

Auctions Versus Negotiations

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To Start Low or To Start High?

The Case of Auctions Versus Negotiations

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ABSTRACT—We document how starting prices differentially impact outcomes in negotiations and auctions. In negotiations (where the number of actors is often predetermined), starting prices drive cognitive processes, leading individuals to selectively focus on information consistent with, and make valuations similar to, the starting value. Thus, starting high will often lead to ending high in negotiations. Conversely, in auctions (where the number of actors is determined during the course of the auction), low starting prices catalyze social processes that can lead to higher final prices: Low starting prices lower barriers to entry and increase the number of bidders; produce more sunk costs for early entrants; and lead participants to infer greater value from this increased bidding activity, resulting in herding behavior. By examining the differential intrapsychic and interpersonal processes that starting prices activate in negotiations versus auctions, we offer a first step toward a more complete understanding of anchoring effects in economic interactions.

Whenever individuals put their firm up for acquisition, seek agreement on salary, or sell a used car, someone has to set the starting price. In these situations, what are the costs and benefits of starting low versus starting high? And how does the bargaining context—a negotiation versus an auction—moderate the effect of starting price on the final outcome?

To answer these questions, we suggest that it is useful to conceptualize starting prices as anchors. An anchor is a numeric value that influences subsequent numeric estimates and outcomes. When people make judgments, their final estimates are often assimilated to—that is, become more similar to—the initial anchor value (Tversky & Kahneman, 1974). For example, in one of the best-known anchoring studies (Tversky & Kahneman, 1974), participants were exposed to an arbitrary number between 0 and 100 from the spin of a roulette wheel and then asked to estimate the percentage of African nations in the United Nations: Participants whose roulette wheel landed on a relatively high number gave higher absolute estimates than did participants whose wheel landed on a lower number. Even outside of trivia questions, few psychological phenomena are as robust as the anchoring effect; it influences public policy assessments, judicial verdicts, economic transactions, and a variety of psychological phenomena (see Mussweiler, Englich, & Strack, 2004, for a summary).

But as it turns out, starting prices as anchors have dramatically different effects depending on whether the bargaining context involves a negotiation or an auction. In two-party negotiations, starting prices drive intrapersonal, cognitive processes, with low starting prices leading to low final outcomes. In contrast, low starting prices in auctions catalyze social processes that often result in higher final prices.

STARTING PRICES IN NEGOTIATIONS

In negotiations, starting high often results in ending high. Buyer–seller negotiations conducted using laboratory or in-class exercises have repeatedly demonstrated that final outcomes are positively anchored by first offers, with correlations ranging from .72 to .93; thus first offers account for a substantial amount of variance in final negotiated outcomes (Galinsky, Leonardelli, Okhuysen, & Mussweiler, 2005; Galinsky & Mussweiler, 2001; Galinsky, Mussweiler, & Medvec, 2002). Not only does manipulating first offers have direct effects on final prices, but starting prices also have powerful generative effects; they help explain how a number of variables such as regulatory focus (the tendency to focus on achieving success versus avoiding failure) drive final prices (Galinsky et al., 2005).

What Mechanisms Produce Starting-Price Effects in Negotiations?

A look at the two cognitive mechanisms that underlie anchoring illuminates why starting high in a negotiation typically results in ending high. First, people mentally adjust from an initial anchor when estimating values, especially when the starting values are self-generated (Epley & Gilovich, 2001). For example, when individuals were asked whether Gandhi was younger or older than 140 when he died and then asked to estimate his actual age at death, people serially worked away from this high anchor of 140 years until their final estimate felt right (Strack & Mussweiler, 1997). Thus these individuals produced higher estimates than participants given the very low anchor of 9 years of age at his passing. The more extreme the starting value, the greater the adjustment needed, but the more likely this adjustment will be insufficient. Thus, extreme starting values will produce more extreme final estimates.

Second, individuals selectively generate information consistent with the anchor, which partially mediates the influence of anchors on subsequent judgments. For example, Mussweiler and Strack (2000) found that giving participants a high anchor when evaluating a car's value (by

asking them whether the average price for a new car was higher or lower than \$22,000) made information consistent with high prices (e.g., luxury features) selectively more accessible.

