives, however, harm negotiator success and ultimately lead to worse outcomes. Cultivating an alternative -- which always involves a risk of losing this alternative -- is thus not invariably beneficial for negotiators.

In addition, the present research sheds additional light on the psychological mechanisms that are evoked by alternatives in negotiations. Previous research has identified

two principle mechanisms, anchoring on the cognitive level and sense of power on the interpersonal level (Magee et al., 2007; Schaerer et al., 2015). With regard to a sense of power, our findings suggest that negotiators are well calibrated in adjusting to losing a position of power (Sivanathan, Pillutla, & Murnighan, 2008). In fact, our participants who lost an alternative felt a similar level of sense of power as those who never had that alternative in the first place. In that way, their experienced sense of power thus reflected their objective bargaining position. As a consequence, changes in the sense of power could not explain the demonstrated consequences of losing an alternative. Rather, anchoring appears to be the more powerful underlying mechanism to explain these effects. As is true for alternatives that remain in place (Schaerer et al., 2015), those that are lost appear to serve as anchors to which negotiator aspirations, first offers, and final outcomes are assimilated. These findings underline just how influential anchoring mechanisms are at the bargaining table. Indeed, the fact that lost alternatives still exert an influence – even though they are no longer relevant to the negotiation – reflects a pattern seen in existing research. Specifically, past studies have shown that numerical anchors, even when they are unrelated to an offer or even to the negotiation, affect negotiators' behaviors and outcomes (e.g., Kristensen & Gärling, 2000; Whyte & Sebenius, 1997). Related to this, it would be interesting for future research to compare a lost alternative condition with one in which the same numerical value is presented to participants, but in a context unrelated to an alternative. Although beyond the scope of the current research, this promises to be an interesting avenue for those interested in uncovering the different ways in which anchoring operates in the realm of negotiation.

Finally, these studies add to a growing body of research examining negotiator satisfaction as a downstream consequence. For one, our results echo recent findings showing a disconnect between objective negotiation outcomes and subjective feelings of satisfaction (e.g., Curhan et al., 2010; Galinsky et al., 2002; Oliver et al., 1994; Schaerer et al., 2020).

Whereas these earlier studies demonstrate that relevant anchors such as target prices or reservations prices (Galinsky et al., 2002) can influence outcomes and satisfaction in opposite directions, the present research demonstrates that this is equally the case for anchors that have become irrelevant because they are no longer available. This finding also adds to a growing list of factors that influence negotiator satisfaction. More specifically, we demonstrate that how satisfied negotiators are with their outcomes not only depends on what actually happened in the negotiation proper, such as the number of issues that were negotiated (Naquin, 2003), the concessions that were made (Kwon & Weingart, 2004) or the support that was received from a third party (Conlon & Ross, 1993). Rather, it also depends on what might have happened (Epstude & Roese, 2008), the alternatives that may have been seized had they not been lost prior to the negotiation. The fact that alternatives powerfully shaped negotiator behavior and outcomes, despite the fact that they had already been lost before the critical negotiation took place, further emphasizes the importance of taking negotiator's bargaining histories into account (O'Connor et al., 2005). To date, there is a scarcity of research examining carry-over effects in subsequent negotiations with different counterparts (Becker & Curhan, 2018). The effects of lost alternatives demonstrated here constitute a novel example of such a sequential carry-over effect.

Practical implications

The present research was primarily designed to make novel theoretical contributions. At the same time, it has several noteworthy practical implications as well. For one, it cautions negotiators to be careful in generating alternatives prior to a negotiation. While alternatives, even if later lost, clearly have the potential to benefit negotiators and help them obtain better outcomes, they do not invariably do so. Rather, the quality of the generated alternative is of paramount importance (Schaerer et al., 2015). Only attractive alternatives yield beneficial

effects. Unattractive alternatives can even prove to be harmful and lead to worse outcomes. Furthermore, the present research suggests a corrective tool for the effects of lost alternatives. More specifically, the de-anchoring manipulation used in Study 5 proved effective in compensating for the effects of lost alternatives. Negotiators who fear they may fall prey to the detrimental effects of unattractive alternatives may work against this influence with the help of this de-anchoring strategy. Actively recruiting information that speaks against the unattractive alternative, the present findings suggest, will undo its detrimental effects and lead to better outcomes.

Limitations and future directions

To our knowledge, the present research constitutes the first exploration of the psychological dynamics and negotiation consequences of losing an alternative. We demonstrate the consequences of losing an alternative and identify the pathway as well as the underlying psychological mechanism that leads to these consequences. This is the first step towards a more complete understanding of the dynamics of lost alternatives. However, more research will need to follow to build upon this work and address some limitations. The present studies suggest a few pathways that promise to be fruitful.

We have focused on a perspective that conceptualizes lost alternatives as anchors. From a selective accessibility perspective, these anchors affect negotiations because they selectively make a particular subset of information about the target quantity available on which negotiators then base their aspirations and first offers. A seller who considers an attractive offer for a mug, for example, will selectively think about characteristics that make this mug particularly valuable and will base aspirations and first offers on this subset of information. Lost alternatives thus influence negotiations through the information about the target they selectively highlight. In light of this informational power of lost alternatives, future research may try to disentangle this anchoring mechanism from the effects of market

information more generally. More specifically, an offer – even if it is later lost – not only serves as an anchor, it potentially also conveys market information about how valuable the target object is to others. A potential buyer may have taken back his or her offer of \$14.50 for a mug, but apparently this buyer did at least once think that the mug is worth \$14.50. Sellers who are in the process of setting their aspirations and first offers for the upcoming negotiation will reasonably include such information in their deliberations.

One possible way of separating out these two mechanisms is to vary the extent to which a lost alternative conveys valid market information. From a market information perspective, the effect should vary with how diagnostic an alternative is of the market more generally. For example, an offer received from a novice negotiator who is unfamiliar with an asset should be less diagnostic of market trends than one received from an experienced negotiator who is very familiar with the asset. Therefore, the former offer should affect aspirations and first offers less than the latter. From an anchoring perspective, however, the effect should be robust across these conditions because anchoring effects emerge even if the anchor is clearly irrelevant for the judgment at hand (Mussweiler & Strack, 2000a, 2001; Tversky & Kahneman, 1974). Studies in the legal domain, for example, show that experienced legal experts anchor their sentencing decisions on a sentencing demand they are given, no matter whether this demand comes from a source with high legal expertise (a prosecutor) or no legal expertise at all (a computer science student; Englich & Mussweiler, 2006). Future research may build on this differential role of relevance to explore the interplay of different informational functions of lost alternatives. When doing so, it may also take into account the different reasons that lead to the withdrawal of an offer. Note that from an anchoring perspective, it does not matter whether an offer is taken back because the buyer wants to pursue a different option, anticipates a change in market value or experiences new

financial constraints. From a market information perspective, however, these different reasons hold valuable information and may thus yield different effects.

Along similar lines, it may also be interesting to explore the consequences of simultaneously losing multiple alternatives. The present research has deliberately focused on the effects of losing a single alternative. In highly competitive and dynamic markets, however, it is conceivable that a negotiator may simultaneously lose multiple offers, for example, because of changing market conditions. From an anchoring perspective, multiple alternatives have been demonstrated to have weaker effects than a single alternative (Mochon & Frederick, 2013; Schaerer et al., 2016). The present research suggests that these differing effects of single vs. multiple offers may well persist even when these offers are lost. Losing a single attractive offer may thus be more beneficial to a negotiator than losing multiple attractive offers. From a market information perspective, losing multiple offers may signal to a negotiator a downward turn in the market or another significant change that makes the target object less valuable and may thus lead to even worse outcomes (Markman & Guenther, 2007). As these examples attest, exploring the interplay of lost alternatives as anchors and sources of market information promises to be a fruitful path for future exploration.

