Pathways of Persuasion[*]

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Abstract

While economic theories of persuasion emphasize the role of self-interest, others emphasize other-regard. To study these pathways, we introduce a simple experimental framework where sellers use free-form conversation to convince buyers to raise their valuations for objects. We find sellers more frequently target buyers' self-interest, and changes in self-interest explain more variation in persuasion overall. Additionally, sellers' gains along one pathway come at a considerable cost along the other. However, when sellers target other-regard, they are at their most persuasive.

1 Introduction

How do people persuade? Consider a salesperson interacting with a potential buyer, for example. She could appeal to the buyer's *self-interest*, describing appealing features of the product. Alternatively, she could try to cultivate the buyer's *other-regard*: being likeable, building rapport, and so on. This paper examines a simple but important question: what roles do these two pathways play in persuasion?[1]

We define an experimental framework to account quantitatively for the roles of self-interest and other-regard in persuasion. We focus on a sales setting in which subjects play the role of either seller or buyer.[2] Buyers speak (by telephone) with sellers, who receive a commission that increases in expectation with the buyer's willingness to pay for an object, such as an iPad.[3] Buyers and sellers communicate however they wish, giving sellers freedom to choose their own persuasive strategy. We then measure how buyers' valuations differ as a result of these conversations, which for the purposes of the paper is how we define and measure persuasion. To decompose these differences into components due to self-interest and other-regard, we elicit buyers' willingness to pay under two alternative assumptions: that the seller *will* receive a commission, and that she will not. Changes in the latter valuation isolate effects on self-interest, while changes in the former capture the combined effect of both pathways. We also benchmark results against those from a condition in which buyers do not converse with sellers but have a similar amount of time to think on their own. This approach lets us quantify the importance of each pathway and also examine how they interact, e.g. as strategic complements or substitutes. It is, however, purely an accounting decomposition: it does not tell us, for example, what it is about buyers' underlying preferences that causes them to take sellers' payoffs into account when making their decisions.

Despite seller's conflict of interest, buyers change their valuations by an (absolute) average of 16% following conversations, and increase their valuations on average significantly, by 5%, compared to only 1% without communication. These are sizeable effects given that sellers were amateurs and spoke with buyers for just 3.5 minutes on average.

Both self-interest and other-regard matter for persuasion, with self-interest accounting for

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[1]Even within a single discipline such as economics, analyses of persuasion and of other-regarding preferences have remained largely siloed. As a crude indicator, the five models of other-regarding preferences with the most Google Scholar citations (Loewenstein et al. (1989), Fehr and Schmidt (1999), Rabin (1993), Bolton and Ockenfels (2000), and Charness and Rabin (2002)) are cited by zero economics or psychology papers with "persuasion" in the title. There is of course evidence that communication can affect other-regard more broadly. See for example Yamamori et al. (2008), Andreoni and Rao (2011), and Greiner et al. (2012) on communication in dictator games; Charness and Gneezy (2008) and Bohnet and Frey (1999) on (removing) anonymity, Landry et al. (2006) on face-to-face interaction and attractiveness, Roth (1995), Dawes et al. (1977), and Buchan et al. (2006) on irrelevant versus strategic conversation, and Brandts et al. (forthcoming) on rapport-building conversation. There is also related work on how material gifts affect other-regard and subsequent behavior. For example, the gift exchange literature surveyed by Cooper and Kagel (2009) explores how employees reciprocate above-market wages with increased productivity; Malmendier and Schmidt (2012) show that bribes can affect willingness to purchase from the briber.

[2]A sales setting is convenient because the "receiver"'s decision, how much to pay, is straightforward to measure and interpret. The concepts of self-interest and other-regard seem as likely to apply to other important persuasion contexts, however – whom to hire, for whom to vote, etc.

[3]Sellers' incentives are common knowledge, so that disclosure is not a salient choice. See Loewenstein et al. (2011) for evidence on the effects of disclosing conflicts of interest.

roughly twice as much of the cross-sectional variation. Further, the bulk of sellers' financial gains are due to changes in self-interest: the overall mean change in self-interest is \$18, while the mean change in other-regard is $-\$4$. However, nurturing other regard is possible and effective. For a minority of sellers, targeting other regard does seem to be an intentional and effective strategy. In the 19% of cases where sellers' targeted other-regard, they increased buyer valuations by more than twice the average.

The mechanics of persuasion likely vary with many elements of context: how experienced the participants are, what decisions they must make, through what medium they communicate, and so on. Our experimental framework can accommodate variation of any of these elements. In this paper we take a modest first step, examining how results vary with the nature of the object being sold. We chose objects to vary the degree of information asymmetry between buyers and sellers: two are consumer electronics devices with which sellers had (by design) more familiarity than buyers, while the other two were a lottery ticket and a post-dated check about which both parties were symmetrically informed. We find that sellers are more effective at selling the consumer electronics, but do also find that they significantly increase mean buyer valuations for the lottery and post-dated check, with the latter gains differentially due to increases in other-regard. While only suggestive, this is consistent with the idea that other-regard may play a larger role in persuasion where information is less asymmetric.

We also examine how persuasion varies with similarity between the buyer and seller. In principle one could imagine that similarity facilitates persuasion for a variety of reasons: it could enhance trust, improve communication, or simply lead the buyer to feel more altruistic towards the seller. Consistent with this idea, we find evidence of a form of homophily: persuasion is significantly higher when the buyer and seller are the same gender, or when the buyer perceives the seller as more similar to him. Persuasion is also substantially higher when buyer and seller are of the same nationality, though this different is not statistically significant. The effects of similarity on persuasion appear to work through both self-interest and other-regard, but with somewhat stronger evidence for self-interest. Other work has highlighted the importance of similarity, e.g. electing for preventive health measures after speaking with a race-matched doctor (Alsan et al., 2018), doing better in school with race-matched teachers (Dee, 2004) or gender-matched teachers (Muralidharan and Sheth, 2016), and female students taking more STEM classes after having a female professor (Bettinger and Long, 2005; Carrell et al., 2010). Our results provide first evidence how similarity potentiates persuasion.

Next, we examine interactions between the two pathways. Our accounting decomposition of persuasion into self-interest and other-regarding components is also a first step towards understanding how the two affect each other. Many mechanisms seem plausible: buyers might put more faith in advice from sellers they like, for example, or dislike people who try a "hard sell." In the data, changes in self-interest and other-regard are significantly negatively correlated with each other, both unconditionally (-0.64) and after projecting the data onto covariates to remove potentially correlated measurement error (-0.70). This relationship does not appear to reflect mechanical tradeoffs between use of conversation time, as it is roughly invariant to overall conversation length. Sellers thus appear to face a trade-off, with gains along one pathway partially offset by losses along the other.

We also examine descriptively the role of trust, using independent coder ratings of the

trustworthiness of each seller based on their conversation transcripts. Some sellers are systematically perceived as more trustworthy than others, and perceived trustworthiness strongly predicts persuasion: sellers perceived as one standard deviation more trustworthy see an increase in post valuation of $11, or a 79% increase relative to the $14 mean increase in valuation after conversation. Interestingly, this effect works entirely through self-interest and not through other-regard, suggesting that buyers do not feel more altruistic or reciprocal towards more trustworthy sellers.

Finally, we examine what researchers working on persuasion believe makes a conversation persuasive, and how well their metrics predict the results. Specifically, we gather predictions from an interdisciplinary set of researchers working on persuasion on what RA-coded features of conversation transcripts would best predict persuasion. Taken together, these predictions provide a rough snapshot of the state of knowledge about persuasion. The researchers expect both appeals to other-regard and self-interest to play a role: 21 items were coded by RAs as capturing appeals to self-interest and 15 to other-regard. However, exactly what the researchers were capturing beyond these two pathways varied greatly. Congruence among researchers was low, suggesting a literature yet to converge: only three items appeared at least twice, with only 'length of the conversation' appearing three times. Predictive power is low overall, suggestive there is room to develop more predictive theories of persuasive content.

Our experiment builds on two strands of persuasion work. The first has examined the effects of communication in settings where only one of the two pathways is operative. In dictator games, for example, there is no uncertainty about the best self-interested action and yet persuasion is possible via appeals to other-regard (e.g. Yamamori et al. (2008)). In sender-receiver games where the sender can only send messages about the receiver's payoff, for another example, communication through self-interest is possible (e.g. Dickhaut et al. (1995)). Collectively these studies show that both pathways are possible, and motivate our interest in settings where both can operate at the same time. A second strand of work has examined aggregate persuasion in such settings (see Roth (1995)); our contribution is to decompose this aggregate, testing for and quantifying the role of each pathway and their interactions. This helps us understand not only whether persuasion occurs, but why.

