Organizational Behavior and Human Decision Processes 148 (2018) 70–86

Contents lists available at ScienceDirect

Organizational Behavior and Human Decision Processes

journal homepage: www.elsevier.com/locate/obhdp

"I was going to offer $10,000 but…": The effects of phantom anchors in negotiation☆

Nazlı Bhatia[a,*,1], Brian C. Gunia[b,1,2]

[a] University of Pennsylvania, United States
[b] Johns Hopkins University, United States

ARTICLE INFO

Keywords:
Negotiation
First offer
Phantom anchor
Interpersonal perceptions
Anchoring

ABSTRACT

Negotiators commonly attach phantom anchors—retracted and aggressive figures—to their actual and less aggressive offers. For example, a seller might say, "I was going to ask for $10,000, but I can offer $8000." Drawing from research on anchoring, we predict that offer-makers will economically benefit from offers with phantom anchors. Drawing from research on interpersonal perceptions, we test competing hypotheses indicating that phantom anchors might elicit perceptions of manipulativeness or benevolence, with economic implications. Finally, we explore situational conditions that could moderate these perceptions. Five studies show that negotiators using offers with (versus without) phantom anchors receive less aggressive counteroffers and more beneficial agreements in both distributive and integrative negotiations, but also seem more manipulative. Situations portraying the phantom anchor-actual offer combination as a true concession, however, dampen manipulativeness perceptions. Overall, the results suggest that phantom anchors represent a powerful yet risky and understudied value-claiming strategy in negotiations.

1. Introduction

One of the most well-known and well-documented decision heuristics is anchoring (Klein et al., 2014): a cognitive bias whereby individuals make uncertain judgments by insufficiently adjusting from other figures, relevant or irrelevant ("anchors"; Tversky & Kahneman, 1974). Anchors influence decisions in a wide variety of domains, including decisions about how much to purchase (Wansink, Schneider, Carter, & White, 1998), what to bid in an auction (Beggs & Graddy, 2009), and which investments to choose (Andersen, 2010).

Anchoring has also been extensively documented in the domain of negotiation. Research in this area mostly examines the anchoring effects of first offers, consistently showing that first offers exert a strong anchoring effect on counteroffers and final settlement prices (e.g., Adair, Weingart, & Brett, 2007; Ames & Mason, 2015; Janiszewski & Uy, 2008; Loschelder, Stuppi, & Trötschel, 2014; Schaerer, Loschelder, & Swaab, 2016; Schaerer, Swaab, & Galinsky, 2015; Sinaceur, Maddux, Vasiljevic, Nückel, & Galinsky, 2013). Notwithstanding some critical boundary conditions identified in the last few years, like the possibility that first offers may reveal sensitive information (e.g., Loschelder, Swaab, Trötschel, & Galinsky, 2014; Loschelder, Trötschel, Swaab, Friese, & Galinsky, 2016) or disadvantage the first mover in the presence of information asymmetry (Maaravi & Data, 2017), first offers generally influence final prices in a direction that benefits the offerer. Indeed, this effect holds up despite a number of plausible moderators such as cultural context, structure of the negotiation, or power differentials (Barry, Lewicki, & Saunders, 2015; Gunia, Swaab, Sivanathan, & Galinsky, 2013). This robust effect apparently emerges because negotiators across cultures and contexts cognitively anchor on the first offer, making counteroffers and agreeing to settlement prices that assimilate to the first offer across various circumstances (Galinsky & Mussweiler, 2001).

Although anchoring effects have mainly been studied in the context of single-issue first offers (cf. Gunia et al., 2013), past work suggests that other numerical values in a negotiation may also influence subsequent offers (Whyte & Sebenius, 1997). For example, recipients of range offers (e.g. "I want $7200 to $7600") anchor on both ends of the range when making counteroffers (Ames & Mason, 2015). Moreover, negotiators often anchor on their poor alternatives, making weak offers reflective of their low-power positions (Schaerer et al., 2015). The

☆ The authors thank Sakshi Ghai and Julia Snoy for data coding.
* Corresponding author at: University of Pennsylvania, 3720 Walnut Street, Philadelphia, PA 19104-6241, United States.
E-mail addresses: bhatiana@upenn.edu (N. Bhatia), brian.gunia@jhu.edu (B.C. Gunia).
[1] Both authors contributed equally to this manuscript.
[2] Address: Johns Hopkins University, Carey Business School, 100 International Drive, Baltimore, MD 21202, United States.

https://doi.org/10.1016/j.obhdp.2018.06.003
Received 4 July 2017; Received in revised form 16 June 2018; Accepted 27 June 2018

current research highlights another potentially important numerical figure that could influence negotiators' judgments: a phantom anchor, by which we mean a retracted and aggressive figure attached to a real and less aggressive offer. For example, a car seller might say: "I was going to ask for $10,000, but I can offer $8000." In this case, $10,000 represents the phantom anchor and $8000 the real offer. We suggest that that the phantom anchor could influence the buyer's judgments despite its retraction. Indeed, the phantom anchor could be especially potent if the seller added an explanation such as: "because I like you" or "because I don't feel like haggling." While not a necessary component of every phantom anchor, such an explanation could help justify the phantom anchor's unavailability (Gunia et al., 2018; but also see Maaravi, Ganzach, & Pazy, 2011).

Phantom choice options (i.e. options "that look real but are unavailable at the time a decision is made"; Pratkanis & Farquhar, 1992, p. 105) have been documented in many types of judgment contexts, including those that involve decoy values (Farquhar & Pratkanis, 1987; Pettibone & Wedell, 2007), counterfactual thinking (Miller, Turnbull, & McFarland, 1990) and delay of gratification (Mischel, 1974),[3] but theory and research on their effects in negotiation is limited. Theoretically, Lax and Sebenius (2006) described similar phenomena in the form of "flexible but extreme offers" and "non-offer offers," meaning indirectly relevant statements or figures that negotiators can mention to justify extreme offers. Empirical research on phantom alternatives, in turn, has mainly focused on the unavailable alternatives that negotiators may have in their minds (Pinkley et al., 2017; Pinkley, 1995). More broadly exploring phantom choice options in negotiation is the goal of the current research. Our main prediction is that offers containing phantom anchors will elicit more favorable counteroffers and final agreements for offerers than offers without phantom anchors. The logic for this prediction is as follows.

Past research on anchoring in non-negotiation situations shows that anchors that are not directly relevant to the decision can still have potent effects. In one of the most well-known demonstrations, Tversky and Kahneman (1974) asked participants to judge the percentage of African countries in the United Nations against a low (10%) or high (65%) anchor. Although these anchors came from the ostensible spin of a wheel with no relevance to judgments about Africa, the anchors nevertheless influenced such judgments strongly: participants who received the high anchor estimated the percentage of African nations in the United Nations to be higher than those who received the low anchor. This is just one example. More or less relevant anchors have been shown to influence decisions in many other contexts, ranging from consumer purchasing decisions (Wansink et al., 1998) to judicial verdicts (Englich, Mussweiler, & Strack, 2006) to real estate transactions (Northcraft & Neale, 1987). Indeed, a recent many-labs replication deemed anchoring one of the strongest psychological effects (Klein et al., 2014).

Similarly, in negotiation, even when a numerical anchor is demonstrably unreliable, it can affect important negotiation parameters. For example, Whyte and Sebenius (1997) provided negotiators with an anchor indicating the amount their counterpart might be willing to pay. Yet, this anchor was then portrayed as a misunderstanding arising from the use of a foreign language translator who was difficult to understand—a fact that would seem to cast doubt on the anchor's reliability and relevance to subsequent judgments. Nevertheless, the anchor significantly influenced first offers as well as reservation and target prices. Effects like these presumably occur because people who hear an anchor and then need to make an ambiguous judgment have a hard time "unhearing" the anchor. It stays in their working memory even if they explicitly try to dismiss it (Wegner, Schneider, Carter, & White, 1987), and thus they incorporate it into their judgments.

If irrelevant anchors can influence judgments so strongly, we predict that phantom anchors, which do provide some marginally relevant information about the offerer's initial intentions, will too. To test this prediction, we generally compare the effects of offers containing phantom anchors (e.g., "I was going to ask for $10,000, but I can offer $8000") against the effects of offers with the same available figure ($8000) but no phantom anchor. Given the predicted anchoring effect of the retracted and aggressive figure ($10,000), we expect that offers with phantom anchors will lead the counterpart to make less aggressive counteroffers and agree to less aggressive final prices (benefitting the negotiator who used the phantom anchor):

Hypothesis 1. Offers with (versus without) phantom anchors will lead to more economically favorable counteroffers and final prices from the offerer's perspective.

1.1. Phantom anchors and interpersonal perceptions

While the anchoring effects of offers on subsequent offers are certainly important, recent work also studies the effects of offers on interpersonal perceptions, which matter because they can influence whether negotiators implement an agreement or want to deal with one another again (Mislin, Campagna, & Bottom, 2011)—and because of their impact on subsequent offers (e.g., Loschelder et al., 2014). Much of the research on the interpersonal effects of offers focuses on the way offers are made. For example, precise versus round first offers suggest that the offerer is knowledgeable and thus elicit more favorable counteroffers (Loschelder et al., 2014; Mason, Lee, Wiley, & Ames, 2013). Additionally, negotiators who add arguments to their first offers are seen as attempting to persuade their counterparts versus provide information, and subsequently receive more aggressive counteroffers (Maaravi et al., 2011). Finally, the rationale attached to an offer can influence perceptions of the offerer's limits and trustworthiness, with implications for both relational and instrumental outcomes (Lee & Ames, 2017).

Building on this line of research, we argue that, whatever their anchoring benefits, phantom anchors may also influence offer-recipients' perceptions of the offerer, which could exacerbate or dampen any anchoring effects on economic outcomes. Interpersonal perceptions could exacerbate anchoring effects, increasing the economic influence of offers with phantom anchors, if offer recipients see the combination of a phantom anchor and actual offer as an indication of the offerer's benevolence. Given that the phantom anchor is less attractive to offer recipients than the actual offer that immediately follows it, offer recipients could see the actual offer as an attempt to benefit them or treat them favorably, i.e., as a signal of benevolence. Since perceptions of benevolence signal trustworthiness (Mayer, Davis, & Schoorman, 1995) and negotiators tend to reciprocate their counterparts' trustworthy behavior (Brett, Shapiro, & Lytle, 1998; Gunia, Brett, Nandkeolyar, & Kamdar, 2011; Putnam & Jones, 1982; Weingart, Thompson, Bazerman, & Carroll, 1990), it is plausible that offer recipients could respond to offers with phantom anchors by making substantive concessions of their own. In other words, theory provides reason to suspect that the interpersonal perception of benevolence could exacerbate the anchoring effects of offers with phantom anchors. This suggests the first part of a competing hypothesis:

Hypothesis 2a. Offers with (versus without) phantom anchors will lead to heightened perceptions of benevolence, which will exacerbate the anchoring effects of these offers.

At the same time, negotiators often come to the bargaining table assuming that their interests are diametrically opposed to their

[3] It is perhaps useful to note that the literature on phantom choice options appears agnostic as to the reason behind the disappearance of the phantom option from the choice set. That is, the phantom option may be unavailable at the time of the decision for any reason. In this paper, we explore the specific situation in which the phantom option is unavailable because the offerer has retracted it.

counterpart's (Thompson & Hastie, 1990). This zero-sum mindset often leads both negotiators to view each other's behavior with skepticism (Sinaceur, 2010), especially when that behavior seems to betray a lack of trustworthiness (Gunia et al., 2011). Indeed, since negotiators with sufficient opportunity and motive resort to lies almost half the time (Schweitzer & Croson, 1999) and negotiations are rife with unethical behavior (Gaspar & Schweitzer, 2013), such beliefs may be somewhat founded. In the context of offers with phantom anchors, this reasoning suggests that offer recipients may perceive such offers not as benevolent attempts to help them, but as malevolent attempts to manipulate them.

Although practitioner-oriented articles have shown a strong interest in manipulative negotiation behaviors and how to counteract them (Adler, 2007; John, 2016),[4] research on the specific tactics that negotiators perceive as manipulative is scarce, with the exception of some recent work. This work suggests that negotiators who emphasize the costliness of a concession to themselves are seen as more manipulative and subsequently receive less favorable counteroffers than negotiators who emphasize how the concession benefits the counterpart (Bhatia, Chow, & Weingart, 2018). Other work suggests that the addition of arguments to offers generates the perception that a negotiator is trying to manipulate through persuasion (Maaravi et al., 2011).

Following this nascent line of work, we suggest that the addition of phantom anchors to offers could generate perceptions of manipulativeness. If the retracted figure (e.g., $10,000) is no longer current, why was it mentioned? If the less aggressive figure (e.g., $8000) is now available, why wasn't it available when the offerer initially formulated an offer? In a context riddled with skepticism, perceptions that the other party is being manipulative provide an easy answer. Thus, as a competing hypothesis, we consider whether offers with phantom anchors could generate negative interpersonal perceptions of manipulativeness, which could readily dampen the anchoring effects of such offers:

Hypothesis 2b. Offers with (versus without) phantom anchors will lead to heightened perceptions of manipulativeness, which will dampen the anchoring effects of these offers.

Beyond the possibility that phantom anchors may have a direct effect on interpersonal perceptions, we consider situational conditions that might moderate these perceptions, particularly by increasing positive (Hypothesis 2a) and/or decreasing negative perceptions (Hypothesis 2b). Since our predictions about interpersonal perceptions really hinge on the perceived intent of the offerer—namely, whether the offerer is seeking to make a true concession that helps or a fake concession that manipulates the offer recipient, we investigate a set of situational conditions that could shed light on the true versus fake nature of the concession: the presence of objective standards, competitiveness of the negotiation situation, and bolstering versus backdown format of the offer (Ames & Mason, 2015).