Conclusion

No matter how certain an alternative in a negotiation may appear, it always comes with some degree of risk. Negotiators may revise an offer they previously made or withdraw it altogether. At first sight, losing an attractive offer may appear as a big loss. The present research, however, offers some consolation. It suggests that even though having an attractive offer is better than losing it, those negotiators who lost an attractive offer are still better off than those who never had it in the first place. In this way, the loss of an attractive offer may, in the end, still prove to be a gain.

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APPENDIX A.

		Lost Attractive Alternative		No Alternative		Have Attractive Alternative		Lost Unattractive Alternative		Lost Attractive De-Anchored		Significance Test: Lost Attractive Alternative vs. No Alternative
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Study 1	Reservation Price	10017.21	46.83	9560.41	494.90							$t(88) = 4.95, p < .001, d = 1.06$
	Target Price	11377.62	802.79	10245.90	399.09							$t(88) = 8.96, p < .001, d = 1.91$
Study 2a	Reservation Price	12.01	3.31	8.73	3.79							$t(69) = 3.87, p < .001, d = 0.93$
	Target Price	17.76	5.05	14.84	4.86							$t(69) = 2.49, p = .02, d = 0.60$
Study 2b	Reservation Price	13.11	3.19	20.60	5.00							$t(108) = 9.21, p < .001, d = 1.77$
	Target Price	8.98	2.91	15.44	4.97							$t(108) = 8.15, p < .001, d = 1.57$
Study 3	Reservation Price	19.20	2.26	17.48	3.72	24.24	3.51					$t(314) = 4.96, p < .001, d = 0.56$
	Target Price	23.45	3.46	21.30	5.11	27.47	3.43					$t(314) = 4.38, p < .001, d = 0.49$
	# of Negotiated Rounds	3.78	1.62	2.87	1.79	5.16	1.97					
Study 4	Reservation Price	5.06	1.45	4.33	1.20			3.78	0.99			$t(697) = 7.16, p < .001, d = 0.54$
	Target Price	8.00	2.48	6.74	2.04			5.82	1.30			$t(697) = 7.29, p < .001, d = 0.55$
	Sense of Power	3.07	1.03	3.12	1.03			3.00	1.06			$t(697) = 0.69, p = .49, d = 0.05$
	Promotion Focus	4.95	1.15	4.85	1.14			4.72	1.21			$t(697) = 1.15, p = .25, d = 0.09$
	Prevention Focus	4.69	1.45	4.57	1.43			4.46	1.48			$t(697) = 1.10, p = .27, d = 0.08$
	Positive Affect	3.21	0.96	3.26	0.97			3.19	0.94			$t(697) = 0.74, p = .46, d = 0.06$
	Negative Affect	1.71	0.85	1.65	0.79			1.69	0.82			$t(697) = 1.00, p = .32, d = 0.08$
	# of Negotiated Rounds	6.03	2.82	4.40	2.43			3.37	1.82			
Study 5	Reservation Price	20.81	2.51	17.65	1.89					19.54	1.71	$t(335) = 12.85, p < .001, d = 1.40$
	Target Price	23.95	3.22	21.34	3.80					21.35	2.36	$t(335) = 6.83, p < .001, d = 0.75$
	# of Negotiated Rounds	4.67	1.91	3.57	1.78					3.83	1.80	
Study 6	Reservation Price	19.63	2.34	17.26	3.48							$t(317) = 7.19, p < .001, d = 0.81$
	Target Price	23.31	3.03	20.60	4.59							$t(317) = 6.27, p < .001, d = 0.70$
	# of Negotiated Rounds	3.85	1.67	2.96	1.82							

Table 1- Descriptive Statistics & Correlations for Study 1

Variables	M	SD	1	2	3
1. Alternative Condition [0 None, 1 Lost Attractive]	0.32	0.47	-		
2. No Alternative Message Condition [0 Not Stated, 1 Stated]	0.44	0.50	-.09	-	
3. Aspiration Level	0.00	0.86	.67***	.02	-
4. First Offer	£10,983.33	£846.64	.67***	-.06	.66***

$N = 90$ *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $< .10$.

Table 2- Descriptive Statistics & Correlations for Study 2a

Variables	M	SD	1	2	3
1. Alternative Condition [0 None, 1 Lost Attractive]	1.48	0.50	-		
2. Negotiated Outcome ^a	£12.33	£5.02	.18	-	
3. Aspiration Level	0.00	0.92	.39**	.58***	-
4. First Offer	£18.74	£7.18	-.03	.57***	.71***

$N = 71$, ^a $N = 68$ *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $< .10$.

Table 3- Descriptive Statistics & Correlations for Study 2b

Variables	M	SD	1	2
1. Alternative Condition [0 None, 1 Lost Attractive]	0.46	0.50	-	
2. Negotiated Outcome ^a	\$18.68	\$4.09	-.31*	-
3. Aspiration Level	0.00	0.93	-.69***	.44***

$N = 110$, ^a $N = 63$ *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $< .10$.

Table 4- Descriptive Statistics & Correlations for Study 3

Variables	M	SD	1	2	3
1. Alternative Condition [0 None, 1 Lost Attractive, 2 Have Attractive]	1.04	0.83	-		
2.Negotiated Outcome ^a	\$19.39	\$2.70	.49 ^{***}	-	
3.Aspiration Level	0.00	0.92	.64 ^{***}	.67 ^{***}	-
4.First Offer	\$25.14	\$6.09	.43 ^{***}	.72 ^{***}	.76 ^{***}

$N = 495$, ^a $N = 484$ *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $< .10$.

Table 5- Descriptive Statistics & Correlations for Study 4

Variables	M	SD	1	2	3	4	5	6	7
1. Alternative Condition [0 Lost Unattractive, 1 None, 2 Lost Attractive]	1.09	0.81	-						
2.Negotiated Outcome ^a	\$3.74	\$1.13	.43 ^{***}	-					
3.Aspiration Level	0.00	0.89	.44 ^{***}	.58 ^{***}	-				
4.Sense of Power	3.07	1.04	.03	.06 [†]	-.07 [*]	-			
5.Positive Affect	3.22	0.96	.01	.01	-.03	.66 ^{***}	-		
6.Negative Affect	1.68	0.82	.01	-.09 ^{**}	-.04	-.05 [†]	-.07 [*]	-	
7.Promotion Focus	4.85	1.16	.08 [*]	.17 ^{***}	.12 ^{***}	.37 ^{***}	.31 ^{***}	-.09 ^{**}	-
8.Prevention Focus	4.58	1.45	.06 [*]	.13 ^{***}	.11 ^{**}	.12 ^{***}	.17 ^{***}	.05	.30 ^{***}

$N = 978$, ^a $N = 971$ *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $< .10$.

Table 6- Descriptive Statistics & Correlations for Study 5

Variables	M	SD	1	2	3
1. Alternative Condition [0 None, 1 Lost Attractive De-Anchored, 2 Lost Attractive]	1.06	0.84	-		
2.Negotiated Outcome ^a	£19.29	£1.93	.23 ^{***}	-	
3.Aspiration Level	0.00	0.88	.49 ^{***}	.63 ^{***}	-
4.First Offer	£23.47	£4.61	.19 ^{***}	.80 ^{***}	.68 ^{***}

$N = 475$, ^a $N = 468$ *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $< .10$.

