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FlashReport

Precise offers are potent anchors: Conciliatory counteroffers and attributions of knowledge in negotiations

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HIGHLIGHTS

- People are in the habit of using round prices as first offers in negotiations.
- Precise first offers act as more potent anchors than round first offers.
- Recipients of precise opening offers made more conciliatory counter-offers.
- This effect carried through to final settlements.
- Precise first offers were seen as more informed, prompting smaller adjustments.

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ABSTRACT

People habitually use round prices as first offers in negotiations. We test whether the specificity with which a first offer is expressed has appreciable effects on first-offer recipients' perceptions and strategic choices. Studies 1a–d establish that first-offer recipients make greater counteroffer adjustments to round versus precise offers. Study 2 demonstrates this phenomenon in an interactive, strategic exchange. Study 3 shows that negotiators who make precise first offers are assumed to be more informed than negotiators who make round first offers and that this perception partially mediates the effect of first-offer precision on recipient adjustments. First-offer recipients appear to make assumptions about their counterpart's language choices and infer meanings that are not explicitly conveyed. Precise numerical expressions imply a greater level of knowledge than round expressions and are therefore assumed by recipients to be more informative of the true value of the good being negotiated.

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Introduction

Our everyday lives frequently present situations that require negotiating with relatives, colleagues, and acquaintances over the allocation of resources and responsibilities. We may need to decide on the authorship order for a paper on which we've collaborated, the destination of an upcoming family vacation, or the price at which we sell a car. Only rarely do "correct" resource allocations exist in these situations so involved parties typically arrive at an accepted outcome via discussion and a series of iterative proposals and counter proposals.

One factor believed to profoundly influence the allocation to which negotiating parties agree is the value of the first proposal on the table. Evidence suggests negotiators anchor on opening offers, resulting in perceptions and settlements that are biased in the direction of the initial proposal (Bazerman & Neale, 1983; Galinsky &

Mussweiler, 2001; Kray, Thompson, & Galinsky, 2001; Northcraft & Neale, 1987). Thus far, researchers have focused primarily on how the *extremity* of the initial offer shapes the recipients' perceptions and strategic choices. Here, we examine whether a first offer's potency also depends on the *precision* with which it is expressed (\$5115 or \$4885 versus \$5000). We argue that negotiators who use precise first offers more effectively anchor their counterparts because they seem more informed of the good's true value than do negotiators who use round first offers. We find evidence consistent with these ideas in a series of vignette and dyadic studies.

Before turning our attention to the effects of precise compared with round opening offers, we examine how often negotiators choose to express offers in these forms. After all, evidence that round first offers have diminished potency has little practical value if negotiators never use them. Previous research on the frequency with which numerals are expressed suggests people write and speak about round numbers, specifically values that are multiples of powers of base 10 (e.g., .10, 1000, etc.; Dehaene & Mehler, 1992), more often than precise numbers (e.g., Baird, Lewis, & Romer, 1970). Our pilot work suggests that this preference for round versus precise expressions

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carries over into negotiations. We reviewed the opening offers that experienced executives ($N = 113$) and Masters of Business Administration (MBA) students ($N = 243$) made when negotiating the price of goods of varying value as part of class exercises. Of the 356 opening offers in our pilot sample, 48% were maximally round or contained only a single significant digit (e.g., \$500; \$50,000,000), 49% contained only two significant digits (e.g., \$9200; \$21,000,000), and none were specified to the dollar place (see Supplementary Online Materials [SOM]).

Real-world markets also show that negotiators tend to use round numbers as first offers. For example, an inspection of listing prices posted on the online real estate marketplace Zillow in four American cities (Bismarck, Honolulu, Seattle, and New Orleans; $N = 1511$; see SOM) revealed 73% of homes in the \$10,000–\$99,999 range and 71% of homes in the \$100,000–\$999,999 range ended with at least three trailing zeros. Ninety-eight percent of homes in the \$1 M–\$10 M range were associated with listing prices that contained at least three trailing zeros (the modal number was four). Across all price ranges, fewer than 2% of the sellers' initial offers were specified to the dollar place. Thus people's round-number habit appears to generalize to the prices they choose as initial offers in both simulated and real-world negotiations. Although possible explanations for this tendency and conditions that exacerbate or diminish it intrigue us, we focus on whether a first offer's potency depends on the precision with which it is expressed.