We also build on a large theoretical literature on persuasion in economics which has typically focused on self-interest,[4] and on work in popular psychology which has more often emphasized the role of other-regard. Dale Carnegie's self-help classic "How to Win Friends and Influence People" promised to reveal "the six ways of making people like you" (Carnegie, 1936), and Cialdini (1993) argues that "people prefer to say yes to individuals they know

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[4]For the purposes of this paper, we define persuasion broadly as the change in the receiver's action that is induced by interaction with the sender. In this sense, related work includes models of information-based persuasion (e.g. Crawford and Sobel (1982), Petty and Cacioppo (1986), Kamenica and Gentzkow (2011), Olszewski (2004), Dziuda (2011), and Che et al. (2013)) as well as taste-based persuasion (e.g. Becker and Murphy (1993)). Our experimental design is arguably less directly related to the "Bayesian persuasion" (Kamenica and Gentzkow, 2011) approach, which studies contexts in which senders can commit to conditioning message probabilities on states of the world, as we do not provide sellers in our experiment with means to commit. Other approaches to conceptualizing persuasion include models that incorporate behavioral assumptions (e.g. Murphy and Shleifer (2004), Mullainathan et al. (2008)) and that distinguish between belief-based and preference-based persuasion DellaVigna and Gentzkow (2009).

and like." In a similar vein, but a laboratory context, Brandts et al. (forthcoming) find that "friendliness" in free-form conversations is correlated with higher earnings in contract renegotiation.

Our results also add to work on other-regarding preferences, which has begun to demonstrate the role they play in real-world settings, from workplace productivity (Bellemare and Shearer, 2009) to workplace satisfaction (Card et al., 2012) to labor relations (Krueger and Mas, 2004) to charitable giving (Andreoni and Payne, 2013). Persuasion seems another important context in which to understand the role of other-regard given its central role in economic life, accounting for as much as 25-30% of the US economy (McCloskey and Klamer, 1995; Antioch, 2013).

2   Conceptual Framework

Consider a buyer b with quasi-linear preferences given by

$$u(c, a; \theta, \gamma) = c + v(a; \theta) + w(a \cdot t, \gamma) \tag{1}$$

Here c represents the value of consumption of all other goods, v the value of a discrete good the buyer may purchase, and w the buyers' preferences over transfers to a seller s. $a \in \{0, 1\}$ indicates whether the purchase is made at price p in which case the seller receives commission t. The buyer's consumption is thus $c = y_b - a * p$. The parameters θ and γ capture uncertainty about the utility of the good to the buyer and about the buyer's level of care or concern for the seller, respectively. For simplicity we normalize $v(0; \theta)$ and $w(0; \gamma)$ to zero.

Given beliefs π, the buyer's willingness to pay WTP_c^* for the good is

$$WTP_c^* = \mathbb{E}_\pi \left[v(a; \theta) + w(t; \gamma) \right] \tag{2}$$

The expression on the left is the incremental utility from consuming p_c^*, while that on the right is the sum of the benefits from purchasing the good, including both the private benefits and the effects through other-regard.

Now suppose instead the buyer is offered the opportunity to purchase the good, but is told the seller will not receive a commission regardless of the outcome. His willingness to pay p_{nc}^* is defined by

$$WTP_{nc}^* = \mathbb{E}_\pi \left[v(a; \theta) \right] \tag{3}$$

Notice that if the buyer values the seller's income then this will be less than his willingness to pay with commission, while if he does not it could be the same or even greater (if he dislikes the seller).

We define persuasion in this setting as the change Δp_c^* in the buyers' valuation induced by interaction with the seller. Mechanically, this decomposes into a change due to self-interest

and one due to other-regard:

$$\underbrace{\Delta WTP_c^*}_{Persuasion} = \underbrace{\Delta WTP_{nc}^*}_{Self-interest} + \underbrace{(\Delta WTP_c^* - \Delta WTP_{nc}^*)}_{Other-regard} \tag{4}$$

$$= \Delta \mathbb{E}_\pi [v(a;\theta)] + \Delta \mathbb{E}_\pi [w(t;\gamma)] \tag{5}$$

Notice that this is purely an accounting decomposition, and as such allows for many possible interactions between the two pathways. We discuss examples, and analyze potential interactions in section 5.5. It is also a broad distinction that takes no stand on the underlying *reasons* for or nature of other-regarding preferences. A buyer might value transfers to the seller because he cares about equity, or because he cares about aggregate efficiency, or because he feels some sense of reciprocity towards sellers who have been helpful, for example, among many other possibilities. The decomposition should be understood as a first, simple step towards a more nuanced analysis of the underlying preferences that drive responses to persuasive communication. In Section 5.6 we do examine the role of one specific factor, trust, that could potentially affect persuasion through both channels.

3 Experimental Design

We organize the experiment as a series of interactions in each of which a buyer submits an initial valuation for a good, the buyer is randomly matched to a seller, the buyer and seller have a free-form telephone conversation lasting at most 10 minutes, and the buyer then submits an updated valuation.[5] It is common knowledge that the seller's (expected) payoff increases in the buyers' willingness to pay, creating an incentive for her to persuade the buyer. Sellers were not given any information about buyers, however, including their ex ante or ex post valuations.

We measure persuasion by eliciting the highest price buyers are willing to pay both with (p_c^*) and without (p_{nc}^*) commission, both before and after the phone call, resulting in four separate valuations. Identifying persuasion within-subject in this way maximizes our statistical power to analyze its determinants. Specifically, the buyer first makes a series of incentivized decisions, choosing between $500 or the object plus $X. As the instructions explain to the subjects, the price of the good is thus $500-X for that decision. We vary X from $0 to $480 in increments of $20. (See Table A-1, Panel A.) We define p_{nc}^* as $500 less the smallest X such that the buyer chooses the good plus $X over $500. The buyer then makes a second series of incentivized decisions between either $500 for herself and $0 for the seller, or the object and $X for herself and $500 for the seller.[6] (Table A-1, Panel B.) The only change from the first elicitation is that the seller now receives $500 if a purchase is made, thus letting us capture p_c^*.[7]

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[5]The paradigm is most similar to the "Oral" condition from Mobius and Rosenblat (2006), where one subject attempts to persuade another over the course of a five-minute free-form telephone call.

[6]We sized commissions to create meaningful incentives for sellers to exert effort, knowing that any given buyer choice had a low chance of being implemented, rather than to reflect typical real-world values.

[7]This design is similar to Bremzen et al. (2015) who disentangle product valuation and altruism by separately eliciting a valuation for the good as well as that good with an other-regard component.

We incentivize valuation decisions as follows: For every fifty buyers, a computer lottery held roughly one week later randomly chooses one and then chooses one of her decisions across the entire experimental session to implement.[8] For example, if a commission question is chosen where she chooses the good, she is given the good and $X, and the seller is paid $500. Since any question might be implemented, the buyer's incentive is to report truthfully her preferences to any one question. Further, since only one question is implemented, each question can be considered in isolation, thus negating motives like hedging (Azrieli et al., forthcoming).

Because both commission and no-commission treatments are *equally likely* at the time conversations take place, incentives do not vary across conversations. At the same time, the seller's material incentive is to increase the number of questions in which the buyer selects the alternative in which the seller receives a commission, as a higher p_c^* increases the likelihood the seller is paid her bonus. This is explained to the seller in her instructions (all experimental instructions and questionnaires available on both authors' websites).

This experimental design is intentionally flexible, with scope to vary many elements of context. We take first steps in this direction, varying the set of objects for sale. Each subject participates in four buyer-seller interactions, always in the same role, with a new counterpart, and with a different object for sale. We chose objects to induce variation in the degree of information asymmetry between buyers and sellers. Two of the objects were new, popular tablet computers: the "New Apple iPad" and the "Microsoft Surface". These two products have features that create rich context for discussion and (potentially) uncertainty about valuation for the buyer, who may not know about all of them. A meaningful proportion of our subject pool already owned one of these two products, which enabled us to recruit sellers with more familiarity than the typical buyer (see below). The other two objects were a $500 check post-dated for January 1st of the following year (8–11.5 months in the future), and a lottery that paid $1,000 with 50% chance and $0 otherwise. In contrast to the tablets, there was no uncertainty about the objective attributes of these goods. Buyer valuations for these should in theory depend only on time and risk preferences and hence should be relatively difficult for sellers to influence through the self-interest pathway. The order in which subjects discussed these four products was randomized at the session level, and subjects did not learn which product they would be discussing in each conversation until after buyer-seller pairings had been made.