Table 7- Descriptive Statistics & Correlations for Study 6

Variables	M	SD	1	2	3	4
1. Alternative Condition [0 None, 1 Lost Attractive]	0.52	0.50	-			
2.Negotiated Outcome ^a	\$18.58	\$2.17	.29 ^{***}	-		
3.Aspiration Level	0.00	0.90	.39 ^{***}	.76 ^{***}	-	
4.First Offer	\$22.85	\$5.08	.18 ^{**}	.84 ^{***}	.78 ^{***}	-
5.Satisfaction ^a	5.37	1.30	-.23 ^{***}	-.11 [†]	-.33 ^{***}	-.21 ^{***}

$N = 319$, ^a $N = 318$ *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $< .10$.

Figure 1: Study 2a Negotiated Outcome for Sellers

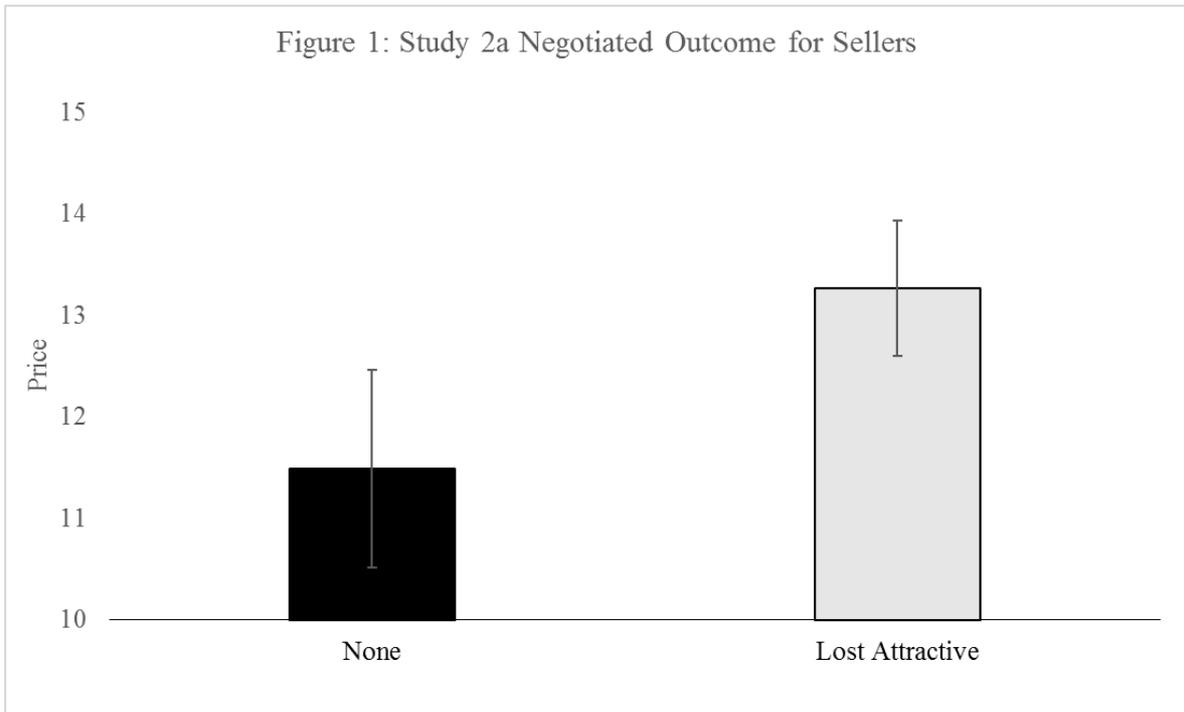
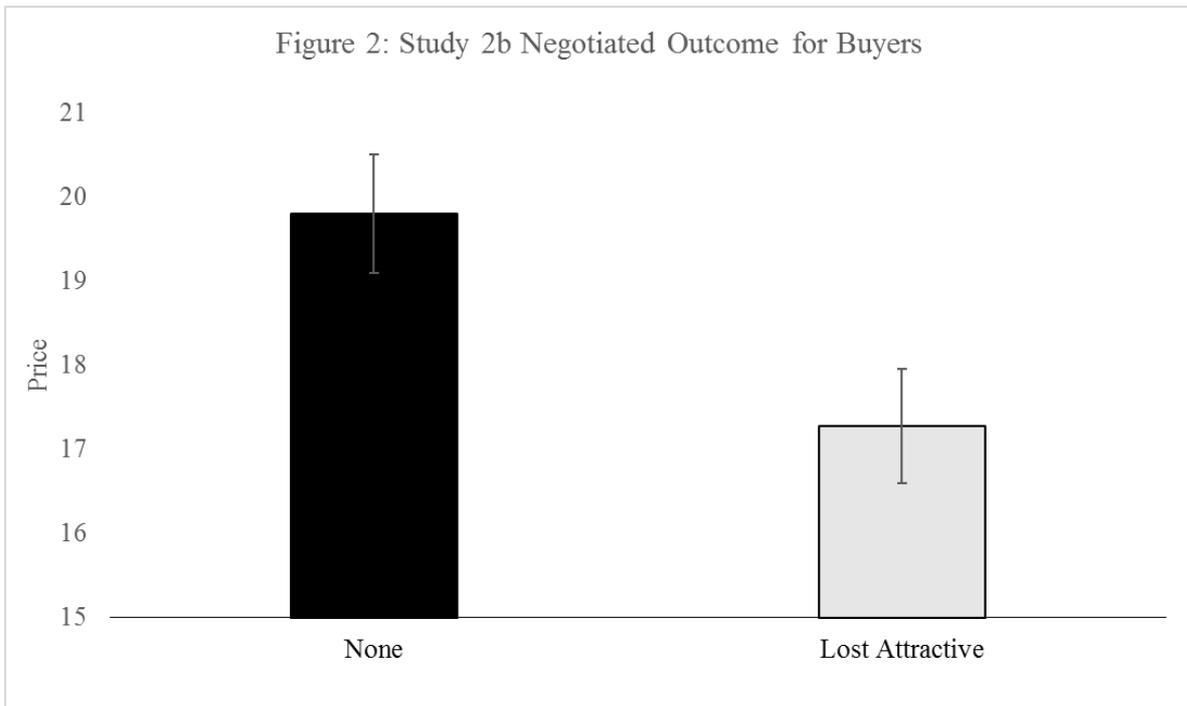


