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When your anchor sinks your boat: Information asymmetry in distributive negotiations and the disadvantage of making the first offer

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Abstract

The literature on behavioral decision-making and negotiations to date usually advocates first-mover advantage in distributive negotiations, and bases this preference on the anchoring heuristic. In the following paper, we suggest that the preference for moving first vs. moving second in negotiations may not be as clear-cut as presumed, especially in situations characterized by information asymmetry between negotiating counterparts. In Study 1, we examined people's initiation preferences and found that unless taught otherwise, people intuitively often prefer to move second. In Studies 2–4, we experimentally tested the suggested advantage of moving second, and demonstrated that in information-asymmetry scenarios – when one party has perfect background information and the other has none — it is actually preferable for both counterparts not to give the first offer while negotiating. We discuss the implications of our findings on the field of negotiation and decision-making, and lay the groundwork for future studies examining this issue.

Keywords: first offer, anchoring, negotiation, second offer, second-mover advantage, information asymmetry

1 Introduction

In a typical *Pawn Stars* episode, a TV series that follows the interactions between the buyers and the sellers at the *World Famous Gold & Silver Pawn Shop*, the shop owner always starts the negotiation by asking the seller: *"And how much do you want for it?"* (e.g., History, 2013). While most of the audience of this American reality show broadcast on the History Channel may be intrigued by the seller's answer and the negotiation that follows, negotiation and decision-making scholars may focus more on the shop owner's question. In the negotiation literature, it is often recommended to make the first offer yourself, and here the owners of *World Famous Gold & Silver Pawn Shop*, who are at the center of this reality show, do the exact opposite: they let their counterpart make the first offer. Who is right here: negotiation scholars who base their advice on academic research, or real-life experts such as the owners of the pawnshop with years of real-life professional experience?

Should negotiators make the first offer or not? This simple but important question is at the heart of this article. In a series of three experiments and a survey, we question the general findings in the negotiation literature that recommend making the first offer, and show that in cases of asymmetry of information, moving second might be better.

Although the anchoring effect was shown to be extremely robust, past research points to certain exceptions. One example is when an overly extreme anchor is used. Research shows that such anchors do not lead to the typical anchoring effect (Chapman & Johnson, 1994). Specifically, in negotiations, overly extreme first offers may also backfire and lead to the opposite effect or even to an impasse (Schweinsberg, Ku, Wang & Pillutla, 2012). While the above focuses on the amount of the anchor, here we question the very recommendation of moving first in a negotiation. One line of research that implies a first-mover disadvantage due to a combination of uncertainty, lack of sufficient information and threat by other alternative players describes a "winner's curse" – a situation in which the first mover in biddings may win but overpay (Becker, Clement & Nöth, 2016; Giliberto & Varaiya, 1989; Thaler, 1988).

Recently, and more relevant to the current article, Loschelder et al. (2014) have also presented a "practitioner-researcher paradox", according to which, while practicing experts have suggested that it was wise to refrain from opening a negotiation (e.g., Dell & Boswell, 2009, p. 159), academic scholars have usually recommended the opposite (Neale & Bazerman, 1992; Malhotra & Bazerman, 2007; Thompson, 2005). To answer this paradox, Loschelder et al. (2014) suggested that, in specific cases, making the first offer may backfire, and a first-mover disadvantage may emerge. They focused on situations where the sender revealed private information about compatible preferences, which the recip-

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ient could take advantage of for his or her own benefit. In a more recent work by the same authors (Loschelder Trötschel, Swaab, Friese & Galinsky, 2016), they provide additional results that further support their hypotheses alongside a cognitive-behavioral model (i.e., "Information-Anchoring Model of First Offers") that predicts *"when and why making the first offer helps versus hurts"* (p. 995).

In the current article, we add to the above two articles by showing that not only in compatible issues or integrative settings, but also in distributive settings, a second-mover advantage may emerge. Specifically, we focus on situations where there is a significant asymmetry of information between the negotiating parties in distributive settings.