Buyers and sellers were recruited to different buildings on the Ohio State University campus. They were not made aware of the other room full of participants until the instructions were read. Buyers sat in the Economics experimental laboratory and read instructions on the computer with only clarifying questions answered. Their valuation elicitations were done in private at their computer terminal once they confirmed the instructions were clear. They then dialed into calls with sellers using cordless landlines. Sellers sat in individual rooms, preventing them from overhearing the conversations other sellers were having and (potentially) learning from their approaches. Sellers read their instructions, with only clarifying questions answered. To measure seller approaches, just before each phone call, through an online survey, they

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[8]We stratified the drawing so that an equal number of commission and non-commission questions would be chosen, which let us tell sellers the precise probabilities of commissions being relevant.

provided free response answers to two questions: What are your goals for this conversation, and how do you plan to achieve them? They then dialed into calls with buyers using their cell phones and headsets provided by the researchers. Calls were made and recorded using a third party conference call service. Calls ended at the seller's discretion or after ten minutes had passed. After each conversation and WTP elicitation, buyers filled out an unincentivized survey about the interaction.

3.1 No Communication Condition

After conducting 11 experimental sessions using the design above, and based on early feedback on the data from these rounds, we also conducted additional experimental sessions in which we implemented a second "no communication" condition. The purpose of this condition was to measure factors other than communication that could change valuations. In this condition, buyers waited for about the length of a phone call before submitting ex post valuations. Valuations could change in this condition as buyers introspected on their decision, for example. Comparing the valuation changes we observe in the Communication and No Communication conditions lets us estimate the effects of communication, net of any effects of time to reflect.

3.2 Researcher Predictions and Conversation Coding

Besides valuations and survey responses, messages between buyers and sellers themselves are potentially useful data. Recent work has found that such content can have surprising predictive power and yield insights into the nature of communication (Pennebaker, 2011). We therefore recorded and transcribed buyer-seller conversations.[9]

We then coded a set of predetermined variables describing these conversations. We determined variables to code by soliciting proposals from other researchers working in the area of persuasion: specifically, we contacted eight researchers from across economics and psychology, gave them the instructions from our experiment, and asked them to describe five variables each that could be obtained from transcripts, using either computer or human coding, that would best predict changes in buyer valuations. We informed them that we would estimate regression models interacting their predictors with product fixed effects, identify the submission with the highest R^2, and publish the name of the winner while keeping others anonymous.[10] We took this approach to discipline our analysis while also obtaining a snapshot view of how researchers currently think about persuasion.

Since the interpretation of messages is often inherently subjective, we recruited coders from the same subject pool as the buyers from our original experiment in order to capture interpretations that are (statistically) the same as those of the original audience. We incentivized thoughtful, honest coding using the coordination game structure proposed by Houser and Xiao (2011): two coders are anonymously paired with each other, read the same transcript, answer the same question (e.g. "How likeable did you find this seller?"), and are paid if their answers

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[9]Due to technical difficulties with the teleconferencing service, the phones themselves, and the online recording and hosting service, we either failed to record or lost the recordings for seven conversations, leaving 257 conversations for the content analysis.

[10]We congratulate the winner, Joel Sobel, whose measures predicted 18% of the variation in persuasion.

match. When there was disagreement among coders, our RA provided a tie-breaking vote to resolve.

4 Recruitment and Data Description

4.1 Recruitment

We recruited subjects via an email to the Ohio State Economics experiment subject pool inviting them to take a two-minute online intake survey which would qualify them for our experiment. To identify subjects with more or less experience with the tablet goods in our experiment, we asked survey respondents about their ownership of and familiarity with the Apple iPad and the Microsoft Surface (among other "filler" questions to hide the nature of the experiment). We then assigned those who reported owning either an iPad *or* a Surface to be sellers, and those who reported owning neither to be buyers. We did not tell subjects what role they would be playing, so that the only perceptible difference was the location on campus to which subjects were invited.

We first held 11 experimental sessions during which we observed 264 buyer-seller conversations. We present results from these sessions below as our primary results. Based on feedback on these results, we subsequently ran 4 additional experimental sessions in which we included both Communication and No Communication arms, with buyers experiencing both arms in those sessions. Appendix Table A-2 summarizes participation by session.[11] Overall, sixty-six sellers participated in four conversations each. Fifty-five buyers participated in sessions in which they spoke with four sellers, while 28 buyers participated in sessions in which they were randomly assigned to the communication condition twice and the no communication condition twice.[12] Subjects were paid $15 for participation plus their payments from buyers' choices and the lottery the following week. No session lasted longer than two hours.

4.2 Data Description

Appendix Table A-3 summarizes participant characteristics. Buyers and sellers are similar demographically but differ (by design) in their product ownership. Buyers are somewhat familiar with these products, however, as 86% and 16%, report having previous used an iPad or a Surface, respectively.

Figure A-1 displays average initial valuations for the four products.[13] The mean initial valuation across all products for the good itself is $279, which increases by $14 when a commission is added ($p = 0.06$). Buyer valuations of the tablets are as expected generally below their $500 market price at the time, with mean valuations at $282 for the iPad and $236 for

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[11]We focus on the first 11 sessions as there could potentially be an interaction between the two arms in the latter sessions. The results below do not qualitatively change, the relationship or effect sizes we estimate are moderately smaller, when conversation data from sessions 12-15 are included (See Appendix subsection A.1).

[12]Sample size was determined by the number of tablet owners we were able to recruit into the experiment.

[13]We did not impose monotonicity on subject responses: subjects could report a willingness to pay X but not $X'(< X)$. Of 1,328 valuations we elicited, 1,306 (all but 2%) are monotonic in the expected direction.

the Surface. Buyers are impatient, valuing a $500 check nine to twelve months from now at $390, and quite risk averse, valuing a 50/50 chance of winning $1,000 at $211.

4.3 Example Conversations

Conversations vary enormously. To give some sense, we provide excerpts here that capture seller attempts to persuade via appeal to self-interest and to other-regard, respectively. Appendix C provides further examples illustrating how some sellers gave up quickly, others monopolized the conversation, others simply lied, etc.

A number of sellers report that they plan to focus on the attributes and value of the object for sale – to "talk about how awesome the iPad is," "tell them the specs and convince them the Surface is worth full retail price," "give extra information," and "sell benefits – USB, keyboard for notes, fast internet, touch screen capabilities, no stylus required to take notes." The following conversation illustrates this approach:

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Seller: So, I'd like to talk to you a little bit more
about the iPad as far as, do you own an iPad or anything? Er, do you
own an iPhone?
Buyer:  Uh, I have only, I'm using an Apple right now.
Seller: Ok so, the iPad obviously, to me, I personally have an iPad, and I, I
love it cause, it seems great for taking notes and everything like that
and it's very handy cause it's much lighter than a laptop. So that's
kinda nice.
Buyer:  Uh, huh.
Seller: Uh, I would definitely recommend getting one. I know they are on the
pricier side, but as far as I know they are much better iPad than like
android tablets that have broken like within a week. So, I would
definitely recommend it. As far as quality goes, they are definitely
worth the price. Plus, when you buy it you automatically get Apple care
and everything like that... Um, it's great for mail and everything like that. Yeah, and
as far as facebook, any social media like that. And then games to kill
time between class is kinda nice.
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Generally speaking, sellers appeal to self-interest frequently: 72% of conversations include at least one statement about the object for sale, for example. Other conversations are largely tangential, however, and in some cases this is evidently strategic. Before the following conversation, for example, the seller states that her plan is to "chat with them and try to get them to connect with me so they will spend more:"

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Seller:  ...Oh yeah, sorry, I don't know about it, bad reception in the building
or something.  Yeah, so the whole thing of it is that, willing to see
how much you would { or how much you would be willing to spend to buy
a { basically a future which is a \$500 check for January 1st 2014.
Buyer:   Yeah, yeah and I know a little bit about the time value of money, so.
Seller:  No, I understand, so do I.  Do you have a job?
Buyer:   Yeah, I work part time for Ohio high school athletic association.
Seller: Oh, really that's cool.  What do you do for them?
Buyer: I'm a basketball referee and baseball umpire.
Seller: That's cool. What did you play in High School?
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Buyer: Yeah. I do now.
Seller: And now what you're doing like go on
Buyer: No. I was I played in High School and they certified me here at Ohio State and Houston con
Seller: So you've got to do it like here in Columbus or do you do it back home like during the su
...
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Here the seller quickly changes the conversation topic from the decision at hand towards personal details in the hopes of establishing a better connection with the buyer. Though less common, many conversations include such appeals to other-regard. Sellers state ex ante they would attempt to build rapport in 19% of pairings, and buyers report ex post they believe that to be their seller's strategy in 16% of pairings. Their specific strategies vary considerably, from "get the customer on my side," to "build a rapport," and to "get on buyer's good side," and so on. Some even mention, and use, specific other-regarding tactics from the literature: for example, "remember the person's name! People love when others remember their names."