Speakers generally express information – and are assumed by listeners to do so – in a manner that is no more precise than their knowledge warrants (Grice, 1975). Thus, when prompted to provide estimates and forecasts of quantities, speakers compensate for their uncertainty by decreasing the precision with which they express them (Channell, 1994; Yaniv & Foster, 1997). Likewise, the confidence message recipients place in the accuracy of quantitative estimates decreases with the coarseness with which speakers express those estimates (Zhang & Schwarz, 2012). Because speakers generally avoid stating that for which they lack evidence, the level of precision at which a speaker chooses to convey a quantitative estimate signals to message recipients the magnitude of error around the estimate they should expect. These conversational norms govern cooperative conversations (Grice, 1975) and negotiators tend to expect their opponents to provide misleading information. Yet, first-offer recipients might still assume that counterparts who use precise prices are more informed than counterparts who use round prices, and this assumption might influence how recipients respond.

Theories of the anchoring-and-adjustment heuristic in judgments under uncertainty converge on the view that the potency of an anchor will depend on its perceived reliability (cf., Chapman & Johnson, 1994; Epley & Gilovich, 2001). This raises the intriguing possibility that the influence an opening offer has on its recipient depends on the precision with which it is expressed. If negotiators who use precise first offers appear more informed than negotiators who use round first offers, their price proposals should seem more reliable and thus have greater anchoring potency.

We offer a social attribution account of this anchoring difference (but see Janiszewski & Uy, 2008; Thomas, Simon, & Kadiyali, 2010), proposing that negotiators tend to look beneath their counterparty's propositions for implied meanings and causes. The potency of an anchor depends on its credibility (Epley & Gilovich, 2001; Simmons, LeBoeuf, & Nelson, 2010) and the granularity of a precise offer suggests that the offer-maker has confidence in its validity (e.g., Channell, 1994). In other words, precise offers are more potent anchors because they tend to be seen as more informed and reasoned than round offers.

Study 1a

Method

Study 1a tests whether round opening offers (e.g., \$20) are less effective anchors than precise opening offers of similar magnitude

(e.g., \$21 or \$19). We recruited 280 individuals via Mechanical Turk (M-Turk; 62% male; average age = 30.4 years) to read about a fictional negotiation they were having with a shopkeeper over jewelry. We assigned participants to one of three first-offer conditions. *Round-offer* participants received a \$20 offer, *precise-under-offer* participants received \$19, and *precise-over-offer* participants received \$21. Each participant was prompted to make a counteroffer.

Results

Results revealed an effect of first-offer type on counteroffer adjustments, $F(2, 277) = 4.64, p = .01, \eta_p^2 = .032$. Consistent with the view that round prices are less effective anchors, simple contrasts revealed greater counteroffer adjustments to round (mean adjustment = \$9.54, $SD = \$3.85$) versus precise first offers (mean = \$8.17, $SD = \$3.61$), $F(1, 277) = 8.59, p = .004, \eta_p^2 = .030$; see Table 1 for all means. There was no significant difference in the counteroffer adjustments made by precise-over and precise-under recipients, $t(183) < 1, p = ns$.

Study 1b

Method

Study 1b replicated the effect obtained in Study 1a by having participants (257 participants on M-Turk; 42% male; average age = 29.2) imagine they were negotiating with a coffee vendor. *Round-offer* participants received a \$10 offer, *precise-under-offer* participants received \$9, and the *precise-over-offer* participants received \$11.

Results

Again, we found a main effect of offer type on counteroffer adjustments, $F(2,254) = 8.32, p < .001, \eta_p^2 = .062$, and simple contrasts confirmed that participants adjusted more to the round (mean adjustment = \$2.56, $SD = \$1.46$) than the precise offers (mean = \$1.97, $SD = \$1.18$), $F(1,254) = 12.12, p = .001, \eta_p^2 = .046$. On average, precise-over recipients made larger adjustments than precise-under recipients, $t(164) = -2.30, p = .02$.

Table 1

Mean adjustments by first-offer recipients in buyer (Studies 1a–c; Study 2) and seller (Study 1d; Study2; Study 3) roles. In parentheses we report standard error.