1.1 The anchoring and adjustment heuristic

Negotiation scholars agree that any negotiation involves decision-making processes and thus many of the heuristics and biases in decision-making (Tversky & Kahneman, 1975) also apply to negotiation (Neale & Bazerman, 1992; Malhotra & Bazerman, 2007; Thompson, 2005). One of the heuristics that were extensively investigated in the negotiation literature is the anchoring and adjustment heuristic (e.g., Maaravi, Pazy & Ganzach, 2014). According to this heuristic, decision makers tend to cling to a given number (anchor) when they judge an unknown quantity. This process may lead to systematic errors since the anchor is often irrelevant and the adjustment is usually insufficient (for a review, see Furnham & Boo, 2011). Past research has demonstrated that the anchoring heuristic is highly robust and affects judgments not only in negotiation (Ritov, 1996), but in many other fields from general knowledge questions (Chapman & Johnson, 1999) to legal verdicts (Mussweiler, 2001).

1.2 First offers as anchors

The negotiation literature suggests that the first offer in a negotiation serves as an anchor that influences both the counteroffer and the settlement price. For example, in one study it was demonstrated that, when sellers made the first offer, settlement prices were significantly higher than when buyers made the first offers (Galinsky & Mussweiler, 2001). Based on such evidence, first offers have become an important subject for academic research (e.g., Ames & Mason, 2015; Maaravi, Ganzach & Pazy, 2011; Ritov & Moran, 2008; Schaerer, Loschelder & Swaab, 2016).

In addition, given the robustness of the anchoring effect and the evidence that first offers may serve as anchors, academic courses and textbooks recommend using an anchoring tactic in order to maximize profits in negotiations processes (e.g., Bazerman & Neale, 1993; Malhotra & Bazerman, 2007; Thompson, 2005). Typically, this anchoring tactic is: a., make the first offer yourself; and, b., make it extreme while still in the reasonable range (Maaravi, Pazy & Ganzach, 2014).[1]

1.3 The first-mover disadvantage

But should negotiators always make the first offer, or are there cases where it may be better to let one's counterpart go first? Can there be a first-mover *disadvantage* in specific situations – for example in a pawn shop? As the research that was mentioned above (Loschelder et al., 2014) suggests, this might indeed be the case. The term *the first-mover advantage* is often used in the strategy and marketing literature to describe companies or products that enter the market first and thus gain significant leadership (Lieberman & Montgomery, 1988). Two examples are the internet giants eBay and Amazon. But strategy scholars also discuss first-mover *disadvantage*, cases in which being first to introduce a service or a product does not translate into market leadership, and being a follower or second in the market is actually better (Dobrev & Gotsopoulos, 2010). This may be the case when the regulation or the customers are not ready for extreme innovations and the first-mover struggles to align and educate them. An example is Facebook that was founded a few years after the first social networks: Myspace or Friendster.

An environment closer to negotiations that can illustrate the complexity of first-mover vs. second-mover advantage may be commercial transactions. In many cases, sellers put price tags on items – clothes in shopping malls, listing prices of real estate properties, special offers of used cars in car dealerships etc. — which can be seen as making the first offer or moving first in their interaction with potential buyers. But not all sellers do that. In auctions, sellers let buyers make the first move. If moving first was always the best strategy, we would expect sellers to always prefer standard selling processes over auctions. Academic research in economics and game theory (Bester, 1993; Gal-Or, 1985) as well as the millions of sellers offering their merchandise by auctions both online (e.g., eBay) and offline (e.g., Sotheby's) suggest that in some cases there might indeed be *a second-mover advantage*. Galinsky et al. (2009) directly examined the different psychological and economic processes that first offers activate in negotiations versus auctions. In their research, while negotiators were better off starting high, in auctions low starting prices catalyzed social processes (e.g., prices lower barriers to entry and increase the number of bidders) that led to higher final prices.

[1] It is important to note here that this tactic is recommended mainly for distributive negotiations, which are often defined as a competitive (win-lose) process of "slicing a fixed-pie" between the negotiating parties. The pawn shop negotiation that was discussed above is an excellent example of a distributive negotiation. Such situations are different from integrative negotiations that are seen as a creative problem-solving process in which both parties work together to find a mutually beneficial (win-win) "pie-expanding" solution (Bazerman & Neale, 1992).