To consider each briefly, since the publishing of *Getting to Yes* (Fisher & Ury, 1981), negotiation scholars have suggested that objective standards—independent valuations indicating a fair or appropriate value in a negotiation—serve to justify offers and portray them as appropriate. In the current context, it stands to reason that the presence of an objective standard that matches the phantom anchor (versus the absence of such a standard) should justify the validity of the phantom anchor and thus make the actual offer seem like a true concession. Likewise, negotiation scholars have long suggested that the competitiveness versus cooperativeness of the situation serves as a lens through which negotiators interpret each other's behavior (Pinkley, 1990; 1992; Schweitzer & DeChurch, 2001). In the current context, we would predict that an overtly cooperative (versus competitive) negotiation setting may cast the combination of the phantom anchor and actual offer in a positive light. In particular, a cooperative negotiation context may frame an offer with a phantom anchor as indicative of a true concession. Finally, Ames and Mason (2015) recently studied range offers (e.g., a seller's offer of $7200–$7600), distinguishing between bolstering and backdown offers (among others). In a bolstering offer, a negotiator intends to make less ambitious offer (e.g., $7200) but attaches a more ambitious figure to it (e.g., $7600). In a backdown offer, a negotiator intends to make a more ambitious offer (e.g., $7600) but attaches a less ambitious figure to it (e.g., $7200). Consistent with this framework, we suggest that offers with phantom anchors should seem more like true concessions when they take the form of a backdown (versus bolstering) range—that is, when the offerer's true intended offer is known to match the phantom anchor versus the actual offer. In that situation, the actual offer should logically seem like a more benevolent and/or less manipulative attempt to concede to the counterpart. In sum, we posit three situational conditions—objective standards, cooperative negotiation contexts, and backdown formats—that could make offers with phantom anchors seem more benevolent and/or less manipulative (depending on which part of the competing hypothesis is supported) by portraying the offerer's behavior as a true concession:

Hypothesis 3. Objective standards, cooperative negotiation contexts, and backdown formats will moderate the interpersonal perceptions associated with offers with phantom anchors, making them seem more benevolent and/or less manipulative.

Taken together, our predictions suggest the moderated mediation model in Fig. 1. The model predicts that phantom anchors will lead to increased anchoring, but this effect will be exacerbated or attenuated depending on whether these offers are perceived as benevolent or manipulative, which may in turn depend on situational conditions portraying the combination of a phantom anchor and an actual offer as a true or fake concession.

2. Overview of studies

To address the obvious question of whether phantom anchors represent a real and common phenomenon, we start by presenting two studies (Studies 1a and 1b) in which professional salespeople report their experiences with phantom anchors, and negotiation transcripts are coded for the natural occurrence of phantom anchors. We then present the results of seven additional studies (described as four for brevity; i.e., as Studies 2–5) that collectively test all of the relationships in our moderated mediation model. Study 2 examines the effect of phantom anchors on counteroffers in an online study. Studies 3a and 3b test this effect in face-to-face negotiations, both distributive and integrative, and explore how phantom anchors impact settlement values. Study 4 seeks to replicate the economic effects of phantom anchors and also focuses on interpersonal perceptions of benevolence and manipulativeness. Studies 5a, 5b and 5c test our full moderated mediation model. Across all studies, we report all measures collected, and exclusionary criteria are detailed in the study methods.

3. Study 1

We first conducted a two-part study to assess whether phantom anchors represent a real negotiation strategy that actual negotiators use without prompting. In Study 1a, a panel of individuals who presumably negotiate often—salespeople—were asked to estimate the percentage of negotiations in which they use offers with phantom anchors, as well as the percentage of negotiations in which they make concessions (as a comparison). In Study 1b, two coders read through a set of negotiation transcripts and indicated how often negotiators spontaneously used offers with phantom anchors.

[4] For further examples, see websites like: https://www.negotiationtraining.com.au/questions/negotiation-and-manipulation/ and http://www.bakercommunications.com/archive/apr13/negotiation040113.html?campId=70140000000flkz.

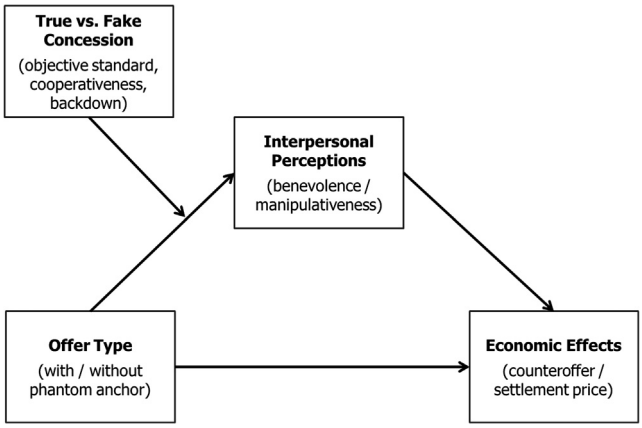

Fig. 1. Theoretical model of the relationship between offer type and economic effects mediated by interpersonal perceptions, with perceptions moderated by situational factors influencing whether the combination of the phantom anchor and actual offer are seen as a true vs. fake concession.

3.1. Study 1a method

3.1.1. Participants and design

50 practicing salespeople were recruited from Qualtrics Research platform (M_{age} = 49.8 SD_{age} = 15.3, 40% women) to participate in a 15-min study for compensation (as determined by Qualtrics). The study did not include any manipulated variables.

3.1.2. Procedure

Participants answered a set of questions for unrelated research projects. Near the end of the study, they answered two questions pertaining to the current research. The first said: "When selling a product or service, salespeople often negotiate with buyers. One negotiation strategy salespeople might use is to make an offer that indicates the price they were initially planning to charge, followed by the price they are actually going to charge. For example, they might say, 'I was initially going to ask for $12,000, but I can do $10,000.' In what percentage of your negotiations do you use this strategy?" (0–100% in 10% increments). They then answered the same question about the following statement: "Another strategy salespeople might use is to make an aggressive first offer but later make a concession. For example, they might initially say, 'I'm asking for $12,000.' Then, later in the negotiation, they might say, 'I can do $10,000.'" Participants completed the study by answering a set of demographic questions.

3.2. Study 1a results and discussion

Supporting our assumption that these participants negotiate often, they reported negotiating an average of 17.2 times (SD = 22.71) per month. Participants indicated that they make offers with phantom anchors in 29.88% (SD = 30.10) and concessions in 37.26% (SD = 30.80) of their negotiations. A planned comparison indicated that the latter did not differ significantly from the former, t (49) = 1.54, p = 0.13, d = 0.24. This suggests that offers with phantom anchors occur fairly often among experienced negotiators.

3.3. Study 1b method

3.3.1. Participants and design

The data came from another study in which individuals negotiated in the lab, and their negotiation sessions were recorded and transcribed. In that study, one hundred and sixty-four participants (82 dyads) from a research participant pool maintained by a Mid-Atlantic U.S. university conducted a distributive negotiation over the sale of a biotechnology plant (the Biopharm-Seltek case; www.negotiationexercises.com). The participants were members of the public in the city where the study was conducted and did not have any formal training on negotiation, nor instruction in phantom anchors. They ranged from 18 to 57 years in age (M_{age} = 27.02, SD_{age} = 9.45), and 58% were women.

3.3.2. Procedure

In the current study, we began by asking two coders (two master's students, both blind to the study hypotheses) to read both sides of the negotiation case. We then trained them to identify offers containing phantom anchors, defined as, "An offer containing a 'would-be' or aspirational figure in negotiation." Additionally, we explained that an offer with a phantom anchor "contains two numerical offers, e.g., 'I was planning on asking for $12 K for the car but I am okay with $10 K,'" providing several examples. Since this was a qualitative study intended to identify when and how the focal phenomenon emerges in real negotiations, we also asked the coders to identify whether the phantom anchor was contained in a first or subsequent offer as well as whether the buyer or seller made the offer.

After this training session, each coder read and coded the same 20 transcripts independently, noting the number of offers containing phantom anchors in each transcript and recording the information above. Following a meeting to discuss ambiguous cases and resolve disagreements, the coders then independently coded the remaining 62 transcripts (initial $\kappa = 0.83$). Finally, they met to resolve any remaining disagreements. Ultimately, the coders reached agreement on the statements constituting phantom anchors in each transcript.

3.4. Study 1b results and discussion

The coding indicated that offers with phantom anchors occurred in 29 of the 82 negotiations (35.8%); the average number of such offers in each negotiation was 0.46, with a maximum of 4. In the 29 negotiations containing offers with phantom anchors, these offers were made by sellers but not buyers 41.4% of the time, buyers but not sellers another 41.4% of the time (i.e., the same number of times), and both buyers and sellers the remaining 17.2% of the time. In five of the negotiations containing phantom anchors (17.22%), these anchors appeared in a first offer; in the remaining negotiations, the phantom anchor appeared in subsequent offers.[5]

These results again suggest that phantom anchors are common, emerging unprompted from negotiators who were not trained in their use (or negotiation in general). Furthermore, the results shed some light on the way that negotiators tend to use offers with phantom anchors. It seems as if sellers and buyers use phantom anchors with similar frequency. Their phantom anchors sometimes appear in their first offers, but more often appear later. Although the primary goal of this study was to establish the validity of the construct, we return to some of these interesting nuances in the general discussion. Having established the unprompted use of phantom anchors, the remainder of our studies examine their economic and interpersonal effects.

4. Study 2

Study 2 examined the economic effects of offers with phantom anchors (Hypothesis 1), asking online participants to imagine themselves conducting a used car negotiation. We examined the relationship between phantom anchors or their absence and counteroffers.

[5] Since phantom anchors appeared in a minority of negotiations and functioned as first offers in a minority of negotiations in which they appeared, phantom anchors functioned as first offers in a small percentage of negotiations overall (6.09%).

4.1. Method

4.1.1. Participants and design

The study manipulated one variable, between-subjects: offer type (phantom anchor present versus phantom anchor absent). An *a priori* power analysis using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007), based on a medium effect size ($d = 0.50$), suggested that power ($1 - \beta$) = 0.80 would be achieved for a one-tailed *t*-test by recruiting 102 participants[6]. We sought to exceed that amount by recruiting 120, from Amazon's MTurk system. Our participants were located in the United States and ranged from 19 to 63 in age ($M = 33.15$, $SD = 10.95$, 43% women); they were paid $0.40 for their participation.

4.1.2. Procedure

All participants were told to imagine that they were selling their car, which was presented as a well-maintained model with low mileage that was likely to sell for $9500–$13,500. They were informed that they had placed advertisements online, had been contacted by several buyers, and were now meeting one of the buyers face-to-face to negotiate the price.

4.1.3. Manipulated and measured variables

Offer type manipulation. We manipulated the way the buyer made an offer to the participant, i.e., the seller. To participants in the *phantom anchor present* condition, the buyer said: "Although I was originally going to offer you $10,000, I am willing to pay $11,000 because you seem like a nice person and the car is in good condition." To participants in the *phantom anchor absent* condition, the buyer said: "I am willing to pay $11,000 because you seem like a nice person and the car is in good condition."

Counteroffer. Participants were asked to provide a counteroffer.

4.2. Results and discussion

4.2.1. Preliminary analysis

Three participants failed the attention check questions embedded in the survey and were excluded from any further analyses, leaving 117 participants. Gender and age did not moderate the effects reported in this or the other studies and thus will not be discussed further.

4.2.2. Main analysis

Counteroffer. We predicted that offers with phantom anchors would elicit less aggressive counteroffers than offers without them. Since the person responding to the offers (i.e., the participant) was a seller, less aggressive counteroffers (from their perspective) would be indicated by lower values. To test the prediction, we coded the offer type variable as *phantom anchor absent* condition = −1, *phantom anchor present* condition = 1. We then conducted a one-way Analysis of Variance (ANOVA) with offer type as the independent and participants' counteroffer amount as the dependent variable. Results revealed a significant difference across the two conditions, $F(1, 114) = 3.83$, $p = 0.05$ (exactly), $d = 0.36$, such that offers with phantom anchors elicited less aggressive counteroffers ($M_{\text{phantom present}} = 11{,}688.60$, $SD_{\text{phantom present}} = 861.01$) than offers without phantom anchors ($M_{\text{phantom absent}} = 12{,}012.69$, $SD_{\text{phantom absent}} = 920.81$). Put differently, offer recipients (our participants) who received an offer with a phantom anchor made a counteroffer that was less advantageous to themselves. These findings provide initial evidence for Hypothesis 1 that offers with versus without phantom anchors elicit more favorable counteroffers for offerers and less favorable counteroffers for offer recipients.

In drawing these conclusions, it is important to note that this and the next study test Hypothesis 1 but provide little or no information about Hypothesis 2. In other words, phantom anchors could be eliciting perceptions of benevolence (which could be exacerbating the anchoring effect), perceptions of manipulativeness (which could be dampening the anchoring effect), both, or neither. Studies 4–5 will turn to these perceptions.

5. Study 3

Study 3 is a two-part study that again explores the economic influence of phantom anchors. It extends our findings to face-to-face negotiations, a different participant group (students), negotiated outcomes such as settlement values, and an integrative negotiation context. In Study 3a, participants conducted a distributive negotiation over a used car; in Study 3b, they conducted an integrative negotiation over a restaurant rental space. In both contexts, we continued to predict that negotiators using offers with phantom anchors would obtain more favorable individual-level outcomes than those using offers without phantom anchors.

In a negotiation with integrative potential, another important outcome is the total value that negotiators create across the dyad, which is computed by adding the two sides' individual gains. Negotiators increase joint gains through information sharing, which helps them realize efficient trade-offs. Although offers still anchor outcomes in integrative negotiations (Gunia et al., 2013), research shows that interpersonal perceptions can also influence joint outcomes by facilitating or reducing information sharing (Gunia et al., 2011). As an initial hint about the validity of Hypotheses 2a vs. 2b (tested in Studies 4–5), we would expect joint gains to be higher if phantom anchors were perceived as benevolent and lower if perceived as manipulative.

5.1. Study 3a method

5.1.1. Participants and design

Participants were 106 Master of Science students with ages ranging from 20 to 26 ($M = 22.57$, $SD = 1.65$, 49% women) from a private, European university. They were a diverse group representing 17 nations. They participated in the study as a class exercise. Similar to Study 2, offer type (phantom anchor present versus phantom anchor absent) was manipulated in a between-subjects design, this time at the dyadic level.