Study	Precise		Round
	Precise-under	Precise-over	Round
Study 1a: buyer counteroffer (\$19/\$21/\$20)	\$7.94 (\$38)	\$8.39 (\$39)	\$9.53 (\$38)
Study 1b: buyer counteroffer (\$9/\$11/\$10)	\$1.77 (\$14)	\$2.19 (\$14)	\$2.56 (\$13)
Study 1c: buyer counteroffer (\$9.85/\$10.15/\$10.00)	\$3.15 (\$39)	\$3.85 (\$41)	\$4.36 (\$29)
Study 1d: seller counteroffer (\$19.85/\$20.15/\$20.00)	\$7.19 (\$72)	\$8.08 (\$54)	\$10.56 (\$49)
Study 2	Precise		Round
	Precise-sellers	Round-sellers	Round-buyers
Study 2: counteroffer	\$3197 (\$246)	\$4690 (\$319)	\$4235 (\$366)
Study 2: final settlement	\$2255 (\$195)	\$2751 (\$233)	\$2963 (\$293)
Study 3	Precise		Round
	Precise-under	Precise-over	Round
Study 3: seller counteroffer (\$1865/\$2135/\$2000)	\$194.44 (\$47.03)	\$321.00 (\$44.60)	\$496.19 (\$31.03)

Study 1c

Method

Study 1c replicated this effect a third time by asking 50 experienced managers and 35 MBAs (total $N = 85$) to assume the role of a restaurant manager (buyer) negotiating a contract with a vendor. *Round-offer* participants received a \$10 offer, *precise-under-offer* participants received a \$9.85 offer, and the *precise-over-offer* participants received a \$10.15 offer.

Results

We found a main effect of offer type on counteroffer adjustments, $F(2,82) = 3.04$, $p = .053$, $\eta_p^2 = .07$, and simple contrasts confirmed that participants adjusted more to the round (mean adjustment = \$4.36, $SD = \$1.70$) than the precise offers (mean = \$3.49, $SD = \$1.70$), $F(1,82) = 4.49$, $p = .037$, $\eta_p^2 = .052$. There was no significant difference in the counteroffer adjustments made by precise-over and precise-under recipients, $t(41) = 1.13$, $p = .26$.

Study 1d

Method

Study 1d replicated the effect in a negotiation where the participants (247 participants on M-Turk; 52% male; average age = 30.1) were asked to imagine they were negotiating with another student over a textbook the participant was selling. *Round-offer* participants received a \$20 offer, *precise-under-offer* participants received \$19.85, and the *precise-over-offer* participants received \$20.15.

Results

Again, we found a main effect of offer type on counteroffer adjustments, $F(2,244) = 9.66$, $p < .001$, $\eta_p^2 = .073$, and simple contrasts confirmed that participants adjusted more to the round (mean = \$10.56, $SD = \$5.28$) than the precise offers (mean = \$7.79, $SD = \$4.93$), $F(1,244) = 19.29$, $p < .001$, $\eta_p^2 = .073$. There was no significant difference in the counteroffer adjustments made by precise-over and precise-under recipients, $t(137) = 1.07$, $p = .29$.

Across a range of populations and negotiated goods, across both buyer and seller roles, we found that precise offers are more potent anchors in that they yield more modest counteroffer adjustments from their recipients.

Study 2

Study 2 tested whether precise offers would be more potent anchors in live dyadic exchanges between negotiation partners. We expected that recipients of precise first offers would have more modest counteroffer adjustments than recipients of round first offers. We also examined whether recipients of precise first offers would demonstrate more modest final outcome adjustments.

Method

Participants were 50 experienced managers, 98 MBAs and 112 undergraduates who constituted 130 buyer–seller dyads.¹ Fifty-six dyads consisted of sellers who made the initial offer in the negotiation; 74 dyads consisted of buyers who made the first offer. The specificity manipulation was applied to participants who were in the

¹ One dyad was excluded for not following instructions (see SOM). Three dyads did not report counteroffers; 7 parties did not reach deals and therefore had no final settlement to report.

buyer role (see SOM). Approximately half of buyers who made the first offer received a version of the role sheet that instructed them to choose a precise dollar figure ($N = 38$); the other half of buyers who made the first offer received no such instructions ($N = 36$). Each of the 56 sellers who made the first offer suggested a round price figure. After completing the negotiation, each dyad reported the initial offer, the counteroffer and the final settlement price.