1.4 The drawbacks of moving first in negotiations

The current article continues a line of research pointing to the limitations and disadvantages of moving first in negotiations, or specifically using the anchoring tactic ("move first, make extreme first offers"). One study (Moran & Ritov, 2002) pointed out that, while making the first offer may be advantageous in distributive settings (e.g., Galinsky & Mussweiler, 2001), it can be problematic in integrative negotiations. Specifically, the authors focused on making Integrative Gambit Offers (IGO), offers in which negotiators gave their counterparts more than was demanded on one of the issues, while still maintaining or improving their overall value. The authors argued and explained why negotiators failed to use such offers despite their advantage. A second study showed how making the first offer might lead to lower levels of satisfaction accompanied by increased levels of anxiety (Rosette, Kopelman & Abbott, 2014). Another article demonstrated that learning and using the anchoring tactic may lead to higher short-term profits stemming from reaching a better deal for the first-mover, but also to lower long-term results both psychological and economic (Maaravi, Pazy, & Ganzach, 2014). In a single negotiation, first-movers' counterparts were less satisfied and consequently were less willing to negotiate with the same counterpart in the future. In a market setting first-movers' closed fewer deals and thus made lower total profits. Finally, and more relevant to the current article, Loschelder et al. (2014) demonstrated that, in integrative negotiations where the sender revealed private information about compatible preferences, which the recipient could take advantage of for his or her own benefit, making the first offer might backfire.

1.5 First-mover vs. second-mover advantage in negotiations

The current article contributes to this line of research (Loschelder et al., 2014) in two main ways: first, it introduces a variable that has seldom been investigated: negotiators *initiation preferences*; and second, it adds to this new line of research that questions the general recommendation to always make the first offer in negotiations. We argue that there are cases in which people prefer to move second, and rightfully so. Here, we focus on one category of such situations that can be defined as follows: (1) a distributive negotiation (e.g., the pawn shop negotiation); (2) there is a significant asymmetry of information between the negotiating parties (e.g., the pawn shop owner is an expert and usually knows the market value of the negotiated item, whereas the seller is typically a layman).

We hypothesize that in such situations:

H1: Negotiation-lay people (people who did not learn about the anchoring tactic) will prefer to move-second and not make the first offers themselves.

H2: Negotiation-savvy people (people who learned about the anchoring tactic) will prefer to move-first and make the first offers themselves.

H3: Negotiators in asymmetry-of-information situations will receive a more valuable offer (not making the first offers) than they would themselves have requested in the first place.

H4: Negotiators in asymmetry-of-information situations will reach better outcomes when they move second and don't make the first offer.

H1 is based on prospect theory (Kahneman & Tversky, 1979). One of the principles of this theory is that losses loom larger than gains. This principle can be used to explain why lay negotiators, that is, negotiators who are not aware of the anchoring tactic and its potential positive effect, usually prefer to move second and not make the first offer themselves. As Figure 1 illustrates, after one of the parties makes the first offer, there are two main possibilities: (a) the first offer is immediately accepted as it is better than the expectations of the counterpart and the parties reach an agreement without any negotiation; (b) the first offer is not accepted, and the parties start negotiating. Since an *unacceptable first offer* that leads to a negotiation can occur whether the focal negotiator makes the first offer or moves second (paths 1 and 4 in Figure 1), the other alternative – that of a first offer that is immediately accepted – might influence the decision to a greater extent. But, the perception and framing of a first offer that is *immediately accepted* are totally different depending on the identity of the initiator. As illustrated in Figure 1, when one's counterpart makes a first offer that exceeds one's expectations and is thus accepted immediately, the agreement will be framed as a *gain* from the focal negotiator perspective (path 3 in Figure 1). On the other hand, when the first offer made by the focal negotiator is accepted immediately by his or her counterpart (path 2), the initiator is more likely to perceive the agreement as a *loss* (Galinsky, Seiden, Kim & Medvec, 2002). Since losses influence decisions more than gains, it is hypothesized that lay people, those who are not aware of the positive effect of first offers, will prefer to move second.