5.1.2. Procedure

Participants were randomly assigned to the role of buyer or seller in a short car sale negotiation. They were also randomly assigned to their negotiation dyad. They received and had 15 minutes to read their materials in preparation for the negotiation. Participants in the buyer role received instructions informing them that they needed to buy a new car and had two prospects, both of which were the same make and model. The first car was in good condition, but its seller refused to budge from €10,000. The second car was also in good condition but slightly older. Buyers were told that the market price for the second car was €8000-€9000. Finally, they learned that they were about to meet the seller of this second car to negotiate the price.

Similarly, participants in the seller role read that they had two potential buyers for the car they were trying to sell, which was also presented as having an €8000-€9000 market value. The first potential buyer had made a final offer of €7000. Sellers were now meeting the second potential buyer face-to-face to negotiate the price. We included information on the Best Alternative to Negotiated Agreement (BATNA) for both negotiators because this study was conducted in the classroom with a convenience sample. Following the literature's recommendation that data collection should not interfere with student learning (Loyd, Kern, & Thompson, 2005), we made sure not to overlook the important concept of BATNA.

[6] We used this power analysis as a benchmark for determining the minimum sample size for the subsequent studies in which participants did not come from a convenience sample.

Table 1
Means, standard deviations, and zero-order correlations of variables in Study 3a.

Variable	*M*	*SD*	Offer type	First offer	Counteroffer	Price
Offer type	0.09	1.00	–			
First offer	11031.82	2014.11	0.14	–		
Counteroffer	7744.19	921.77	0.31*	0.08	–	
Price	8729.52	726.91	0.35*	0.21	0.79**	–

Note: $N = 44$. Offer type is coded as phantom anchor absent = −1, phantom anchor present = 1. First offers were made by sellers; counteroffers were made by buyers and the settlement price reflects that of the dyad. *p < 0.05, **p < 001.

5.1.3. Manipulated and measured variables.

Offer type manipulation. Given our access to a relatively small sample and to avoid potential role effects (Neale, Northcraft, & Huber, 1987), we gave the manipulation materials to only one side: the seller. The manipulation was delivered via an "Important Message for the Seller." Sellers first read: "In negotiation, it is recommended that you make the first offer because aggressive first offers lead to better economic outcomes. However, negotiation practitioners and scholars point out that HOW you make the first offer also matters." Then, sellers in the *phantom anchor present* condition read: "A recommended strategy for making first offers is the following: Determine your intended first offer. **Before making this offer, make it sound like you planned to make a higher, more aggressive offer and follow it immediately with your actual first offer.** For example, you might say, **"I had planned to sell the car for €12,000, but I can do €11,000."**

Sellers in the *phantom anchor absent* condition read: "A recommended strategy for making first offers is the following: make an offer that is short and focused on a single number. For example, you might say, **"I can sell the car for €11,000."** Finally, sellers in both conditions were told that this was just an example and that they could implement the strategy in any way that fits this description. Buyers did not receive instructions about offers.

While Study 1 indicated that phantom anchors occur more often in counteroffers (and a number of our other studies manipulated phantom anchors that way), the current study focused on first offers for three reasons. First, Study 1b indicated that phantom anchors do arise in first offers, so we wanted to determine whether the predicted effects generalize to first offers. Second, we sought to maximize comparability with the large literature on anchoring in negotiations, which has focused on first offers. Third, since this literature indicates that counteroffers are strongly influenced by first offers, it was methodologically cleaner to manipulate phantom anchors as part of first offers. Otherwise, the actual numbers in the phantom anchors (or regular anchors) that emerged in this study would have been highly variable.

First offer, Counteroffer, and Settlement Price. We provided participants with an agreement sheet on which they reported who made the first offer and the amounts of the first offer, counteroffer, and settlement price.

5.2. Study 3a results and discussion

5.2.1. Preliminary analyses

Means, standard deviations and bivariate correlations for this study are reported in Table 1. Our 106 participants were organized into 53 negotiation dyads. As noted, participants in the seller role were instructed to make the first offer in accordance with their condition. However, in examining the agreement sheets, we learned that the buyers actually made the first offer in nine dyads. Since we cannot know whether these buyers used offers with or without phantom anchors, we excluded these dyads from further analyses (leading to lower degrees of freedom in the analyses below). No other dyads were excluded.

First offer. We first wanted to make sure that the offer type condition did not influence the magnitude of participants' first offers. To do that, we coded the offer type variable as *phantom anchor absent* condition = −1, *phantom anchor present* condition = 1 and performed a one-way Analysis of Variance (ANOVA), with offer type as the independent and participants' first offer as the dependent variable. Results were not significant, $F(1, 42) = 0.85$, $p = 0.36$.

5.2.2. Main analysis.

Counteroffer. We predicted that offers with phantom anchors would elicit less aggressive counteroffers than offers without phantom anchors. Since the negotiator responding to the offers was a buyer, less aggressive counteroffers (from their perspective) would be indicated by higher values. Given the strong relationship between first offers and counteroffers ($r = 0.43$, $p = 0.001$), we controlled for the magnitude of the first offer in our analysis of counteroffers. We conducted a univariate ANCOVA with the offer type as the independent, the counteroffer amount as the dependent, and first offers as the control variable. This analysis revealed a significant difference, where offers with phantom anchors led to less aggressive counteroffers, $F(1, 42) = 4.15$, $p = 0.048$, $d = 0.23$, $M_{phantom\ present} = 8022.73$, $SD_{phantom\ present} = 957.44$; $M_{phantom\ absent} = 7452.38$, $SD_{phantom\ absent} = 804.75$ than offers without them.

Settlement price. To examine the effect of offer type on settlement prices, we ran a parallel ANCOVA. Results indicated a significant difference, $F(1, 42) = 5.72$, $p = 0.032$, $d = 0.61$, $M_{phantom\ present} = 8967.35$, $SD_{phantom\ present} = 633.82$; $M_{phantom\ absent} = 8469.05$, $SD_{phantom\ absent} = 746.91$, indicating that sellers using the phantom anchor strategy sold their cars for a significantly higher price (achieved a better economic outcome) than those who did not use this strategy.[7]

Study 3a showed, in a face-to-face negotiation, that offers with versus without phantom anchors lead to less aggressive counteroffers and more favorable settlement prices. These results reveal that the economic advantage of phantom anchors extends to a different set of participants, from counteroffers to settlement prices, and from hypothetical to real negotiations. We find Study 3a particularly noteworthy given its context: The data were collected outside the United States among participants representing many cultural and national backgrounds. The persistence of the "phantom anchor effect" in this context is consistent with similar findings regarding the robustness of anchoring effects across cultures (Gunia et al., 2013). Next, we sought to extend our inquiry to integrative negotiations.

5.3. Study 3b method

5.3.1. Participants and design

Participants were a convenience sample of 92 undergraduate students enrolled in an introductory behavioral economics course at a Mid-Atlantic U.S. university. They completed the study as a classroom exercise during a guest lecture on negotiation. Prior to the session in which data were collected, participants had no formal training on the topic. Due to the short duration of the lecture (80 min) and our desire to ensure the data collection did not interfere with learning (Loyd et al.,

[7] Results for both sets of analyses were the same when the magnitude of the first offer was not included a control variable; counteroffer: $F(1, 42) = 4.45$, $p = 0.041$; final price: $F(1, 42) = 5.72$, $p = 0.021$.

Table 2
Means, standard deviations, and zero-order correlations of variables in Study 3b.

Variable	*M*	*SD*	Offer type	Joint Outcome	Individual Outcome
Offer type	−0.05	1.01	–		
Joint Outcome	9827.27	659.23	−0.19	–	
Individual Outcome	0.55	0.08	0.31*	−0.23	–

Note: $N = 44$. Offer type is coded as phantom anchor present = 1, phantom anchor absent = −1. *p < 0.05, **p < 001.

2005), our ability to administer surveys was limited. Thus, we were only able to collect an agreement sheet, meaning we do not have demographic information on the participants but expect them to be similar to the typical student body in a private university in the region. The study manipulated one variable, between-subjects, at the dyadic level: offer type (phantom anchor present versus phantom anchor absent).

5.3.2. Procedure

After a brief introduction to negotiation, participants received their role materials, which randomly assigned them to the role of a restaurant space owner or a representative of a restaurant chain. The exercise was loosely based on the Dispute Resolution Research Center's More Growth for Tonto (www.negotiationexercises.com) and involved the rental of a restaurant space. The scenario included one distributive issue, price per square foot, and two trade-off issues, date of first rent payment and duration of the lease. All issues were quantified with points, thus clarifying the extent to which participants valued the issues. The structure of the negotiation was such that the rental space owner valued the date of the first rent payment more than the duration of the lease, whereas the restaurant chain representative held the reverse preference ordering. This structure meant that if the negotiators were able to uncover these priorities, they could make efficient trade-offs and reach a pareto efficient outcome. The distributive issue afforded both sides the most points and was thus the most important issue.

In addition to the general negotiation information, the restaurant space owner's role materials contained our manipulation, presented as "Important Negotiation Instructions" (detailed below). After receiving their role materials, participants had 10 min to prepare for the negotiation. Once they were ready, they randomly paired up with a participant of the opposite role and had a maximum of 15 min to conduct the negotiation. When they were done, they filled out an agreement sheet, which contained our measures.

5.3.3. Manipulated and measured variables.

Offer type manipulation. Similar to Study 3a, we had access to a small sample and thus administered our manipulation to one side only, the restaurant space owner. Space owners were instructed to make the first offer, and representatives of the restaurant chain were instructed to let their counterparts make the first offer. Rationales for these instructions were provided to both sides. Additionally, restaurant space owners in the *phantom anchor present* condition read:

> "A recommended strategy for making first offers is the following: Determine your intended first offer. **Before making this offer, make it sound like you planned to make a higher, more aggressive offer and follow it immediately with your actual first offer.** For example, you might say, 'I had planned to offer you X, but I can do Y.' In this example, X would be the higher offer and Y would be your actual first offer."

Restaurant space owners in the *phantom anchor absent* condition read: "A recommended strategy for making first offers is the following: **make an offer that is short and focused.** For example, you might say, '**I offer you X.**'" Our instructions referenced variables like "X" and "Y" instead of figures because we did not want to influence whether participants made a single- or multi-issue offer in this multi-issue negotiation. We chose to embed the phantom anchor manipulation in the first offer for the same reasons as in Study 3a.

First offer and Settlement Value. We provided participants with an agreement sheet on which they reported who made the first offer as well as the amounts of the first offer and settlement value for each issue. We used these reported values to compute the individual outcome for each negotiator as well as the joint outcome for the dyad.

5.4. Study 3b results and discussion

5.4.1. Preliminary analyses.

Means, standard deviations and bivariate correlations of variables for this study are reported in Table 2. Our 92 participants formed 46 negotiation dyads, of which two impassed and were excluded. We conducted all subsequent analysis on the remaining 44 dyads.

First offer. It is interesting to note that restaurant space owners in 24 dyads (more than half) made multi-issue first offers. Participants in eight dyads did not indicate the amount of the first offer. The remaining 12 made single-issue offers, predominantly on the distributive issue of price per square feet[8]. We believe that the high incidence of multi-issue offers is noteworthy because it may mean that the effect of phantom anchors was spread across all issues (if the first offer involves all three issues, the phantom anchor probably would too).

5.4.2. Main analysis

Joint outcome. To test the effect of phantom anchors on joint outcomes, we first computed individual gain for each dyad member by adding the point values corresponding to the issues in the final settlement. Next, we added the two negotiators' individual gains to compute the dyad's joint gains. We then coded the independent variable as *phantom anchor absent* condition = −1 and *phantom anchor present* condition = 1. Results of a one-way ANOVA with offer type as the independent and joint gains as the dependent variable did not indicate significant differences across the two conditions, F (1, 42) = 1.64, $p = 0.21$, though dyads with phantom anchors descriptively created less value than those without phantom anchors, $M_{phantom\ present} = 9695.24$, $SD_{phantom\ present} = 736.53$; $M_{phantom\ absent} = 9947.83$, $SD_{phantom\ absent} = 569.58$.

Individual outcome. Next, we examined individual outcomes, i.e., how much of the total value created in the dyad was claimed by each side. Given the persistent effect of phantom anchors on distributive (i.e., individual) economic outcomes, we expected participants who used phantom anchors to obtain better individual outcomes than those who did not. Since dyads in an integrative context create varying joint value, the appropriate measure of distributive outcomes in this setting is the percentage of total value claimed. Thus, we first computed a "value-claimed" variable by dividing each negotiator's individual outcome by the dyad's joint gains. We then reran the above one-way ANOVA on this variable and found that restaurant space owners who were instructed to make offers using phantom anchors claimed significantly more value than those who were not instructed to use phantom anchors, F (1, 42) = 4.52, $p = 0.04$, $d = 0.57$, $M_{phantom\ present} = 0.58$, $SD_{phantom\ present} = 0.08$; $M_{phantom\ absent} = 0.53$ $SD_{phantom\ absent} = 0.06$.

Study 3b examined phantom anchors in a face-to-face negotiation with integrative potential. Our findings indicate that the value-claiming

[8] The occurrence of multi- vs. single-issue offers did not differ across the *phantom anchor present* versus *phantom anchor absent* conditions, $X^2 = 0.52$, $p = 0.47$.

advantage of phantom anchors extends to negotiations with integrative potential: negotiators using phantom anchors claimed more of the negotiation pie than those who did not. Moreover, we did not observe a detrimental effect of phantom anchors on joint gains: dyads using phantom anchors did not create significantly less value than those who did not (though our sample size was relatively small).

Collectively, Study 3a and 3b reveal that the phantom anchor advantage emerges when the anchor appears in a first offer, in accordance with the large literature on first offers in negotiation. While the use of first offers to manipulate phantom anchors is a weakness of these studies in that this apparently occurs less often in real life (according to Study 1b), we also consider the current results useful for demonstrating the generalizability of the effect and connecting our work to the first offers literature. Notably, these studies go beyond a mere replication of the anchoring effect by showing that phantom anchors "anchor better" than the normal first offers against which we compared them.