These two processes of insufficient adjustment and selective accessibility combine to explain the influence of starting prices on final prices in negotiations. Take the example of a buyer facing a seller. The buyer knows she should adjust from the seller's high opening offer, but does so insufficiently. Similarly, her opponent's high opening offer selectively directs negotiators' attention toward an item's positive attributes; in contrast, a lower opening offer would direct attention to its flaws. In estimating a used car's true value, a high first offer is likely to lead the buyer to focus on the car's pristine interior rather than its ailing clutch, thereby leading to a higher valuation (Mussweiler, Strack, & Pfeiffer, 2000) and making a high final price more palatable.

Does it Make Sense to Go First?

One of the most vexing questions in a negotiation is whether to make the first offer or wait to hear the other side's proposal. Many negotiation books recommend waiting for the other side to offer first. However, existing empirical research contradicts this conventional wisdom: The final outcome in single and multi-issue negotiations, both in the United States and Thailand, often depends on whether the buyer or the seller makes the first offer. Indeed, the final price tends to be higher when a seller (who wants a higher price and thus sets a high first offer) makes the first offer than when the buyer (who offers a low first offer to achieve a low final price) goes first (Galinsky & Mussweiler, 2001; Gunia, Galinsky, Sivanathan, & Swaab, 2009).

How Does One Protect Against the Anchoring Effect of an Opponent's First Offer?

Given the powerful role that anchor-consistent information plays in producing anchoring effects, negotiators can protect themselves against an opponent's first offer by focusing on

information that is inconsistent with the implications of that first offer (see Fig. 1). When negotiators focus on their own ideal price or on their opponent's weaknesses, first-offer effects are dramatically reduced (Galinsky & Mussweiler, 2001). Similarly, considering why a suggested first offer may be inaccurate can also reduce anchoring effects (Mussweiler et al., 2000).

When Is Starting High Starting Too High?

Despite the accumulated evidence, there are two potential caveats to the conclusion that going first and starting aggressively (i.e., high for the seller and low for the buyer) result in advantageous outcomes. There are two important outcomes in negotiations: whether a deal is reached and the value of a completed deal. Although research on anchoring effects in other domains typically shows linear effects of anchor extremity on numeric estimates (e.g., Mussweiler & Strack, 2001), with implausibly extreme anchors yielding the strongest effects, this may not hold in negotiations. An implausibly aggressive anchor may seem outrageous to the recipient, decreasing the likelihood of reaching a deal (even though the final price would be positively correlated with the starting price *if* a deal were reached). Some research suggests that negotiators who make overly aggressive first offers may drive negotiating counterparts away (Ku, Schweinsberg, & Pillutla, 2009). Similarly, going first may prove detrimental when the negotiator has little information about the item or market, potentially making an offer that is too timid or wildly unacceptable.

We call for future research, both inside and outside the laboratory, to understand the full relationship between starting prices and outcomes (both impasses *and* final prices). In the laboratory, researchers should vary the size of the bargaining zone or the information available to each negotiator to test whether aggressive first offers decrease settlement rates and under what

conditions going first proves disadvantageous. Moreover, future research should also go beyond laboratory contexts because these settings create subtle incentives towards reaching agreements, thereby masking the potential downside of aggressive first offers.

STARTING PRICES IN AUCTIONS

In contrast to the dearth of real-world data on first offers in negotiations, the real world has been a fruitful source of auction data. Previous work on the effect of starting prices on final prices in auctions has been inconclusive, with low starting prices predicting higher final prices in some research (Kamins, Drèze, & Folkes, 2004) and lower final prices in other research (Brint, 2003), resulting in an upright U-shaped curvilinear effect across studies. Using both archival analyses and quasi-experiments on eBay, we (Ku, Galinsky, & Murnighan, 2006) set out to reconcile these mixed results. The right side of the U-shaped curve could easily be explained by the assimilative effects of starting prices. But what could explain the left side?

In considering this question, it became clear that starting prices specifically and anchors more generally not only may affect intrapsychic processes but may also catalyze interpersonal processes and effects across multiple individuals.

What Mechanisms Produce Starting-Price Effects in Auctions?