The above analysis focuses on descriptive psychology, that is, it describes how decision makers may actually behave. But what we suggest here — and is expressed in H3 and H4 — is that in specific cases negotiators are indeed better off moving second. Think about the pawn-shop owner in the above example. When the seller approaches him with the item for sale (bull-horn clippers, in this example), he can easily estimate the price he is willing to pay. His professional knowledge should reduce the uncertainty from his perspective, and therefore he is not expected to be anchored by the first offer of the seller. Moreover, research has shown that focusing on information that counters the anchor, for

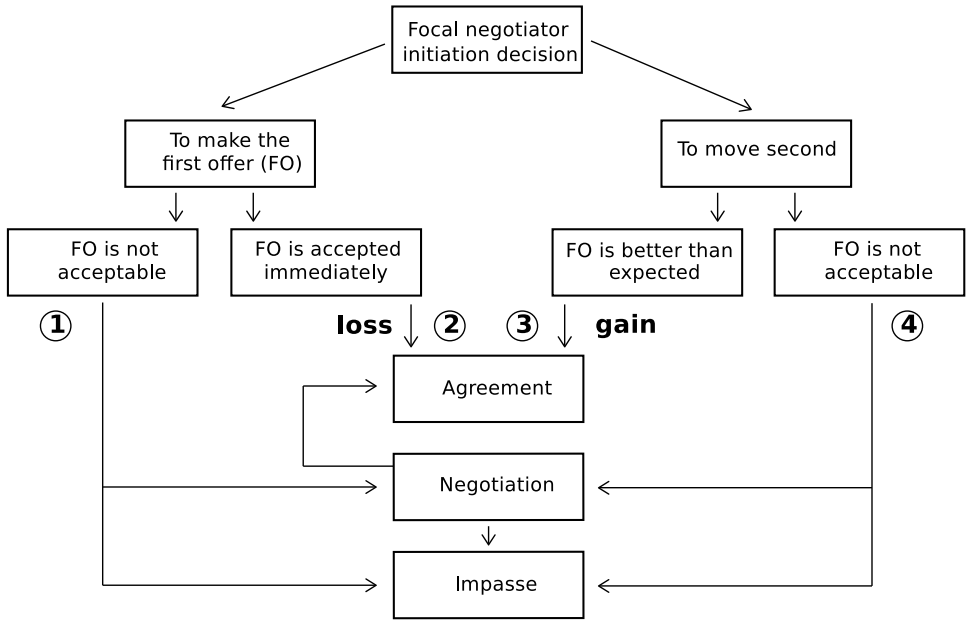

FIGURE 1: Illustration of a negotiator initiation decision, outcomes and perceptions.

example one's goals in the negotiation, may eliminate the anchoring effect altogether (Galinsky & Mussweiler, 2001). Actually, moving second may entail an opportunity for the shop owner. Since this is a case of asymmetry of information, and the shop owner is the expert, in some cases the seller might ask for less than the shop owner would have offered if he were to make the first offer.

On the other hand, making the first offer can be risky for the pawn-shop owner as he might offer much more than the seller would have asked for. Since the shop owner knows the actual price range of the item, he is likely to use this information as a reference point to decide the amount of the first offer (Kahneman, 1992). Interestingly, instead of benefiting from the anchoring effect of the first offer, he may be anchored by his own knowledge of the typical range of prices. One similar example is research that has shown that it may be better not to have any alternative in a negotiation rather than to have a poor one, since the poor alternative may anchor the negotiator and make him settle for less (Schaerer, Swaab & Galinsky, 2014).

The above analysis focused on the negotiator who is more informed, but interestingly enough, in cases of information asymmetry, the lay negotiator is also better off moving second. If he moves first, he cannot benefit from the positive effect of the first offer, because the savvy negotiator is not likely to be influenced by it. On the other hand, moving second may reveal some important information. We suggest that the first offer of an informed counterpart will be based (or anchored) on the reasonable price range as a reference point (Kahneman, 1992), thus giving the uninformed negotiator who decided to move second some important information.