5   Results

We conduct hypothesis tests non-parametrically where possible using clustered rank-sum tests. Where we condition on additional variables, we estimate regressions of the form

$$WTP^1_{bsp} = \alpha + \beta WTP^0_{bsp} + \gamma_p + \epsilon_{bsp} \tag{6}$$

where b indexes buyers, s indexes sellers, g indexes products, and p^0_{bsp} (p^1_{bsp}) is a measure of willingness to pay for a product before (after) conversations. Product fixed effects account for any systematic differences between products.[14]

5.1   Does Communication Matter?

We first check whether communication affects behavior at all. Sellers have a material conflict of interest, so that in principle buyers might disregard everything they say as "cheap talk." Communication does in fact alter valuations, however. Figure 1 shows the means of absolute changes in valuations with commission for the communication and no communication conditions. The mean absolute change in valuation under communication is $49 (for all 15 sessions) significantly and substantially larger than the analogous $24 without communication (clustered rank-sum $p < 0.01$). On the extensive margin, 56% of buyers change their valuation in the communication group versus 31% in the no communication arm. Communication thus affects the majority of valuations, some of them substantially.

We next test whether sellers' payoffs are higher in expectation when they have the opportunity to communicate. We find that they are: the mean change in buyers' valuation with commissions is $14 under communication (in the full 15-session sample), significantly different from the mean change without communication of $3 (clustered rank-sum $p = 0.01$) (Figure

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[14]We do not include order effects, as these have no impact on estimates of α or on predictive power as measured by Adjusted R-squared.

Figure 1: Absolute changes in valuation driven by communication
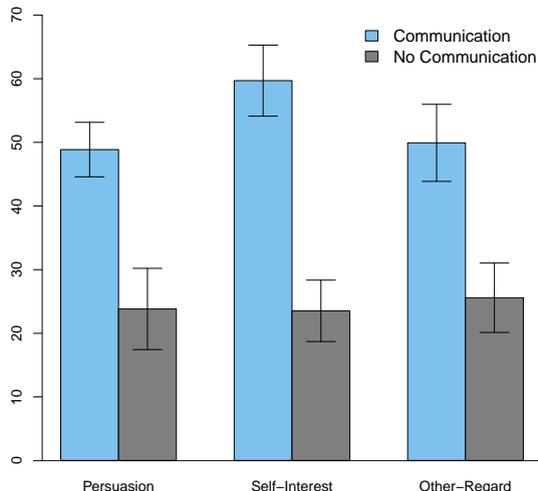
Plots the absolute change in total persuasion, self-interest, and other-regard (per Equation 4) for both the no communication and communication conditions. Vertical bars depict standard errors allowing for clustering by buyer and by seller.Mean of absolute valuation change in willingness to pays, by experimental condition.

2, left-most bars). In contrast, the no communication treatment produces significant absolute changes but no systematic increase or decrease in mean valuations.[15]

One potential concern is that valuation changes could reflect buyer confusion or inattention, generating inconsistent answers before and after the phone call. This would not explain the facts that valuations increase on average and differentially so in the communication arm relative to the no communication arm, however. We also redo our analysis removing subjects who (i) self-report confusion, (ii) were coded as potentially being confused by coders reading the transcripts, or (iii) provide non-monotonic valuations (e.g. willing to pay \$100, but not willing to pay \$80), and find this does not qualitatively alter the result (available on request).

5.2 Which Pathways Matter?

The data suggest that both self-interest and other-regard matter. The second and third sets of bar graphs in Figure 1 illustrate this, plotting the means of absolute changes for the two components of persuasion. The middle bars show the mean absolute change in self-interest is \$60 compared to \$24 without communication (clustered rank-sum $p < 0.01$), and as in the right-most bars, the mean absolute change in other-regard is \$50 compared to \$26 in no communication (clustered rank-sum $p < 0.01$). To quantify more precisely how much self-interest and other-regard contribute to variation in persuasion, we ask what proportion of the

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[15]It is also clear in the raw data (Figure 5) that communication is a driver of additional changes in valuation.

Figure 2: Communication increases valuations; changes in self-interest are mean positive
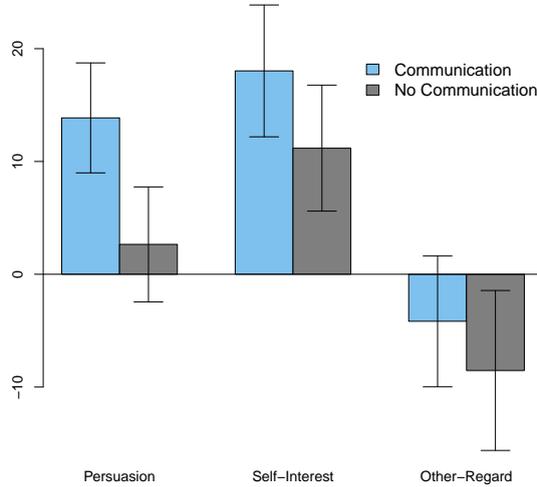
Plots the mean change in total persuasion, self-interest, and other-regard (per Equation 4) for both the no communication and communication conditions. Vertical bars depict standard errors allowing for clustering by buyer and by seller.

overall variation is eliminated by conditioning on each component.[16] Conditioning on self-interest reduces variance more than conditioning on other-regard: 16% of the variance can be explained by other-regard alone, and 29% can be explained by self-interest alone.

While changes in other-regard are substantial, they also tend to cancel each other out on average. Figure 2 shows the average gains by pathway using the full sample (to facilitate comparisons with the No Communication arm). While the average change in perceived self-interest is $18 and significantly different from zero, the average change in other-regard is -$4 and insignificant. The same is true in the first eleven sessions (without No Communication): changes in self-interest net to a mean change of $20, significantly different from zero ($p < 0.01$), comprising 115% of total persuasion, while changes in other-regard roughly cancel each other out, netting a mean change of -$2.64, insignificantly different than zero ($p = 0.7$).

One interpretation is that other-regard is exogenous "white noise", while self-interest is the main pathway for intentional persuasion. For example, buyers might find some sellers more likeable than expected and others less so, without sellers making any intentional effort to *manipulate* buyers' regard for them.

Recall that sellers reported their strategies before the conversations began. To examine

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[16]Specifically, we calculate the proportion

$$1 - \frac{\mathbb{E}[V(\Delta WTP_c | \Delta WTP_{nc})]}{V(\Delta WTP_c)} \tag{7}$$

of total variance attributable solely to self-interest, and the proportion

$$1 - \frac{\mathbb{E}[V(\Delta WTP_c | \Delta(WTP_c - WTP_{nc}))]}{V(\Delta WTP_c)} \tag{8}$$

attributable solely to other-regard.

Table 1: Sellers who target other-regard outperform

	Persuasion	Self-Interest	Other-regard	Persuasion	Self-Interest	Other-regard
Targets Other-Regard	23.77*	1.52	5.52	29.12	−10.85	24.34**
	(14.20)	(14.42)	(10.22)	(21.93)	(22.18)	(10.85)
Targets Self-Interest	−0.73	−8.40	2.82	7.00	−12.26	14.31
	(18.48)	(20.37)	(15.16)	(14.30)	(22.57)	(17.46)
Has Any Strategy	11.21	10.90	6.14	2.92	3.08	7.77
	(19.42)	(20.49)	(11.91)	(19.22)	(25.75)	(17.06)
Seller FE	No	No	No	Yes	Yes	Yes
Observations	220	220	220	220	220	220
R^2	0.74	0.61	0.07	0.79	0.70	0.33
Adj R^2	0.73	0.60	0.04	0.72	0.59	0.07

Each column is a separate regression. Outcomes are changes in total persuasion, self-interest, and other-regard from before to after communication. "Targets other-regard", "Targets self-interest", and "Any strategy" are indicators equal to one if at least two of three coders agreed that the seller's self-reported strategy involves manipulating other-regard, manipulating self-interest, or influencing the buyer in any way respectively. Standard errors clustered by buyer and by seller in parenthesis. Statistical significance is denoted as: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

how such strategies fared, we had three undergraduate research assistants independently code each strategy as referring to other-regard, referring to self-interest, and/or containing any plan. Coders saw only strategy statements and subject identifier codes. We code a strategy as having a feature (e.g. targeting other-regard) if at least two of three coders said it did. Overall we code 19% of statements as targeting other-regard, 30% targeting self-interest, and 55% containing any plan. This coding appears consistent with our independent coding of the conversation transcripts themselves: for example, sellers whom we code as targeting other-regard use the buyer's first name directionally more often ($p = 0.27$), have more personal conversations ($p = 0.02$), and have more tangential conversation not focused on the product ($p = 0.03$).[17]

Sellers who use other-regarding strategies perform significantly better than their peers (Table 1, Column 1). Moreover, the estimated effect size represents a sizeable 137% of average persuasion in our conversations.[18] The data do not provide strong evidence these gains are the result of one pathway or another. Sellers who use strategies that target other-regard are modestly, but insignificantly more successful in raising buyers' perceived self-interest (Column 2) and other-regard (Column 3).

