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# Bargaining zone distortion in negotiations: The elusive power of multiple alternatives

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ABSTRACT

We challenge the assumption that having multiple alternatives is always better than a single alternative by showing that negotiators who have additional alternatives ironically exhibit downward-biased perceptions of their own and their opponent's reservation price, make lower demands, and achieve worse outcomes in distributive negotiations. Five studies demonstrate that the apparent benefits of multiple alternatives are elusive because multiple alternatives led to less ambitious first offers (Studies 1–2) and less profitable agreements (Study 3). This distributive disadvantage emerged because negotiators' perception of the bargaining zone was more distorted when they had additional (less attractive) alternatives than when they only had a single alternative (Studies 1–3). We further found that this multiple-alternatives disadvantage only emerges when negotiators used quantitative (versus qualitative) evaluation standards to gauge the extremity of their offers (Study 4), and when they base their offers on their own numerical alternative(s) versus on opponent information (Study 5).

## 1. Introduction

> *"Get as many offers as you can, then you'll have more negotiation leverage."*
> [Pouideh (2005), *Secrets from Graduate School*, p. 205]

> *"[. . .] from a purely rational economic maximization perspective, to get more power in the employment marketplace means to collect offers (as many as possible) and keep them valid (for as long as possible)."*
> [Kurtzberg and Naquin (2011), *The Essentials of Job Negotiations*, p. 16]

The quotes above reflect a central assertion of research on power and negotiations that has become almost a truism: The more alternative offers negotiators can secure, the more leverage they have, and the more they can demand from their opponent. This belief is grounded in a variety of research domains, including economics and psychology. For example, classic economic models have traditionally assumed that humans are driven by their preferences. According to rational choice theory (Hotelling, 1929; von Neumann & Morgenstern, 1944), more choice alternatives are always better than fewer alternatives because they allow individuals to maximize utility by identifying the best match between their preferences and their alternatives. Similarly, psychological research suggests that – when given a choice – individuals prefer more over fewer alternatives because of the anticipated benefits additional alternatives seem to provide (e.g., Iyengar, Wells, & Schwartz, 2006; Reibstein, Youngblood, & Fromkin, 1975).

Thus, it is not surprising that negotiation scholars and practitioners often recommend obtaining multiple alternative offers because these are assumed to lead to a distributive advantage relative to few alternatives (or a single alternative). This recommendation relies on the idea that "the bargaining partner who has more alternatives is more powerful" (Yan & Gray, 1994, p. 1481) and that negotiators with few alternatives are at a disadvantage because they cannot walk away as easily from the bargaining table (e.g., Mannix & Neale, 1993; McAlister, Bazerman, & Fader, 1986; Pinkley, 1995; for a review see Thompson, Wang, & Gunia, 2010). Indeed, when we asked 55 professionals pursuing a Master of Business Administration (MBA) whether they preferred negotiating a job offer with four alternatives or a single alternative (see Appendix A for details), an overwhelming majority preferred having

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multiple alternatives (85.5%). In addition, these participants expected to negotiate better deals with multiple alternatives than a single alternative ($p < 0.001$). These findings suggest that people prefer multiple alternatives over a single one – likely because of the distributive advantage they anticipate from having additional alternatives.

In contrast to the recommendations made by negotiation scholars and people's preference for more alternatives, we propose that the perceived advantage of multiple alternatives may be elusive and that multiple alternatives can in fact *hurt* a negotiator's performance. In making this prediction, we build on recent anchoring research suggesting that multiple anchors can be more potent than single anchors. The scale distortion theory of anchoring (Frederick & Mochon, 2012; Mochon & Frederick, 2013) argues that anchors exert a scaling effect such that they shift the subjective (or implicit) response scale on which people make judgments, which then results in an assimilation of judgments towards those anchors. For example, people who first estimated the calories in a strawberry subsequently judged medium-sized French fries to be less caloric than people who first estimated the calories in a pizza. Moreover, scale distortion theory suggests that the subsequent assimilation of judgments on objective scales intensifies as the number of anchors increases (Mochon & Frederick, 2013). Building on the scale distortion theory of anchoring and prior findings that negotiation alternatives serve as salient anchors (Schaerer, Swaab, & Galinsky, 2015), we propose that compared to having a single alternative, multiple alternatives can lead to a greater downward distortion of negotiators' perceptions of the bargaining zone, such that they judge their own and their opponent's reservation prices to be lower. Because negotiators use the perceived bargaining zone to gauge their initial demands, we predict that negotiators will construe their first offer as more extreme when they have multiple alternatives (vs. a single alternative), thereby leading to a downward adjustment of the first-offer size (i.e., less ambitious demands) and less profitable agreements.

Our research makes several contributions to the negotiation, anchoring, and decision-making literatures. First, it extends our understanding of the impact of alternatives on negotiation outcomes. Theories on negotiation and power have generally assumed that more alternatives *help* rather than *hurt* negotiators. However, our research tests for the first time a counterintuitive and detrimental effect of multiple alternatives on negotiation outcomes. Second, we contribute to the "anchoring in negotiation" literature which has primarily relied on the anchoring-and-adjustment framework (Epley & Gilovich, 2006) and the selective accessibility model (Strack & Mussweiler, 1997) – neither of which currently provides an explanation for why multiple alternatives would bias negotiators more strongly than a single alternative. We argue that scale distortion theory provides such an explanation. In addition, we illuminate the underlying processes and boundary conditions of scaling effects and show that distortion is a pervasive phenomenon with profound implications for competitive social interactions. Third, this research puts forward a parsimonious account of how alternatives affect first-offer magnitude and negotiation outcomes through perceptions of the bargaining zone. Contrary to research that often provides negotiators with a predetermined bargaining zone (e.g., Galinsky & Mussweiler, 2001; Larrick & Wu, 2007), we show that the focal negotiator's construal of the bargaining zone is *malleable* and subject to contextual influences. Finally, this research is the first to examine the perceived bargaining zone as a key antecedent of first offers. This is an important contribution because past research has primarily focused on the consequences of the first offer and largely ignored its antecedents.

## 2. Bargaining zone distortion in negotiations

The bargaining zone is a fundamental concept in negotiation research and refers to the distance between two negotiators' reservation prices—the price at which individual parties prefer an impasse to an agreement (see Raiffa, 1982). For example, if a seller is willing to accept any price above $8 and a buyer is willing to accept any price below $12, the bargaining zone lies between those two reservation prices ($8–$12).

Past research has generally treated the bargaining zone as fixed (e.g., Blount, Thomas-Hunt, & Neale, 1996; Galinsky & Mussweiler, 2001; Kim & Fragale, 2005; Larrick & Wu, 2007; Pinkley, 1995; Pinkley, Neale, & Bennett, 1994; White & Neale, 1994; Wolfe & McGinn, 2005). For example, Galinsky and Mussweiler (2001) provided negotiators with pre-determined reservation prices in the task materials. Other research manipulated the size of the bargaining zone as an independent variable (e.g., Larrick & Wu, 2007), or assumed that negotiators gradually form an understanding of the bargaining zone *during* the negotiation (e.g., Pinkley et al., 1994). Extending this research, we argue that in the eyes of a negotiator the bargaining zone is *malleable* and can be affected by contextual cues before the negotiation has even started. One important contextual cue lies in the alternatives that parties have available to a negotiated agreement. Alternatives are often represented numerically and can act as salient anchors that influence negotiators' first offers and final agreements (Schaerer et al., 2015) – even when additional reference points are available (Blount et al., 1996) and even when negotiators are highly experienced (Northcraft & Neale, 1987).

Given the critical role of anchors in negotiations, we propose that numerically represented alternatives shape a negotiator's implicit perception of the bargaining zone. This hypothesis builds on the scale distortion theory of anchoring (Frederick & Mochon, 2012; Mochon & Frederick, 2013). This theory suggests that the perceived magnitude of a number can be influenced by other numeric values on the same objective scale. To test their theory, Frederick and Mochon (2012) asked one group of participants to estimate the weight of a small animal on an objective numerical scale (e.g., a raccoon, which weighs 20 lb). Another group was not asked to make such an estimate. Then, all participants assessed the weight of a much larger animal using the same scale (e.g., "How many pounds does a giraffe weigh?"). Frederick and Mochon found that participants reported lower numbers for the giraffe's weight when they were first exposed to the weight of the raccoon than when they did not make this comparison. This anchoring effect occurs because prior exposure to the lower raccoon weight causes people to subsequently estimate the giraffe's weight as lower, not because people believe the giraffe is lighter, but rather because they operate on a distorted response scale to communicate their unchanged mental representation of the giraffe. Whereas a 1000-lb giraffe might have seemed like a reasonable response in the absence of an anchor, this number seems too large when contrasted with the 20 lb the raccoon weighs. Moreover, this distortion of the weight scale does not affect related estimates such as the height of the giraffe or how many lions a giraffe might feed, and only emerges when comparisons are made on the exact same scale (e.g., distortion is less likely to occur when the giraffe's weight is expressed in tons rather than pounds).

Scale distortion theory has important implications for the impact of multiple anchors on subsequent judgments. If numeric anchors affect the representation of scales, it is likely that such an effect is amplified as people are exposed to a greater number of anchors prior to making an overt judgment. In support of this prediction, Mochon and Frederick (2013, Study 2) found that people estimated the price of a television as lower when they were

first asked to estimate the price of a clock radio *and* a fax machine compared to when they were first asked to estimate the price of only a clock radio *or* a fax machine. The stronger anchoring effect occurs because exposure to multiple anchors leads to a stronger contrast effect among the anchors. For example, the price of a fax machine (e.g., $50) may seem rather high when presented together with the price of a clock radio (e.g., $10). In contrast, the price of the same fax machine may be much harder to judge in the absence of the $10 radio-anchor and would thus appear as neither particularly high nor low. Thus, when subsequently asked to estimate the price of a TV, people who were exposed to multiple anchors (and perceive a value of $50 as "high") will select a lower value to reflect the fact that a TV is much more expensive than a fax machine compared to those who were exposed to a single anchor (and perceive a value of $50 as, say, "moderate").

This logic allows us to make predictions for how the exposure to multiple alternatives (versus a single alternative) affects negotiators' perception of the bargaining zone. Specifically, given a particular alternative, the presence of additional less attractive alternatives creates a contrast effect among those alternatives. This contrast effect then leads to an assimilation effect in negotiators' assessments of their own and their opponent's reservation prices. For example, an alternative of $75 for a coffee maker is likely to look rather high when it is contrasted with two additional alternatives of $70 and $65. The same $75 may seem neither extremely high nor low when the comparison standards of $70 and $65 are absent. The contrast effect between the three alternatives downward-biases negotiators' subsequent assessment of their own reservation prices such that they may believe that an ambitious reservation price for themselves may already be reached at, say, $80. On the other hand, negotiators with only one alternative of $75 do not experience this contrast effect and may feel that an ambitious reservation price will only be reached at, say, $90. The same logic should apply to negotiators' estimation of their opponents' reservation prices. A negotiator with multiple alternatives who already perceives a value of $75 as relatively "high," will likely think that the opponent's reservation price is much lower (e.g., $100) than a negotiator who perceives his or her only alternative of $75 as, say, "average," and the opponent's walkaway point as much larger (e.g., $120). Thus, multiple alternatives relative to a single alternative should lead to a contrast effect that causes a downward-shift (i.e., distortion) of one's own reservation price and the perceived opponent reservation price.