In contrast to negotiations, in which the number of actors is often predetermined by factors outside of the negotiation itself, the number of actors in auctions is determined by factors at play in the auction. Thus, variables that increase participation in auctions will likely increase final prices.

There are at least three mechanisms that can explain why starting low may lead to ending high in auctions: First, lower starting prices may decrease barriers to entry and encourage participation. Second, early bidders may incur greater sunk costs that lead them to escalate their

commitments by making additional bids. Finally, all of this bidding activity may lead old and new bidders to see the auction item as having greater value, encouraging additional bidding.

Each of these mechanisms can independently and collectively drive final prices higher.

Lowering Barriers to Entry

We (Ku et al., 2006) found in laboratory studies that lower starting prices had two effects on potential auction participants. First, starting prices had an assimilative effect on estimates of an item's worth, consistent with traditional anchoring findings. Simultaneously, however, low starting prices reduced barriers to entry, encouraging more individuals to enter the auction, sowing the seeds for a reversal of the anchoring effect.

To test whether low starting prices would actually lead to higher final prices, we (Ku et al., 2006) conducted archival analyses of completed eBay auctions of Tabriz Persian rugs and Nikon digital cameras. In our analyses, starting prices had three important effects. First, high starting prices led to fewer transactions (earlier, we suggested a similar effect may exist in negotiations). When a sale is not completed, the seller wastes time and resources, creating economic inefficiency. Second, lower starting prices increased traffic (i.e., the number of bids and unique bidders). Finally, lower starting prices generated higher final prices, with this final effect mediated by traffic. Low starting prices allowed for greater entry and participation, which then pushed up the final prices.

These studies established that starting prices can act as barriers to entry, affecting market entry and participation. Follow-up studies demonstrated that two other processes contribute to lower starting prices producing higher final prices in auctions.

Escalating Commitment to Sunk Costs

With low starting prices, early bids act as sunk costs—that is, investments of time and energy (albeit not money since outbid individuals don't have to pay for the item) in pursuit of winning the auction—which can then lead individuals to escalate their commitments by rebidding when they are outbid (see also Ku, Malhotra, & Murnighan, 2005). In auctions, low starting prices can seem like harmless lures similar to the foot-in-the-door technique (Freedman & Fraser, 1966) or Milgram's (1963) initial request to shock a confederate with a “mere” 15 volts.

Testing this escalation hypothesis in a natural quasi-experiment, we (Ku et al., 2006) analyzed 89 auctions from a particular eBay seller (Browncow) who in his auctions varied the starting price (\$9.99 vs. \$24.99) of his Hawaiian-themed Tommy Bahama shirts. Our analyses replicated the finding that lower starting prices lead to more traffic and higher final prices. For escalation of commitment, we found that winners of low-starting-price auctions spent more time bidding (the amount of time between their first and last bid) and made more bids than did both the winners of high-starting-price auctions and nonwinners. Thus, low starting prices drew bidders in early and, as they accumulated sunk costs, they kept bidding until they won the auction. In addition, we found that the number of unique bidders and winners' sunk costs had separate and significant effects on final prices, suggesting that market entry (i.e., the lower barriers to entry mechanism) and escalation of commitment each contributed to higher final prices.

Inferring Value From Traffic and Herding Behavior

The increased bidding spurred by low starting prices might convey value to other potential auction bidders. If bidders use traffic as an indicator of value, early bidding could beget later bidding similar to theories of social proof and bandwagon effects (Cialdini, 1993). In a

laboratory study, we (Ku et al., 2006) varied the current price and the amount of traffic for a Cancun vacation and found that both variables positively predicted estimates of the vacation's worth. Not only does current price positively predict value estimates (consistent with traditional anchoring research), the traffic generated by low starting prices also conveys value. Similarly, using a sample of 8,333 DVD auctions, Simonsohn and Ariely (2008) demonstrated that bidders herd into auctions with more existing bids, even when the higher levels of traffic are simply the result of no-longer-available low starting prices.

Together then, because of lower barriers to entry, escalation of commitment, and more value inferred from and herding around high levels of traffic, starting low in auctions can result in ending high. Indeed, in our studies using archival and field data, the correlation between starting prices and final prices ranged from $-.16$ to $-.44$, suggesting small- to moderately-sized effects in real-world settings.