Figure 2: Study 2b Negotiated Outcome for Buyers



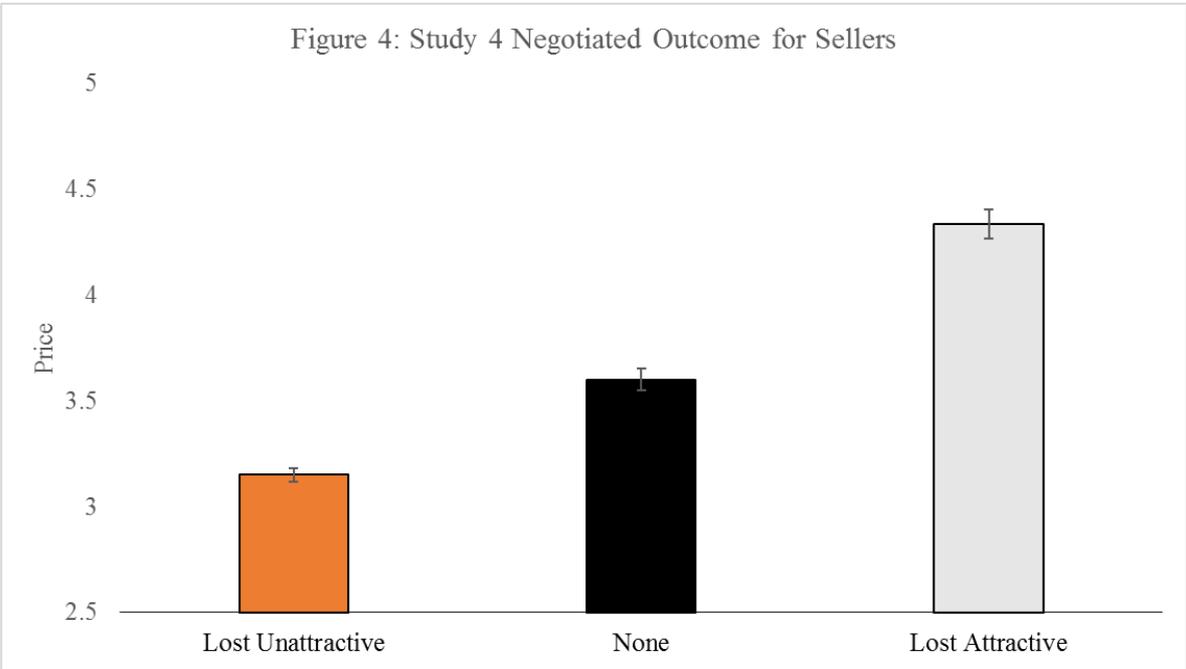
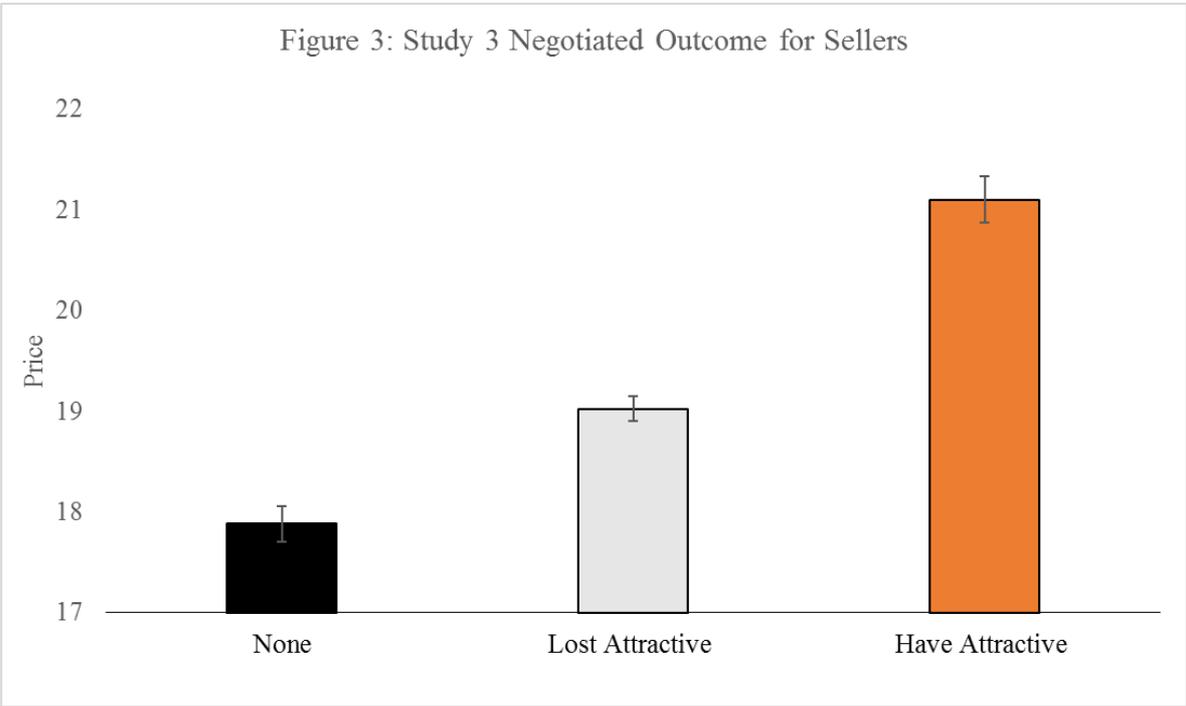
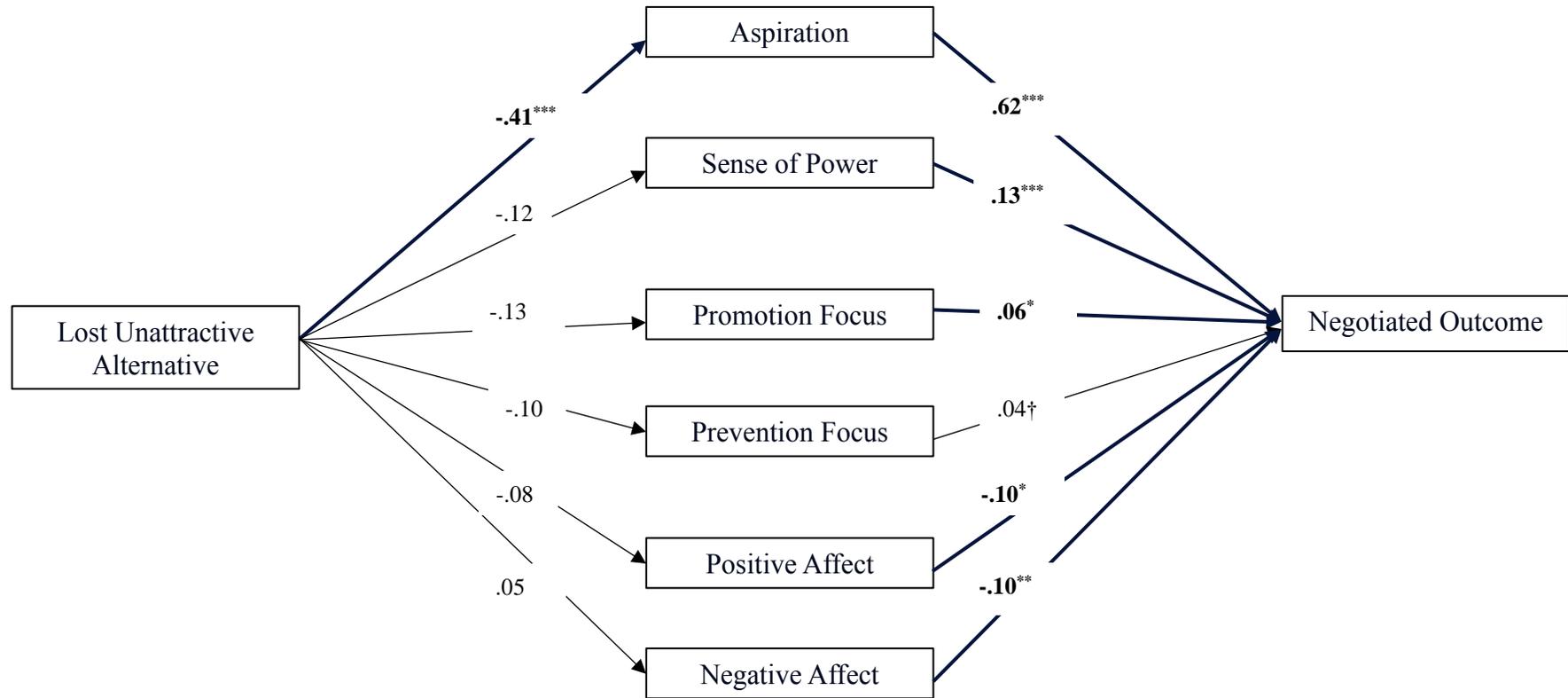