The distorting effect of numeric alternatives on negotiators' perceptions of the bargaining zone has important downstream consequences for the remainder of the negotiation. We hypothesize that a negotiator's construal of the bargaining zone determines the size of his or her subsequent first offer. Picture again the negotiator from above who has three alternatives and perceives the bargaining zone to span a range of $80–$100. This negotiator would likely make a less ambitious first offer than a negotiator with a single alternative who perceives his or her bargaining zone to range from $90 and $120. Thus, if the exposure to multiple alternatives results in a more downward-biased bargaining zone than the exposure to a single alternative, negotiators with multiple alternatives will also demand less from their opponent. Stated formally:

**Hypothesis 1.** Compared to negotiators with a single alternative, negotiators who have additional (less attractive) alternatives perceive their own and others' reservation prices to be closer to the value of their alternatives.

**Hypothesis 2.** Compared to negotiators with a single alternative, negotiators who have additional (less attractive) alternatives make less ambitious first offers.

**Hypothesis 3.** The effect of multiple alternatives on first offers is mediated by negotiators' perceived own and opponent reservation prices.

These predictions have important downstream consequences because the extremity of the first offer strongly predicts final negotiation agreements—especially in distributive negotiations in which negotiators strive for diametrically opposed outcomes (Gunia, Swaab, Sivanathan, & Galinsky, 2013; Loschelder, Swaab, Trötschel, & Galinsky, 2014). In fact, the extremity of the first offer can account for up to 85% of the variance in negotiation outcomes (e.g., Galinsky & Mussweiler, 2001; Schaerer et al., 2015). Because first offers constitute one of the most important determinants of outcomes in distributive negotiations (see Maaravi, Ganzach, & Pazy, 2011), we propose that negotiators also obtain less profitable outcomes when they have multiple alternatives rather than a single one (see Fig. 1 for a schematic representation of our bargaining zone distortion model).

**Hypothesis 4.** Compared to negotiators with a single alternative, negotiators who have additional (less attractive) alternatives achieve less profitable agreements.

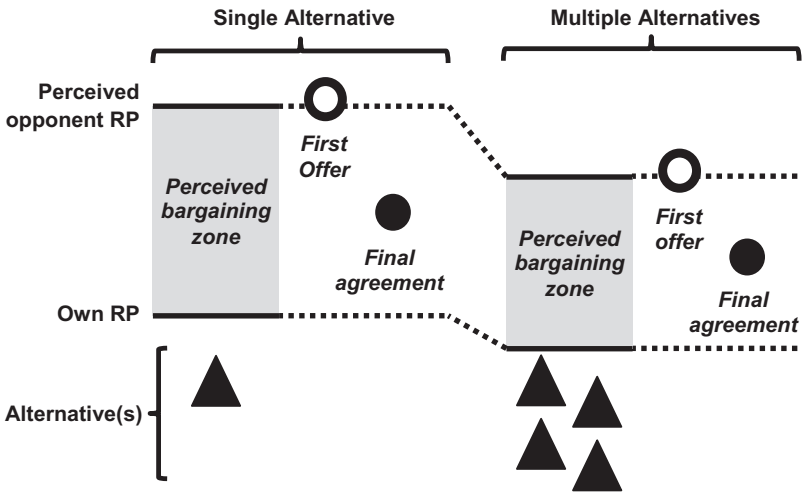



**Fig. 1.** Bargaining zone distortion in negotiations. The perceived bargaining zone, bounded by the perceived opponent and own reservation prices (RPs), will be shifted downward in the case of multiple alternatives (right side) relative to a single alternative (left side), resulting in less extreme first offers and less profitable final agreements.

**Hypothesis 5.** The effect of multiple alternatives on negotiation outcomes is sequentially mediated by negotiators' perceived own and opponent reservation prices and the extremity of their subsequent first offers.

## 3. Overview of the present research

We tested our hypotheses across five studies. Studies 1 and 2 tested whether the presence of multiple alternatives would distort the perceived bargaining zone more strongly and lead to less extreme first offers than a single alternative. Study 2 ruled out the alternative explanation that negotiators with multiple alternatives merely anchor on a lower average value and tested competing mechanisms for the detrimental effect of multiple alternatives on first offers. Study 3 involved an interactive face-to-face negotiation and tested the complete causal model of bargaining zone distortion by assessing whether the number of alternatives affected final agreements and whether this causal relationship is sequentially mediated by the perceived bargaining zone and extremity of the first offer. The final two studies provide additional demonstrations of our theoretical model by experimentally manipulating the proposed scale distortion mechanism (see *moderation-of-process*; Spencer, Zanna, & Fong, 2005). Specifically, Study 4 tested the assumption that scale distortion emerges when numeric scales are used, but is mitigated when negotiators also have an alternative, qualitative evaluation standard available to gauge the extremity of their first offers. Finally, Study 5 tested the assumption that scale distortion only emerges when the determination of the first offer directly follows an exposure to one's own alternatives, by manipulating whether the focal negotiator or the opponent moves first.

## 4. Study 1: Multiple alternatives and first offers

The first study tested the impact of multiple alternatives on negotiators' perceived bargaining zone and first-offer extremity (Hypotheses 1–3). We predicted that negotiators with multiple alternatives would make *less ambitious* first offers than those with a single alternative and that this detrimental effect of multiple alternatives on first-offer extremity occurs due to bargaining zone distortion. Specifically, we predicted that the relationship between alternatives and first offers would be mediated by negotiators' lower own and opponent reservation price estimates.

### 4.1. Participants and design

Three hundred individuals (mean age = 34.98, *SD* = 10.76; 51.3% female) were recruited from Amazon's Mechanical Turk in exchange for $1.00. Participants were randomly assigned to one of three conditions: single alternative/high value, single alternative/low value, or multiple alternatives. Prior to data collection, we decided to exclude duplicate responses, inattentive participants, and outliers. Fifty-one participants were excluded due to duplicate IP addresses (10 participants), because they failed an attention check (4), or because they made extreme first offers that fell outside 2.5 times the Mean Absolute Deviation (MAD) from the median (37), a method recommended by Leys, Ley, Klein, Bernard, and Licata (2013). We applied these criteria consistently across all online studies. The remaining 249 observations were analyzed.[1]

[1] Although we decided to exclude outliers prior to data collection, we also analyzed the data including outliers ($N = 286$). Identical effects emerged for reservation prices ($ps < 0.007$) and first offers ($p < 0.001$).

### 4.2. Procedure and manipulations

Participants first completed an audio test to ensure that they could properly hear the recorded voice messages, which were used to manipulate the number of alternatives. Participants then read their role instructions and were told that they had just moved into a new apartment and that they had received a brand new, fully-automatic coffee machine from their parents. They also read that they already possessed a functioning coffee machine for which they had paid $400, and that they would keep the new machine and advertise the old one for sale on the Internet. The instructions then indicated that participants received inquiries about the coffee machine via email and voicemail. Participants first read an email from a buyer who was ostensibly looking for a coffee machine and asked for an initial offer (see Appendix B).

Before responding to this email, participants were exposed to the alternatives manipulation. The number of alternatives was manipulated by having participants listen to (the) message(s) on their voicemail recorder. Two female research assistants, whose native language was English, each recorded two different voicemail messages (see Appendix B). All messages contained similar language and were equal in length. In the *high-value condition*, participants always listened to one voicemail with an alternative offer of $90. Those in the *low-value condition* always received an offer of $80. Participants in the *multiple alternatives condition* listened to both messages ($80 and $90). Message content, recorded voice, anchor values (multiple alternatives conditions only), and presentation order of the recordings (multiple alternatives conditions only) were randomized. After listening to the messages, participants completed the dependent measures.

### 4.3. Dependent measures

#### 4.3.1. First-offer extremity

Participants were asked what their initial offer to the buyer would be. The extremity of the first offer served as the key dependent measure.

#### 4.3.2. Perceived bargaining zone

The perceived bargaining zone was measured by asking participants to indicate the minimum price they would be willing to accept in the current negotiation (own reservation price) and what they thought the highest price was that the email buyer would be willing to pay (opponent reservation price). Negotiators' perceived bargaining zone served as the mediating construct.

#### 4.3.3. Manipulation and attention checks

To make sure that our manipulation had the intended effect, participants were also asked to indicate how many alternative offers they had available and what the value of their best offer was.

At the end, participants completed an attention check (Oppenheimer, Meyvis, & Davidenko, 2009) and demographic questions.[2]

### 4.4. Results

#### 4.4.1. Manipulation check

The manipulation was successful. Participants in the multiple alternatives condition indicated that they had more alternative

[2] We also measured negotiators' perceived power using a 4-item scale (e.g., Schaerer et al., 2015; Swaab, Phillips, & Schaerer, 2016). We found that negotiators in the multiple alternatives condition ($M = 5.62$, $SD = 1.12$) felt more powerful than those in the single alternative conditions, ($M = 5.15$, $SD = 1.18$, $F(1,247) = 8.05$, $p = 0.005$, $d = 0.40$. Although these results are in line with our argument that multiple alternatives can have apparent psychological (power) benefits over a single alternative, we do not report these results in the main text because first offers and outcomes were our primary focus, but report them here for transparency reasons.

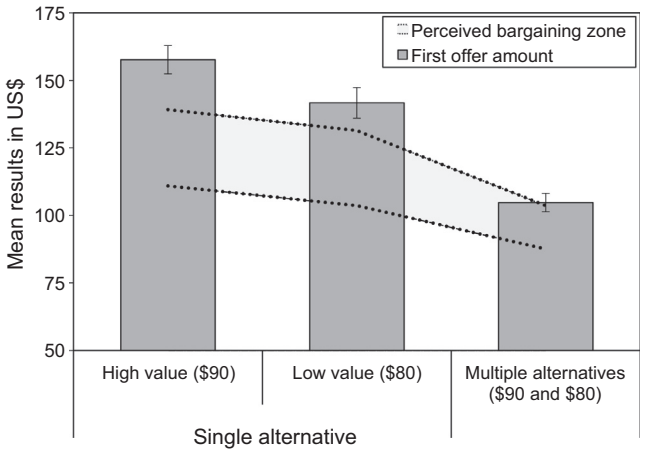



**Fig. 2.** Study 1: Negotiators with multiple alternatives exhibited a relatively more distorted bargaining zone and made less ambitious first offers than those in the single alternative conditions. Error bars indicate ± 1 *SEM*.

offers ($M = 1.99$, $SD = 0.12$) than those in the high alternative condition ($M = 1.06$, $SD = 0.41$), $F(1,246) = 442.64$, $p < 0.001$, and those in the low alternative condition, ($M = 0.97$, $SD = 0.18$), $F(1,246) = 553.47$, $p < 0.001$. The high and the low alternative conditions also significantly differed ($p = 0.031$).[3] In addition, negotiators in the low-value condition reported their best alternative to be lower ($M = 80.11$, $SD = 1.05$) than those in the high alternative condition ($M = 90.00$, $SD = 0.00$), $U = 45.00$, $p < 0.001$, and those in the multiple alternatives condition, ($M = 89.85$, $SD = 1.21$), $F(1,246) = 4603.22$, $p < 0.001$. The latter two conditions did not differ ($p = 0.31$)

*4.4.2. Perceived bargaining zone*

We predicted that the detrimental effect on first-offer extremity would occur because two alternatives would distort the perceived bargaining zone to a greater extent than either of those alternatives alone (Hypothesis 1). This is exactly what we found (see Fig. 2). Negotiators in the multiple alternatives condition perceived the opponent's reservation price to be lower ($M = 103.60$, $SD = 22.26$) than those in the single alternative conditions, ($M = 135.30$, $SD = 44.57$, $F(1,247) = 31.39$, $p < 0.001$, $d = 0.80$. This effect also emerged when the high-value condition ($M = 139.22$, $SD = 38.26$), $F(1,246) = 31.16$, $p < 0.001$, $d = 1.14$, or the low-value condition ($M = 131.42$, $SD = 49.95$), $F(1,246) = 19.09$, $p < 0.001$, $d = 0.72$, were contrasted separately with the multiple alternatives condition. There was no significant difference between the two single alternative conditions ($p = 0.19$).