2 Study 1

2.1 Method

Participants and design. We recruited 42 first year social science students, and 118 second year students studying in a college in Israel (70 male; Mage=24.04 years, SD=1.85). The participants provided demographic information and filled out a short questionnaire regarding their general preference about giving the first vs. second offer in negotiation ("*In general, i.e., in the framework of your job or your private life, do you prefer making the first offer during a negotiation, or do you prefer to let your counterpart make the first offer*"). Finally, participants where asked why they had the stated negotiation preference.

2.2 Results and discussion

In line with H1, the majority of the first-year students (64%) preferred to *not* give the first offer. However, as predicted in H2, the majority of second year students (59%) who were taught about economic behavior and heuristics showed a significant preference for giving the first offer (Z-score=–2.63, p=0.01). Moreover, when asked to explain why they preferred to give the first offer, 60% of second year students explicitly indicated the anchoring heuristic as opposed to only 13% first year students who mentioned anchoring (Z=–3.28, p=0.001). These findings corroborate hypothesis 1 and 2 stated above regarding the preferences of negotiation-savvy (knowing about the anchoring effect) vs. negotiation-lay people. Based on these initial findings it is possible to assume that people's natural tendency is to move second,

and that the existing negotiation theory, and accordingly negotiation education, instill a preference for moving first.

Note that another important factor that may play a role in negotiators initiation preferences is level of uncertainty, i.e., their knowledge about market value. The level of uncertainty might mediate negotiators' preference for making the first offer, so that the *greater* the uncertainty, the *fewer* negotiators (both laypeople and savvy negotiators) will tend to make the first offer. This factor was not explored in the current research but it is discussed in the general discussion section below.

3 Study 2

Study 1 has shown that, although according to the anchoring and adjustment tactic it is preferable to make the first offer, people prefer to move second unless they were taught otherwise. The results of Study 1 can be explained in two ways. First, as in other cases studied in the field of economic behavior, the intuitive tendency to avoid giving the first offer may simply be irrational, and it comes at the expense of optimal profit (e.g., Kahneman & Tversky, 1975; Kahneman, Knetsch, & Thaler, 1991). Second, the intuitive tendency to avoid giving the first offer may be a result of actual life experience in which there are cases where you are actually better off not giving the first offer. One such case in which the second offer may be preferable is when the two negotiating parties have different sources of information, or more specifically different reference points (Kahneman, 1992; Schaerer, Swaab & Galinsky, 2014). We designed the following studies to examine whether, in cases of asymmetry of information it might be preferable to avoid making the first offer. In Study 2 we use an extreme example based on the pawn shop owners' scenario.

3.1 Method

Participants and design. We recruited 130 U.S. participants (45 male; M_{age}=36.3 years, SD=11.3) via Mturk. Participants were randomly assigned to one of two conditions as described below. The participants provided demographic information, read a short description of a hypothetical scenario, and filled out a short questionnaire. Since this was the first experimental study we ran in this context, we did not have a clear reference regarding the necessary sample size. We based the sample size on a power analysis (through G*Power, Faul et al., 2007) which assumed that we wanted a statistical power of 0.80 to detect a medium-sized effect (d=0.5). This analysis suggested a required sample size of 64 participants per condition.

Procedure. The participants were told that the study at hand was meant to examine how people go about buying or selling antiques. The scenario was that of an individual who had recently inherited a small sculpture of a duck from a distant relative. The participants were shown a picture of the sculpture and assigned either to the role of the sculpture owner who is interested in selling it, or the antique shop owner who is interested in buying it. The picture of the sculpture (see Figure 2) was the actual picture of a rare Edier Drake sculpture taken from the official Sotheby's web site, where its value was estimated at $350,000 to $500,000 (Sotheby's, 2016). However, this information was disclosed only to participants playing the role of the antique shop owner, who was expected to have relevant sources of information regarding antiques and their value. The participants playing the seller role, on the other hand, were told that they did not know the sculpture value. Finally, in both conditions the participants were asked to make the first offer for either selling or buying the sculpture.