Figure 5



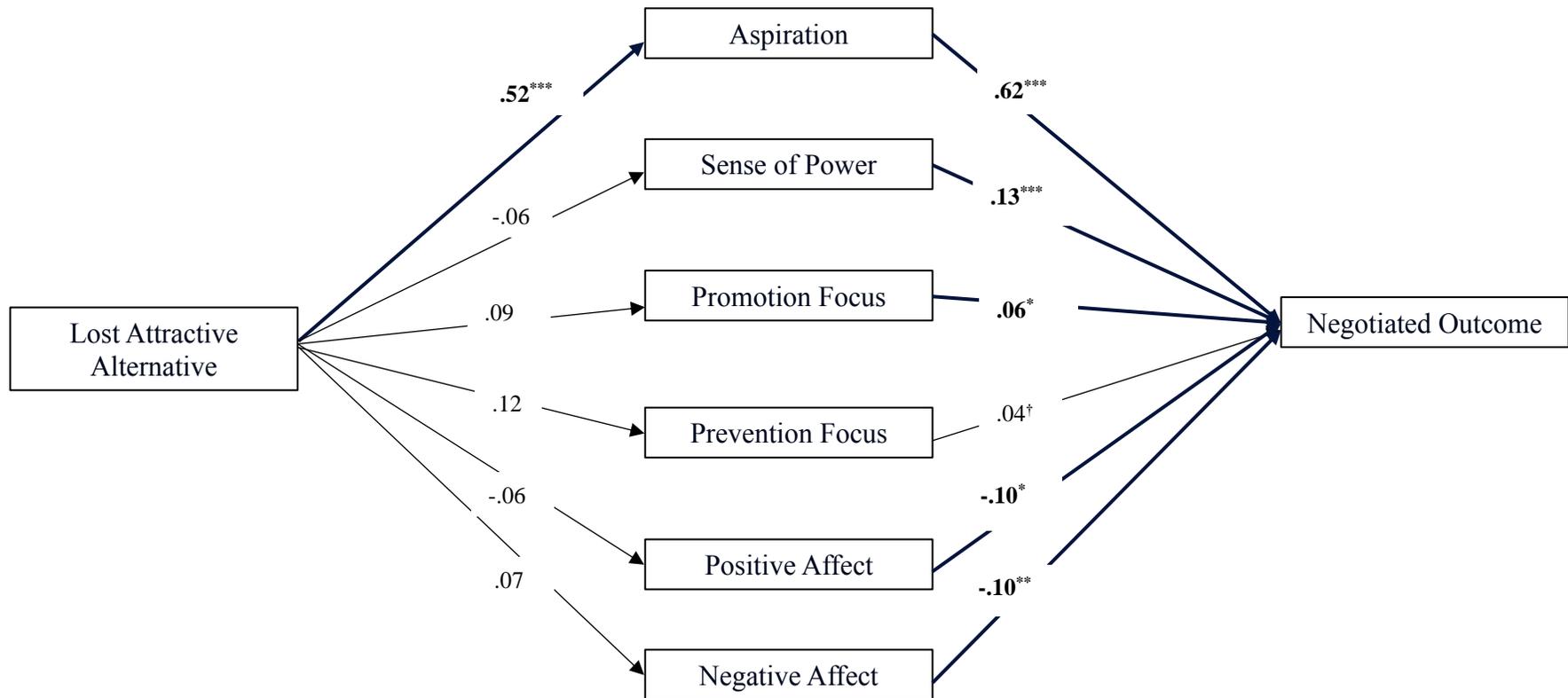
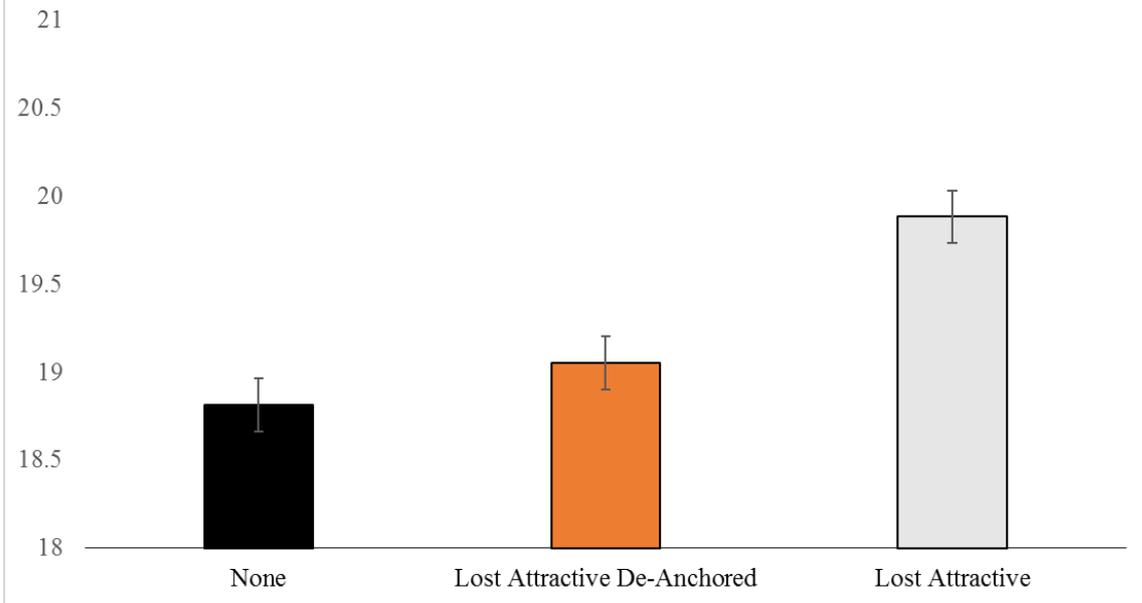


Figure 5. Results of competing indirect effects model in Study 4. Negotiator aspiration level had an indirect effect on the relationship of negotiators' lost alternative on negotiated outcome. Alternative explanations were ruled out.

Unstandardized coefficients reported.