Identical patterns were found for negotiators' own reservation price. Those in the multiple alternatives condition chose a lower reservation price ($M = 87.53$, $SD = 15.43$) than those in the single alternative conditions, ($M = 107.27$, $SD = 29.15$), $F(1,247) = 28.17$, $p < 0.001$, $d = 0.75$. This difference was significant irrespective of whether the single alternative value was high ($M = 110.94$, $SD = 24.53$), $F(1,246) = 31.37$, $p < 0.001$, $d = 1.10$, or low ($M = 103.64$, $SD = 32.83$), $F(1,246) = 14.92$, $p < 0.001$, $d = 0.63$. There was a marginally significant difference between the two single alternative conditions ($p = 0.060$).

*4.4.3. First-offer extremity*

We predicted that negotiators with multiple alternatives would make less extreme first offers than those with only a single alternative (Hypothesis 2). The results supported these predictions (Fig. 2). Negotiators with multiple alternatives ($M = 104.78$, $SD = 12.08$) made less extreme first offers than those in the single alternative conditions, ($M = 149.64$, $SD = 47.96$), $F(1,247) = 57.97$, $p < 0.001$, $d = 1.08$. This difference was significant irrespective of whether the single alternative value was high, ($M = 157.67$, $SD = 44.87$), $F(1,246) = 64.66$, $p < 0.001$, $d = 1.61$, or low ($M = 141.69$, $SD = 49.81$), $F(1,246) = 31.70$, $p < 0.001$, $d = 1.02$. As expected, negotiators who received the high alternative made more extreme first offers than those who received the low alternative, $F(1,246) = 6.89$, $p = 0.009$, $d = 0.34$.

*4.4.4. Mediation analysis*

We conducted mediation analyses to examine whether negotiators with multiple alternatives made lower first offers because their perceived bargaining zone was relatively more distorted than that of negotiators with only one alternative (Hypothesis 3). We compared the multiple alternatives to the most conservative single alternative condition (i.e., low value) and used a contrast variable as the independent variable (−1 for the single alternative/low value condition; +1 for the multiple alternatives condition). The analysis showed a significant indirect effect of the contrast variable on first-offer extremity through negotiators' perceived bargaining zone—that is, the perceived opponent reservation price, $CI_{95}$ [−7.89; −1.91], and the own reservation price, $CI_{95}$ [−9.74; −2.73], see Fig. 3.[4]

*4.5. Discussion*

Study 1 demonstrates for the first time that, despite the apparent and intuitive benefits multiple alternatives seem to provide, having two instead of one alternative caused negotiators to make *less* extreme first offers. Mediation analyses revealed that this effect occurred because the presence of multiple alternatives distorted the perceived bargaining zone to the negotiator's disadvantage: participants perceived their own and their opponent's reservation price as lower than in the single-alternative conditions.

## 5. Study 2: Average value and alternative mechanisms

Study 2 had three goals. First, it tested whether the multiple alternatives detriment would be robust to a different number of alternatives in the multiple alternatives condition with different anchor values. Second, Study 2 aimed to test the possibility that negotiators simply anchor on a lower average value in the multiple alternatives condition when the best alternative is held constant across conditions. To do so, Study 2 included three different multiple alternatives conditions for which the mean value of the alternatives was lower, equal to, or higher than the value of the single alternative.

Third, Study 2 sought to rule out competing mechanisms for the effect of multiple alternatives on first offers. Although we propose a cognitive explanation for why multiple alternatives lead to lower first offers, it is possible that social inferences are also at play. For example, it could be argued that multiple alternatives in Study 1 lowered first offers because they led them to believe that asking for more was unfair (i.e., *interpersonal justice*; see Bies & Moag, 1986; Colquitt, 2001). After all, having a lot of leverage could cause negotiators to voluntarily give away some of their share to the opponent (see also Handgraaf, Van Dijk, Vermunt, Wilke, & De

[3] When we excluded participants who did not report the correct number of alternatives when completing the manipulation check ($N = 8$), our predicted effects for reservation prices and first offers remained identical (all $ps < 0.001$).

[4] The indirect effect was also significant when the multiple alternatives condition was compared to the one alternative/high value condition instead (opponent reservation price: $CI_{95}$ [−9.81; −2.59]; own reservation price: $CI_{95}$ [−12.43; −5.77]), or when the high and low value conditions were combined (opponent reservation price: $CI_{95}$ [−5.77; −1.66]; own reservation price: $CI_{95}$ [−7.22; −3.26]).

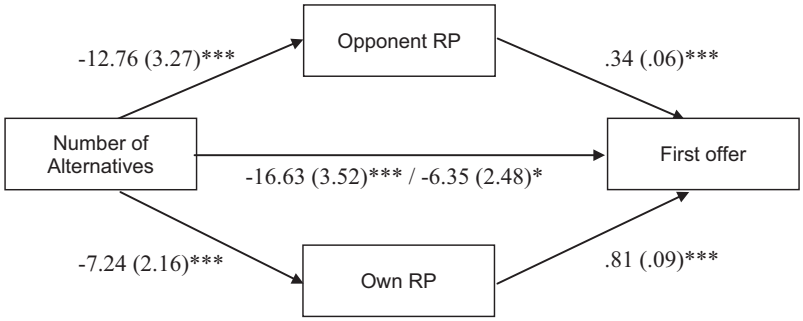



**Fig. 3.** Study 1: Bargaining zone perceptions (i.e., opponent and own RPs) mediated the causal relationship of negotiators' number of alternatives on first-offer extremity. Regression coefficients are unstandardized with SEs in parentheses. RP = Reservation Price. * p < 0.05, ** p < 0.01, *** p < 0.001.

Dreu, 2008). Relatedly, it is possible that negotiators with multiple alternatives demanded less because they were more concerned about *preserving face* and making a bad impression on others if they acted too greedily (Brown, 1968; Pruitt & Johnson, 1970). A third possibility is that the greater number of reference points provided by the multiple alternatives could have led to greater *price confidence* – confidence in what the approximate value of the negotiation item might be on the market. Finally, it is also plausible that multiple alternatives caused negotiators to infer that their opponent must possess a lot of power as well. Negotiators often infer *opponent power* based on their own power (Pinkley, 1995; Pinkley et al., 1994). Thus, Study 2 examined whether interpersonal justice concerns, face concerns, confidence, and perceived opponent power could account for the causal relationship between alternatives and first-offer extremity.

### 5.1. Participants and design

Four hundred and one individuals (mean age = 35.38, *SD* = 11.50; 53.6% female) were recruited from Mechanical Turk in exchange for $1.00 and randomly assigned to a single alternative condition or to one of three multiple alternatives conditions. We excluded 82 participants using the same pre-determined criteria as in Study 1, leaving 319 observations.[5]

### 5.2. Procedure and manipulations

Participants received the same task as in the previous study. In contrast to Study 1, participants listened to one or to three voicemail messages (see Appendix B). All messages contained similar language and were equal in length. Participants in the *single alternative condition* listened to a single voicemail message, for which the alternative offer was always valued at $75. Participants in the multiple alternatives conditions listened to three voicemail messages. The alternative offers were valued at $85, $80, and $75 in the *higher average condition,* at $80, $75, and $70 in the *equal average condition,* and at $75, $70, and $65 in the *lower average condition*. Message content, recorded voice, anchor values (multiple alternatives conditions only), and presentation order of the recordings (multiple alternatives conditions only) were randomized. After listening to the messages, participants completed the dependent measures.

### 5.3. Dependent measures

As in Study 1, participants reported their first offer, as well as their perceived own and opponent reservation price.

In addition, we measured four potential alternative mechanisms. *Interpersonal justice* was measured using an adapted scale (Bies & Moag, 1986; Colquitt, 2001) asking participants to indicate whether demanding more than their best alternative would be "impolite," "disrespectful," "not treating the buyer with dignity," and "an improper request" (1 = *to a small extent*; 5 = *to a large extent*; $\alpha = 0.94$). *Face concerns* were measured using a scale adapted from Oetzel and Ting-Toomey (2003) asking participants to indicate the extent to which they were worried about protecting their own face (e.g., "I was concerned with not bringing shame to myself," "I was concerned with protecting my self-image;" 1 = *strongly disagree*, 7 = *strongly agree*; $\alpha = 0.91$). *Price confidence* was measured with a 5-item scale asking participants to indicate how confident they were about the actual value of the negotiation item ("I was confident about how much I could ask for the coffee machine," "I was certain about the market value of the coffee machine," "I felt like I had a good understanding of the price range for coffee machines," "I had a good understanding of the range within which the actual value of the coffee machine would fall," and "It was easy for me to reliably estimate the coffee machine's true value;" 1 = *completely disagree*, 7 = *completely agree*; $\alpha = 0.89$). Finally, *perceived opponent power* was measured using the 4-item scale used in Study 1 and adapted from Schaerer et al. (2015); see also Swaab et al., 2016). Specifically, participants indicated how powerful (1 = *powerless*, 7 = *powerful*), strong (1 = *weak*, 7 = *strong*), confident (1 = *unconfident*, 7 = *confident*; $\alpha = 0.92$), and how much in control (1 = *no control*, 7 = *in control*) they believed their opponent to be.

Finally, all participants completed the same manipulation and attention checks and demographic questions as in Study 1.

### 5.4. Results

#### 5.4.1. Manipulation check

The manipulation was successful. Participants in the multiple alternatives condition indicated that they had more alternative offers ($M = 3.00, SD = 0.09$) than those in the single alternative condition ($M = 1.17$, $SD = 0.64$), $F(1,317) = 1848.57$, $p < 0.001$. Importantly, participants in the higher-average condition reported a higher best alternative ($M = 84.87$, $SD = 0.79$) than those in the equal-average condition ($M = 80.07$, $SD = 2.27$), $F(1,315) = 508.28$, $p < 0.001$. Those in the equal-average condition reported a higher best alternative than those in the lower-average condition ($M = 74.94$, $SD = 0.55$), $F(1,315) = 589.28$, $p < 0.001$, and those in the single alternative condition ($M = 75.05$, $SD = 0.51$), $F(1,315) = 554.89$, $p < 0.001$. The latter two conditions did not differ ($p = 0.38$).