How Does One Protect Against Being Trapped by Low Starting Price Auctions?

Although Simonsohn and Ariely (2008) found that experienced bidders are less likely to bid in low-starting-price auctions, novices can also learn to avoid getting trapped into paying too much in these auctions. By bidding in high-starting-price auctions, learning to avoid the lure of or ignoring sunk costs, and investigating the value of an item regardless of other bidders' activities, bidders can avoid winning the auction but paying too much for the prize. Future research will be needed to determine which mindsets or contexts are particularly effective at reducing the lure of low starting prices.

When Does Starting Low Lead to Ending Low in Auctions?

As mentioned earlier, past findings of starting prices in auctions have cumulatively found an upright U-shaped curvilinear effect. The importance of traffic as the mediator of the starting-

low–ending-high effect suggests that auctions involving undesirable items or ones that have barriers to entry—and thus low traffic—may demonstrate the typical assimilative effect of anchors. Without the catalyzing effect of traffic, higher starting prices—when they result in sales—should lead to higher final prices because the main force is the assimilative effect of starting price on value inference. We (Ku et al., 2006) found support for this hypothesis using a naturally occurring field study of eBay auctions. Auctions without barriers to entry (i.e., correctly spelled items) replicated the starting-low–ending-high effect. However, auctions with barriers to entry (e.g., auctions where the item was misspelled, making potential bidders less likely to find the auction) produced less traffic and a positive correlation between starting and final prices (see Fig. 2).

TOWARD COMPLETE MODELS OF ANCHORING AND HEURISTICS

By considering the differential effects of anchors in negotiations and auctions, the above research enriches our theoretical understanding of anchors. The past decade has provided compelling data that explains how anchoring occurs and offers what appears to be a complete understanding of anchors. The present analysis, however, demonstrates that anchors do not merely have intrapersonal, cognitive effects but can also catalyze social processes that transpire across individuals. Given the incipient nature of these new effects, we are only beginning to understand how anchors influence interpersonal processes and how the interpersonal and intrapsychic interact. Because research on other cognitive and motivational heuristics and biases (e.g., availability, representativeness, egocentrism) typically focuses on individual-level processes, we hope the present findings inspire empirical examinations that produce new theoretical insights for how other foundational heuristics catalyze social processes. Given that transcending analyses of intrapsychic processes has been a fruitful path toward a more complete

understanding of anchoring effects in economic interactions, the same may hold for other systematic influences on human judgment and decision making.

Recommended Reading

Galinsky, A.D., & Mussweiler, T. (2001). See References. Empirical research documenting that first offers serve as powerful anchors in negotiations while also demonstrating how to overcome the anchoring effect of an opponent's first offer.

Ku, G., Galinsky, A.D., & Murnighan, J.K. (2006). See References. Empirical research investigating how starting prices affect final prices in auctions. Demonstrates both why and when low starting prices lead to higher final prices.

Mussweiler, T., & Strack, F. (2000). See References. Empirical research providing evidence for the selective accessibility model of anchoring effects.

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Fig. 1. The effect of first offers on final sale prices in a simulated negotiation over a pharmaceutical plant (Galinsky & Mussweiler, 2001). We manipulated whether the buyer or seller made the first offer and the type of information the recipient of the first offer was told to focus on. In the control condition, where recipients received no specific instructions, final agreements favored the negotiator who made the first offer, with final sale prices higher when the seller made the first offer than when the buyer made the first offer. Similarly, when the

recipient focused on information that was near his/her opponent's first offer (the recipient's own reservation or walk-away price), the advantage of making the first offer was also apparent. However, when recipients focused on self-advantageous information that was counter to and far removed from the opponent's first offer (the recipient's target/ideal price or their opponent's reservation price), the advantage of making the first offer disappeared

Fig. 2. Final prices of Michael Jordan shirts as a function of starting price in auctions where the items were spelled correctly ("Michael") versus when they were misspelled ("Micheal"). Using predicted values, the Starting Price \times Spelling (correctly spelled vs. incorrectly spelled) interaction on final price showed that when Michael was spelled correctly, the auctions replicated the starting-low–ending-high effect. However, when the shirts were misspelled as "Micheal," creating a natural barrier to entry because potential buyers were less likely to find these auctions, there was less traffic and a positive correlation between starting price and final price, consistent with the typical anchoring effect.