Our overall model posits that phantom anchors also generate positive (benevolent) or negative (manipulative) interpersonal perceptions, which could exacerbate or dampen anchoring effects, respectively. Our remaining studies continue to measure economic outcomes but focus on these interpersonal perceptions and situational factors that could moderate them.

6. Study 4

Study 4 focuses on interpersonal perceptions resulting from phantom anchors: specifically, perceptions of benevolence (Hypothesis 2a) and manipulativeness (Hypothesis 2b). To do so, a different online sample reacted to the same negotiation scenario as in Study 2. Additionally, this study sought to test an alternative explanation for any potential interpersonal perceptions arising from offers with phantom anchors: that such perceptions derive not from the form or "phantomness" of the offers but rather from their extremity (i.e., the fact that they include a relatively extreme figure). To test this alternative explanation, we included relatively extreme and moderate versions of offers with and without phantom anchors. If the alternative explanation holds, then the more extreme combination of the phantom anchor and actual offer should be seen as less benevolent and/or more manipulative than the moderate combination. If not, then both combinations should generate similar interpersonal perceptions.

6.1. Method

6.1.1. Participants and design

We advertised the study on Prolific Academic for 440 participants but ended up with 441 (M_{age} = 33.32, SD_{age} = 12.09, 44% women). Participants were all located in the United States, were native speakers of English and received $0.95 for their participation. The study had a 2 (offer type: phantom present versus phantom absent) × 2 (offer magnitude: extreme versus moderate) between-subjects design.

6.1.2. Procedure.

The procedure was identical to Study 2's with two exceptions: (1) participants answered additional questions (see below), and (2) we manipulated the extremity of the phantom anchor.

6.1.3. Manipulated and measured variables

Offer type and offer magnitude manipulations. Our manipulations were very similar to the previous two studies, and our two independent variables led to four conditions. In the *phantom anchor present-extreme* condition, the buyer said: "Although I was originally going to offer you $10,000, I am willing to pay $11,000"; in the *phantom anchor present-moderate* condition: "Although I was originally going to offer you $11,000, I am willing to pay $12,000"; in the *phantom anchor absent-extreme* condition: "I am willing to pay $11,000"; and in the *phantom anchor absent-moderate* condition: "I am willing to pay $12,000."

Counteroffer. Participants were asked to provide a counteroffer to the buyer.

Perceptions of offerer's benevolence. To gauge whether phantom anchors led to perceptions of benevolence, the primary questions participants answered were these: "The buyer tried to help me out in this negotiation" (1 = Strongly disagree, 7 = Strong agree); "Based on the limited information you have about the buyer, to what extent do you expect him to cooperate with you in this negotiation?" (1 = Not at all, 7 = A lot); "Based on the limited information you have about the buyer, to what extent do you expect him to work with you in this negotiation?" (1 = Not at all, 7 = A lot, α = 0.71).

Perceptions of offerer's manipulativeness. To test the possible effects of phantom anchors on perceptions of manipulativeness, the primary questions participants answered were these: "The buyer is being manipulative with the way he made his offers in this negotiation"; "The buyer is trying to take advantage of me"; and "The buyer was not honest in the way he made his offers" (1 = Strongly disagree, 7 = Strongly agree, α = 0.85).

Attention check. To test whether participants were paying attention, we included a question that read: "This is a question that is designed to see if you are paying attention. Do not answer this question."

6.2. Results and discussion

6.2.1. Preliminary analysis

Twenty-one participants failed our attention check question. An additional five participants provided counteroffers that reflected either a lack of attention or a lack of comprehension. For example, despite being in the role of the seller, one participant countered with $450 and another with $21. We excluded these twenty-six participants and conducted our analysis using the remaining 415 respondents. Means, standard deviations and bivariate correlations of variables used in Study 4 are reported in Table 3.

6.2.2. Main analysis

Counteroffer. To test the effect of offers with versus without phantom anchors and the magnitude of these offers on counteroffers, we coded our independent variables as *phantom anchor absent* condition = −1, *phantom anchor present* condition = 1 and *moderate magnitude* condition = −1, *extreme magnitude* condition = 1. Since the

Table 3
Means, standard deviations, and zero-order correlations of variables in Study 4.

Variable	*M*	*SD*	Offer type	Offer magnitude	Perceptions of benevolence	Perceptions of manipulativeness	Counteroffer
Offer type	−0.01	1.00	–				
Offer magnitude	−0.01	1.00	0.00	–			
Perceptions of benevolence	4.49	0.97	−0.05	−0.19**	–		
Perceptions of manipulativeness	3.08	1.37	0.37**	0.14**	−0.51**	–	
Counteroffer	12433.01	804.51	−0.26**	−0.25**	−0.21**	0.07	–

Note: N = 415. Offer type is coded as phantom anchor absent = −1, phantom anchor present = 1; offer magnitude is coded as extreme magnitude = −1, moderate magnitude = 1. Participants were in the role of sellers. *p < 0.05, **p < 001.

person responding to the offers was a seller, less aggressive counteroffers (from their perspective) would be indicated by lower values. We then conducted a factorial Analysis of Variance (ANOVA), which produced two main effects but no interaction. The first main effect indicated that offers with phantom anchors led to less aggressive counteroffers than those without phantom anchors, F (1, 411) = 32.30, $p < 0.001$, $d = 0.54$, $M_{phantom\ present} = 12{,}221.12$, $SD_{phantom\ present} = 751.27$; $M_{phantom\ absent} = 12{,}641.87$, $SD_{phantom\ absent} = 802.30$. The second main effect indicated, as anchoring theory would suggest, that sellers were anchored by the magnitude of the buyer's offer. Those who received a moderate (i.e., higher) offer made a higher counteroffer than those who received an extreme (i.e., lower) offer, F (1, 411) = 30.22, $p < .001$, $d = 0.53$, $M_{extreme} = 12{,}227.07$, $SD_{extreme} = 846.12$; $M_{moderate} = 12{,}634.05$, $SD_{moderate} = 707.87$. The interaction was not significant, F (1, 411) = 0.03, $p = 0.89$, meaning that the effectiveness of offers with versus without phantom anchors did not depend on extremity. Taken together, these results replicate the distributive advantage of phantom anchors.

Perceptions of offerer's benevolence. To test for the effect of phantom anchors on perceptions of benevolence (Hypothesis 2a), we reran the above ANOVA on the "perceptions of offerer's benevolence" variable. This analysis did not yield a significant effect of the offer type variable, F (1, 411) = 1.04, $p = 0.31$. However, there was a significant main effect of offer magnitude, F (1, 411) = 15.26, $p < 0.001$, $d = 0.40$, such that moderate offers led to higher perceptions of benevolence than extreme offers, $M_{moderate} = 4.67$, $SD_{moderate} = 0.99$, $M_{extreme} = 4.30$, $SD_{extreme} = 0.91$. Finally, the interaction was not significant, F (1, 411) = 0.004, $p = 0.96$.[9] These results suggest that, in contrast to Hypothesis 2a, the combination of a phantom anchor with an actual offer did not influence perceptions of the offerer's benevolence.

Perceptions of offerer's manipulativeness. To test for the effect of phantom anchors on perceptions of manipulativeness (Hypothesis 2b), we reran the above ANOVA once more, this time on the "perceptions of offerer's manipulativeness" variable. The ANOVA revealed a significant main effect of offer type, F (1, 411) = 65.85, $p < 0.001$, $d = 0.78$, a significant effect of offer magnitude, F (1, 411) = 9.66, $p = 0.004$, $d = 0.29$, and no interaction, F (1, 411) = 0.47, $p = 0.49$. Specifically, phantom anchors significantly increased perceptions of the offerer's manipulativeness, $M_{phantom\ present} = 3.58$, $SD_{phantom\ present} = 1.34$, $M_{phantom\ absent} = 2.58$, $SD_{phantom\ absent} = 1.21$. Additionally, moderate offers led to lower perceptions of manipulativeness than extreme offers, $M_{moderate} = 2.88$, $SD_{moderate} = 1.31$, $M_{extreme} = 3.27$, $SD_{extreme} = 0.40$. Consistent with Hypothesis 2b, these results suggest that phantom anchors are perceived as manipulative. Inconsistent with the alternative explanation, these perceptions appeared to stem from the form or "phantomness" of the offer rather than its extremity.

Suppression Analysis. So far, we observed that offers with phantom anchors led to less aggressive counteroffers than offers without them, but also increased perceptions of the offerer's manipulativeness. Taken together, these results suggest that phantom anchors, despite successfully anchoring offer recipients and eliciting less aggressive counteroffers, also breed negative interpersonal perceptions. These results begin to support the mediation portion of the moderated mediation model in Fig. 1, though we have not yet measured the proposed moderator (situational conditions portraying the combination of the phantom anchor and actual offer combination as a true concession). Thus, we sought to conduct a preliminary test of the mediation portion of the model. We should also note that, although this study includes a second independent variable (offer magnitude), we collapsed across the two levels of this variable based on the results reported above.

Since phantom anchors appear to have beneficial economic effects but generate negative interpersonal perceptions (which should dampen economic effects), the mediation pattern is more properly called suppression or inconsistent mediation. In a pattern of suppression, the sign of the indirect relationship is opposite the sign of the total relationship. To test that possibility, we used the PROCESS macro by Hayes (2017) to conduct a bootstrapping test with 10,000 resamples, with offer type as the independent variable, perceptions of offerer's manipulativeness as the mediator, and counteroffer as the dependent variable. This analysis first revealed a significant and negative direct effect of the phantom anchor variable on counteroffers, B = −265.45, SE = 40.42, 95% CI −344.90, −186.00, indicating less aggressive counteroffers. Moreover, there was a significant and positive effect of perceptions of buyer manipulativeness on counteroffers, B = 109.41, SE = 29.53, 95% CI 51.37, 167.45, indicating that offers became more aggressive as perceptions of manipulativeness increased. Finally, the indirect effect involving the suppressor, i.e. perceptions of the offerer's manipulativeness, was also significant and positive, B = 55.08, SE = 16.44, 95% CI 23.79, 88.49. The opposing signs on the relationships involving and not involving the mediator support suppression. Fig. 2 depicts this analysis.

Taken together, these findings suggest that phantom anchors set powerful anchors, influencing counteroffer values directly. This replicates our previous findings and supports Hypothesis 1. On the other hand, phantom anchors also seem to produce negative interpersonal perceptions of manipulativeness, thereby harming economic outcomes—albeit through a less direct path and less strongly than the anchoring effect. Coupled with the fact that phantom anchors did not seem to influence perceptions of benevolence, this pattern supports Hypothesis 2b rather than 2a. Importantly, this study also argued against a potential alternative explanation: that the extremity rather than the "phantomness" of an offer drives manipulativeness perceptions. Our results suggest that it is the "phantomness" of phantom anchors that seems manipulative.

7. Study 5

Study 5 is a three-part study intended to delve deeper into interpersonal perceptions, explore potential moderators, and test our full moderated mediation model (Fig. 1). Each part of the study tests one of the moderators predicted to influence whether offers with phantom anchors are perceived as true concessions: the presence versus absence of objective standards (Study 5a), competitiveness versus cooperativeness of the negotiation context (Study 5b), and bolstering versus backdown format of the offer (Study 5c). For consistency and comparability, all three parts of the study used the same context: a salary negotiation.

[9] We also tested the effects of phantom anchors and offer magnitude on perceptions of manipulativeness and benevolence using measures that are aimed at gauging more general perceptions of the offerer. Specifically, the four items for perceptions of manipulativeness were, "To what extent do you think the buyer's behavior can be described as manipulative, misleading, deceitful, deceptive" (1 = Not at all, 5 = Very much, α = 0.96); and the four items for perceptions of benevolence were, "To what extent do you think the buyer's behavior can be described as benevolent, altruistic, cooperative, helpful" (1 = Not at all, 5 = Very much, α = 0.81). We first ran a factorial ANOVA with the offer type and the offer magnitude variables as the independent and perceptions of benevolence as the dependent variable. We observed only a main effect of the offer magnitude condition, F (1, 411) = 28.23, $p < 0.001$, $M_{moderate} = 2.65$, $SD_{moderate} = 0.86$, $M_{extreme} = 2.20$, $SD_{extreme} = 0.73$, $d = 0.56$. There was neither an effect of offer type, F (1, 411) = 0.09, $p = 0.93$ nor an interaction, F (1, 411) = 0.77, $p = 0.38$. We then ran this analysis on perceptions of manipulativeness. Results were very similar to those with our main manipulativeness measure, such that there was a marginally significant effect of offer magnitude, F (1, 411) = 3.19, $p = 0.08$ and a significant effect of offer type F (1, 411) = 70.73, $p < 0.001$, but no interaction, F (1, 411) = 2.21, $p = 0.14$. Moderate offers decreased perceptions of manipulativeness in relation to extreme offers, $M_{moderate} = 1.67$, $SD_{moderate} = 0.99$, $M_{extreme} = 1.82$, $SD_{extreme} = 0.93$, $d = 0.16$, and phantom anchors led to higher perceptions of offerer's manipulativeness, $M_{phantom\ present} = 2.11$, $SD_{phantom\ present} = 1.06$, $M_{phantom\ absent} = 1.38$, $SD_{phantom\ absent} = 1.06$, $d = 0.82$.

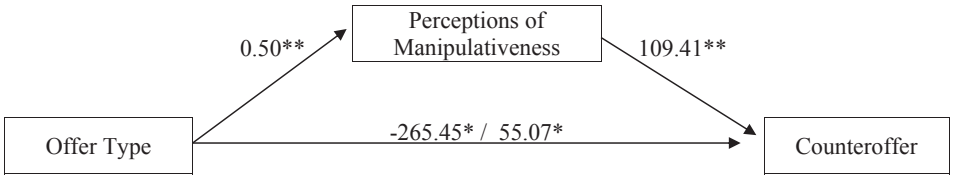

Fig. 2. Analysis of the relationship between offer type and counteroffers in Study 4 with perceptions of manipulativeness as the suppressing variable. *Note:* $N = 205$. Offer type was coded as phantom anchor absent = −1 phantom anchor present = 1.