#### 5.4.2. Perceived bargaining zone

We predicted that multiple alternatives would distort negotiators' perceived bargaining zone to a greater extent than a single

[5] When we analyzed the data including outliers, we found the same significant effects for reservation prices ($ps < 0.001$) and first-offer extremity ($p < 0.001$).

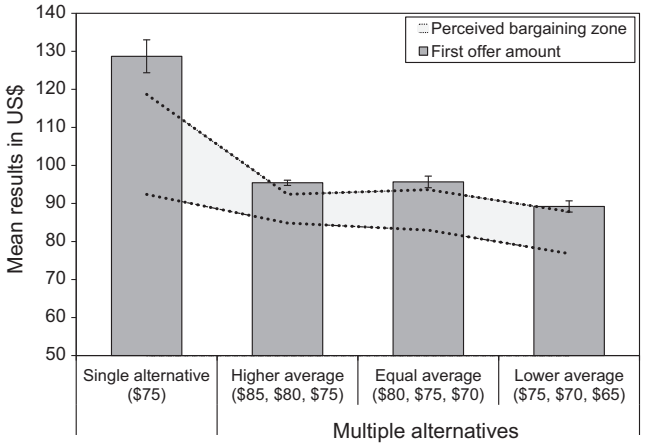



**Fig. 4.** Candidates with multiple alternatives showed a relatively more distorted bargaining zone and made lower first offers than those with a single alternative, irrespective of whether the average of the multiple alternatives was higher, equal, or lower. Error bars indicate ± 1 *SEM*.

alternative (Hypothesis 1). This is what we found (see Fig. 4). Negotiators with multiple alternatives ($M = 91.20$, $SD = 14.52$) perceived the opponent's reservation price to be lower than those with a single alternative ($M = 118.69$, $SD = 35.85$), $F(1,317) = 95.00$, $p < 0.001$, $d = 1.24$. The mean comparison was significant irrespective of whether the average value was higher ($M = 92.41$, $SD = 8.20$), $F(1,315) = 57.34$, $p < 0.001$, $d = 1.00$, equal to ($M = 93.62$, $SD = 17.92$), $F(1,315) = 50.40$, $p < 0.001$, $d = 0.87$, or lower ($M = 87.87$, $SD = 15.40$), $F(1,315) = 80.35$, $p < 0.001$, $d = 1.11$, than the single alternative. There were no significant differences between the three multiple alternative conditions (all $ps > 0.10$).

Likewise, negotiators with multiple alternatives ($M = 81.46$, $SD = 8.14$) set a lower reservation price for themselves than those with a single alternative ($M = 92.38$, $SD = 25.55$), $F(1,317) = 33.60$, $p < 0.001$, $d = 0.74$. This difference remained robust irrespective of whether the average value was higher ($M = 84.85$, $SD = 6.22$), $F(1,315) = 10.88$, $p = 0.001$, $d = 0.40$, equal to ($M = 82.97$, $SD = 8.56$), $F(1,315) = 16.41$, $p < 0.001$, $d = 0.48$, or lower ($M = 76.82$, $SD = 7.29$), $F(1,315) = 47.36$, $p < 0.001$, $d = 0.82$, than the single alternative. Own reservation prices were lower in the low average condition than in all other conditions (all $ps < 0.009$). No other effects were significant (all $ps > 0.42$).

#### 5.4.3. First-offer extremity

We predicted that multiple alternatives would lead negotiators to make the least extreme demands (Hypothesis 2). The results supported these predictions (Fig. 4). Negotiators with multiple alternatives ($M = 93.34$, $SD = 11.70$) made less extreme first offers than those with a single alternative ($M = 128.69$, $SD = 39.65$), $F(1,317) = 150.84$, $p < 0.001$, $d = 1.56$. This difference was significant irrespective of whether the alternatives' average was higher ($M = 95.44$, $SD = 6.16$), $F(1,315) = 90.12$, $p < 0.001$, $d = 1.16$, equal to ($M = 95.68$, $SD = 13.20$), $F(1,315) = 84.25$, $p < 0.001$, $d = 1.09$, or lower ($M = 89.22$, $SD = 13.24$), $F(1,315) = 127.01$, $p < 0.001$, $d = 1.33$, than the single alternative. There were no significant differences between the three multiple alternatives conditions (all $ps > 0.075$).

#### 5.4.4. Mediation analyses

We conducted a multiple mediation analysis (Preacher & Hayes, 2008) to simultaneously test the hypothesized as well as the potential alternative mechanisms of the effect of multiple alternatives (versus a single alternative) on first offers. We used an orthogonal contrast as the independent variable (−3 for the single alternative; +1 for each of the multiple alternatives conditions).

The mediation analysis showed a significant indirect effect of the contrast variable on first-offer extremity through perceived reservation price of the opponent, $CI_{95}$ [−4.86; −1.67], and negotiators' own reservation price, $CI_{95}$ [−2.66; −0.69] (see Fig. 5). However, none of the alternative explanations mediated. The indirect effects of interpersonal justice, $CI_{95}$ [−0.05; +0.28], face concerns, $CI_{95}$ [−0.17; +0.05], price confidence, $CI_{95}$ [−0.10; +0.13], and perceived opponent power, $CI_{95}$ [−0.05; +0.15], were not significant. Reservation prices also mediated when they were entered in the mediation model without the alternative explanations (Opponent RP: $CI_{95}$ [−5.03; −1.76]; Own RP: $CI_{95}$ [−2.70; −0.75]).[6] Thus, negotiators with multiple alternatives made less extreme first offers than those with a single alternative because their perceived bargaining zone was relatively more distorted.

### 5.5. Discussion

Study 2 replicated the findings from Study 1 using different anchor values and more alternatives in the multiple alternatives condition. Negotiators with multiple alternatives made less extreme first offers compared to those with only a single alternative. Again, this effect was mediated by a distorted view of the bargaining zone (i.e., lower perceived own and opponent reservation price). The effect was not mediated by negotiators being more concerned about interpersonal justice, wanting to protect their own face, feeling more confident about the value of the negotiation item, or perceiving their opponent as more powerful. Importantly, Study 2 also ruled out the possibility that negotiators merely anchored on the average value of the alternatives by showing that similar effects on the perceived bargaining zone and first-offer extremity emerged, irrespective of whether the average of the multiple alternatives was lower, equal to, or even higher than the single alternative. Note, however, that the anchor values in the "higher average" condition were chosen arbitrarily. Thus, the finding of lower first offers in the "higher average" condition compared to the single alternatives condition does not imply that *any* set of multiple alternatives will pull down first offers and that the value of the best alternative never matters. In contrast, past research has repeatedly demonstrated that a higher best alternative leads to higher first offers and outcomes (Pinkley et al., 1994; Schaerer et al., 2015; see also present Study 1). In other words, as the value of the best alternative in the "higher average" condition becomes substantially larger than the value of the single alternative, the biasing effect of multiple alternatives will at some point likely be overpowered by the positive effect of a more attractive best alternative. We return to this finding in the General Discussion.

## 6. Study 3: Multiple alternatives and negotiation outcomes

Although Studies 1 and 2 demonstrate that multiple alternatives can distort the perceived bargaining zone and impair first offers, they do not speak to the impact on negotiation outcomes.

[6] We also asked participants about their target price (i.e., the ideal price they would like to achieve). Although target prices yielded the same pattern as reservation prices between the single alternative and multiple alternatives conditions ($p < 0.001$) and correlated significantly with the reservation prices ($rs > 0.52$, $ps < 0.001$), the perceived bargaining zone was a more robust and influential mediator for the underlying mechanism. When jointly entered in a multiple mediation model, own reservation price, $CI_{95}$ [−2.63; −0.68], and opponent reservation price, $CI_{95}$ [−4.08; −1.20], both resulted in a significant indirect effect. Target price did not, $CI_{95}$ [−1.98; +0.11]. These results do not change when the other alternative explanations are simultaneously entered in the model. No other measures than the ones reported here were collected in this study.

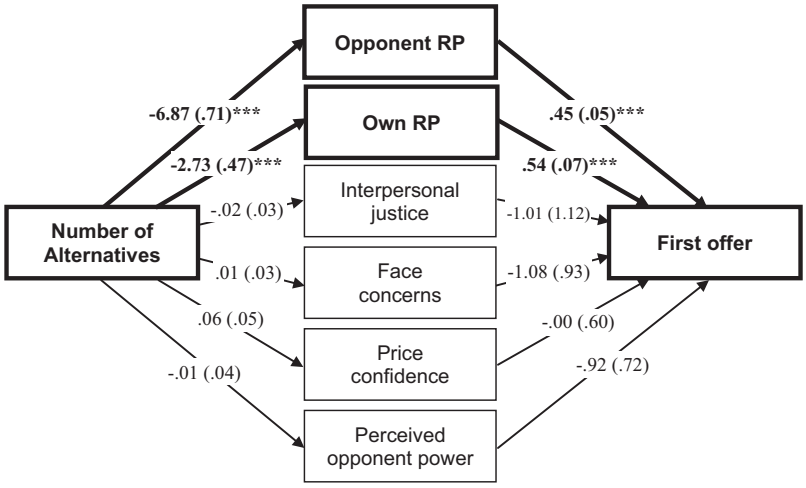



**Fig. 5.** Results of competing mediation model in Study 2: perceived bargaining zone (opponent and own RPs) mediated the causal relationship of negotiators' alternatives on first-offer extremity. Alternative explanations were ruled out. Regression coefficients are unstandardized and SEs in parentheses. RP = Reservation Price. *** p < 0.001.

Therefore, Study 3 examined whether the effect on first offers would carry through to final agreements in an interactive, face-to-face negotiation (Hypothesis 4). Study 3 tested a serial mediation model in which negotiators with multiple alternatives (versus a single alternative) claim less value *because* their perceived bargaining zone is distorted, which then weighs down their first offer (Hypothesis 5).

### 6.1. Participants and design

Participants were 174 French students in 87 dyads (mean age = 22.46, *SD* = 2.94; 65.48% female) who were recruited from a Parisian university district in exchange for €5.00. Dyads were randomly assigned to a single alternative or a multiple alternatives condition. Fourteen dyads were excluded because they did not follow the instructions (e.g., did not comply with the predefined first-offer order, invented additional bargaining issues; 4 dyads) or because they reported extreme values (median ± 2.5 MAD; 10 dyads) for first offer and/or final agreement. Thus, the analyses are based on the remaining 73 observations.[7]

### 6.2. Procedure and manipulations

Participants assumed the role of a seller or a buyer and negotiated the price of a Starbucks logo mug (see Schaerer et al., 2015). Sellers were equipped with a Starbucks mug and instructed to review their alternative offer(s) before entering the negotiation with the buyer. In the *single alternative* condition, sellers were told that their alternative offer was €4.75. In the *multiple alternatives* condition, sellers received four offers of €4.75, €4.25, €3.75, and €2.25. The best alternative (i.e., €4.75) was identical in both conditions. Sellers were further informed that their goal was to sell the mug at the highest price possible and that they would be making the first offer. Buyers received the same role instructions in both conditions, were not given any alternatives, and were instructed to buy the mug at the lowest price possible. Participants then negotiated the price of the mug. No impasses occurred.