***p < 0.001, **p < 0.01, *p < 0.05, † < .10.

Figure 6: Study 5 Negotiated Outcome for Sellers



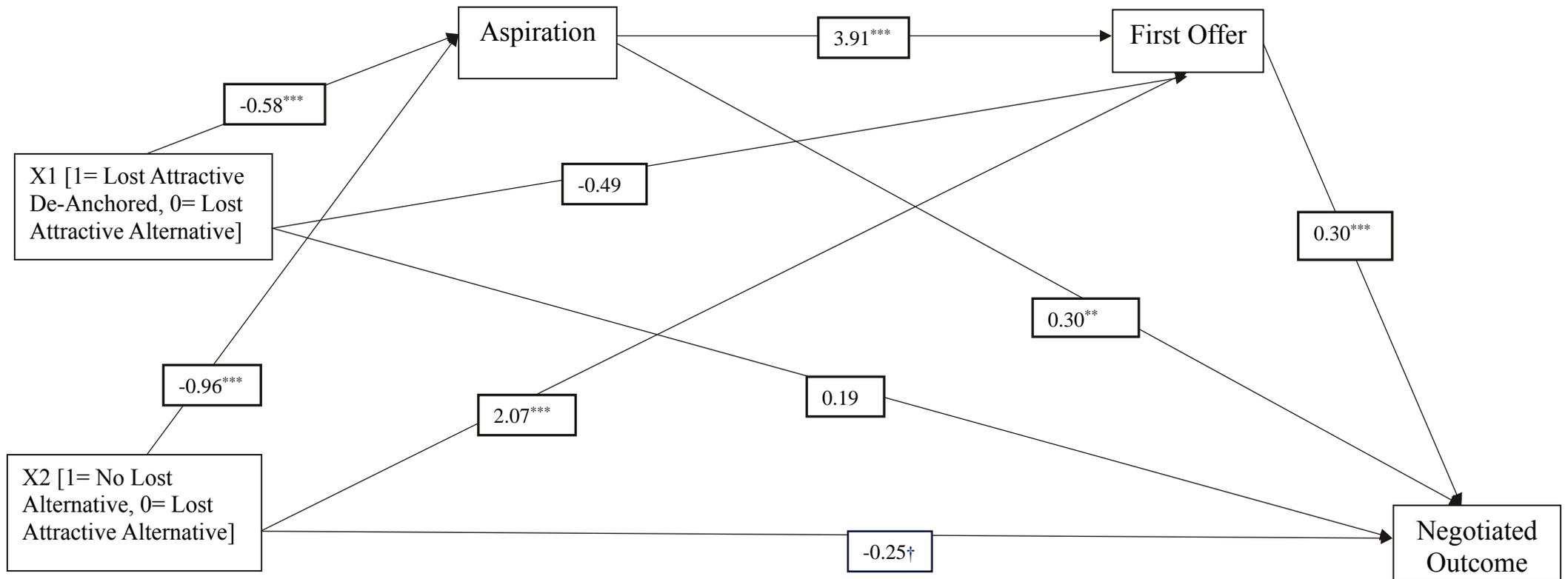
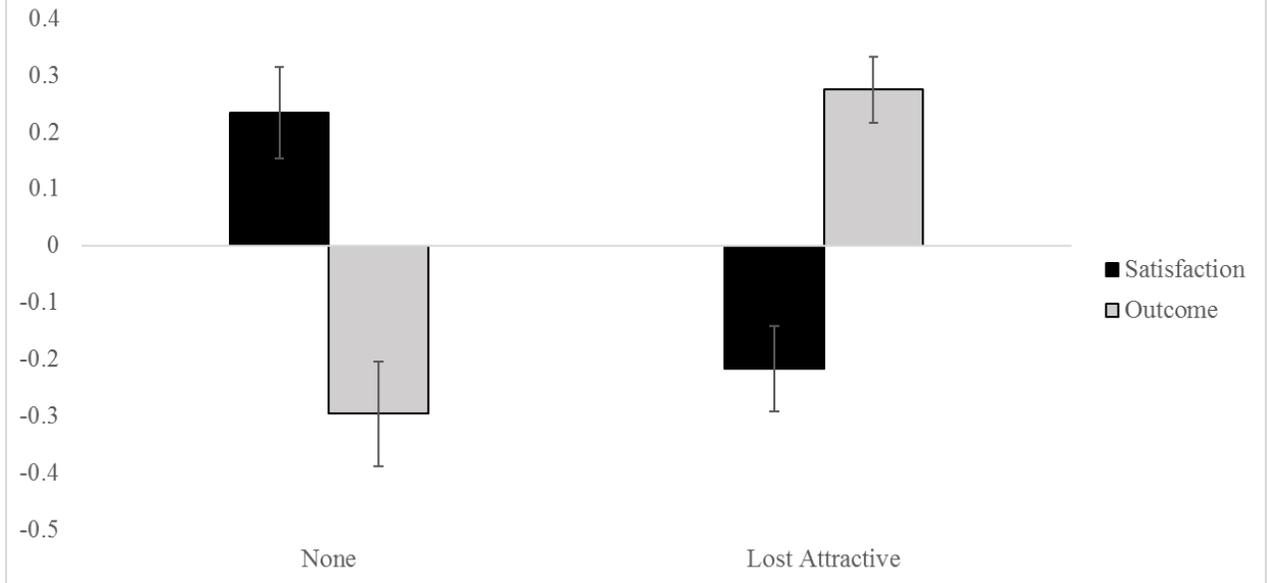


Figure 7. Results of serial indirect effects model in Study 5. We compare our Lost Attractive Alternative Condition against the Lost Alternative De-Anchor Condition (X1) and No Lost Alternative Condition (X2) on negotiated outcome via an indirect effect through negotiator aspiration and first offer. Unstandardized coefficients reported.

***p < 0.001, **p < 0.01, *p < 0.05, † < .10.

Figure 8: Study 6 Negotiated Outcome and Satisfaction Interaction for Sellers



SUPPLEMENTARY MATERIALS:

1. Descriptive Statistics-- How prevalent are lost alternatives in negotiations?
2. Testing the impact of a lost attractive alternative on reservation price and target price independently.
3. Replication of Study 1 at a business school campus center
4. Additional study investigating the effects of de-anchoring

1. Descriptive Statistics-- How prevalent are lost alternatives in negotiations?

Business School Sample:

As part of a class exercise, two streams of negotiation students received a sheet of paper asking the following, “In our daily life, we often negotiate with others. Some of these negotiations involve high stakes, such as when we are buying or selling a house or car or negotiating for a new job. Most negotiations, however, involve smaller stakes, such as when we are buying or selling a used piece of furniture or clothing item. Please think back to negotiations you have had in the past. Can you remember a situation in which when you were negotiating you had a tentative agreement or offer that was taken back? That is, when trying to sell something, have you ever been in a situation in which someone made an offer to buy, but then took that offer back? Or, when trying to buy something, have you ever been in a situation in which someone said they would sell at a certain price, but then took that offer back?” Students could indicate yes or no, followed by a question of gender, age, and the total number of years with full-time work experience.

Students were not required to respond if they did not wish to. Of the students who received the question, 66 responded (44% female; $M_{age} = 29.88$, $SD_{age} = 2.36$). The sample had an average full-time working experience of 6.20 years ($SD = 2.25$). In total, 59% indicated that they had experienced losing an alternative.

Online Professional Sample:

We set a target of recruiting 500 participants through the Prolific Academic online platform. In order to restrict our sample to experienced negotiators, we applied a Prolific

Academic custom prescreening question, “Do you have experience of negotiation in the course of your work? (For example buying or supplying service or products to another organization, relationship management, negotiation, make-or-buy decisions etc.)—Negotiation Experience. This prescreening question is given by prolific and should exclude participants who do not have prior negotiation experience. In response, 502 participants completed our survey. Participants read the following, “Please think back to negotiations you have had in the past as a part of your job. Can you remember a situation in which - when you were negotiating - you had a tentative agreement or offer that was taken back? That is, when trying to sell something as a part of your job, have you ever been in a situation in which someone made an offer to buy, but then took that offer back? Or, when trying to buy something as a part of your job, have you ever been in a situation in which someone said they would sell at a certain price, but then took that offer back?” Participants could indicate yes or no, followed by both personal and workplace demographics.

Out of the 502 individuals, 394 indicated that they had negotiated as part of their current or prior work roles (57% female; $M_{age} = 42.48$, $SD_{age} = 11.73$). The final sample had an average full-time working experience of 19.81 years ($SD = 11.23$). In total, 64% indicated that they had experienced losing an alternative.

2. Testing the impact of a lost attractive alternative on reservation price and target price independently.

We pre-registered the methods and analyses for both studies.¹⁸

Reservation Price

Method

Participants and design. We set a target of recruiting 220 participants through Amazon Mechanical Turk. In response, 242 participants completed the survey. In line with our pre-registration, 17 participants were excluded for either failing the attention check question (4) or for qualifying as an outlier on one of our dependent variables (13). The analysis included the remaining 225 observations (54% female; $M_{age} = 35.95$, $SD_{age} = 10.09$).

This study had a two-cell, between-participants design: alternative (lost attractive vs. none).

Materials and procedure. For the negotiation materials, we used a modified version of Synertech-Dosagen, a single-issue negotiation (Galinsky & Mussweiler, 2001). Participants were told they would be randomly assigned to either the buyer or seller role when in fact, all participants were assigned the role of the seller. As the seller, participants played the role of Chief Financial Officer (CFO) for Dosagen a pharmaceutical company and were informed they would negotiate the selling price of a pharmaceutical plant with an interested buyer—Synertech. The role materials included both general information and confidential role information. The

¹⁸(Reservation Price) <http://aspredicted.org/blind.php?x=ys6uw2>
(Target Price) <http://aspredicted.org/blind.php?x=mn5gd9>

general information informed participants of their role as CFO, that their company had purchased the pharmaceutical plant three years ago for a bargain price of \$15 million, and that the local real estate market had declined 5% since the purchase. The confidential role information informed participants that failure to reach an agreement would result in their company stripping the plant for equipment, netting an estimated \$17 million.