7.1. Study 5a

Study 5a again examines the effect of phantom anchors on perceptions of benevolence and/or manipulativeness. Additionally, it examines whether the presence of an objective standard (Fisher & Ury, 1981) that matches the phantom anchor, by portraying the real offer as a true concession, may increase perceptions of benevolence and/or reduce perceptions of manipulativeness, either of which could influence phantom anchors' economic effects. Yet, our prior studies suggest that the economic effect of phantom anchors is unlikely to be eliminated.

7.2. Study 5a method

7.2.1. Participants and design

We advertised the study on Prolific Academic for 400 participants but ended up with 412 (M_{age} = 33.57 SD_{age} = 11.10, 47.1% women). Participants were all located in the United States and were native English speakers. They received $0.75 in exchange for their participation. The study contained two manipulated variables: offer type (phantom anchor present versus phantom anchor absent) x objective standard (objective standard present versus objective standard absent) in a between-subjects factorial design.

7.2.2. Procedure

All three parts of Study 5 used a similar adaptation of a negotiation scenario from Ames and Mason (2015). We describe the scenario in detail here and discuss only the variants in Studies 5b and 5c. Participants imagined that they had been working as a temporary project manager for a construction company for the past six months. They learned that the company now wanted to hire them as a full-time, salaried employee and that they were about to negotiate the offer with the human resources director, Pat. The full scenario is in Appendix A.

7.2.3. Manipulated and measured variables.

Objective standard manipulation. Study 5a manipulated the presence of an objective standard by including a salary estimate from a job-hunting website. Specifically, in the *objective standard present* condition, prior to hearing Pat's offer, participants read that: "Job websites like Monster.com indicate that people in similar positions, in similar companies, make about $55,000." In the *objective standard absent* condition, they read: "Job websites like Monster.com have no information on the average salary of people in similar positions, in similar companies."

Offer type manipulation. We manipulated offer type via the way in which the human resource director, Pat, made the salary offer. In the *phantom anchor present* condition, Pat said: "We were planning on offering you $55,000 but we can do $60,000." In the *phantom anchor absent* condition, Pat said: "We can offer you $60,000."

Counteroffer. Participants were asked to provide a counteroffer to Pat's salary offer.

Counteroffer reason. To make sure participants understood the negotiation and their role, we also asked participants to describe why they chose the counteroffer amount they did.

Perceptions of offerer's benevolence. We measured perceptions of benevolence the same as in Study 4, though the items now referenced Pat, α = 0.70.

Perceptions of offerer's manipulativeness. Perceptions of manipulativeness were also measured the same way in is Study 4, referencing Pat, α = 0.81.

Attention check. As in our previous studies, we embedded a question to test whether participants were paying attention: "This is a question to test if you are paying attention. Please do not answer this question."

7.3. Study 5a results and discussion

7.3.1. Preliminary analysis

Twenty-three participants failed the attention check question. As a secondary check on participants' attention, we looked through the counteroffers and their accompanying reasons. Five additional participants provided counteroffers and reasons that clearly reflected a lack of either comprehension or attention. For example, one participant provided a counteroffer of $7 and said, "Because I like it!" Another participant offered $50,000, which is $10,000 lower than the initial offer and said, "I feel it's fair." We excluded the confused or inattentive participants and performed data analyses with the remaining 384. Means, standard deviations and bivariate correlations of variables for Study 5a are reported in Table 4.

7.3.2. Main analysis.

Our moderated mediation model suggests that phantom anchors will elicit less aggressive counteroffers (Hypothesis 1) along with perceptions of either benevolence (Hypothesis 2a) or manipulativeness (Hypothesis 2b), which will be moderated by situational conditions portraying the offer with phantom anchor as a true concession (Hypothesis 3). We first test each hypothesis using ANOVAs. Then, we test the full moderated mediation model.

Counteroffer. Since the person responding to the offers in this and the other parts of Study 5 was a job candidate, Hypothesis 1 suggests that offers with phantom anchors should elicit lower counteroffers, which are less aggressive from a candidate's perspective. To test Hypothesis 1, we conducted a two-way ANOVA with *offer type* condition (*phantom anchor absent* = −1, *phantom anchor present* = 1) and

Table 4
Means, standard deviations, and zero-order correlations of variables in Study 5a.

Variable	*M*	*SD*	Offer type	Objective Standard	Perceptions of benevolence	Perceptions of manipulativeness	Counteroffer
Offer type	0.00	1.00	–				
Objective Standard	−0.01	1.00	−0.08	–			
Perceptions of benevolence	4.52	1.12	0.04	0.39**	–		
Perceptions of manipulativeness	3.13	1.43	0.22**	−0.30**	−0.47**	–	
Counteroffer	65111.13	5596.48	−0.22**	−0.38**	−0.44**	0.26**	–

Note: $N = 484$. Offer type is coded as phantom anchor absent = −1, phantom anchor present = 1; objective standard is coded as objective standard absent = −1, objective standard present = 1. Participants were in the role of job candidates. *p < 0.05, **p < 001.

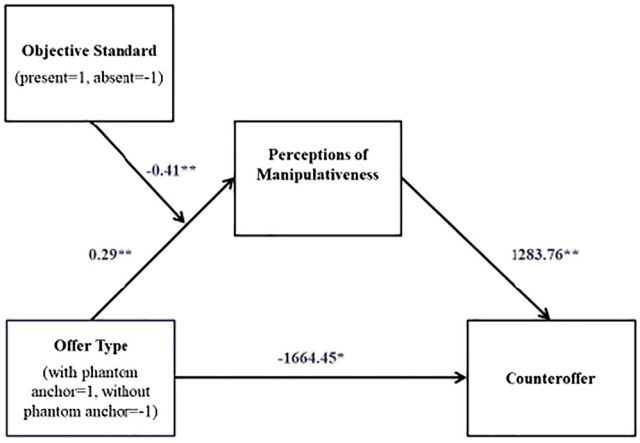

Fig. 3. Moderated mediation analysis with offer type as the independent, objective standard as the moderating, perceptions of manipulativeness as the mediating, and counteroffer as the dependent variable in Study 5a. *Note:* $N = 384$.

objective standard condition (*objective standard absent* $= -1$, *objective standard present* $= 1$) as independent variables and counteroffer as the dependent variable. Consistent with the hypothesis, the analysis resulted in a main effect of *offer type* condition, F (1, 380) $= 31.54$, $p < 0.001$, $d = 0.46$. Additionally, it produced a main effect of the *objective standard* condition, F (1, 380) $= 77.09$, $p < 0.001$, $d = 0.74$ and an interaction, F (1, 380) $= 6.46$, $p = 0.01$, $\eta^2 = 0.02$. As suggested by Hypothesis 1, offers with phantom anchors elicited less aggressive counteroffers than offers without phantom anchors, $M_{phantom\ present} = 63{,}856.77$, $SD_{phantom\ present} = 3889.51$, $M_{phantom\ absent} = 66{,}365.49$, $SD_{phantom\ absent} = 5688.59$. Also, consistent with basic theory about objective standards, job candidates who learned of an objective standard countered less aggressively ($M_{objective\ standard\ present} = 62{,}983.35$, $SD_{objective\ standard\ present} = 5223.19$) than those who did not ($M_{objective\ standard\ absent} = 67{,}216.87$, $SD_{objective\ standard\ absent} = 6208.56$), F (1, 380) $= 77.09$, $p < 0.001$, $d = 0.74$.

We conducted tests of simple effects to decompose the interaction. Results indicated that offers with phantom anchors elicited significantly less aggressive counteroffers when accompanied by an objective standard ($M_{objective\ standard\ present} = 62{,}142.05$, $SD_{objective\ standard\ present} = 3966.78$) than when not ($M_{objective\ standard\ absent} = 65{,}307.69$, $SD_{objective\ standard\ absent} = 5715.04$), $F = 19.44$, $p < 0.001$, $d = 0.64$. This effect also emerged for offers without phantom anchors, $M_{objective\ standard\ present} = 63{,}702.14$, $SD_{objective\ standard\ present} = 3691.41$, $M_{objective\ standard\ absent} = 69{,}447.81$, $SD_{objective\ standard\ absent} = 6044.04$, $F = 64.14$, $p < 0.001$, $d = 1.14$. As the effect sizes demonstrate, however, the effect was weaker for offers with phantom anchors, hinting that the anchoring benefits of such offers are less susceptible to situational influences compared to offers without phantom anchors. This observation is in line with our prior findings documenting the strength of the distributive advantage of phantom anchors.

Perceptions of offerer's benevolence. Hypothesis 2a posits that phantom anchors may increase perceptions of benevolence, and Hypothesis 3a that situational factors like objective standards may amplify this relationship. These predictions amount to a main effect of offer type as well as an interaction between the offer type and objective standard variables. To test this prediction, we ran a factorial ANOVA with the offer type and objective standards variables as the independent and perceptions of benevolence as the dependent variable. Results included only a main effect of the objective standard condition, indicating that objective standards increased perceived benevolence, $M_{objective\ standard\ present} = 4.96$, $SD_{objective\ standard\ present} = 1.07$, $M_{objective\ standard\ absent} = 4.08$, $SD_{objective\ standard\ absent} = 1.07$, F (1, 380) $= 71.82$, $p < 0.001$, $d = 0.82$. Neither offer type, F (1, 380) $= 2.47$, $p = 0.12$, nor the interaction, F (1, 380) $= 0.19$, $p = 0.66$, was significant.

Perceptions of offerer's manipulativeness. Similarly, Hypothesis 2b suggests that phantom anchors may generate perceptions of manipulativeness, but Hypothesis 3 suggests that objective standards may dampen such perceptions. To test these predictions, we reran the above ANOVA on perceptions of offerer's manipulativeness. Results included two main effects and an interaction. Consistent with Hypothesis 2b, the main effect of phantom anchors indicated that they increased perceptions of manipulativeness, F (1,380) $= 17.71$, $p < 0.001$, $d = 0.45$, $M_{phantom\ present} = 3.44$, $SD_{phantom\ present} = 1.46$, $M_{phantom\ absent} = 2.81$, $SD_{phantom\ absent} = 1.34$. On the other hand, the main effect of objective standards indicated that these standards decreased perceptions of manipulativeness, $M_{objective\ standard\ present} = 2.70$, $SD_{objective\ standard\ present} = 1.41$, $M_{objective\ standard\ absent} = 3.55$, $SD_{objective\ standard\ absent} = 1.33$, F (1, 380) $= 35.45$, $p < 0.001$, $d = 0.62$.

Moreover, there was an interaction between offer type and objective standard, F (1, 380) $= 6.46$, $p = 0.01$. Tests of the simple effects underlying the interaction revealed that, for offers with phantom anchors, the presence of an objective standard significantly reduced perceptions of manipulativeness, $M_{objective\ standard\ present} = 2.83$, $SD_{objective\ standard\ present} = 1.43$, $M_{objective\ standard\ absent} = 3.97$, $SD_{objective\ standard\ absent} = 1.27$, $F = 35.47$, $p < 0.001$, $d = 0.84$. This effect, though weaker, also emerged for offers without phantom anchors, $M_{objective\ standard\ present} = 2.59$, $SD_{objective\ standard\ present} = 1.40$, $M_{objective\ standard\ absent} = 3.06$, $SD_{objective\ standard\ absent} = 1.22$, $F = 6.06$, $p = 0.01$, $d = 0.36$.

Taken together, our findings on perceptions of benevolence and manipulativeness support Hypothesis 2b (rather than Hypothesis 2a) as well as Hypothesis 3.

Moderated mediation analysis. Finally, we sought to test the full moderated mediation model collectively implied by our hypotheses (Fig. 1). Given the significant effect of offers with phantom anchors on perceived manipulativeness, we tested a model involving that mediator first (using Version 3 of Hayes' [2017] PROCESS Model 7). In support of the predicted model, the confidence interval for the indirect effect of manipulativeness did not include zero [331.42, 889.98] in the *objective standard absent* condition but did include zero in the *objective standard present* condition [−101.56, 449.79]. Additionally, the confidence interval for the overall model did not include zero [−782.16, −96.73], providing support for the predicted pattern of moderated mediation (with manipulativeness as the mediator). Fig. 3 depicts these results.

Despite the null results for benevolence reported above, we also tested the moderated mediation model with perceptions of benevolence as the mediator. Consistent with the null results, confidence intervals for the indirect effects [$CI_{objective\ standard\ absent}$ −464.74, 196.68; $CI_{objective\ standard\ present}$ −548.75, 72.05] and overall model [−556.11, 352.10] all included zero.

Taken together, results of Study 5a support the prediction that phantom anchors have a strong anchoring effect (Hypothesis 1), despite eliciting negative interpersonal perceptions of manipulativeness (Hypothesis 2b). The presence of an objective standard, though, seems to reduce or eliminate these negative perceptions (Hypothesis 3).

7.4. Study 5b

Study 5b examines another potential moderator of interpersonal perceptions: the competitiveness versus cooperativeness of the negotiation situation. Like an objective standard, a cooperative negotiation seems likely to cast an offer with a phantom anchor as a true concession.

7.5. Study 5b method

7.5.1. Participants and design

We advertised the study for 440 participants on Prolific Academic but ended up with 439 ($M_{age} = 33.36$ $SD_{age} = 11.34$, 47.8% women). Participants were all located in the U.S. and were native speakers of

English. They received $0.95 for their participation. We should note that we prevented participants who had taken Study 5a from taking this study due to its similarity. The study contained two manipulated variables: offer type (phantom anchor present versus phantom anchor absent) and negotiation type (competitive versus cooperative) in a between-subjects factorial design.

7.5.2. Procedure

This study's procedure was exactly the same as Study 5a's except that no information about the presence or absence of an objective standard was provided, and the competitiveness versus cooperativeness of the negotiation was manipulated as follows.