Results

Since the specificity manipulation was applied to participants in the buyer role, the most conservative approach involves restricting our analyses to responses by first-offer recipients in seller roles. As predicted, *round-offer* recipients responded with more adjusted counteroffers (mean adjustment = \$4235; $SD = \$2136$) than did precise-offer recipients (mean = \$3197; $SD = \$1499$), $t(69) = 2.39$, $p = .020$, $d = .57$. We found evidence that this anchoring difference carried through to final settlement prices. *Round-offer* recipients agreed to final settlement prices that reflected greater adjustments to the opening offer (mean adjustment = \$2963; $SD = \$1705$) than did *precise-offer* recipients (mean = \$2256; $SD = \$1185$), $t(69) = 2.043$, $p = .045$, $d = .49$.²

Another test of our predictions would be to contrast reactions to all precise and round initial offers, regardless of role and condition. If we include responses by the 56 participants in buyer roles, all of whom received round first-offers, the effect of offer type on counteroffer adjustments is $t(100.96) = 3.83$, $p < .001$, $d = .76$.³ On average, *round-offer* recipients responded with more adjusted counteroffers (mean adjustment = \$4519; $SD = \$2296$) than did precise-offer recipients (mean = \$3197; $SD = \$1499$). Again, the effect of offer type carried through to final outcomes. *Round-offer* recipients agreed to final settlement prices that reflected greater adjustments to the opening offer (mean adjustment = \$2835; $SD = \$1687$) than did *precise-offer* recipients (mean = \$2256; $SD = \$1184$), $t(95.44) = 2.17$, $p = .032$, $d = .44$.

Study 3

Although the pattern of results obtained thus far are consistent with the view that negotiators who use precise offers seem more informed of the good's true value and therefore more effectively anchor their counterpart, we still have no direct evidence of this causal mechanism. Study 3 manipulated offer precision and examined its causal effect on counteroffer adjustment and the perception that the offerer deliberated on and researched his offer. We then tested whether the perception that the offer was reasoned and informed partially mediated the link between precision and counteroffer adjustment.

² Inspection of the first offer amounts revealed that buyers who made precise first offers tended to be more conciliatory (mean first offer = \$10,679) than buyers who made round first offers (mean first offer = \$10,055), $t(72) = -1.74$, $p = .086$. As a result, the effect of precision on counteroffer price was smaller than the effect of precision on counteroffer adjustment. Consistent with our predictions, sellers who received precise first offers from their buyers countered with a marginally lower price (mean counteroffer = \$13,891) than sellers who received round offers (mean counteroffer = \$14,367), $t(69) = 1.79$, $p = .078$. Likewise, because precise-offer buyers made more conciliatory first offers than round-offer buyers, the effect of precision on final price was smaller than the effect of precision on final price adjustment. As expected, sellers who received precise first offers from their buyers ultimately agreed to sell the car at a lower price on average (mean final settlement price = \$12,932) than sellers who received round first offers from their buyers (mean final settlement price = \$13,022), however this difference did not reach statistical significance, $p = .34$.

³ The assumption of homogeneity of variance was not met so statistics are based on adjusted df 's (Cochran & Cox, 1957; Satterthwaite, 1946).

Method

Two hundred and thirty-eight M-Turk adults (48% male; average age = 32.9) read about a fictional negotiation they were having over the sale of their used car (see SOM). Participants assumed the role of a seller who received one of three offers from their buyer counterparty. The buyer made *round-offer* participants a \$2000 offer, *precise-under-offer* participants a \$1865 offer, and *precise-over-offer* participants a \$2135 offer. Participants reported their counteroffers.

We measured participants' perceptions of the degree to which the offerer has an informed view by asking about their extent of agreement with the following statements (1 = *completely disagree*, 9 = *completely agree*). The young man: spent quite a bit of time thinking about the car's worth in advance of making his initial offer; put considerable energy into researching the value of the car; deliberated on the value of the car prior to writing with his offer; had good reasons for the price he suggested; seemed to have a clear understanding of what he could afford. We computed a composite score by summing responses to these five measures (Cronbach's alpha = .87).

Results

We replicated our previous findings. A main effect of offer type, $F(2,235) = 15.662, p < .001, \eta_p^2 = .118$, arose, and simple contrasts confirmed that participants responded with more adjusted counteroffers to the round compared with the precise offers, $F(1,235) = 28.25, p < .001, \eta_p^2 = .107$.