Of course, it could be that sellers who report other-regarding strategies are intrinsically more likeable and that we measure the effects of their personality as opposed to their choices. We examine this by adding seller fixed effects to the model (Columns 4-6). The estimates are qualitatively similar and if anything larger than the pooled estimates; however, the estimate on the net gains are large but insignificant (Column 4). Interestingly, the same sellers have

[17]p-values from OLS regressions controlling for product fixed effects, clustering at seller level.
[18]The relationship between targeting other-regard and persuasion is not significant by conventional thresholds when including data from the last four, mixed treatment sessions (see subsection sec:mixedsessions).

a larger effect on other-regard when using strategies that target other-regard than when they do not (Column 6).

5.3 How Does Persuasion Vary with Context?

We next examine how persuasion varies with the nature of the good being sold. Sellers were more successful on average at persuading buyers to buy tablet computers. Figure 3 breaks down average valuation changes, overall and for the two pathways, for the tablets and the abstract goods. Total valuations increase by \$25.1 for the tablets compared to \$9.6 for the abstract goods (rank-sum, clustered at buyer and seller level, $p = 0.03$). This is consistent with the view that information asymmetry creates greater scope for persuasion. Yet the valuation increase for abstract goods is statistically significant: sellers benefit from persuasion even when "selling" lottery tickets and post-dated checks.[19]

This result is hard to reconcile with models of persuasion in which buyer preferences are self-interested and fixed. Perhaps persuasion is feasible here because sellers can exploit other-regard? Consistent with this view, Figure 3 shows that other-regard plays a larger role for abstract goods than for tablets. The mean change in self-interest is significantly higher for tablets (\$34 versus \$6, rank-sum clustered at buyer and seller level, $p = 0.05$). In contrast, other-regard actually decreases on average for tablets, while increasing insignificantly for abstract goods (\$8.9 versus $-\$3.6$, rank-sum, clustered at buyer and seller level, $p = 0.22$). Broadly speaking, these results show that which pathways matter depend on the good being sold (or more generally, the decision being made). More specifically, for the goods we comprehensively describe to all subjects – the lottery and the check – the information channel is less effective while appeals to other-regard are more so. This suggests self-interest plays a larger role when information is less symmetric.[20] One caveat, however, is that we cannot reject the hypothesis that the same patterns hold in the no communication condition, due to imprecise estimates. More generally, persuasion may differ across goods for a variety of reasons – selfish preferences for abstract goods might be influenced by framing, for example – so that any differences across product types should be interpreted as suggestive.[21]

5.4 Similiarty and persuasion

We next examine how persuasion varies with similarity between the buyer and seller. We measure similarity in two complementary ways. First, we use buyers' self-reports of their perceived similarity with the seller. The benefit of this measure is that it is comprehensive; the drawback is that it is subjective, and buyers might feel a need to answer in a way that rationalized their valuation responses. We therefore complement it by also testing directly for effects of a match on the observable characteristics of gender and nationality. These

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[19]A more generic F-test for equality in mean persuasion across products is marginally insignificant ($p = 0.11$).

[20]One potential caveat to this interpretation is that while both players were provided with identical, comprehensive information about the lottery and check, one player might *understand* this information better than the other, creating asymmetries in effective information. However, these asymmetries in effective information should not be systematically tilted towards buyers or sellers in the way that information about the tablets was by design. We thank one of the referees for pointing out this possibility.

[21]We thank one of the referees for suggesting this possibility.

Figure 3: Valuations increase more for consumer electronics; driven by appeals to self-interest
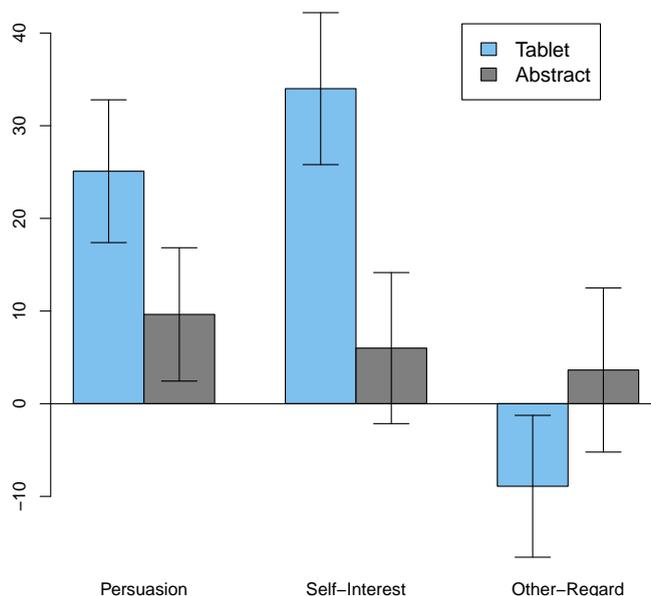
Plots the mean change in self-interest and other-regarding valuation components as defined in Equation 4 as well as total persuasion, for tablets and abstract goods. Vertical bars depict standard errors allowing for clustering by buyer and by seller.

are incomplete measures of similarity, but objective. Overall both measures appear sensible. Perceived similarity is distributed fairly uniformly from 1 ("not at all") to 11 ("very much so"), with no score occurring less than 5% of the time or any score occurring more than 14% of the time. Buyers who were matched on gender or nationality with their seller reported significantly higher similarity scores (1.0 points and 1.5 points, respectively; rank-sum $p < 0.01$ in both cases).

We find that similarity strongly predicts persuasion. Figure 4 illustrates this for self-reported similarity, while Table 2 reports regression coefficients for all three measures. In Column 1 we estimate a \$5.7 increase in persuasion for every one point increase in similarity score ($p < 0.01$). For perspective, this implies that a one standard deviation increase in similarity would produce an \$17.7 increase in persuasion, more than doubling average persuasion (\$17.4). This result is stronger when we focus the match on gender specifically: while neither buyer or seller gender predicts persuasion or changes in self-interest or other-regard, the interaction of their gender does. The fourth column shows that pairs that are matched on gender have increases of \$22 more than the gender-mismatched pairs ($p = 0.04$).[22] For nationality this pattern is weaker; persuasion is higher by \$45.4 for same-nationality pairs but this is not statistically significant.[23]

The effects of similarity could plausibly work either through self-interest or through other-

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[22]We estimate similar effects of male-male and female-female matches.

[23]While two non-US citizens are not necessarily well described as "matched," anecdotally the probability is high that both are East Asian, and in any case such pairings are too rare (4%) to be driving our results.

Figure 4: Perceived similarity predicts influence

Similarity Score	0	1	2	3	4	5	6	7	8	9	10	11
Sample Size	14	17	17	14	19	27	26	35	34	22	13	15
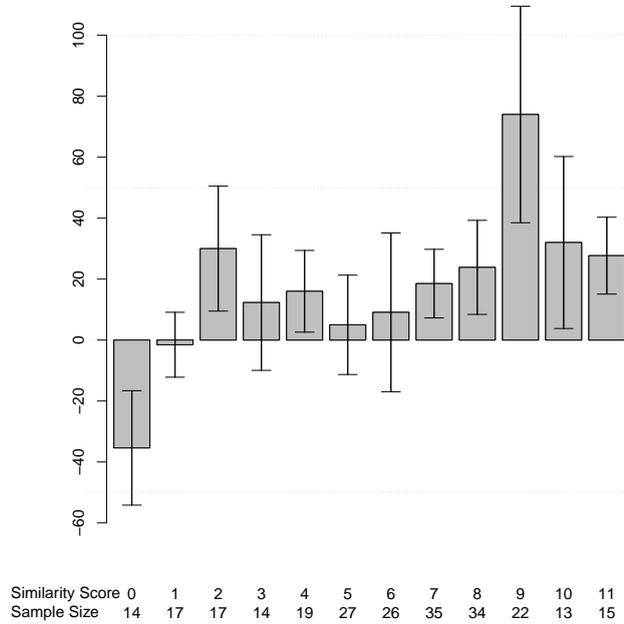
Plots the mean change in persuasion by how similar the seller was to the buyer according to the buyer, where 11 is most similar. Vertical bars depict standard errors allowing for clustering by buyer and by seller.

regard. Similarity could beget altruism, build trust, or give the seller greater insight into the buyer's preferences, for example. We find evidence for both channels, but somewhat stronger evidence for self-interest. A one point increase in reported similarity increases changes in self-interest by \$4.2 ($p = 0.06$) and other-regard by \$3.0 ($p = 0.04$). With gender-matched pairs this gap is starker: gender-matched pairs see a large \$29.4 increase in valuations via self-interest ($p = 0.02$) but only an insignificant \$3.3 increase via other-regard ($p = 0.6$). Neither channel is significant on its own for nationality match, however.[24][25]

Overall, we find strong evidence that similarity facilitates persuasion, a novel form of homophily, and suggestive evidence that this works primarily through sellers' ability to convince buyers about what it is their own self-interest.