7.5.3. Manipulated and measured variables.

Negotiation type manipulation. We manipulated negotiation type by including information about how the human resources manager, Pat, behaved. In the *cooperative negotiation* condition, participants read that, "Pat acts very cooperatively, demonstrates great concern about your interests, and expresses a strong desire to make an offer with a reasonable salary." In the *competitive negotiation* condition, they read: "Pat acts very competitively, demonstrates little concern about your interests, and expresses no desire to make an offer with a reasonable salary."

Offer type manipulation. Our offer type manipulation was identical to Study 5a.

Counteroffer, counteroffer reason, perceptions of manipulativeness, perceptions of benevolence and attention check. These measures were also identical to Study 5a.

7.6. Study 5b results and discussion

7.6.1. Preliminary analysis

Before moving on to the main analysis, we checked whether any participants needed to be excluded due to lack of attention or comprehension. Twenty-one participants failed the attention check question. As in our previous study, an additional six participants made counteroffers or gave rationales indicating that they were not paying attention and/or did not understand the instructions. We excluded these twenty-seven participants and conducted all further analysis on the remaining 412. Means, standard deviations and bivariate correlations are reported in Table 5.

7.6.2. Main analysis

Counteroffer. Hypothesis 1 suggests that offers with phantom anchors should elicit lower (less aggressive) counteroffers. Basic negotiation theory would suggest that cooperative negotiations should have the same effect. We did not identify an *a priori* reason to expect an interaction. To test these predictions, we conducted a two-way ANOVA with *offer type* condition (*phantom anchor absent* = −1, *phantom anchor present* = 1) and *negotiation type* condition (*competitive* = −1, *cooperative* = 1) as independent variables and counteroffer as the dependent variable. As expected, results revealed the predicted main effect of *offer type*, F (1, 408) = 52.34, $p < 0.001$, $d = 0.71$, such that offers with phantom anchors led to less aggressive counteroffers, $M_{phantom\ present} = 63{,}827.01$, $SD_{phantom\ present} = 5745.16$, $M_{phantom\ absent} = 71{,}461.69$, $SD_{phantom\ absent} = 9690.04$. Additionally, the ANOVA produced the expected main effect of *negotiation type*, F (1, 408) = 14.30, $p < 0.001$, $d = 0.37$, such that participants operating in a cooperative setting made less aggressive counteroffers than those in a competitive setting, $M_{cooperative} = 67{,}059.71$, $SD_{cooperative} = 3889.51$, $M_{competitive} = 70{,}092.23$, $SD_{competitive} = 9681.20$. Finally, we did not observe an interaction, F (1, 380) = 0.32, $p = 0.57$.

Perceptions of offerer's benevolence. Hypothesis 2a implies a main effect of offer type on perceptions of benevolence, and Hypothesis 3 posits that a cooperative negotiation should strengthen this relationship. It is also likely that a cooperative (versus competitive) negotiation would elicit and heighten perceptions of benevolence. These predictions amount to a main effect of offer type and negotiation type variables as well as an interaction between the two on perceptions of benevolence. To test these predictions, we reran the above ANOVA on perceptions of benevolence. Results indicated a main effect of the offer type variable, F (1, 408) = 6.20, $p = 0.01$, $d = 0.21$, $M_{phantom\ present} = 4.07$, $SD_{phantom\ present} = 1.39$, $M_{phantom\ absent} = 3.77$, $SD_{phantom\ absent} = 1.41$ and a main effect of the negotiation type variable, F (1, 408) = 257.3, $p < 0.001$, $d = 1.58$, $M_{cooperative} = 4.80$, $SD_{cooperative} = 1.03$, $M_{competitive} = 3.06$, $SD_{competitive} = 1.17$. However, the interaction was not significant, F (1,408) = 1.28, $p = 0.26$. These results provide support for Hypothesis 2a but not for Hypothesis 3 (in the context of benevolence).

Perceptions of offerer's manipulativeness. Hypothesis 2b implies a main effect of offer type on perceptions of manipulativeness, whereas Hypothesis 3 suggests an interaction indicating that a cooperative negotiation moderates these perceptions. It also stands to reason that a cooperative negotiation should elicit lower manipulativeness perceptions (a main effect). Rerunning the above two-way ANOVA on perceptions of offerer's manipulativeness, we observed these two main effects and interaction. In support of Hypothesis 2b, recipients of offers with phantom anchors viewed their negotiation partners as more manipulative than recipients of offers without phantom anchors, F (1,408) = 23.58, $p < 0.001$, $d = 0.41$, $M_{phantom\ present} = 4.43$, $SD_{phantom\ present} = 1.44$, $M_{phantom\ absent} = 3.81$, $SD_{phantom\ absent} = 1.57$. Additionally, partners were viewed as less manipulative in the cooperative than the competitive setting, $M_{cooperative} = 3.51$, $SD_{cooperative} = 1.50$, $M_{competitive} = 4.74$, $SD_{competitive} = 1.31$, F (1, 408) = 87.32, $p < 0.001$, $d = 0.87$.

To interpret the interaction between offer type and negotiation type, F (1, 412) = 11.42, $p = 0.001$, we conducted simple effects tests. Consistent with Hypothesis 3, they revealed that offers with phantom anchors were viewed as significantly less manipulative in the context of a cooperative negotiation, $M_{cooperative} = 4.04$, $SD_{cooperative} = 1.43$ than a competitive negotiation, $M_{competitive} = 4.84$, $SD_{competitive} = 1.35$, $F = 18.23$, $p < 0.001$, $d = 0.58$, though this difference was smaller than the difference for offers without phantom anchors, $M_{cooperative} = 2.94$, $SD_{cooperative} = 1.38$ $M_{competitive} = 4.64$, $SD_{competitive} = 1.27$, $F = 79.04$, $p < 0.001$, $d = 1.28$.

Moderated mediation analysis. We next tested our full model using PROCESS Model 7 (Hayes, 2017), starting with perceptions of manipulativeness. In this analysis, the confidence interval for the indirect effect of manipulativeness did not include zero [653.46, 1535.78] in the *competitive* condition but did include zero in the *cooperative* condition

Table 5
Means, standard deviations, and zero-order correlations of variables in Study 5b.

Variable	*M*	*SD*	Offer type	Negotiation type	Perceptions of benevolence	Perceptions of manipulativeness	Counteroffer
Offer type	0.00	1.00	–				
Negotiation type	−0.01	1.00	0.02	–			
Perceptions of benevolence	3.93	1.40	0.11*	0.62**	–		
Perceptions of manipulativeness	4.12	1.53	0.20**	−0.40**	−0.57**	–	
Counteroffer	68575.97	8395.96	−0.34**	−0.18**	−0.31**	0.27**	–

Note: $N = 412$. Offer type is coded as phantom anchor absent = −1, phantom anchor present = 1; negotiation type is coded as competitive context = −1, cooperative context = 1. Participants were in the role of job candidates. *p < 0.05, **p < 001.

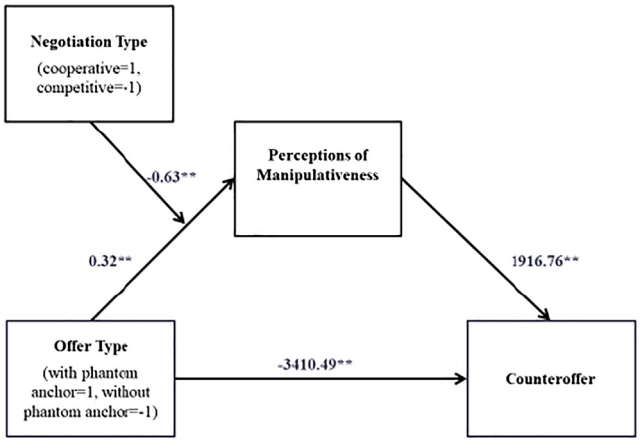

Fig. 4. Moderated mediation analysis with offer type as the independent, negotiation type as the moderating, perceptions of manipulativeness as the mediating, and counteroffer as the dependent variable in Study 5b. *Note:* $N = 412$.

[−156.49, 559.64]. Moreover, the confidence interval for the overall model did not include zero [355.49, 1438.32]. These results support the overall model, depicted in Fig. 4, with manipulativeness as the mediator.

We then tested perceptions of benevolence as the mediator in a similar model. In this analysis, the confidence interval did not include zero [−617.09, −65.31] in the *cooperative* condition and did in the *competitive* condition [−394.10, 114.87]. However, the confidence interval for the overall model included zero, [−146.20, 578.69], indicating that the moderated mediation model was not supported with benevolence as the mediator.

This study showed that offers with phantom anchors influenced counteroffers irrespective of the cooperative or competitive nature of the negotiation, supporting Hypothesis 1. Phantom anchors also increased perceptions of benevolence (Hypothesis 2a) and manipulativeness (Hypothesis 2b), though manipulativeness perceptions were reduced in the cooperative negotiation (Hypothesis 3). Finally, when examining the full moderated mediation model, we only found support for perceptions of manipulativeness as the mediator. Along with Study 5a, this study provides converging evidence that phantom anchors afford economic advantages but send disadvantageous interpersonal signals, albeit signals that situational factors can reduce.

7.7. Study 5c

Study 5c looks at another potential moderator of interpersonal perceptions: the bolstering versus backdown format of the offer. As noted, Ames and Mason (2015) studied range offers, distinguishing between bolstering range offers (true intended figure = less ambitious number in range) and backdown ranges (true intended figure = more ambitious number in range). For example, they indicated that, "a seller asking '$7200 to $7600' rather than '$7200'" would be a bolstering range offer whereas "a seller asking '$6800 to $7200' rather than '$7200'" (Ames and Mason, 2015, p. 256) would be a backdown range offer. It is possible to apply this typology to phantom anchors, as the phantom anchor and actual offer could be conceptualized as two ends of a range. A situation in which the true intended offer is known to match the actual offer would resemble a bolstering range offer, while a situation in which the true intended offer is known to match the phantom anchor would resemble a backdown range offer. In line with Ames and Mason (2015), we label the former configuration a "bolstering phantom" and the latter a "backdown phantom." To demonstrate these possibilities more clearly, consider a situation in which it is known that a seller truly intends to make a $7200 offer for an item. The statement, "I was going to ask for $7600 but can do $7200" would be a bolstering phantom since the true intended offer matches the actual offer, which the phantom anchor bolsters. On the other hand, if it was known that the seller's true intended offer was $7600, we would categorize the same statement as a backdown phantom since the seller has backed down from the intended offer to $7200.

Consistent with Ames and Mason (2015), we predict that a backdown phantom will be seen as more of a true concession, and thus as more benevolent and/or less manipulative than a bolstering phantom. Additionally, and consistent with our prior studies, we expect the economic advantages of phantom anchors to persist across both types of phantoms.

7.8. Method

7.8.1. Participants and design

We advertised the study on Amazon Mturk for 400 participants but ended up with 399 (M_{age} = 37.64, SD_{age} = 11.32, 49.6% women). Participants, who were all located in the United States, received $0.75 for their participation. In designing the study, we sought to compare bolstering versus backdown phantoms as well as offers with and without phantom anchors, but also to keep the actual offer the same across offer types (to test for anchoring). This involved the creation of four discrete offer conditions, which we manipulated between-subjects: bolstering phantom, backdown phantom, bolstering control, and backdown control. For clarity, we describe our conditions using these names. As described below, however, these four conditions are equivalent to the factorial design: 2 (offer type: phantom present versus absent) × 2 (true intended offer: $55,000 versus $60,000), and we conduct all analyses accordingly for consistency with Study 5a and 5b.

7.8.2. Procedure

We used the same job negotiation scenario as in Studies 5a and 5b, without any mention of objective standards or cooperativeness/competitiveness.

7.8.3. Manipulated and measured variables

Phantom anchor type manipulation. In the *bolstering phantom* condition, participants read that they had researched the company and were "pretty confident that Pat would like to offer you $60,000." In the negotiation, Pat said: "We were planning on offering you $55,000 but we can do $60,000." In the *backdown phantom* condition, participants believed that Pat intended to offer them $55,000, and they read the exact same statement.

In the *bolstering control* condition, Pat's true intended offer was matched to the true intended offer in *bolstering phantom* condition ($60,000), and Pat said: "We can offer you $60,000." In the *backdown control* condition, Pat's true intended offer was matched to the true intended offer in *backdown phantom* condition ($55,000), and participants received a $60,000 offer. In sum, participants received a $60,000 offer across conditions, but we manipulated both the presence versus absence of a phantom anchor and Pat's true intended offer to create four conditions, which were equivalent to a 2 (offer type: phantom present or absent) × 2 (true intended offer: $55,000 or $60,000).

Counteroffer. Participants were asked to provide a counteroffer to Pat's salary offer.

Perceptions of offerer's benevolence. Our measure of benevolence was the same as in Studies 5a and 5b, $\alpha = 0.78$.

Perceptions of offerer's manipulativeness. Our measure of manipulativeness was the same as in Studies 5a and 5b, $\alpha = 0.84$.

Attention check. We used the same attention check question as in Studies 5a and 5b.

Table 6
Means, standard deviations, and zero-order correlations of variables in Study 5c.

Variable	*M*	*SD*	Offer type	True intended offer	Perceptions of benevolence	Perceptions of manipulativeness	Counteroffer
Offer type	0.02	1.00	–				
True intended offer	−0.04	1.00	0.03	–			
Perceptions of benevolence	4.96	1.08	0.02	0.21**	–		
Perceptions of manipulativeness	2.98	1.50	0.29**	−0.19**	−0.36**	–	
Counteroffer	63991.95	4719.07	−0.27**	−0.20**	−0.36**	0.07	–

Note: $N = 392$. Offer type is coded as phantom anchor absent = −1, phantom anchor present = 1; true intended offer is coded as \$60,000 = −1, \$55,000 = 1. Participants were in the role of job candidates. *p < 0.05, **p < 001.

7.9. Results and discussion

7.9.1. Preliminary analysis

Seven participants who failed the attention check question were excluded from subsequent analyses. This left us with 392 participants. Means, standard deviations and bivariate correlations for this study are reported in Table 6.