FIGURE 2: A rare Edier Drake sculpture taken from the official Sotheby's web site.

3.2 Results and discussion

As predicted in H3, in this scenario of information asymmetry, both negotiation parties would have been better off moving second. Due to the vast differences in the possible price range between conditions, we did not assume equal variances across conditions (Levene's test, F= 123.15, p<0.001). Based on an independent sample t-test, we found that while the average offer given by the seller was $324.27 (SD=683.52), the average offer given by the antique shop owner, who was probably self-anchored by the market prices she was aware of, was $236,631.89 (SD=253,561.26; t(65)=7.57, p<0.001, d=1.32). This of course means that if the seller had given the first offer, she would have received only a tiny fraction of what she potentially could have gotten for the sculpture. In addition, if the shop owner had given the first offer, she would have paid on average more than seven hundred times what the seller was expecting to get.

While these results are impressive, Study 2 has several limitations. First and foremost, such extreme asymmetry of information is not very likely to occur in real life. Second, the setting of buying and selling antiques is not familiar to most individuals and the external validity of such a scenario can be questioned. Finally, the existence a single dependent variable in this study calls for additional data to be collected. Study 3 was designed in order to address these limitations.

4 Study 3

Study 3 tested the preference of giving the second offer in a more realistic and conservative setting. To that end, we selected the scenario of a person taking a taxi in a foreign country. This scenario is inherently defined by information asymmetry, but is relatively common and not at all extreme. It is safe to assume that most people reading this paper have at one time or another found themselves in a foreign country hailing a taxi without the faintest clue as to how much the fare was supposed to be. Accordingly, Study 3 once again tested a negotiation scenario defined by information asymmetry: a local taxi driver who has all the information and a foreign traveler who lacks it.

4.1 Method

Participants and design. We recruited 62 Israeli participants (32 male; M_{age}=41.5 years, SD=15.8) via an internet survey company. Participants were randomly assigned to one of two conditions. The participants provided demographic information, read a short description of a hypothetical scenario, and filled out a short questionnaire. Based on Study 2 we wanted to be able to achieve a statistical power of 0.80 to detect a large-sized effect (d=0.8). This analysis suggested a required sample size of 21 participants per condition. However, since Study 3 was in a more conservative setting than Study 2, we recruited a slightly larger sample in case the effect would diminish accordingly.

Procedure. The scenario described in Study 3 was that of a foreigner on a business trip to Namibia. The businessperson has just arrived in Namibia and she is about to hire a taxi at the airport. While the taxi fare is set by the meter, the businessperson has a two-hour meeting on the way to her hotel, in a place where it is difficult to get a taxi, and she would like the taxi driver to wait for her and then take her to her hotel. Half of the participants were assigned to the businessperson role and the other half were assigned to the taxi driver role. All participants were required to make the first offer. According to information found on the internet, the rate for every hour the taxi waits in Namibia is approximately $US1.50 (Numbeo, 2016); however, this information was disclosed only to the participants in the taxi driver condition. Indeed, in a real world scenario the local professional knows exactly what the rates are and the foreign visitors seldom do. Participants were first asked to what extent they would prefer to make the second offer (as opposed to the first) in this given situation (*1- not at all, 6-to a very high extent*), and then all were asked to make the first offer themselves.

4.2 Results and discussion

As predicted in H3 and replicating Study 2, both negotiation parties would have been better off moving second and not making the first offer. While the average offer given by the participants playing the role of businessperson for the two hour wait was $25.40 (SD=17.1), the average offer given by the taxi driver who was aware of the local fares and probably used them as a reference point was $4.86 (SD=2.78; t(60)=6.61, p<0.001, d=1.68). This means that, if the businessperson had given the first offer, she would have paid over six times more than necessary. In addition, if the taxi driver had given the first offer, she would have received a fraction of what she could have gotten.

Interestingly, the intuition of the participants served them well in the businessman condition, and they strongly preferred not to make the first offer (M=5.22, SD=2.3); however, this was not the case in the taxi driver condition, despite the driver having the upper hand in the scenario (M=3.45, SD=2.4; t(60)=2.96, p<0.01, d=0.75).