5.5   How do Self-Interest and Other-Regard Interact?

In principle, the self-interest and other-regard pathways could interact with each other in several ways. Mechanical interactions could arise because sellers face constraints in terms of time, buyer attention, etc. and must choose between influencing self-interest or other-regard. Causal interactions could arise if a given seller behavior affects both self-interest and other-

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[24]We also find that similarity continues to predict persuasion even after we condition on a measure of trust coded from the transcripts (not reported).

[25]Concurrent with our work, He et al. (2015) also find that gender-matched pairs cooperate more in social dilemma games that involve communication.

Table 2: Buyer-seller similarity predicts persuasion through both pathways

	Persuasion	Self-Interest	Other-Regard	Persuasion	Self-Interest	Other-Regard	Persuasion	Self-Interest	Other-Regard
Similarity Score	5.71	4.22	3.00						
	$(1.53)^{***}$	$(2.23)^{*}$	$(1.41)^{**}$						
Gender Match				22.01	29.36	3.28			
				$(10.33)^{**}$	$(12.41)^{**}$	(6.68)			
Buyer Female				1.53	-5.16	-3.46			
				(12.46)	(13.56)	(8.79)			
Seller Female				-1.26	-2.54	-14.90			
				(10.29)	(13.02)	$(7.68)^{*}$			
Citizenship Match							5.39	0.44	13.45
							(7.12)	(20.42)	(17.09)
Buyer Non-American							15.69	1.13	19.79
							$(9.46)^{*}$	(16.33)	(19.97)
Seller Non-American							-11.61	-30.16	16.91
							(7.42)	(21.93)	(15.16)
N	210	210	210	220	220	220	216	216	216
Adj. R^2	0.74	0.60	0.06	0.73	0.61	0.05	0.73	0.61	0.05

Each column is a separate regression. Each regression includes product fixed effects. "Similarity score" is the buyer's perceived similarity with the seller on a 1-11 scale. Standard errors clustered by buyer and by seller in parenthesis. Statistical significance is denoted as: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Figure 5: Communication increases more valuations; net influence frequently driven by changes in self-interest
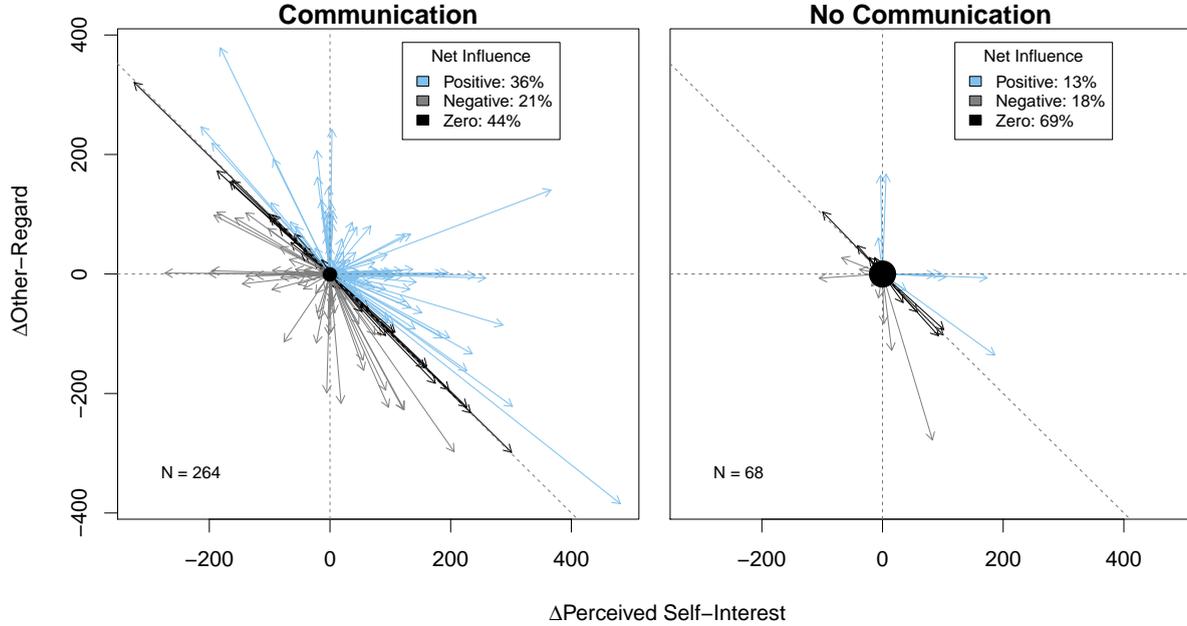
Plots the changes in self-interest and other-regarding valuation components as defined in Equation 4 for every buyer-seller pairing, for both the communication (left figure) and no communication (right figure) conditions. Each vector represents one buyer-seller pairing, with initial valuations normalized to the origin; vectors point to valuation changes, with jitter added. The x-axis denotes changes in perceived self-interest, and the y-axis changes in other-regard. Vectors that lie northeast of the y = -x line (light blue vectors) denote positive net influence; vectors lying east of the y-axis denote positive changes in perceived self-interest; vectors lying north of the x-axis denote positive changes in other-regard.

regard. These effects could be complementary or offsetting. For example, spending time describing positive features of a product could come across as helpful and engender feelings of reciprocity in the buyer, or as pushy and engender resentment. Establishing things that the parties have in common could affect both other-regard and the credibility of advice about the buyer's self-interest.

To visualize this interaction, Figure 5 plots the full distribution of valuation changes as vectors in (self-interest, other-regard) space, and separately for the communication (left) and no communication condition (right). Vectors lying east (west) of x=0 indicate an increase (decrease) in self-interest, and vectors lying north (south) of y=0 indicate an increase (decrease) in other-regard. If the pathways of persuasion were positively correlated, most vectors would point to the northeast or southwest. Instead, most of the vectors lie in the northwest and southeast quadrants, indicating a negative correlation. Indeed, when we see non-zero changes in both pathways, a gain in one pathway is coupled with a loss along the other in 79% of cases. Overall, changes in self-interest and other-regard are significantly negatively correlated ($\rho = -0.64$).

One concern is that this correlation could be biased by error in our measurement of val-

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uations, as the change in self-interest enters negatively into our calculation of the change in other-regard. To remove any unsystematic measurement error, we project changes in self-interest and other-regard onto the full set of conversation features recommended by other researchers,[26] as well as product fixed effects and examine the correlation between the fitted values. This limits the analysis to the component of persuasion not orthogonal to these regressors, but also eliminates any spurious negative correlation due to classical measurement error.[27] We find that predicted changes in self-interest and other-regard are in fact even more negatively correlated, $\rho = -.70$, and this holds for all four products individually (iPad $\rho = -0.79$; Surface $\rho = -0.79$; Check $\rho = -0.68$; Lottery $\rho = -0.52$). This suggests a sharp trade-off between the two pathways.

This pattern does not appear to be driven by mechanical substitution between tactics in short conversations. No conversations hit the ten-minute time constraint, and results are similar regardless of conversation length, even in the longest conversations (in which one might expect the mechanical constraints to be less binding). If anything we see a sharper trade-off in longer conversations: by quartile of conversation length, the correlations are $\rho = -0.54$, $\rho = -0.76$, $\rho = -0.73$, and $\rho = -0.70$ respectively. It thus seems unlikely that sellers simply run out of time, and more likely that their behaviors have offsetting effects.

One qualification to this pattern is that, as we saw in Table 1, sellers who intentionally chose strategies that targeted other-regard paid only a small (and statistically insignificant) penalty in terms of self-interest for doing so. In other words, while it is true on average that gains along one pathway tend to come at the expense of the other, there are evidently strategies used by some of the more successful sellers that largely mitigate this tradeoff. Understanding this positive deviance could be an interesting direction for future work.