7.9.2. Main analysis

Counteroffer. Hypothesis 1 suggests that the economic advantage of offers with (versus without) phantom anchors should persist regardless of their bolstering or backdown format. To test this prediction, we first coded the offer type variable as *phantom anchor absent* = −1, *phantom anchor present* = 1, and the true intended offer variable as: *\$60,000* = −1 and *\$55,000* = 1. We then conducted a two-way ANOVA with the offer type and true intended offer conditions as the independent, and the counteroffer as the dependent variable. This analysis yielded a main effect of the offer type variable, F (1, 388) = 29.85, $p < 0.001$, $d = 0.56$, a main effect of the true intended offer variable, F (1, 388) = 16.13, $p < 0.001$, $d = 0.40$, and a significant interaction, F (1, 388) = 7.72, $p = 0.006$. Consistent with Hypothesis 1, we observed that offers with phantom anchors produced less aggressive counteroffers than offers without them, $M_{phantom\ present}$ = 62,740.00, $SD_{phantom\ present}$ = 3911.06, $M_{phantom\ absent}$ = 65,296.08, $SD_{phantom\ absent}$ = 5128.42. As one might expect, counteroffers were also less aggressive when the negotiation counterpart's the true intended offer was \$55,000, $M_{intended\$55K}$ = 63,029.26, $SD_{intended\$55K}$ = 3720.93, $M_{intended\$60K}$ = 64,879.14, $SD_{intended\$60K}$ = 5337.64.

To decompose the interaction, we conducted simple effects tests, which revealed that, for offers without phantom anchors, participants made significantly less aggressive counteroffers when they knew the true intended offer was \$55,000 (i.e., in the backdown control condition), $M_{intended\$55K}$ = 63,662.93, $SD_{intended\$55K}$ = 3424.30, than when they knew the true intended offer was \$60,000 (i.e., in the bolstering control condition), $M_{intended\$60K}$ = 66,707.23, $SD_{intended\$60K}$ = 5898.72, $F = 22.56$, $p < 0.001$, $d = 0.63$. For offers with phantom anchors, however, there was no difference in counteroffers between bolstering and backdown formats, $F = 0.79$, $p = 0.38$.

Perceptions of offerer's benevolence. In line with Hypothesis 2a and 3, we examined whether bolstering versus backdown phantoms would influence perceptions of benevolence and whether these perceptions would be moderated by the format of the offer. Rerunning the above ANOVA on these perceptions, results revealed only a significant effect of the true intended offer variable, F (1, 388) = 17.12, $p < 0.001$, $d = 0.42$, such that participants viewed their negotiation counterpart as more benevolent when the true intended offer was \$55,000, $M_{intended\$55K}$ = 5.19, $SD_{intended\$55K}$ = 1.06, rather than \$60,000, $M_{intended\$60K}$ = 4.75, $SD_{intended\$60K}$ = 1.05. This is understandable since actual offer was \$60,000 in both cases. There was not a significant effect of offer type, F (1, 388) = 0.09, $p = 0.76$, nor an interaction, F (1, 388) = 1.05, $p = 0.31$.

Perceptions of offerer's manipulativeness. Hypothesis 2b suggests that offers with phantom anchors would be viewed as more manipulative than offers without phantom anchors, but Hypothesis 3 suggests that backdown phantoms would be seen as less manipulative than bolstering phantoms. To test these predictions, we first reran the above ANOVA on perceptions of manipulativeness and observed a main effect of offer type, F (1, 388) = 37.74, $p < 0.001$, $d = 0.60$, the true intended offer, F (1, 388) = 17.03, $p < 0.001$, $d = 0.38$ and a significant interaction, F (1, 388) = 7.57, $p = 0.006$. Specifically, offers with phantom anchors were viewed as more manipulative than offers without them, $M_{phantom\ present}$ = 3.40, $SD_{phantom\ present}$ = 1.50, $M_{phantom\ absent}$ = 2.54, $SD_{phantom\ absent}$ = 1.37. Morever, a true intended offer of \$60,000 was seen as more manipulative than that of \$55,000, $M_{intended\$55K}$ = 2.69, $SD_{intended\$55K}$ = 1.33, $M_{intended\$60K}$ = 3.25, $SD_{intended\$60K}$ = 1.59. More importantly, tests of the simple effects revealed that backdown phantoms (i.e., when the true intended offer matched the phantom anchor) were seen as significantly less manipulative than bolstering phantoms (i.e., when the true intended offer matched the actual offer), $M_{intended\$55K}$ = 2.91, $SD_{intended\$55K}$ = 1.34, $M_{intended\$60K}$ = 3.88, $SD_{intended\$60K}$ = 1.50, $F = 24.19$, $p < 0.001$, $d = 0.68$. There was no difference between the backdown and bolstering control conditions, $F = 0.92$, $p = 0.34$. This analysis supports Hypotheses 2b and 3.

Moderated mediation analysis. Akin to Studies 5a and 5b, we tested our full mediation model with the bolstering versus backdown format of the phantom anchor as the moderator. We used Version 3 of Hayes (2017) PROCESS macro Model 7 to conduct a moderated mediation analysis, first with manipulativeness as the mediator. Results indicated the indirect effects at both levels of the true intended offer variable had confidence intervals excluding zero [$CI_{\$55,000}$ 13.06, 308.65; $CI_{\$60,000}$ 74.22, 630.77], supporting the presence of indirect effects. Additionally, the overall model had a confidence interval excluding zero [−448.36, −28.36], providing support for the overall pattern of moderated mediation, with manipulativeness as the mediator (Fig. 5).

We also tested this model with perceptions of benevolence as the

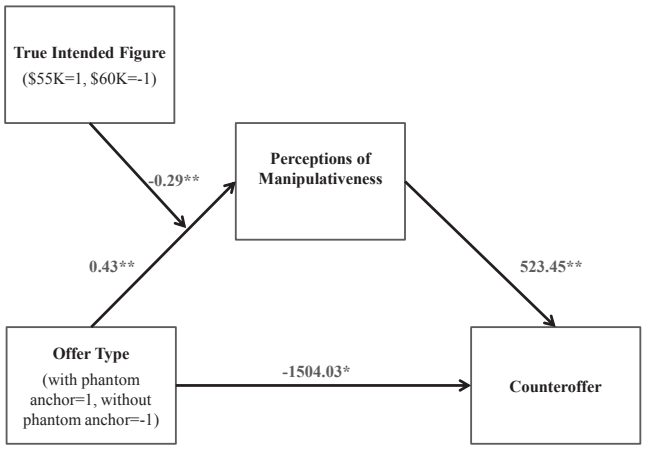

Fig. 5. Moderated mediation analysis with offer type as the independent, true intended figure as the moderating, perceptions of manipulativeness as the mediating, and counteroffer as the dependent variable in Study 5c. *Note:* $N = 392$.

mediator, but neither the indirect effects [$CI_{\$55,000}$ −343.46, 471.80, $CI_{\$60,000}$ −302.22, 482.67] nor the overall model [−526.32, 580.49] had a confidence interval excluding zero.

This study provided further evidence that offers with phantom anchors produce an economic advantage but also elicit perceptions of manipulativeness, which can be attenuated by formatting the phantom similarly to a backdown range. Yet, perceptions of manipulativeness were again insufficient to eliminate the economic advantage afforded by phantom anchors. Additionally, we would note the consistent absence of benevolence perceptions, in opposition to Hypothesis 2a. At least in the current contexts, our participants rarely appeared to see phantom anchors as indicative of the offerer's benevolence. Overall, offer recipients seemed to perceive little benevolence and some manipulativeness in the use of phantom anchors, but manipulativeness perceptions were insufficient to counteract the economic advantage afforded by those anchors, especially under situational conditions signaling a true concession.

8. General discussion

In this paper, we introduced the concept of phantom anchors in negotiation, which are retracted and aggressive figures attached to real and less aggressive offers. Our first study documented the spontaneous use of phantom anchors in negotiation, while our next four studies collectively showed that these anchors afford an economic advantage due to anchoring (a "phantom anchor effect"), but only at the expense of interpersonal perceptions. Specifically, our findings suggest that negotiators using phantom anchors received more favorable counteroffers and obtained better settlement prices but were also viewed as more manipulative than those who did not use phantom anchors. Indeed, in a single paper meta-analysis (McShane & Brockenholt, 2017) of our studies, we actually find that offers with phantom anchors led to 4.5% less aggressive counteroffers than offers without phantom anchors (95% CI: 2.5–6.4%) but also increased perceptions of manipulativeness by 0.58 points on a 7-point scale (95% CI: 0.36–0.78; please see Appendix B for more details on this analysis). As Study 5 demonstrates, however, these manipulativeness perceptions can be reduced by situational conditions portraying the combined phantom anchor and actual offer as a true concession. We believe these findings offer some notable contributions to theory and practice.

8.1. Contributions to negotiation theory

By showing that offers with the same actual offers can elicit divergent counteroffers, our work contributes to the interpersonal influence and persuasion framework in negotiation, with interpersonal influence and persuasion defined as "the effort to positively influence another party's attitude toward a given idea or proposition without changing the incentives or objective information set of the other party" (Malhotra & Bazerman, 2008, p. 512). In line with this framework, phantom anchors, despite being a relatively "cheap" form of talk, do seem to anchor offer recipients. Thus, offers with phantom anchors persuade offer recipients to accept less favorable terms (which are also more favorable for the offerer in a distributive negotiation).

Furthermore, our findings advance the literature on anchoring effects in negotiation (e.g., Adair et al.,2007; Ames & Mason, 2015; Janiszewski & Uy, 2008; Loschelder, Trötschel, et al., 2016, 2014; Schaerer et al., 2016, 2015) by documenting the effects of retracted figures as anchors. We find it striking that, although the figure mentioned in the phantom anchor is explicitly retracted (and perhaps was never being offered), it still influences counteroffers and settlement prices in favor of the offerer. In this way, our findings also contribute to an understudied area within the work on anchoring in negotiation: the effect of multiple anchors on counteroffers and perceptions (cf. Ames & Mason, 2015; Whyte & Sebenius, 1997). While the literature on first offers as anchors has greatly enriched our understanding of anchoring in bargaining contexts, negotiators are exposed and attend to numerous figures during a negotiation. Thus, it is critical to understand which of these figures serve as alternative anchors and subsequently influence negotiators' perceptions of and behavior toward one another. We believe the current findings advance the literature in this direction, e.g., by complementing work on poor alternatives as anchors (Schaerer et al., 2015).

While phantom anchors afford immediate economic gains through anchoring, they also appear to carry a distinct interpersonal cost. In Studies 4 and 5, recipients of offers with (versus without) phantom anchors viewed their counterparts as more manipulative, despite the apparent "discount" being offered relative to the phantom anchor. Apparently, offer recipients "saw through" the phantom anchor, diagnosing it as a manipulative tactic as opposed to a benevolent concession, even while insufficiently adjusting from the anchor. This finding raises several interesting questions that could seed intriguing lines of research: For example, do perceptions of manipulativeness arise from the fact that the phantom anchor is now retracted or the fact that the discounted real offer was supposedly unavailable at the time the phantom was formulated?

More generally, our findings also appear to move the nascent literature on manipulativeness forward. In a context laden with skepticism and mistrust like negotiation (Sinaceur, 2010), individuals probably look to every word to determine whether their counterpart is being manipulative. Indeed, guarding against manipulativeness is a predominating concern of negotiation practitioners. Yet, negotiation research has not often considered which types of statements negotiators perceive to be manipulative. While we know that negotiators consider overtly deceptive behaviors like misrepresentation or false promises unethical (Robinson, Lewicki, & Donohue, 2000), we do not know which of the many more subtle and presumably more common influence tactics that negotiators use are seen as manipulative. What about tactics like flattery, schmoozing, or displays of excessively positive emotion?

Our research takes an important step in the direction of understanding tactics perceived to be manipulative, presenting a specific and apparently rather common tactic, the phantom anchor, with both economic gains and relational costs. This apparent trade-off means that real negotiators should use phantom anchors with caution. Possibly, negotiators should even avoid using phantom anchors unless they view a negotiation as purely distributive and/or can point to situational factors like objective standards that would justify the anchor's validity. More work on the full suite of manipulative tactics and their associated relational and economic implications, along with the ways that real negotiators manage the inherent trade-off, is clearly needed.

Overall, it is intriguing to note that phantom anchors consistently influenced negative rather than positive interpersonal perceptions (with the exception of Study 5b, where phantom anchors influenced both). While it seems perfectly plausible that the combination of a phantom anchor and actual offer could be perceived in positive terms, our participants consistently diagnosed such combinations as attempts to manipulate. We suspect this relates to the difficulty of increasing any positive perceptions in a context already laden with mistrust (Sinaceur, 2010). In other words, the negotiation context itself may prevent negotiators from reaching many positive perceptions, even in reaction to seemingly benevolent behaviors. Given the critical role of trust in negotiation (Lewicki & Polin, 2013), research into heightening positive perceptions rather than just mitigating negative perceptions is still a priority.

8.2. Limitations and future directions

The trade-off between economic and interpersonal outcomes in this research begs the question of whether it is possible to use phantom anchors and maintain a distributive advantage without sacrificing the interpersonal relationship. Our moderated mediation results shed some

light on this issue, suggesting that negative interpersonal perceptions can be reduced but are difficult to eliminate entirely. As an important avenue for future research, we wonder whether the explanations used to justify phantom anchors might help eliminate such perceptions completely. Though we do not view the provision of an explanation as an inherent property of offers with phantom anchors, certain types of explanations may play an important role in decreasing the negative interpersonal perceptions associated with this strategy. For example, rationales speaking to one's constraints (Lee & Ames, 2017) or explaining why the phantom anchor is retracted may be successful in eliciting the distributive advantage without incurring interpersonal costs. We would welcome future research into these possibilities.