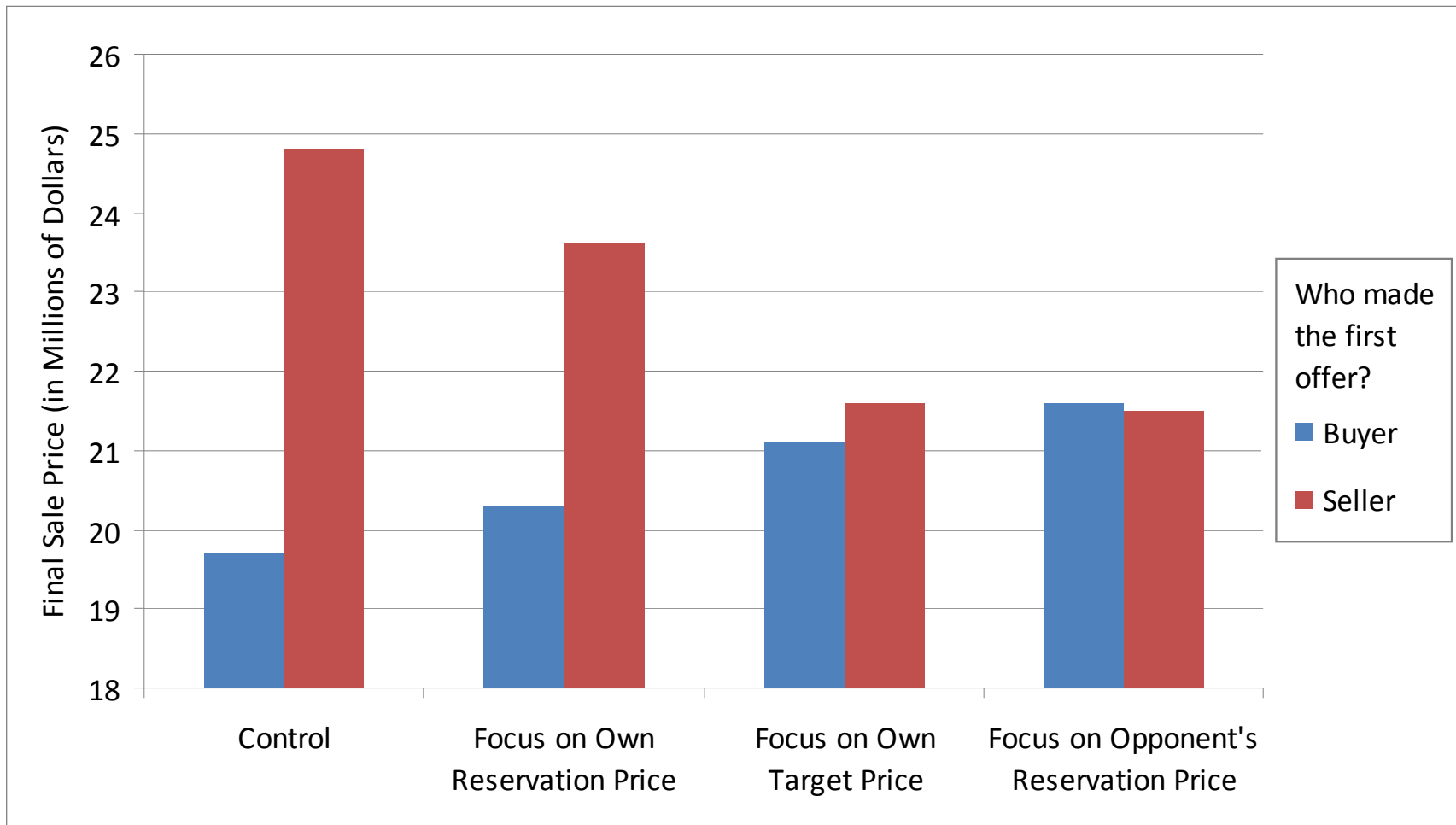


Figure 2.