5.6 Trust

As discussed above, our decomposition of valuation changes into self-interested and other-regarding components is potentially consistent with many different underlying models of preferences (and distributions of these preferences in the subject pool). While testing exhaustively between these is beyond the scope of this paper, we do examine in more depth the role of one factor specifically: trust. Trust is plausibly related to both channels of persuasion, as buyers may be more inclined to believe claims made by sellers they trust, and more inclined to trust sellers they like.

We examine the role of trust using data from our post-experiment analysis of the content of conversations. Specifically, we asked coders after reading each transcript "On a scale of 1 to 5, how much do you trust this seller?"[28] This gives us a measure of how trustworthy the seller was perceived to be by a subject drawn from the same pool as the buyer, letting us examine how the extent to which sellers were perceived as trustworthy correlates with persuasion through either channel.

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[26] After removing features recommended by more than one researcher, we are left with 31 unique features. We do not make any further selection among features.

[27] Formal derivation available on request.

[28] Two coders read each transcript. We use the average of their scores as our measure in the analysis.

Table 3: Sellers who target other-regard outperform

	Dependent variable:		
	Persuasion	Self-Interest	Other-Regard
Trust seller	15.50**	13.08*	2.42
	(7.48)	(7.91)	(5.17)
Observations	212	212	212
R^2	0.74	0.64	0.03
Adjusted R^2	0.74	0.63	0.002

Each column is a separate regression. "Trust seller" is the average of two third parties' ratings of how trustworthy the seller was in the conversation (1-5, with higher being more trustworthy). Standard errors clustered by buyer and by seller in parenthesis. Statistical significance is denoted as: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Perceived trustworthiness varies meaningfully from conversation to conversation, with most sellers rated a 2 (23%), 3 (52%), or 4 (21%) out of five. Moreover, some sellers were systematically perceived as more trustworthy than others. Seller fixed effects explain 14% of the variation in perceived trustworthiness, and this relationship is strongly significant ($p < 0.01$, F-test of seller fixed effects in OLS regression predicting perceived trustworthiness including product dummies, clustering at buyer and seller level).

Trustworthiness also strongly predicts changes in valuation, and this effect works entirely through changes in perceived self-interest. Column 1 of Table 3 reports results from a regression of the form in Equation 6 that includes seller trustworthiness as a predictor. Sellers perceived as one standard deviation more trustworthy see an increase in post-conversation valuation of $11, or a 79% increase relative to the $14 mean increase in valuation after conversation. In Columns 2 and 3 we examine the relationship between trustworthiness and self-interest and other-regard, respectively. Sellers perceived as one standard deviation more trustworthy see a significant increase in self-interest of $9.4, but a small and insignificant change in other-regard.

These results suggest that seller trustworthiness is important for buyers' willingness to accept their statements about what is in their own self-interest, but not for their feelings of altruism or reciprocity towards sellers. Consistent with this idea, we also find that sellers are not perceived as more trustworthy when they intentionally plan to target other-regard (Table A-4, Column 1), and that the estimated relationships between these strategies and persuasion outcomes in Table 1 do not change substantially if we control for trustworthiness (Table A-4, Columns 2-3). Overall, the patterns we find suggest that trust and trustworthiness matter for the self-interest channel but not substantially for other-regard.

5.7 Researcher predictions

Seven of the eight researchers whom we invited agreed to participate in our "prediction challenge." Appendix B lists the 35 questions they proposed, which arguably provide a snapshot view into how social scientists currently understand persuasion. Two features appear noteworthy.

First, congruence across researchers is low. To the human eye they appear to propose very different measures, with only three items appearing more than once: the number of words in the conversation (3×), the number of times the seller uses the buyer's name (2×), and how likeable the seller is (2×). Of course, variables could appear different but still capture similar statistical information. We therefore calculate how well a given variable proposed by one researcher is predicted by the variables proposed by a second researcher. This metric would be 100% if all researchers were in fact proposing the same underlying model, and 2% in expectation if their variables were completely unrelated (due to chance correlation). In our data the average value of this statistic is 26%, implying at most modest agreement. This suggests to us a relatively young field of research that has yet to converge on a consensus view of how persuasion works.

Second, researchers collectively expect both self-interest and other-regard to play a role in persuasion. Of the thirty-five items, twenty one were coded by at least two of three research assistants as capturing appeals to perceived self-interest, and fifteen items as capturing appeals to other-regard.[29] Researcher 3, for example, focused on self-interest, proposing a series of questions about product attributes (e.g. "How many statements of the form 'you can use it for X' does the seller make?") and their interaction with a measure of trustworthiness. Several other researchers, meanwhile, asked questions about the likeability (or dis-likeability) of the seller, or about features like language style matching which are thought to promote liking.

5.7.1   What researcher items predict persuasion?

We can also use these researcher-provided variables to learn what facilitates persuasion in our setting. Tables A-5, A-6, and A-7 show how each of these items correlate with our three outcomes. Each row represents a separate regression: We run the baseline regression from Equation 6 while including the researcher variable listed as one additional covariate. Here, we highlight a few of the items that help explain persuasion in our setting. We focus on items that increase Adjusted R-squared from our baseline regression by 0.005 or more and are at least marginally significant.

For predicting persuasion overall, the most explanatory power was provided by a purely subjective variable: Do you think this increased the buyer's valuation? Though persuasion is hard, and hard to predict, apparently, we do recognize it when we see it (Δ Adj R^2=0.009, $p < 0.01$). Another meaningful predictor of persuasion was "Do you trust the seller?" (Δ Adj R^2=0.007, $p = 0.04$). Ex post, the importance of trust may seem obvious; however, only one researcher included it in their five items. Perhaps the most surprising predictor of persuasion was the number of times the seller uses the word "I" (Δ Adj R^2=0.007, $p = 0.09$). This could potentially capture the seller speaking of their own experience with the product, their own perspective, or perhaps getting personal with the buyer.

Looking at which researcher items predict changes in perceived self-interest, it seems that talking positively about the good being sold is effective. This may be true independent of how true the statements are perceived to be. First, the number and strength of the seller's

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[29]The coding was not mutually exclusive, and two items were coded as intending to capture both pathways. No item was coded as intending to capture neither channel.

arguments, as perceived by our coders, predict strong gains in product valuations (Δ Adj R^2=0.009, $p < 0.01$), consistent with Petty and Cacioppo (1986). Second, how many lies or exaggerations the seller told is also significant and predictive (Δ Adj R^2=0.012, $p = 0.02$). Strikingly, every additional lie or exaggeration our coder's perceived coincided with a \$38.8 *increase* in product valuation on average.

We also only found two variables that help predict variance in changes in other-regard. The first variable is again the subjective coding of "Do you think this increased the buyer's valuation?" Interestingly, this variable is not at all predictive of gains along perceived self-interest. The persuasion that our coders can see in the transcripts is happening through increased altruism only (Δ Adj R^2=0.018, $p = 0.03$). Second, the number of times the seller said "no" also correlates positively with gains in other-regard (Δ Adj R^2=0.017, $p = 0.05$). This item is not just operating through its correlation with length of conversation as a separate expert prediction measures that directly. Perhaps this tactic could build credibility with the buyer by admitting the limits of the products (akin to the intuition in Dziuda (2011)). Finally, a popular item in books (and seminars) is the number of times the seller uses the buyer's first name. Though sellers attempt this strategy (mean number of times name is mentioned $= 0.5$), and it is marginally significant; it does not increase our ability to predict variance substantially (Δ Adj R^2=0.002).

6 Conclusion

We define and apply an experimental framework for studying whether and when persuasion works through appeals to self-interest or to other-regard. We find that both mechanisms matter to a degree, with substantial variation depending on context and individuals. The "average" seller in our experiment benefits from communication primarily because communication convinces buyers that it is in their own best interest to pay more for objects. At the same time, a minority of sellers make a strategic choice to focus on getting buyers to like them, and these sellers outperform their peers significantly both at cultivating other-regard and at persuasion overall. Sellers gains are driven more by buyer self-interest when they discuss tangible products about which sellers were better-informed, but more by other-regard in settings of symmetric information. Finally, sellers face a trade-off, with gains on one pathway generally offset in part by losses on the other.