### 6.3. Dependent measures

After reading their role instructions but before making their first offer, sellers reported the perceived opponent reservation price and their own reservation price in a pre-negotiation questionnaire. Upon completion of the negotiation, participants filled in a short post-negotiation questionnaire prompting them to report the extremity of the seller's first offer, the final agreement, the number of alternatives they had available (sellers only), and demographic information.[8]

### 6.4. Results

#### 6.4.1. Manipulation check

The manipulation was successful. Sellers in the multiple alternatives condition reported having more alternative offers ($M = 3.56$, $SD = 1.13$) than those in the single alternative condition ($M = 1.05$, $SD = 0.65$), $F(1,71) = 139.14$, $p < 0.001$.

#### 6.4.2. Perceived bargaining zone

Hypothesis 1 was supported. Sellers with multiple alternatives perceived the buyer's reservation price as lower ($M = 5.31$, $SD = 1.81$) than sellers with a single alternative ($M = 6.44$, $SD = 1.52$), $F(1,71) = 8.41$, $p = 0.005$, $d = 0.67$. Sellers with multiple alternatives also perceived their own reservation price as lower ($M = 4.15$, $SD = 1.01$) than sellers with a single alternative ($M = 4.98$, $SD = 0.54$), $F(1,71) = 19.95$, $p < 0.001$, $d = 1.02$.[9]

#### 6.4.3. First-offer extremity

Hypothesis 2 was supported. Sellers with multiple alternatives made less extreme first offers ($M = 5.98$, $SD = 1.50$) than sellers with a single alternative ($M = 8.35$, $SD = 2.88$), $F(1,71) = 18.58$, $p < 0.001$, $d = 1.01$.

#### 6.4.4. Final agreements

We predicted that negotiators with multiple alternatives would negotiate worse agreements than those with a single alternative (Hypothesis 4). Indeed, sellers with multiple alternatives obtained

[7] When we analyzed the data including outliers, opponent reservation price ($p = 0.59$) was not significant. However, the effects for own reservation price ($p = 0.020$), first offers ($p = 0.021$), and outcomes ($p = 0.001$) persisted.

[8] Analogous to Study 1, we also measured sellers' perceived power. Power did not differ across the two conditions, $F(1,71) = 0.15$, $p = 0.70$, $d = -0.01$.

[9] Some participants chose a reservation price that was lower than their best alternative. Although one would expect rational negotiators to only accept a price that is equal to or higher than their best alternative, negotiators often consider other idiosyncratic factors that lead them to set reservation prices below the value of their alternative (e.g., Amanatullah, Morris, & Curhan, 2008; Pinkley et al., 1994; Thompson, 2011). For example, realizing that accepting a previous offer may be associated with additional transaction costs or closing a deal "right now" may be more appealing than going back to an old offer and, in turn, result in lower reservation prices than the best alternative. Thus, even rational negotiators sometimes set a reservation price that is lower than their best alternative.

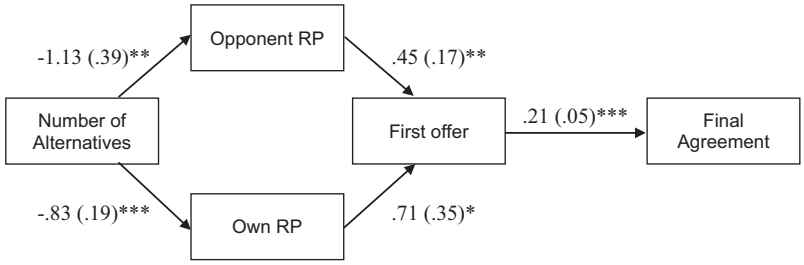



**Fig. 6.** Path model of the causal relationships tested in Study 3. Regression coefficients unstandardized and SEs in parentheses. RP = Reservation Price. * p < 0.05, ** p < 0.01, *** p < 0.001.

less profitable agreements ($M = 4.63$, $SD = 0.92$) than those with only one alternative ($M = 6.17$, $SD = 1.24$), $F(1,71) = 35.62$, $p < 0.001$, $d = 1.41$.

#### 6.4.5. Mediation analysis

Mediation analysis tested Hypothesis 5, stating that multiple alternatives (vs. a single alternative) lead to lower final agreements because they first distort the perceived bargaining zone and then weigh down first offers (Fig. 6). The predicted serial mediation model was tested in two ways: First, we used path analysis (Baron & Kenny, 1986) to test the indirect effects of the model components. A bootstrapping procedure (5000 iterations) revealed that perceived opponent reservation price, $CI_{95}$ [−1.35; −0.08], and own reservation price, $CI_{95}$ [−1.24; −0.25], simultaneously mediated the relationship of the alternatives manipulation (0 = single alternative; 1 = multiple alternatives) on first-offer extremity. First-offer extremity, in turn, mediated the effect of the alternatives manipulation on final agreements, $CI_{95}$ [−1.14; −0.39]. In addition, the alternatives manipulation predicted final agreements serially through opponent reservation price and first-offer extremity, $CI_{95}$ [−0.43; −0.04], and through own reservation price and first-offer extremity, $CI_{95}$ [−1.24; −0.25] (see Hayes, 2013; Model 6).

Second, using a structural equation model (Gatignon, 2010), the indirect effect of the full model was tested. As expected, multiple alternatives (vs. a single one) led to lower opponent and own reservation prices, which in turn led to less extreme first offers and less profitable agreements, $CI_{95}$ [−1.38; −0.59]. Thus, negotiators with many alternatives achieved worse agreements than those with a single alternative because their perception of the bargaining zone was relatively more distorted, which then led them to make less ambitious offers. These results support our proposed theory of bargaining zone distortion.

### 6.5. Discussion

Study 3 made two important contributions. First, it extended the findings from Studies 1 and 2 by establishing the effects of bargaining zone distortion on first offers in an interactive, face-to-face negotiation. Second, Study 3 extended our findings by showing that multiple alternatives do not only distort the perceived bargaining zone and result in less extreme first offers but also shape final negotiation agreements: compared to negotiators with a single alternative, negotiators who had additional alternatives ended up claiming over €1.50 (25%) less.

Together, Studies 1–3 provide consistent evidence for our bargaining zone distortion model. Negotiators who had additional alternatives reported distorted reservation prices, started with less extreme first offers (Study 1–3) and incurred a distributive negotiation disadvantage (Study 3) compared to those with a single alternative only. The final two studies further tested our causal model by experimentally manipulating the proposed mechanism using a moderation-of-process approach (Spencer et al., 2005).

## 7. Study 4: What's in a scale?

We theorized that the underlying scaling effect causes a particular numerical value to *appear* as more extreme when multiple alternatives are present, causing negotiators to make lower initial demands. In other words, although two negotiators may make two objectively different first offers to their opponent, they may in fact subjectively perceive these offers to be equally aggressive. One way to demonstrate that different individuals may have different representations of the underlying numeric response scale is to provide an alternative, qualitative evaluation standard for a particular judgment (e.g., De Langhe, Puntoni, Fernandes, & Van Osselaer, 2011). Specifically, non-numeric cues that provide diagnostic information about the absolute extremity of an offer should reduce or eliminate distortion (see Frederick & Mochon, 2012). To test this, we provided negotiators with an alternative evaluation basis (i.e., linguistic cues) for interpreting the extremity of their own first offers. After being informed about their alternatives, negotiators were instructed to determine the size of their first offer using (1) a numeric scale (similar to the prior studies), (2) a qualitative scale, or (3) both. Because scale distortion should only emerge when comparisons are made across the exact same scales (Frederick & Mochon, 2012), we predicted that multiple alternatives (versus a single alternative) would only weigh down the dollar value of first offers when negotiators select their first offers from the same numeric scale (condition 1), but not when they are able to calibrate the extremity of their offers using qualitative information (conditions 2 and 3).

### 7.1. Participants and design

We recruited 302 individuals (mean age = 31.72, $SD = 9.86$; 37.10% female) from Mechanical Turk in exchange for $0.50 and randomly assigned them to six conditions of a 2(Alternatives: single vs. multiple) × 3(Evaluation standard: numeric vs. numeric + qualitative vs. qualitative) between-subjects design. Thirty-eight participants were excluded using the same a priori determined criteria as in the previous online studies, leaving 264 observations.[10]

### 7.2. Procedure, manipulations, and dependent measures

Participant had to negotiate the sales price of a CD (Schaerer et al., 2015). Specifically, they were told that they wanted to sell one of their old CDs and that an interested person asked for a first

[10] In line with the findings reported below, data analysis including outliers led to a significant difference in the numeric condition ($p = 0.019$), but not when numeric *and* qualitative labels were present ($p = 0.36$) or when only qualitative labels were present ($p = 0.08$; first offers in the multiple alternatives condition were marginally *higher*).

offer. Participants then received differential information about the alternative offers that they had already secured. In the *single alternative* condition, the value of the alternative offer was \$6.00. In the *multiple alternatives* condition, participants received four alternatives valued at \$6.00, \$5.00, \$4.00, and \$3.00. As in the previous study, the best alternative was identical in both conditions.

Participants then chose their first offer on a response scale ranging from \$3 to \$15, with one-dollar increments. The endpoints of the scale were chosen based on the minimum and maximum offers a different participant sample made during a pretest ($N = 100$). In the *numeric condition*, participants made their first offer on a scale with *numeric* labels only (*\$3, \$4, \$5…\$15*; see Appendix C). In the *numeric + qualitative condition*, participants received additional qualitative information that indicated the relative extremity of a first offer (*\$3 = extremely low first offer, \$5 = very low first offer… \$15 = extremely high first offer*; see Appendix C). In the *qualitative condition*, dollar values were removed and participants selected their first offer on a scale with qualitative labels only (Appendix C). Finally, participants indicated the number of alternatives they had and completed the same attention check and demographic questions as in Studies 1–2. No additional measures were collected.

### 7.3. Results

#### 7.3.1. Manipulation check

The manipulation was effective. Participants in the multiple alternatives condition reported having more alternatives ($M = 3.96$, $SD = 0.53$) than those in the single alternative condition ($M = 1.00$, $SD = 0.38$), $F(1,262) = 2{,}708.26$, $p < 0.001$.