Study 3 offered a replication of Study 2 in a more realistic and conservative setting. While these findings improve the external validity of the hypothesis, Studies 2 and 3 both examined only the first offers participants made in a hypothetical negotiation setting. Since our hypothesis deals with behavior in negotiations, it should be tested in a full negotiation process with two counterparts and a final settlement price. Study 4 offered all of the above.

5 Study 4

Study 4 was designed as a replication of Study 3 with the context of the foreign businessman and the taxi fare in Namibia, only this time we let participants in a class exercise play out an actual negotiation process until they reached a final settlement.

5.1 Method

Participants and design. We recruited 86 international students studying at an Israeli college (38 male; M_{age}=21.5 years, SD=2.8). The participants read a short description of a hypothetical scenario, participated in a negotiation simulation, and filled out a short questionnaire. Based on Study 3 we wanted to be able to achieve a statistical power of 0.80 to detect a large-sized effect (d=0.8). This criterion implied

TABLE 1: Correlations between first offers, counteroffers and settlement prices ($p < .01$ for all).

Measures	First offers	Counteroffers
Counteroffers	.854	--
Settlement prices	.934	.947

a sample size of 21 dyads per condition. The participants in this study were collected in two separate waves.

Procedure. Participants were randomly assigned to a serial number and a color. Then, the participants were asked to pair up according to their number, and were assigned a role (either businessman or driver) according to their color. Each pair then read about the taxi scenario and started a negotiation process based on the instructions they received. All pairs received the same scenario about the taxi-ride in Namibia, but half of the pairs were randomly assigned to a condition in which the businessman made the first offer, and in the other half the driver made the first offer. Participants were told they had ten minutes to reach a final price and they also had the option of ending the negotiation with an impasse. Following the negotiation, the participants were asked to rate their satisfaction with the negotiation results.

5.2 Results and discussion

All 43 of the dyads were able to reach an agreement. As predicted in H4, and replicating Studies 2 and 3, both parties would have been better off not making the first offer, but rather moving second. As for the first offer, participants in the businessman role offered \$45.07 (SD=56.23) on average when they made the first offer compared to \$14.02 (SD=14.28) offered by the taxi driver participants when they made the first offer (t(41)=2.45, p=0.019, d=0.76). More importantly, while the average final price reached by pairs in which the businessman made the first offer was \$49.50 (SD=55.18), the average final price reached by pairs in which the taxi driver made the first offer was \$11.36 (SD=10.86; t(41)=3.11, p=0.003, d=0.96). In other words, the businessman was better off moving second and paying only \$11.36 instead of \$49.50, and the taxi driver was also better off moving second and thus making, on average, almost five times more.

Additionally, to demonstrate the crucial influence of the amount of the first offer on the negotiation process – i.e., the counteroffer and the settlement price – we examined the correlations between all three variables. As expected, there was a positive correlation between first offers, counteroffers and settlement prices. The correlations are summarized in Table 1. Regarding the satisfaction of participants with the negotiation outcome, there were no significant differences between conditions or between assigned roles.

6 General Discussion

Existing literature in the realm of economics and game theory (Bester, 1993; Gal-Or, 1985) suggests that there is no clear cut preference for moving first vs. moving second in economic transactions, and addresses this issue in a context dependent manner. The literature on behavioral decision making and negotiations, on the other hand, hasn't developed a similar complexity to date, and usually advocates the first-mover advantage based on the anchoring heuristic (e.g., Furnham & Boo, 2011). Additionally, as demonstrated in Study 1, there seems to be an inconsistency between the first-mover advantage advocated in the negotiation literature, and people's baseline intuition. In the current paper, we suggest a more complex approach, which introduces a context dependent model for the moving first vs. moving second preference in negotiation. More specifically, we suggest that in cases of information asymmetry between the negotiating parties, it is actually preferable for both parties to move second.

In our first study, we found that, although the literature suggests moving first, based on their personal experience most people prefer to move second unless taught otherwise. In the following experimental studies, we found a first-mover *disadvantage* across different scenarios of information asymmetry. These findings were replicated across extreme as well as more common situations, across cultures, and they remained persistent whether we tested first offers or complete negotiations ending with a final settlement.