We conducted a regression using a bootstrapping technique (Preacher & Hayes, 2004; see Table 2). Participants who received precise opening offers perceived them as being more reasoned and informed than those who received round opening offers. The perception that the first offerer was informed was negatively correlated with counteroffer adjustments. Accounting for these altered perceptions of the offerer reduced the previously significant relationship between price precision and counteroffer adjustment. A bootstrap analysis revealed the indirect effect was positive and statistically different from zero, as evidenced by a 95% bias-corrected bootstrap confidence interval that is entirely above zero (3.49, 40.68; Preacher & Hayes, 2004).

General discussion

Across a series of studies, we found that precise first offers act as more potent anchors than round first offers. For both buyers and sellers, in both controlled vignettes and unscripted dyadic exchanges, precise opening-offer recipients made more modest adjustments in their counteroffers, yielding more value to precise offer-makers. Study 2 revealed that this effect carried through to final settlements,

with final deals being more heavily anchored by precise opening offers than round ones. These effects were due at least in part to attributions that offer recipients made: compared to round first offers, precise first offers were seen as more informed and reasoned, leading responders to make more conciliatory counteroffers.

These results are consistent with Janiszewski and Uy (2008) who found that consumers prompted to judge price markups made larger adjustments to round versus precise sale prices and with Thomas et al. (2010) who report that participants are willing to pay higher prices for goods with precise versus round prices. Whereas we offer a social attribution account for this effect, Janiszewski and Uy (2008) argue that it reflects differences in the resolution with which people represent round and precise prices on a mental number line, while Thomas et al. (2010) argue that consumers adjust less to precise prices because they feel subjectively smaller than round ones. While the former mechanism might contribute to the potency difference observed here, the Thomas et al. (2010) explanation seems implausible since the account predicts that first offer recipients in seller roles should adjust more to precise offers, not less, as we found here.

Although this paper highlights potential downsides of round first offers, we acknowledge their appeal. Round numbers are easier to manipulate and remember (Krifka, 2007), noncommittal (Ochs Keenan, 1976), and require a relatively effortless judgmental process (Pelham, Sumarta, & Myaskovsky, 1994). Imprecision is a form of prudence and a means of hedging against uncertainty and unknowns.

We also acknowledge the possible risks in using precise first offers. Just as overly extreme first offers lead to higher rates of avoidable impasses (Schweinsberg, Ku, Wang, & Pillutla, 2012), overly precise first offers might signal inflexibility and prompt recipients to walk away from mutually beneficial deals. Signaling a willingness to accommodate can improve both interpersonal and instrumental outcomes (Medvec & Galinsky, 2005), so negotiators who lead with precise offers might forego these benefits by seeming unyielding. Our attributional mechanism for the potency of precise offers suggests another risk: if precise offer recipients have other reasons for being skeptical about the offer maker's expertise, preparation, or motives, a precise offer could backfire in being seen as a manipulative gambit or obnoxious ploy.

These findings have practical importance in that they imply negotiators can claim more value in competitive interactions by increasing the precision with which they express their opening offers. As a matter of fact, Study 1a, 1c, and 1d results suggest that precise first offers beget less aggressive counteroffers than round first offers even when they are more conciliatory (i.e., less extreme). This raises the intriguing possibility that a negotiator making a round offer (\$50.00) can fare better if she concedes on price and opens with a slightly less extreme but precise offer (e.g., \$49.75 if she is a seller; \$50.25 if she is a buyer). On the flip side, the findings highlight how a lack of awareness about the power of precision may put the recipient of a precise offer at a disadvantage.

Finally, our results suggest considering the pragmatics of natural language, especially numerical utterances, is valuable. The danger in leading with round-price proposals stems from the fact that listeners make assumptions about the speaker's language choices and infer meaning that a speaker's message does not explicitly convey. Future research might extend these findings by identifying other messages negotiators implicitly communicate to each other, and by considering how they affect the negotiation process.

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Table 2
Results of Study 3 mediation-analysis using a bootstrapping technique.

DV	Counteroffer					
	Adjustment		Perception that the offer is informed		Adjustment	
	B	SE	B	SE	B	SE
Constant	261.05***	32.55	33.53***	.57	608.87***	127.78
Precise	−235.12***	45.09	1.74*	.78	−217.11***	44.91
Informed					−10.37**	3.69

Beta weights are unstandardized.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.jesp.2013.02.012>.

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