#### 7.3.2. First-offer extremity

We predicted that negotiators with multiple alternatives would make less extreme first offers than those with a single alternative when they used the numeric response scale. In contrast, the presence of a qualitative scale was expected to counteract the distorting influence of the bargaining zone and ultimately mitigate the detrimental first-offer effect (two conditions with qualitative labels). These predictions were supported (Fig. 7). In the numeric condition, first offers were lower for negotiators with multiple alternatives ($M = 7.80$, $SD = 1.62$) than for negotiators with a single alternative ($M = 8.83$, $SD = 1.50$), $F(1,258) = 10.40$, $p < 0.001$, $d = 0.86$, replicating Hypothesis 2. However, when participants received numeric *and* qualitative scales, first offers of multiple-alternatives negotiators were no longer significantly different ($M = 9.12$, $SD = 1.78$) from single-alternative negotiators ($M = 9.57$, $SD = 1.53$), $F(1,258) = 2.18$, $p = 0.14$, $d = 0.27$. Similarly, when only a qualitative scale was presented, negotiators with multiple alternatives ($M = 10.75$, $SD = 1.15$) did not make lower first offers than those with a single alternative ($M = 11.27$, $SD = 1.31$), $F(1,258) = 2.27$, $p = 0.13$, $d = 0.42$. Overall, these patterns produced a marginally significant main effect of the alternatives manipulation, $F(1,258) = 2.96$, $p = 0.087$, a significant main effect of the evaluation basis manipulation, $F(2,258) = 66.19$, $p < 0.001$, and a significant interaction effect, $F(2,258) = 5.50$, $p = 0.005$, $\eta_p^2 = 0.041$.

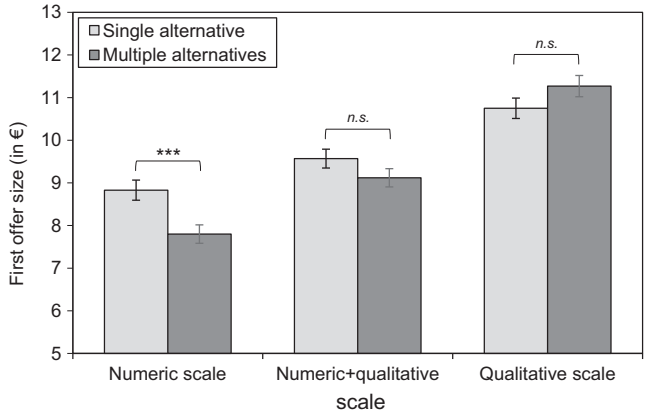



**Fig. 7.** Study 4: Negotiators with multiple alternatives made lower first offers than those with a single alternative, but only when they used a numeric scale. Error bars indicate ± 1 *SEM*. Asterisks indicate sig. differences between conditions (*** $p < 0.001$).

### 7.4. Discussion

Study 4 provided a direct, causal test of our bargaining zone distortion model by experimentally manipulating the evaluation basis of the first offer. The finding that negotiators with multiple alternatives only made lower first offers when they used a numeric scale is consistent with the idea that scale distortion should only emerge when comparisons are made across the exact same (numerical) scale (Frederick & Mochon, 2012). Thus, these findings support our theoretical model assuming that multiple numerical anchor values distort the perceived bargaining zone and result in less extreme first offers.

## 8. Study 5: The moderating role of making the first offer

Our theoretical model further proposes that bargaining zone distortion occurs when negotiators estimate reservation prices and determine first offers immediately after exposure to their numerical alternative(s). Indeed, scale distortion should be most consequential when an exposure to initial anchors is immediately followed by a subsequent estimation (Frederick & Mochon, 2012). This assumption implies that the differences between multiple alternatives and a single alternative should be particularly strong when negotiators *make* the first offer. If negotiators move second, however, they are more likely to rely on the opponents' first offer as a proxy for their own first offer and less likely to rely on their own alternatives. To disrupt scale distortion, we therefore instructed negotiators to make the first offer (as in Studies 1–4) or to let their opponent move first. We predicted that multiple alternatives and a single alternative would only have different effects on first offers and outcomes when negotiators make the first offer but not when they receive it. A second goal was to test our predictions with a sample of experienced professionals.

### 8.1. Participants and design

Participants were 350 professionals (mean age = 29.16; $SD = 2.45$; 28.3% female) pursuing an MBA at a global business school. The negotiation was part of an introductory leadership class in the first semester of the program. Participants completed the negotiation in dyads as part of their class preparations. The resulting 175 dyads were randomly assigned to a 2(Alternatives: one vs. multiple) × 2(First mover: candidate vs. recruiter) between-subjects factorial design. Analogous to Study 4, we excluded 23 dyads that did not follow the instructions (e.g., agreement outside the task boundaries, dependent measures not reported; $N = 3$) or reported extreme values (median ± 2.5 MAD, $N = 20$) for first offers and/or final agreements, leaving 152 dyads for our analyses.[11]

[11] When outliers were included, first offers ($p = 0.087$) were marginally lower and outcomes ($p = 0.032$) significantly lower in the multiple alternatives condition than in the single alternatives condition when focal negotiators moved first, but not when the opponent made the first offer ($ps > 0.39$).

### 8.2. Procedure

The study was conducted over email using a scenario adapted from Galinsky and Mussweiler (2001). The interaction involved a single-issue negotiation of a bonus between a job candidate and a recruiter. Participants in both roles were told that they had already agreed on most terms of the job offer (salary, starting date, benefits) but that the signing bonus was yet to be discussed. Participants were given five days to complete the negotiation and could exchange as many emails as they wanted to.

### 8.3. Experimental manipulations

#### 8.3.1. Alternatives manipulation

Participants in the candidate role were randomly assigned to one of two conditions. Candidates in the *single alternative* condition were told that they had secured a job offer at a comparable firm with a signing bonus of €9000. Candidates in the *multiple alternatives* condition were told that they had secured four job offers at comparable firms with signing bonuses of €9000, €8000, €6000, and €5000, respectively. The best alternative was identical across the two conditions. Participants in the role of the recruiter were always told that the bonuses offered by their company have averaged €10,000 in the past, that they should aim to pay as little as possible, and that they would prefer to hire another candidate if they cannot settle for a bonus of €25,000 or less.

#### 8.3.2. First-offer manipulation

For half of the dyads, the job candidate received the contact information of the recruiter and was instructed to reach out to the recruiter by email with a first offer. For the other half of the dyads, the recruiter was instructed to move first.

### 8.4. Dependent measures

Upon completion of the negotiation, dyads reported their first offers and negotiation outcomes to the course assistant**.** No additional variables were collected.

### 8.5. Results

#### 8.5.1. Impasses

Of the 152 dyads, eight dyads did not reach an agreement. The number of impasses was not significantly different across the four cells, $\chi^2(3, N = 158) = 3.20$, $p = 0.36$. Tripp and Sondak (1992) recommended that "if subjects have been given an alternative, then the value of that alternative should be used" (p. 277). In this study, all candidates were told that "if you do not reach an agreement in the negotiation [...], you will take the (one of the) other job offer (s)...". Thus, because we manipulated the role materials of the job candidates and were interested in their performance, we assigned candidates the value of their best alternative (€9000) as the negotiation outcome when they reached an impasse.[12]

#### 8.5.2. Candidates' first-offer extremity

As predicted, when *candidates* moved first, their first offers were less extreme when they had multiple alternatives ($M = 16{,}783$, $SD = 4935$) than when they only had a single alternative ($M = 20{,}676$, $SD = 6807$), $F(1,148) = 9.40$, $p = 0.003$, $d = 0.64$. However, when candidates were instructed to wait for the recruiter to move first, candidates' offers no longer differed between the multiple alternatives condition ($M = 16{,}258$, $SD = 4112$) and the single alternative condition ($M = 16{,}871$, $SD = 5348$), $F(1,148) = 0.25$, $p = 0.62$. These main effects were qualified by a marginally significant two-way interaction, $F(1,148) = 3.44$, $p = 0.065$, $\eta_p^2 = 0.02$.

#### 8.5.3. Final agreement

We predicted similar patterns for final agreements and the results in Fig. 8 support this prediction. When instructed to move first, candidates with multiple alternatives negotiated *lower* signing bonuses ($M = 11{,}472$, $SD = 2359$) than candidates with only a single alternative ($M = 14{,}905$, $SD = 4572$), $F(1,148) = 18.80$, $p < 0.001$, $d = 0.91$. However, when candidates were instructed to wait for the recruiter to move first, those with multiple alternatives ($M = 12{,}764$, $SD = 2843$) performed as well as those with a single alternative ($M = 12{,}409$, $SD = 3144$), $F(1,148) = 0.22$, $p = 0.64$. These patterns produced a significant interaction effect, $F(1,148) = 11.81$, $p < 0.001$, $\eta_p^2 = 0.07$.

#### 8.5.4. Mediation analysis

We ran a moderated mediation model (Hayes, 2013; Model 8) to test our prediction that the detrimental effect of multiple alternatives on final agreements was mediated by the extremity of candidates' first offers. Candidates' number of alternatives was used as the independent variable, their first-offer extremity as the mediating variable, final agreement as the dependent measure, and first-mover order as the moderating variable. A bootstrapping procedure with 5000 resamples and a 95% bias-corrected bootstrap confidence interval (Preacher & Hayes, 2004) confirmed that having additional alternatives negatively affected negotiation outcomes through candidates' first offers when candidates moved first, $CI_{95}$ [−2,233.28; −362.81], but not when recruiters moved first, $CI_{95}$ [−887.46; +476.47].

### 8.6. Discussion

Study 5 supported the assumption of our theoretical model that bargaining zone distortion only emerges when negotiators determine their first offers immediately following the exposure to numerical alternatives. Indeed, the number of alternatives only affected offers and outcomes when negotiators based their first offer on their own multiple alternatives. However, when they were provided with information from their opponent before making their offer, the number of alternatives no longer impaired the extremity of their first offer or their negotiation outcomes.

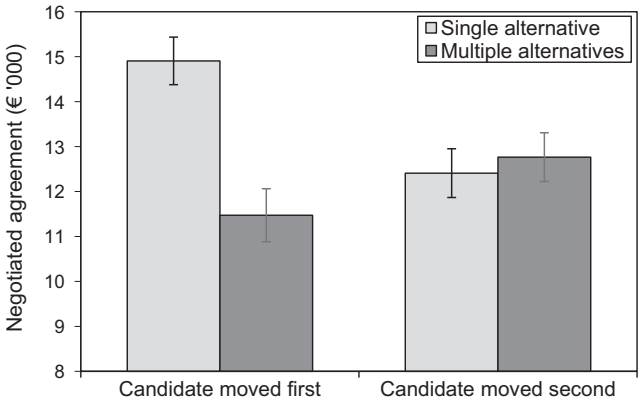



**Fig. 8.** Candidates with multiple alternatives reached lower agreements than those with a single alternative, but only when they moved first. Error bars indicate ± 1 *SEM*.

[12] The direction and significance of the results did not change when we instead excluded dyads with an impasse. First offers ($p = 0.001$) and outcomes ($p < 0.001$) were significantly lower in the multiple alternatives condition than in the single alternatives condition when focal negotiators moved first, but not when the opponent made the first offer ($ps > 0.60$).

## 9. General discussion

Practical guidebooks, negotiation theory, and people's lay perceptions all suggest that negotiators prefer having multiple alternatives over a single alternative—likely because negotiators expect to attain better deals when they have more than one alternative. Across five simulated and interactive negotiations conducted over email and face-to-face, we found that these lay intuitions may be inaccurate. We found consistent evidence that negotiators who had multiple alternatives, as opposed to those who only had a single alternative, made less ambitious first offers, even though parties' best alternatives were identical across conditions (Studies 1–5). Notably, negotiators with multiple alternatives also made less extreme first offers when the average value of multiple alternatives was equal to or even *higher* than the value of the single alternative, allowing us to rule out that people simply anchor on the average value when they are exposed to multiple anchors (Study 2). Less extreme first offers, in turn, led to less profitable negotiation agreements (Studies 3 and 5). In sum, the present studies are the first to show that multiple alternatives can lead to a distributive *dis*advantage in negotiations.