Other interesting avenues for future research relate to the timing and nuances of phantom anchors as a strategy. In this paper, we examined offers with phantom anchors at relatively early points in the negotiation process. Despite evidence that phantom anchors afforded an economic advantage in all of these settings, both the first offer and the first counteroffer come relatively early in a negotiation. Thus, the efficacy of phantom anchors at later stages of a negotiation remains an interesting and open question. On the one hand, early phantoms might be more potent for the same reasons that first offers are so potent: they set the tone for all subsequent adjustments (e.g., Galinsky & Mussweiler, 2001). On the other hand, a phantom anchor later in the negotiation might generate fewer perceptions of manipulativeness, as the offerer could explain the phantom anchor as an intention formed before talking to the offer recipient (or, equivalently, the actual offer as a concession justified by the conversation). Future research could usefully examine these timing-related issues as well as other intriguing possibilities.

9. Conclusion

The current research offers a useful point-of-entry into the fascinating and potentially important world of retracted yet still-mentioned figures in negotiation. Retracted as they might be, phantom anchors appear quite relevant to the responses of offer recipients, guiding their economic and interpersonal reactions, for better or worse.

Appendix A. Study 5a materials

Imagine that you have spent the last 6 months working as a temporary, part-time project manager for a company that makes construction materials. The company has about 50 employees. In this role, you have overseen new initiatives, communicated with customers, and coordinated the work of the production staff. According to the feedback you received, you have done an excellent job.

The company recently told you that they would like to hire you as a full-time, salaried employee—something you've been hoping for. You are excited about the opportunity but would like to make sure you negotiate a reasonable salary. Jobs websites like Monster.com indicate that people in similar positions, at similar companies in the area, make about $55,000/Jobs websites like Monster.com have no information on the average salary of people in similar positions, at similar companies in the area.

You are now meeting with Pat, the human resources director for the company. In your meeting, Pat describes the position and comes around to salary, saying: "We can offer you $60,000."/"We were planning on offering $55,000, but we can offer you $60,000."

Appendix B. Single paper meta-analysis

To afford a sense for the overall strength of our effects, we conducted a single paper meta-analysis (SPM) following the recommendations of McShane and Brockenholt (2017). In accordance with their method, which requires that all dependent variables use the same scale and have similar values (Personal communication from McShane & Brockenholt, 2017), we transformed all of our focal dependent variables to be on the same scale. Specifically, we computed a variable measuring the percentage difference between the given offer (with phantom present or absent) and counteroffer. For example, if a buyer stated that, "I was planning on offering $10,000 but I can do $11,000", and a seller participant countered with $11,500, the percentage difference would be (11,000–11,500)/11,000 (a 4.5% divergence from the counterpart's offer). Based on our findings, we would expect this divergence to be lower, signaling less aggressive counteroffers, for offers with versus without phantom anchors. In addition to the counteroffer, we also examined perceptions of manipulativeness in this meta-analysis, using the original scales. Overall, our dataset included Studies 2, 3a, 4, 5a, 5b, 5c from the paper as well as three additional studies that are not reported in the paper but include both of these variables. We could not include Study 3b in this analysis since we did not have sufficiently reliable information on the first offer.

The SPM revealed that, across nine studies, offers with phantom anchors lead to 4.5% less aggressive counteroffers than offers without phantom anchors (95% CI: 2.5–6.4%, $p < 0.001$). Similarly, offers with phantom anchors increased perceptions of manipulativeness by 0.58 scale points (95% CI: 0.36–0.78, $p < 0.001$) on a 7-point scale. These findings are especially notable since they do not adjust for the moderating conditions measured in Studies 5a-5c, suggesting that phantom anchors consistently and strongly anchor the counterpart, sending signals of manipulativeness.

Appendix C. Supplementary material

Supplementary data associated with this article can be found, in the online version, at https://doi.org/10.1016/j.obhdp.2018.06.003.

References

Adair, W. L., Weingart, L., & Brett, J. (2007). The timing and function of offers in US and Japanese negotiations. *Journal of Applied Psychology, 92*(4), 1056.

Adler, R. S. (2007). Negotiating with liars. *MIT Sloan Management Review, 48*(4), 69.

Ames, D. R., & Mason, M. F. (2015). Tandem anchoring: Informational and politeness effects of range offers in social exchange. *Journal of Personality and Social Psychology, 108*(2), 254–274.

Andersen, J. V. (2010). Detecting anchoring in financial markets. *Journal of Behavioral Finance, 11*(2), 129–133.

Barry, B., Lewicki, R., & Saunders, D. (2015). *Essentials of negotiation.* McGraw-Hill Higher Education.

Beggs, A., & Graddy, K. (2009). Anchoring effects: Evidence from art auctions. *American Economic Review, 99*(3), 1027–1039.

Bhatia, N., Chow, R. M. & Weingart, L. R. (2018). Your cost or my benefit? The effects of concession frames in negotiation. (in preparation).

Brett, J. M., Shapiro, D. L., & Lytle, A. L. (1998). Breaking the bonds of reciprocity in negotiations. *Academy of Management Journal, 41*(4), 410–424.

Englich, B., Mussweiler, T., & Strack, F. (2006). Playing dice with criminal sentences: The influence of irrelevant anchors on experts' judicial decision making. *Personality and Social Psychology Bulletin, 32*(2), 188–200.

Farquhar, P. H., & Pratkanis, A. R. (1987). *Phantom choices: The effects of unavailable alternatives on decision making.* Pittsburgh: Carnegie Mellon University Unpublished manuscript.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175–191.

Fisher, R., & Ury, W. (1981). *Getting to yes: Negotiating agreement without giving in.* Boston: Houghton Mifflin.

Galinsky, A. D., & Mussweiler, T. (2001). First offers as anchors: The role of perspective-taking and negotiator focus. *Journal of Personality and Social Psychology, 81*(4), 657.

Gaspar, J. P., & Schweitzer, M. E. (2013). The emotion deception model: A review of deception in negotiation and the role of emotion in deception. *Negotiation and Conflict Management Research, 6*(3), 160–179.

Gunia, B. C., Brett, J. M., Nandkeolyar, A. K., & Kamdar, D. (2011). Paying a price: Culture, trust, and negotiation consequences. *Journal of Applied Psychology, 96*(4), 774.

Gunia, B., Pinkley, R. & Bhatia, N. (2018). Information order as strategy in negotiation: The strategic implications of when negotiators share how much they want [anchors] and why [accounts]. Working paper.

Gunia, B. C., Swaab, R. I., Sivanathan, N., & Galinsky, A. D. (2013). The remarkable robustness of the first-offer effect: Across culture, power, and issues. *Personality and Social Psychology Bulletin, 39*(12), 1547–1558.

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis:*

A regression-based approach. Guilford Publications.
Janiszewski, C., & Uy, D. (2008). Precision of the anchor influences the amount of adjustment. *Psychological Science, 19*(2), 121–127.
John, L. K. (2016). Managing yourself: How to negotiate with a liar. *Harvard Business Review, 94*(7–8), 114–117.
Klein, R.A., Ratliff, K.A., Vianello, M., Adams Jr, R.B., Bahník, Š., Bernstein, M.J., … & Cemalcilar, Z. (2014). Investigating variation in replicability: A "many labs" replication project. Social Psychology, 45(3), 142.
Lax, D. A., & Sebenius, J. K. (2006). 3-D negotiation: Powerful tools to change the game in your most important negotiations. Boston: Harvard Business School Publishing.
Lee, A. J., & Ames, D. R. (2017). "I can't pay more" versus "It's not worth more": Divergent effects of constraint and disparagement rationales in negotiations. *Organizational Behavior and Human Decision Processes, 141*, 16–28.
Lewicki, R. J., & Polin, B. (2013). Trust and negotiation. Handbook of research on negotiation (pp. 161–187).
Loschelder, D. D., Stuppi, J., & Trötschel, R. (2014). "€ 14,875?!": Precision boosts the anchoring potency of first offers. *Social Psychological and Personality Science, 5*(4), 11–16.
Loschelder, D. D., Swaab, R. I., Trötschel, R., & Galinsky, A. D. (2014). The first-mover dis advantage: The folly of revealing compatible preferences. *Psychological Science, 25*(4), 954–962.
Loschelder, D. D., Trötschel, R., Swaab, R. I., Friese, M., & Galinsky, A. D. (2016). The information-anchoring model of first offers: When moving first helps versus hurts negotiators. *Journal of Applied Psychology, 101*(7), 995.
Loyd, D. L., Kern, M. C., & Thompson, L. (2005). Classroom research: Bridging the ivory divide. *Academy of Management Learning & Education, 4*(1), 8–21.
Maaravi, Y., & Data, A. L. (2017). When your anchor sinks your boat: Information asymmetry in distributive negotiations and the disadvantage of making the first offer. *Judgment and Decision Making, 12*(5), 420.
Maaravi, Y., Ganzach, Y., & Pazy, A. (2011). Negotiation as a form of persuasion: Arguments in first offers. *Journal of Personality and Social Psychology, 101*(2), 245–257.
Malhotra, D., & Bazerman, M. (2008). Psychological influence in negotiation: An introduction long overdue. *Journal of Management, 34*, 509–531.
Mason, M. F., Lee, A. J., Wiley, E. A., & Ames, D. R. (2013). Precise offers are potent anchors: Conciliatory counteroffers and attributions of knowledge in negotiations. *Journal of Experimental Social Psychology, 49*(4), 759–763.
Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review, 20*(3), 709–734.
McShane, B. B., & Böckenholt, U. (2017). Single-paper meta-analysis: Benefits for study summary, theory testing, and replicability. *Journal of Consumer Research, 43*(6), 1048–1063.
Miller, D. T., Turnbull, W., & McFarland, C. (1990). Counterfactual thinking and social perception: Thinking about what might have been. In Advances in experimental social psychology (Vol. 23, pp. 305–331). Academic Press.
Mischel, W. (1974). Processes in delay of gratification. In Advances in experimental social psychology (Vol. 7, pp. 249–292). Academic Press.
Mislin, A. A., Campagna, R. L., & Bottom, W. P. (2011). After the deal: Talk, trust building and the implementation of negotiated agreements. *Organizational Behavior and Human Decision Processes, 115*(1), 55–68.
Neale, M. A., Huber, V. L., & Northcraft, G. B. (1987). The framing of negotiations: Contextual versus task frames. *Organizational Behavior and Human Decision Processes, 39*(2), 228–241.
Northcraft, G. B., & Neale, M. A. (1987). Experts, amateurs, and real estate: An anchoring-and-adjustment perspective on property pricing decisions. *Organizational Behavior and Human Decision Processes, 39*(1), 84–97.
Pettibone, J. C., & Wedell, D. H. (2007). Testing alternative explanations of phantom decoy effects. *Journal of Behavioral Decision Making, 20*(3), 323–341.
Pinkley, R. L. (1990). Dimensions of conflict frame: Disputant interpretations of conflict. *Journal of Applied Psychology, 75*(2), 117–126.
Pinkley, R. L. (1992). Dimensions of conflict frame: Relation to disputant perceptions and expectations. *International Journal of Conflict Management, 3*(2), 95–113.
Pinkley, R. L. (1995). Impact of knowledge regarding alternatives to settlement in dyadic negotiations: Whose knowledge counts? *Journal of Applied Psychology, 80*(3), 403.
Pinkley, R. L., Conlon, D., Sawyer, J., Sleesman, D., Vandewalle, D., & Kuenzi, M. (2017). Unpacking BATNA availability: How probability can impact power in negotiation. In Paper presented at the academy of management conference, Atlanta, GA.
Pratkanis, A. R., & Farquhar, P. H. (1992). A brief history of research on phantom alternatives: Evidence for seven empirical generalizations about phantoms. *Basic and Applied Social Psychology, 13*(1), 103–122.
Putnam, L. L., & Jones, T. S. (1982). Reciprocity in negotiations: An analysis of bargaining interaction. *Communication Monographs, 49*(3), 171–191.
Robinson, R. J., Lewicki, R. J., & Donahue, E. M. (2000). Extending and testing a five factor model of ethical and unethical bargaining tactics: Introducing the SINS scale. *Journal of Organizational Behavior,* 649–664.
Schaerer, M., Loschelder, D. D., & Swaab, R. I. (2016). Bargaining zone distortion in negotiations: The elusive power of multiple alternatives. *Organizational Behavior and Human Decision Processes, 137*, 156–171.
Schaerer, M., Swaab, R. I., & Galinsky, A. D. (2015). Anchors weigh more than power: Why absolute powerlessness liberates negotiators to achieve better outcomes. *Psychological Science, 26*(2), 170–181.
Schweitzer, M. E., & Croson, R. (1999). Curtailing deception: The impact of direct questions on lies and omissions. *International Journal of Conflict Management, 10*(3), 225–248.
Schweitzer, M. E., & DeChurch, L. A. (2001). Linking frames in negotiations: Gains, losses and conflict frame adoption. *International Journal of Conflict Management, 12*(2), 100–113.
Sinaceur, M. (2010). Suspending judgment to create value: Suspicion and trust in negotiation. *Journal of Experimental Social Psychology, 46*(3), 543–550.
Sinaceur, M., Maddux, W. W., Vasiljevic, D., Nückel, R. P., & Galinsky, A. D. (2013). Good things come to those who wait: Late first offers facilitate creative agreements in negotiation. *Personality and Social Psychology Bulletin, 39*(6), 814–825.
Thompson, L., & Hastie, R. (1990). Social perception in negotiation. *Organizational Behavior and Human Decision Processes, 47*(1), 98–123.
Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. Science, 185(4157), 1124–1131.
Wansink, B., Kent, R. J., & Hoch, S. J. (1998). An anchoring and adjustment model of purchase quantity decisions. Journal of Marketing Research, 71–81.
Wegner, D. M., Schneider, D. J., Carter, S. R., & White, T. L. (1987). Paradoxical effects of thought suppression. *Journal of Personality and Social Psychology, 53*(1), 5.
Weingart, L. R., Thompson, L. L., Bazerman, M. H., & Carroll, J. S. (1990). Tactical behavior and negotiation outcomes. *International Journal of Conflict Management, 1*(1), 7–31.
Whyte, G., & Sebenius, J. K. (1997). The effect of multiple anchors on anchoring in individual and group judgment. *Organizational Behavior and Human Decision Processes, 69*(1), 75–85.