To manipulate the lost alternative, participants received additional confidential information. Within the confidential information, participants in the lost alternative condition read, “Prior to today’s negotiation, a company named Inergy offered \$24 million for the plant. However, Inergy later decided it did not need another plant and pulled their offer.”

Participants were given information on how to submit their responses in numerical form. If they wanted to submit an offer worth \$1,000,000 they responded with 1.

Measured variables. Participants were asked to indicate their reservation price (“What is the lowest price you would be willing to sell the plant for?”) and their sense of power (four-item measure, in which participants indicated the extent to which they feel powerful, in control, confident, and strong in the upcoming negotiation (1 = Not at all to 7 = Extremely; $\alpha = .95$; Schaerer et al., 2015).

Results

Descriptive statistics and correlations among study variables are presented in Table 1 of the supplementary materials.

Reservation price. We predicted that participants who lost an attractive alternative would set more aggressive reservation prices than those who never had an alternative in the first place. The results of an independent-samples 2-tailed t-test supported this prediction, $t(223) = 5.97, p < .001, d = 0.80$ ($M_{lost\ attractive\ alternative} = 18.99, SD = 2.08; M_{no\ alternative} = 17.20, SD = 2.41$).

Sense of power. Losing an attractive alternative ($M = 4.86$, $SD = 1.45$) did not significantly affect sense of power when compared to those who never had an alternative in the first place ($M = 5.13$, $SD = 1.18$), $t(223) = 1.52$, $p = .13$, $d = 0.20$.

Indirect effect. We tested whether a sense of power would drive the relationship between the alternative conditions and reservation price. We ran a bootstrap analysis with 10,000 resamples using PROCESS model 4 (Hayes, 2012). We did not find evidence for an indirect effect ($b = -0.07$, $SE = 0.05$, $CI_{95\%} [-0.19, 0.02]$).

Target Price

Method

Participants and design. We set a target of recruiting 220 participants through Amazon Mechanical Turk. In response, 208 participants completed the survey. Using the same exclusion criteria as in the prior study, we excluded a total of 10 participants who either failed the attention check question (5) or who qualified as an outlier on one of our dependent variables (5). The analysis included the remaining 198 observations (64% Female; $M_{age} = 37.18$, $SD_{age} = 12.47$).

This study had a two-cell, between-participants design: alternative (lost attractive vs. none).

Materials and procedure. The procedure was the same as above with the reservation price study, except that instead of being asked their reservation price, participants were asked about their target price.

Measured variables. Participants were asked to indicate their target price by responding to the following question, “What is the highest price you think you could get for the plant in this negotiation?” This was followed by the same sense of power scale used in the reservation price study ($\alpha = .94$).

Results

Descriptive statistics and correlations among study variables are presented in Table 2 of the supplementary materials.

Target price. We predicted that participants who lost an attractive alternative would set more aggressive target prices than those who never had an alternative in the first place. The results of an independent-samples 2-tailed t-test supported this prediction, $t(196) = 3.47$, $p = .001$, $d = 0.50$ ($M_{lost\ attractive\ alternative} = 21.51$, $SD = 2.89$; $M_{no\ alternative} = 19.76$, $SD = 4.11$).

Sense of power. Sense of power was marginally lower when negotiators lost an attractive alternative ($M = 4.90$, $SD = 1.27$) compared to those who never had an alternative in the first place ($M = 5.21$, $SD = 1.09$), $t(196) = 1.84$, $p = .07$, $d = 0.26$.

Indirect effect. We tested whether a sense of power would drive the relationship between the alternative conditions and target price. We ran a bootstrap analysis with 10,000 resamples using PROCESS model 4 (Hayes, 2012). We did not find evidence for an indirect effect ($b = -0.18$, $SE = 0.13$, $CI_{95\%} [-0.50, 0.01]$).

3. Replication of Study 1 at a business school campus center

Method

We pre-registered the methods and analyses for this study.¹⁹

Participants and design. Data collection took place at a business school campus center. Participation was restricted to students currently enrolled within one of the programs at the school, e.g., Master of Business Administration (MBA), Executive Master of Business Administration (EMBA), Masters in Management (MiM). Data collection was set to end either after five days of collection (the maximum allowed) or when a sample size of 300 participants had been collected, whichever came first. Data collection was cut short due to campus closures in response to the Covid-19 pandemic so that 173 participants completed the survey. In line with the pre-registration for the study, the analyses exclude participants who failed the attention check question (20) or for qualifying as an outlier on one of our dependent variables (64). The remaining 89 observations (40 % female, $M_{age} = 28.40$, $SD_{age} = 5.09$) were used for analysis: 34 were White background, 19 were South Asian (e.g. Indian, Pakistani), 7 were Hispanic, 6 were East Asian (e.g. Chinese, Japanese), 6 were White British, 3 were Black/African Caribbean, 2 were Middle Eastern, and 12 indicated mixed or other backgrounds.

This study had a four-cell, between-participants design: alternative (lost attractive vs. none) X no alternative message (stated vs. not stated).

Materials and procedure. This study implemented the same design as Study 1.

Measured variables. Reservation price and target price were captured as in Study 1, standardized and then averaged to compute aspiration level, $r(89) = .29$, $p = .01$.

First offer was captured in the same way as in Study 1.

Results

¹⁹<https://aspredicted.org/blind.php?x=ei7eq5>

Descriptive statistics and correlations among study variables are presented in Table 3 of the supplementary materials.

Aspiration level. We predicted that participants who lost an attractive alternative would set more aggressive aspiration levels than those who never had an alternative in the first place. A 2 X 2 analysis of variance (ANOVA) revealed, consistent with our prediction, a significant main effect of alternative condition, $F(1, 85) = 20.87, p < .001, \eta^2_p = 0.20$ ($M_{lost\ attractive\ alternative} = 0.34, SD = 0.79$; $M_{no\ alternative} = -0.46, SD = 0.55$).

There was also a significant main effect of “no alternative” message condition, $F(1, 85) = 4.27, p = .04, \eta^2_p = 0.05$. Negotiators who were explicitly told they did not have an alternative to the negotiation set higher aspiration levels ($M = 0.20, SD = 0.86$) than negotiators who did not receive this information ($M = -0.30, SD = 0.59$). These main effects were not qualified by a significant interaction, $F(1, 85) = 1.04, p = .31, \eta^2_p = .01$.

First offer. We predicted that participants who lost an attractive alternative would give more aggressive first offers than those who never had an alternative in the first place. A 2 X 2 analysis of variance (ANOVA) revealed, consistent with our prediction, a significant main effect of alternative condition, $F(1, 85) = 7.28, p = .01, \eta^2_p = .08$, ($M_{lost\ attractive\ alternative} = 13,065.04, SD = 1,078.72$; $M_{no\ alternative} = 12,198.66, SD = 1,556.44$).

There was no main effect of “no alternative” message condition, $F(1, 85) = 1.43, p = .24, \eta^2_p = 0.02$. The interaction was also not significant, $F(1, 85) = 0.01, p = .94, \eta^2_p < .001$.

Indirect effect. Finally, we tested whether negotiator aspiration levels would drive the relationship between the alternative conditions and negotiator first offer. This represents a subset of Hypothesis 4 (we did not test for negotiation outcomes in this study). Using PROCESS macro 4 ($k = 10,000$), we found that losing an attractive alternative led negotiators to set more aggressive aspiration levels for the upcoming negotiation, leading sellers in the lost attractive alternative

condition to make more aggressive first offers, $b = 598.67$, $SE = 196.35$, $CI_{95\%} [294.96, 1,059.97]$.