To account for these paradoxical effects, we proposed a bargaining zone distortion model. According to this model, the influence of alternatives on negotiators' perceptions of their own and their opponents' reservation prices can be characterized as a scaling effect, leading to a greater downward distortion of the perceived bargaining zone for multiple alternatives versus a single alternative. The distorted bargaining zone, in turn, causes first offers to be less extreme and final outcomes to be less profitable. Our studies provide compelling evidence for this model. First, we found negotiators' perceptions of their own and their opponents' reservation prices were more distorted in the presence of additional alternatives and that these perceptions mediated the effect of alternatives on first-offer extremity (Studies 1–3). The remaining studies demonstrated scale distortion as a key mechanism, showing that multiple alternatives did not lead to a relative downward distortion when negotiators used an alternative evaluation standard to determine their offers (Study 4), and when the determination of the first offer was not immediately preceded by negotiators' own alternatives (Study 5).

### 9.1. The role of multiple alternatives in negotiation

Our findings contribute to theory and research in a number of important ways. First, the present research speaks to negotiation research examining the role of alternatives in predicting negotiation outcomes (for a review, see Kim, Pinkley, & Fragale, 2005). We complement and extend recent research illustrating the paradoxical nature of alternatives in distributive negotiations. Schaerer et al. (2015) demonstrated the two distinct forces that alternatives can exert: alternatives not only provide feelings of power but also serve as salient anchors that can affect the size of first offers. The present research extends these findings by focusing on the impact of multiple alternatives rather than the value of only a single alternative. In other words, whereas Schaerer et al. (2015) examined how the value (or *quality*) and mere existence of an alternative affects negotiations, the present studies focus on the number (or *quantity*) of alternatives. In doing so, the present research demonstrates that alternatives exert a scaling effect that changes the cognitive representation of the underlying response scale that negotiators face when making a first offer (i.e., the perceived bargaining zone).

Our findings also have implications for another widely held assumption in the negotiations literature: the idea that a negotiator's best alternative to a negotiated agreement, or BATNA, is the driving force behind a negotiator's success (Fisher & Ury, 1981). According to this view, multiple alternatives should not lead to worse outcomes compared to a single alternative when the best alternative is equally high across conditions. In contrast, our bargaining zone distortion account suggests that even alternatives that could be seen as irrelevant (i.e., less valuable alternatives than the best alternative) have a pervasive impact on negotiators' cognition. It is possible that negotiators need to make a conscious effort to focus on their best alternative and to disregard all other alternatives. Indeed, negotiators are often advised to identify and focus on their best alternative exclusively when they prepare for negotiations (e.g., Thompson, 2011). To explore this possibility, we ran an additional study (see Appendix D for detailed procedure and results), in which negotiators with multiple alternatives were explicitly informed that "the only alternative offer that should inform your negotiation is your best offer" and that they should "disregard all other offers." The distorting effect of multiple alternatives was robust and immune to this strategy: focusing on the best alternative did not lead to an improvement of their first offers. Importantly, these findings do not suggest that BATNAs are irrelevant. There is robust evidence that a strong BATNA (compared to a weak or no BATNA) can lead to a considerable distributive advantage (e.g., Pinkley et al., 1994; Schaerer et al., 2015). However, our findings do suggest that negotiators find it hard to discount alternatives of lower value – even when explicitly told to ignore them.

### 9.2. Explaining anchoring effects in negotiation

Extant negotiation research has typically relied on anchoring-and-adjustment (Epley & Gilovich, 2001, 2006) or selective accessibility processes (Chapman & Johnson, 1994, 1999; Mussweiler & Strack, 2000, 2001; Strack & Mussweiler, 1997) to explain how negotiators are influenced by numerical anchors. Although these schools of thought can readily explain, for example, why more ambitious first offers can lead to better outcomes (Galinsky & Mussweiler, 2001) or why a low BATNA can weigh down a negotiator's first offer (Schaerer et al., 2015), neither framework offers a compelling explanation for our multiple-anchors effect. Both schools of thought rely on the assumption that anchoring effects occur whenever an anchor value falls outside a plausible range. Anchoring-and-adjustment predicts that people adjust away from an anchor until "they reach the nearest edge of some implicit range of plausible values" (Epley & Gilovich, 2006, p. 312). When people reach this plausible estimate they terminate the adjustment process, which is often insufficient. In our studies, the presence of weaker anchors in the multiple alternatives conditions (e.g., $75 vs. $75, $70, $65 in Study 2) could have caused negotiators to adjust away from a lower starting point – increasing the likelihood that an anchor value would fall outside the plausible range and that adjustments are insufficient. However, the effects of multiple alternatives were virtually identical when the lowest alternative was equal to the value of the single alternative (e.g., $75 vs. $75, $80, $85 in Study 2).

Selective accessibility relies on the assumption that whenever a value falls outside a plausible range, "participants test the possibility that the target possesses the anchor value and try to construct a mental model that includes information that is maximally consistent with the anchor value" (Strack & Mussweiler, 1997, p. 444). It is not evident how in the present studies the exposure to additional, less extreme negotiation alternatives would activate this process differentially (see also Ames & Mason, 2015; Mochon & Frederick, 2013). Scale distortion theory, on the other hand, is a novel account that does not rely on the assumption that people test an anchor value against a plausible range or that anchors change the underlying representation of a negotiation item. Instead, scale distortion implies that anchors affect the subjective response scale

on which people make judgments and that this process is intensified as the number of reference points increases. It is nevertheless possible that other established anchoring mechanisms such as anchoring-and-adjustment and selective accessibility can operate simultaneously with, or in lieu of, scale distortion. This may likely depend on the level of uncertainty associated with the negotiation context. Further research is needed to examine whether, when, and why these processes substitute each other or operate simultaneously.

### 9.3. Perceived bargaining zone as antecedent of first offers

The current research also contributes to the literature on first offers. In recent years, research on first offers in negotiations has exploded. Although this literature has found that men generally ask for more than women (Barron, 2003) and anxiety negatively affects first-offer aspirations (Brooks & Schweitzer, 2011), the majority of studies on first offers have investigated the *consequences* of first offers (e.g., Ames & Mason, 2015; Loschelder, Stuppi, & Troetschel, 2013; Loschelder, Trötschel, Swaab, Friese, & Galinsky, 2016). Considering that first offers can explain a significant share of the variance in negotiation outcomes (Galinsky & Mussweiler, 2001), we know remarkably little about their antecedents. The present theory and corroborating data illustrate that negotiators' perceived bargaining zone is a key determinant of first-offer extremity and final agreements. Although two negotiators may have the same goals and identical underlying representations of a particular negotiation issue, a distorted representation of the bargaining zone can set negotiators up for failure.

### 9.4. Practical implications

The present findings also have implications for practitioners. Even though the detrimental effect of multiple negotiation alternatives seems to suggest that parties should refrain from collecting alternative offers, this is not what we would recommend by default. Instead, the present research reinforces the idea that negotiators need to be aware of the dual role that alternatives play. Contrary to the lay perception that multiple alternatives come with a distributive advantage, we show that they exert a strong distortion effect on parties' perceived bargaining zone and subsequent first offers. Our findings suggest that negotiators may be best off by pursuing a sequential approach to realize the elusive power that multiple alternatives appear to provide without negatively affecting their initial requests. One way to do so could be for negotiators to first select an initial offer based on their goals (see also Jäger, Loschelder, & Friese, 2015) and only then to generate alternatives as a safety net. Such an approach would prevent them from downward-adjusting their first offer based on emerging alternative offers.

### 9.5. Limitations and future directions

Although the present studies provide consistent support for our theoretical model, they have some limitations that open exciting avenues for future research. For instance, the present findings are likely limited (as are all anchoring effects) to a minimal degree of uncertainty. Although uncertainty is quite common in negotiations, as reservation prices are generally difficult or even impossible to obtain (e.g., Bottom, 1998; Srivastava, Chakravarti, & Rapoport, 2000; Thompson, 2011), future research could examine whether our effects persist when there is relatively little uncertainty. We expect that the adverse impact of multiple alternatives on first offers and outcomes is likely to be weaker when, for instance, negotiators are aware that the opponent has strong alternatives (Schaerer et al., 2015), when the actual bargaining zone is smaller than the perceived bargaining zone (Larrick & Wu, 2007), or when negotiators disclose their own alternatives to the counterpart (Pinkley, 1995).

Another assumption of our bargaining zone distortion model is that it pertains to cases in which the best alternative is the same across conditions and the additional alternative(s) in the multiple alternatives condition is (are) less attractive than the best alternative. In Study 3, for example, the three additional values (€4.25, €3.75, €2.25) in the multiple alternatives condition were lower than the best alternative that was identical across both conditions (€4.75). Although we found in another study (Study 2) that the multiple alternatives in a "higher average" condition still led to lower first offers than a single alternative, we do not mean to imply that any set of multiple alternatives would always lead to worse outcomes than a single one. To the contrary: If the best alternative of multiple alternatives is markedly higher than the single alternative (e.g., €4.75 vs. €10.00, €4.25, €3.75, €2.25), then the offer-boosting effect of a higher BATNA value will likely overshadow any distortion effect that we found consistently for equal best alternatives (i.e., €4.75 vs. €4.75, €4.25, €3.75, €2.25). Future research could investigate at which point the offer-boosting BATNA effect (Pinkley et al., 1994; Schaerer et al., 2015) outweighs the present distortion effect.

Given the counterintuitive nature of our findings, Studies 4 and 5 tested theoretically motivated manipulations of the underlying process rather than more practical interventions. Thus, future research could identify more applied interventions that are easy to implement and have broad practical appeal. For example, the de-biasing strategy of scale labeling in Study 4 suggests that the influence of numerically represented alternatives on first offers should decrease the more a negotiator is certain of what a "reasonable" offer and negotiation outcome look like. Although past research suggests that both novice and expert negotiators are equally affected by anchors (Englich, Mussweiler, & Strack, 2005; Northcraft & Neale, 1987) and our final study used a professional sample with an ecologically valid negotiation scenario, future research could examine more thoroughly whether our results would vary in domains where negotiator expertise plays a more important role (see also Loschelder, Friese, Schaerer, & Galinsky, in press). Future research could also manipulate whether negotiators conceptualize alternatives as an information source for their offers or merely as a "cushion" that allows them to be bold and take risks during the negotiation. Multiple alternatives may turn out to be an advantage in the latter case.

Finally, although our studies focus predominantly on the seller role, we expect that the same logic applies to buyers. Buyers face the same structural situation as sellers: they have alternatives, construe a bargaining zone, and make first offers based on this information. Indeed, a plethora of negotiation research suggests that first offers tend to function in a similar way for both sellers and buyers (e.g., Galinsky & Mussweiler, 2001; Loschelder et al., 2013; Moran & Ritov, 2002).