Throughout the paper, we sought to enhance the external validity of the findings by demonstrating that first-movers may have a clear disadvantage in several different scenarios of information asymmetry. While "suffering" from lack of information regarding the value of a given product, or the lack of information regarding the knowledge of the negotiation counterpart, buyers may make a first offer that is higher than necessary, and sellers might make a first offer that is lower than what they could have been offered. This conceptual framework suggests a multitude of combinations based on two main variables: (1) information about the market value; and (2) information regarding the negotiation counterpart's knowledge of the market value. Based on the findings of the studies described in this paper, it should be possible to map out when it is advantageous to move first and when to move second based on the combination of these two variables. Existing research deals almost solely with situations in which both negotiating parties have a clear reference of the market price, as well as knowledge regarding the information their counterpart holds (combination 1 in Table 2), and suggests it is best to move first in such a situation. However, the studies in this paper dealt with two different combinations (combinations 3 & 4 in Table 2), and as described above, in both these cases it seems that it is preferable to move second.

This line of thought opens up a new venue for the understanding of preferences in negotiation scenarios, and future

TABLE 2: Moving first vs. second preference, based on the negotiator's information.

		Negotiator's (e.g., seller) information regarding the market value	
		Negotiator has value reference	Negotiator lacks value reference
Negotiator's information regarding his counterpart's (e.g. buyer) knowledge of the market value	Counterpart has value reference	Preferable to move 1st (Combination #1)	Preferable to move 2nd (Combination #4)
	Counterpart lacks value reference	Preferable to move 2nd (Combination #2)	Preferable to move 1st (Combination #5)
	Unknown	Preferable to move 2nd (Combination #3)	Preferable to move 2nd (Combination #6)

studies should attempt to shed light on additional combinations not yet examined. Table 2 offers a matrix of the possible combinations in this regard, as well as our prediction of negotiation preferences in each scenario.

Moreover, there are three additional variables that have been found to play a crucial role in negotiations and should therefore also be incorporated into future research of the case study at hand. First, future studies should try to incorporate the issue of negotiators' alternatives. Past research has shown that negotiators' alternatives, and more specifically their best alternative (or BATNA, i.e., Best Alternative to a Negotiated Agreement), plays a crucial role in negotiators' power, perception of power and results (Magee, Galinsky & Gruenfeld, 2007). Thus, the presence or absence of alternatives, as well as the assessment of the alternatives, and the knowledge regarding the counterpart's alternatives should all be examined in future designs investigating negotiation preferences and outcomes. Second, the value or significance of the negotiated asset, which embodies elements of risk and gain, and is also bound to affect negotiation preference, should be accounted for as well. Third, The negotiators' experience, which has been found to play an important role in negotiations (Northcraft & Neale, 1987; Loschelder, Friese, Schaerer, & Galinsky, 2016), should also be examined in this regard, by contrasting proven, seasoned experts with negotiation amateurs.

Furthermore, future research should also explore a number of important individual differences that have been found to play a key role in determining negotiation initiation and its effectiveness. Two such factors are the locus of control (Shalvi, Moran & Ritov, 2010) and the social value orientation (Loschelder et al., 2016) of the respondent to the first offer. Since these two variables were shown to decrease or even eliminate the anchoring effect in negotiation, they might have a similar attenuating effect in situations of information asymmetry as discussed in the current article.

As we have tried to demonstrate throughout the paper, when discussing negotiation preferences, one should ask what is preferable for negotiators, as well as what negotiators actually prefer. This distinction described above has been found to be important in the process of negotiation preference analysis, and should therefore be preserved in future studies as well.

In sum, based on the studies presented in this paper we suggest that a more complex approach towards moving first in negotiation is necessary. Such an approach can be based on the knowledge that negotiating parties hold regarding both the market value and their counterparts. Future studies should continue to map the different combinations in this regard in order to create a more accurate and comprehensive framework for the understanding of negotiation preferences.

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