Results do not change when controlling for no alternative message condition.

4. Additional study investigating the effects of de-anchoring

Method

Participants and design. We set a target of recruiting 350 participants. In response, 350 U.S. participants completed an online-simulated negotiation through Amazon's Mechanical Turk platform. We used the same pre-determined criteria used in all prior studies, resulting in the exclusion of 76 participants.²⁰ The remaining 274 observations were used for analysis (60% female; $M_{age} = 38.45$, $SD_{age} = 12.08$).

This study had a three-cell between-participants design: alternative (lost attractive vs. lost attractive de-anchored vs. none).

Materials and procedures. Used the same experimental design as described in Study 5. Participants negotiated the sale of a pharmaceutical plant. In addition to the basic information, participants in the *lost attractive* and *lost attractive de-anchored* conditions were informed that they had negotiated a deal with another company (Inergy) for \$24 million prior to their upcoming negotiation.

Participants in the *lost attractive de-anchored* condition were then asked to actively generate at least three arguments or reasons that would contradict the value of the current \$24 million offer. Specifically, participants were told, "Some may see the value of the \$24 million alternative as being too high. What would you say speaks for a lower valuation of the plant?"

²⁰ Participants were excluded for responses that qualified as an outlier for at least one of the dependent measures (69), did not follow experimental procedure (1), and or did not engage in the reflection task (6).

Participants in the *lost attractive* and *lost attractive de-anchored* conditions were then informed that Energy withdrew their \$24 million offer. Prior to entering the negotiation, participants indicated their aspiration levels.

Measured variables. Reservation price was captured by asking, “What is the lowest price you would be willing to accept from Synertech?” To measure target price, we asked: “What price would you ideally like to obtain in this negotiation?” We z-transformed the negotiators’ reservation and target prices and averaged their scores to compute aspiration level, $r(274) = 0.58, p < .001$. First offers were determined by the opening offer given in the negotiation. Negotiated outcomes were recorded as either (a) the offer from Synertech that was accepted by participants or (b) the offer participants made that was below the next pre-set Synertech offer.²¹

Results

Descriptive statistics and correlations among study variables are presented in Table 4 of the supplementary materials.

Aspiration level. We predicted that participants who lost an attractive alternative would set more aggressive aspiration levels than both those who never had an alternative as well as those in the de-anchoring condition. A one-way ANOVA indicated a significant difference across the conditions, $F(2, 271) = 4.94, p = .01, \eta^2_p = 0.04$. Planned comparison analyses revealed that negotiators who lost an attractive alternative set higher aspiration levels ($M = 0.22, SD = 0.67$) than negotiators who never had an alternative ($M = -0.16, SD = 1.22$), $t(271) = 2.99, p = .003, d = 0.36$. Further, negotiators in the de-anchoring condition set lower aspiration levels ($M = -0.08, SD = 0.54$) than negotiators in the lost attractive alternative condition, $t(271) = 2.29, p = .02, d = 0.28$.

²¹ Sense of power was measured as in the Reservation Price study ($\alpha = .95$). We did not find evidence to support sense of power as a significant mechanism, nor did including sense of power in our indirect effect analysis change the results.

First offer. We predicted that participants who lost an attractive alternative would make higher first offers than both those who never had an alternative as well as those in the de-anchoring condition. A one-way ANOVA indicated a significant difference across conditions, $F(2, 271) = 4.36, p = .01, \eta^2_p = 0.03$. Planned comparison analysis revealed that negotiators who lost an attractive alternative gave higher first offers ($M = 24.71, SD = 4.00$) than negotiators who never had an alternative ($M = 24.02, SD = 6.43$), but this difference was not statistically significant, $t(271) = 1.00, p = .32, d = 0.12$. Further, negotiators in the de-anchoring condition gave lower first offers ($M = 22.63, SD = 2.96$) than those in the lost attractive alternative condition, $t(271) = 2.92, p = .004, d = 0.35$.

Negotiated outcome. One participant failed to reach a negotiated outcome. We predicted that participants who lost an attractive alternative would achieve better negotiated outcomes than both those who never had an alternative as well as those in the de-anchoring condition. Indeed, a one-way ANOVA indicated a significant difference across conditions, $F(2, 270) = 3.21, p = .04, \eta^2_p = 0.02$. Planned comparison analysis reveal that negotiators who lost an attractive alternative achieved better negotiated outcomes ($M = 19.33, SD = 1.57$) than negotiators who never had an alternative ($M = 18.67, SD = 2.37$), $t(270) = 2.49, p = .01, d = 0.30$. Further, negotiators in the de-anchoring condition achieved lower negotiated outcomes ($M = 18.90, SD = 1.29$) than those in the lost attractive alternative condition, however, this difference was not statistically significant, $t(270) = 1.59, p = .11, d = 0.19$.

Indirect effects. We predicted that negotiator aspiration levels and first offers would drive the relationship between alternative conditions and negotiated outcomes. To test the multi-categorical serial indirect effect hypothesis, we used PROCESS model 6 ($k=10,000$). Indicator coding was used to create the two variables X1 [Lost Attractive Alternative = 0, Lost Attractive Alternative De-Anchored = 0, No Lost Alternative = 1] and X2 [Lost Attractive Alternative = 0, Lost Attractive Alternative De-Anchored = 1, No Lost Alternative = 0]. Thus, the Lost Attractive Alternative condition was the reference group. We found support for our predictions: having no

alternative (X1 $b = -0.38$, $SE = 0.15$, $CI_{95\%} [-0.70, -0.09]$) and de-anchoring an attractive lost alternative (X2 $b = -0.30$, $SE = 0.09$, $CI_{95\%} [-0.49, -0.12]$) led to lower aspiration levels, less aggressive first offers, and worse outcomes compared to having an attractive lost alternative.

Table 1- Descriptive Statistics & Correlations for Section 2 of the Supplementary Materials—Reservation Price

Variables	M	SD	1	2
1. Alternative Condition [0 None, 1 Lost Attractive]	0.52	0.50	-	
2. Reservation Price	\$18.13	\$2.41	.37***	
3. Sense of Power	4.99	1.33	-.10	.10

$N = 225$ *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $< .10$.

Table 2- Descriptive Statistics & Correlations for Section 2 of the Supplementary Materials—Target Price

Variables	M	SD	1	2
1. Alternative Condition [0 None, 1 Lost Attractive]	0.49	0.50	-	
2. Target Price	\$20.63	\$3.66	.24**	
3. Sense of Power	5.06	1.19	-.13†	.16*

$N = 198$ *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $< .10$.

Table 3- Descriptive Statistics & Correlations for Section 3 of the Supplementary Materials

Variables	M	SD	1	2	3
1. Alternative Condition [0 None, 1 Lost Attractive]	0.57	0.50	-		
2. No Alternative Message Condition [0 Not Stated, 1 Stated]	0.61	0.49	.24*	-	
3. Aspiration Level	0.00	0.80	.50***	.31**	-
4. First Offer	£12,695.12	£1,365.81	.32**	.19†	.49***

$N = 89$ *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $< .10$.

Table 4- Descriptive Statistics & Correlations for Section 4 of the Supplementary Materials

Variables	M	SD	1	2	3	4
1. Alternative Condition [0 None, 1 Lost Attractive De-Anchored, 2 Lost Attractive]	1.00	0.84	-			
2.Negotiated Outcome ^a	\$18.97	\$1.83	.15*	-		
3.Aspiration Level	0.00	0.89	.18**	.71***	-	
4.First Offer	\$23.84	\$4.81	.06	.79***	.74***	-
5.Sense of Power	4.92	1.46	-.15*	.12*	.07	.12 [†]

N = 274, ^a*N* = 273 ****p* < 0.001, ***p* < 0.01, **p* < 0.05, † < .10.