## 10. Conclusion

Negotiation alternatives are an important source of leverage at the bargaining table. However, in their pursuit of a distributive advantage, negotiators tend to neglect that alternatives may also affect their subjective judgment of the bargaining zone. We developed and tested a bargaining zone distortion model to explain why – although negotiators tend to have a preference for *more* over fewer alternatives – multiple alternatives can cause parties to negotiate *less* aggressively and *less* effectively at the same time. The presence of additional alternatives can result in a distorted perception of the bargaining zone, less extreme first offers and less

profitable agreements. Ironically, obtaining more alternatives to quench the thirst for ever-increasing power can put negotiators at a distributive *dis*advantage.

## Appendix A. Lay perception study

### *A.1. Participants*

Participants were 55 professionals (mean age = 31.84, *SD* = 5.41; 25.5% female) pursuing a Master's of Business Administration (MBA) at an international business school. Participants had an average of 8.14 (*SD* = 5.54) years of professional experience.

### *A.2. Procedure and measures*

Participants received a survey asking them to imagine that they were about to graduate from their MBA program. Their last interview had turned into a job offer, and the only remaining order of business was the salary negotiation with the company who wanted to hire them. Participants were then presented with two different scenarios. In Scenario 1, they were told that they had secured another job offer valued at €86,600. The job offer amount was the mean salary taken from the business school's most recent MBA employment report. In Scenario 2, they were informed that they had obtained four job offers (€86,600, €86,400, €84,800, and €84,400). We kept the best alternative identical across both scenarios, as this is the most conservative comparison to detect potential misconceptions about the *upside* of multiple alternatives.

After familiarizing themselves with the scenarios, participants indicated on a single item how powerful (1 = *not at all powerful*; 7 = *very powerful*) they would feel in each of the two scenarios, how their negotiation outcome would look like (1 = *poor negotiation outcome*; 7 = *great negotiation outcome*) for each of the two scenarios, and which scenario they would prefer. Finally, participants reported demographic information. No other measures were collected.

### *A.3. Results and discussion*

Participants expected to feel more powerful when they had multiple alternatives ($M = 6.07$, $SD = 1.10$) than when they had only a single alternative offer ($M = 4.51$, $SD = 1.30$), $F(1,54) = 104.44$, $p < 0.001$, $d = 1.30$. Participants also believed that they would negotiate a better deal with multiple alternatives ($M = 5.80$, $SD = 1.08$) than with a single alternative ($M = 4.87$, $SD = 1.20$), $F(1,54) = 35.61$, $p < 0.001$, $d = 0.81$. Finally, a large majority (85.5%) preferred multiple alternatives over one alternative (14.5%).

## Appendix B. Role materials of Studies 1–2

Email message participants received from potential buyer:

*Hi there,*

*I'm looking for a coffee machine and just saw that you are selling yours.*

*You mentioned that the price is negotiable. Can you make an initial offer?*

*Thanks,*

*Jessica*

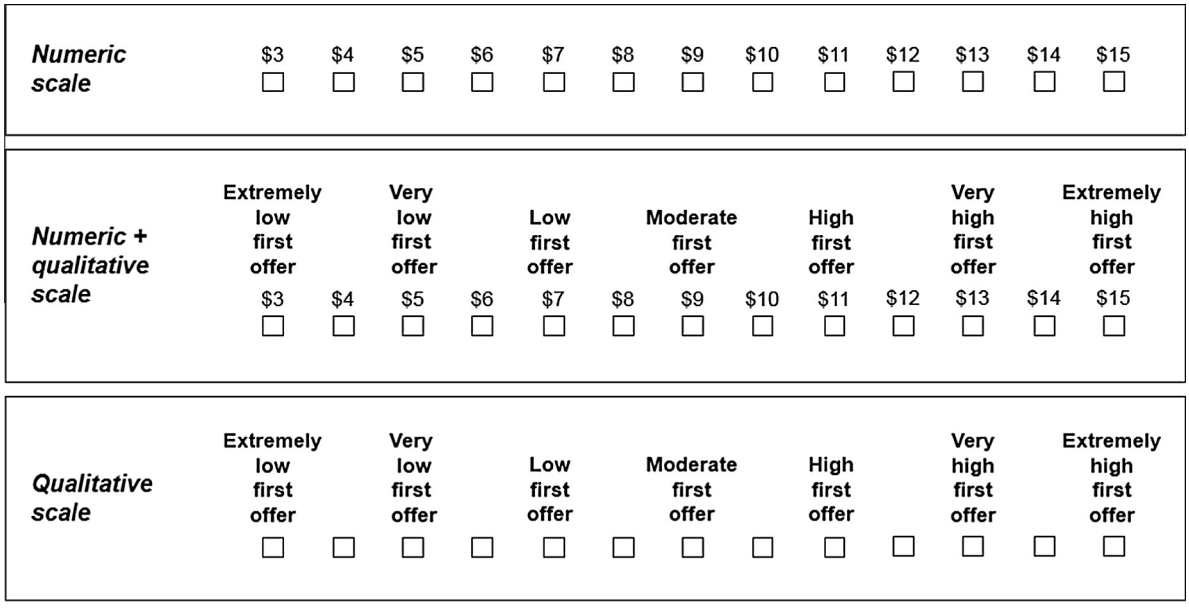
Voicemail messages participants listened to (alternative values, recorded voice, and presentation order randomized):

*Hello, this is Joanna Parker. I came across your ad and wanted to make you an offer for the espresso machine. I can pay ___ dollars for it. Let me know if you are willing to accept this offer of ___ dollars. Have a good day.*

*Good afternoon, my name is Erica Martinez. I would like to make you an offer for the espresso machine you have for sale. I could pay ___ dollars for the machine. Let me know if you would like to accept my offer of ___ dollars. Goodbye.*

*Hi there, my name is Cindy Miller. I saw your ad and would like to make you an offer for your espresso machine. I'm willing to pay ___ dollars for the machine. Let me know if you want to accept my offer of ___ dollars. Bye. (Last message presented in Study 2 only)*

## Appendix C. Schematic representation of the response scales used in Study 4



## Appendix D. Focus on best alternative

### D.1. Method

#### D.1.1. Participants

Participants were 150 participants on Mechanical Turk (mean age = 31.82, *SD* = 8.63; 39.3% female) who participated in an academic study in exchange for $0.45. Five participants were excluded using the exact same exclusion procedure as in Study 4, leaving a total of 145 observations.

#### D.1.2. Procedure

Participants encountered the same task as in Study 4 with three exceptions. First, all negotiators made their first offer on a numerical scale (the baseline condition in Study 4). Second, to rule out the alternative explanation that negotiators' expectations about future alternatives may vary as a function of the number of alternatives, we explicitly told all negotiators that they should "not expect additional alternative offers to become available in the future." Third, participants were randomly assigned to three conditions. In addition to the *single alternatives condition* and the *multiple alternatives condition* used in Study 4, we also included a *BATNA-focus condition* which was identical to the multiple alternatives condition except that participants received additional instructions that asked them to focus on their best alternative:

> "When making your first offer to the buyer, you should only focus on the best offer that you have received and ignore the value of the other offers. Thus, the only alternative offer that should inform your negotiation is your best offer. You can disregard all other offers."

#### D.1.3. First offer

Next, participants indicated their first offer on the same 13-item scale used in Study 4. The scale had $1 increments ranging from $3 to $15.

#### D.1.4. Manipulation checks

Participants indicated whether they "could expect additional alternatives to become available in the future" (0 = *No*; 1 = *Yes*). They also indicated how many alternative offers they had received and what the value of their best alternative was. Then, they indicated whether they were instructed to "focus only on your [their] best alternative offer" (1 = *not at all*; 7 = *to a great extent*).

Finally, participants reported demographic information. No other measures were collected.

### D.2. Results

#### D.2.1. Manipulation check

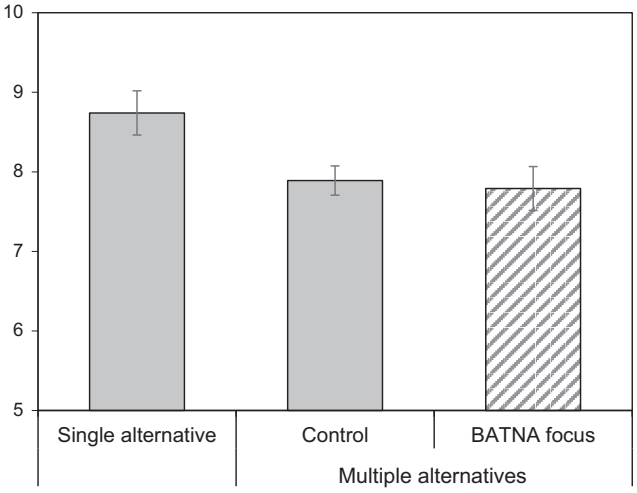
Future expectations about additional alternatives did not drive our results. Although some participants (22.8%) incorrectly recalled whether they could expect alternatives in the future (the correct answer was "no"), the majority (77.2%) of participants operated under the assumption that there would be no additional alternatives. Importantly, the percentage of incorrect responses did not differ between the single alternative and multiple alternatives conditions ($p = 0.95$). To further test the robustness of our findings, we also analyzed first offers excluding those who thought that there might be other alternatives available and found identical results (all $ps < 0.009$).

Our alternatives manipulation was successful. Participants in the single alternative condition reported to have fewer alternatives ($M = 0.91$, $SD = 0.46$) than those in the multiple alternatives condition ($M = 3.87$, $SD = 0.93$), $F(1,142) = 394.18$, $p < 0.001$, and those in the BATNA-focus condition ($M = 3.73$, $SD = 0.69$), $F(1,142) = 380.21$, $p < 0.001$. The latter two conditions did not differ ($p = 0.34$). As expected, participants' recall of their best alternative did not significantly differ across conditions (all $ps > 0.12$).

Finally, our BATNA-focus manipulation was successful. Participants in the BATNA-focus condition reported that they focused on their best alternative to a greater extent ($M = 6.29$, $SD = 1.67$) than those in the single alternative condition ($M = 3.83$, $SD = 2.21$), $F(1,142) = 69.54$, $p < 0.001$, and those in the multiple alternatives condition ($M = 2.87$, $SD = 2.19$), $F(1,142) = 36.37$, $p < 0.001$. Those in the single alternatives condition naturally also focused more on their best alternative than those in the multiple alternatives condition ($p = 0.024$), because the former condition only had one alternative.

#### D.2.2. First offer

Replicating our previous studies, participants in the multiple alternatives condition made lower first offers ($M = 7.89$, $SD = 1.25$) than those in the single alternative offer ($M = 8.74$, $SD = 1.91$), $F(1,142) = 5.46$, $p = 0.021$, $d = 0.53$. We also found that participants with multiple alternatives who were explicitly instructed to focus only on their best alternative still made lower first offers ($M = 7.79$, $SD = 1.99$) than those with a single alternative, $F(1,142) = 7.28$, $p = 0.008$, $d = 0.49$, and did not differ from those with multiple alternatives but who were not instructed to focus on their best alternative ($p = 0.77$).

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