Future work could adapt the experimental framework we use here to study a number of additional questions. One natural extension would be to compare the methods and performance of amateur to expert persuaders, such as professional salespeople. A second would be to examine the returns to different forms of communication – for example, whether interacting face-to-face yields large benefits to the persuader. A third would be experimentally manipulate what is *permissible* in a conversation – for example, prohibiting subjects from discussing the product (or more broadly, the decision) at hand might force them to rely upon appeals to other-regard. Finally, it would be interesting to contrast persuasion about purely private goods such as those we use here to persuasion about public goods. Persuading a neighbor to vote in favor of an environmental reform, for example, has the interesting features that (i)

it may never be in the neighbors narrow self-interest to do so, and (ii) voting for the reform likely benefits the persuader if and only if it also benefits the neighbor, creating a direct link between self-interest and other-regard. Finally, future work could examine what drives the trade-off we see between pathways, perhaps by experimentally varying the strategies sellers use through coaching.

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A Appendix, for online publication

Table A-1: Eliciting Willingness to Pay, Flat Wage

Panel A: Flat Wage

Please select which alternative you would prefer			
⊙	I would prefer the new iPad	⊙	I would prefer $500
⊙	I would prefer $20 and the new iPad	⊙	I would prefer $500
	⋮		⋮
⊙	I would prefer $480 and the new iPad	⊙	I would prefer $500

Panel B: With Commission

Please select which alternative you would prefer			
⊙	I would prefer the new iPad for me and $500 for the seller.	⊙	I would prefer $500 for me and $0 for the seller.
⊙	I would prefer $20 and the new iPad for me and $500 for the seller.	⊙	I would prefer $500 for me and $0 for the seller.
	⋮		⋮
⊙	I would prefer $480 and the new iPad for me and $500 for the seller.	⊙	I would prefer $500 for me and $0 for the seller.

Each row is a separate question. Buyers answered all questions before proceeding with the experiment. All questions in Panel A were displayed on the same page, with Panel B on the subsequent page.

Figure A-1: Initial valuations show moderate altruism
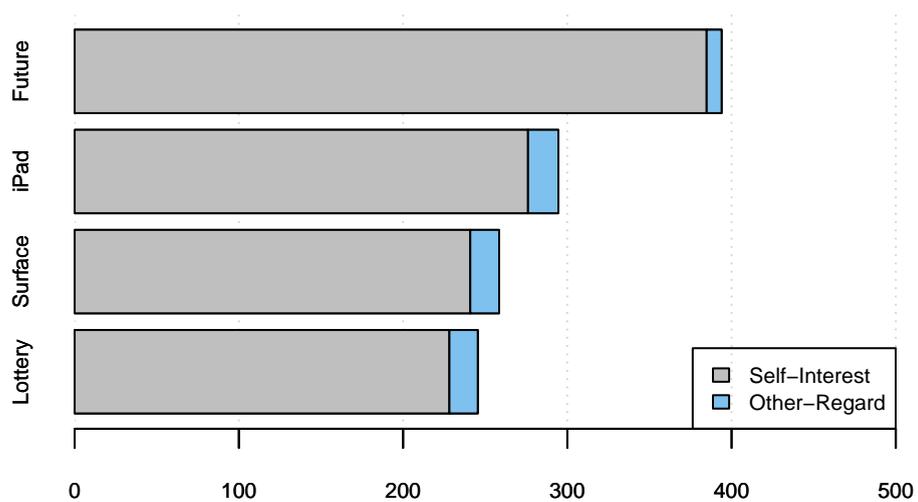
Plots buyers' mean initial valuations, in dollars, for each of the four products studied. Valuations have been decomposed into the mean willingness to pay absent any commission for the seller ("self-regarding") and the mean incremental willingness to pay when commissions are added ("other-regarding").

Figure A-2: Distribution of participant fixed effects
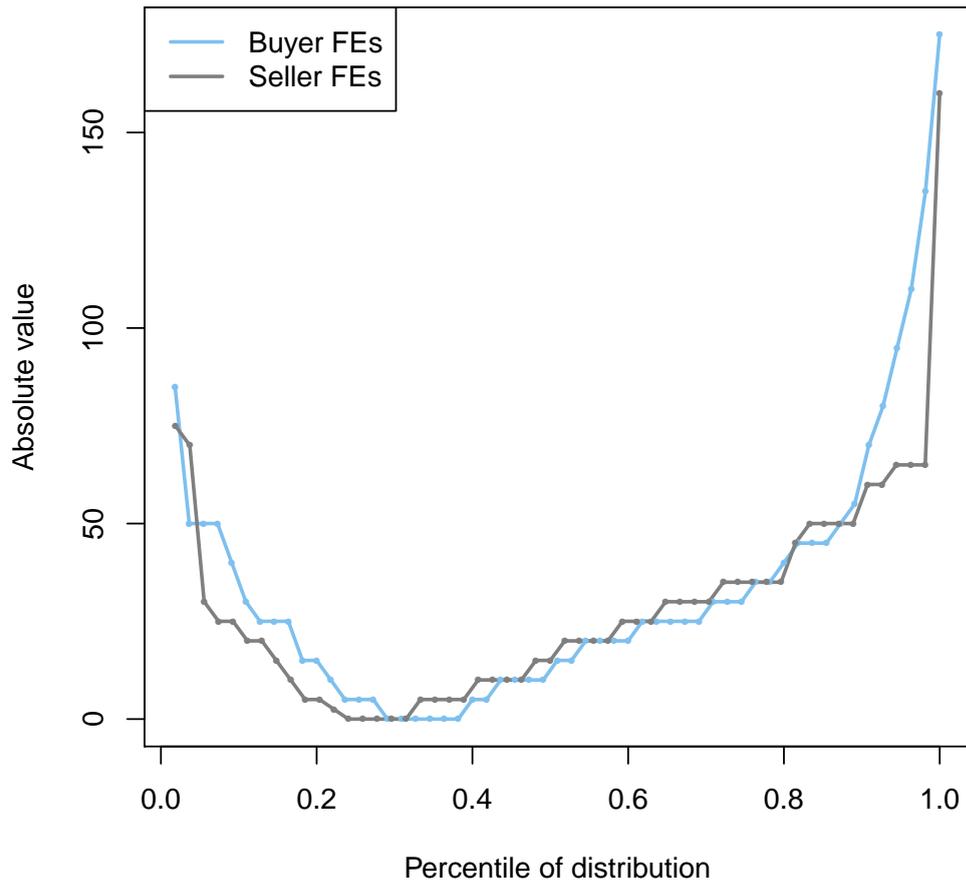
Plots each study participants' absolute mean change in persuasion across all four conversations, sorted from smallest to largest before absolute value taken, for each seller (gray) and each buyer (blue), from all sessions without the no communication condition (1-11).

Table A-2: Participation by Session

Session	Buyers	Sellers	Conversations	No Communication
1	4	4	16	0
2	6	6	24	0
3	5	5	20	0
4	5	5	20	0
5	7	7	28	0
6	4	4	16	0
7	5	5	20	0
8	5	5	20	0
9	5	5	20	0
10	5	5	20	0
11	4	4	16	0
12	10	6	20	20
13	7	3	8	20
14	6	2	4	20
15	5	4	12	8
Totals	83	70	264	68

Table A-3: Participant characteristics

	Buyers		Sellers	
Variable	Mean	SD	Mean	SD
Age	21.24	1.86	21.21	1.80
Gender = Male	0.55	0.50	0.56	0.50
Weekly Expenditure	67.34	42.74	86.95	82.93
Voted	0.56	0.50	0.70	0.46
Owns an iPad	0.00	0.00	0.80	0.40
Used an iPad	0.88	0.32	0.94	0.24
Owns a Windows Tablet	0.00	0.00	0.24	0.43
Used a Windows Tablet	0.18	0.39	0.56	0.50
Owns an iPhone	0.54	0.52	0.68	0.47
Owns an iPod	0.76	0.46	0.80	0.40
Owns an Android Tablet	0.06	0.29	0.14	0.34

Reports means and standard variations of age (top row) and indicator variables for whether a given statement is true (all other rows). By sample construction, no buyers owned an iPad or a Windows tablet.

Table A-4: Seller strategies and perceived trustworthiness: correlations and mediations

	Dependent variable:		
	Trust seller	Persuasion	
Trust seller			15.16**
			(7.17)
Targets Other-Regard	−0.01	22.51	22.56
	(0.13)	(14.39)	(14.28)
Targets Self-Interest	0.04	−0.83	−1.49
	(0.15)	(19.47)	(19.94)
Has Any Strategy	0.11	9.75	8.05
	(0.16)	(19.18)	(18.65)
Observations	212	212	212
R^2	0.01	0.74	0.75
Adjusted R^2	−0.02	0.73	0.74

Column 1 reports an OLS regression predicting perceived seller trustworthiness using seller's pre-conversation reported strategies. Columns 2 and 3 regress (OLS) total persuasion on seller's reported strategies (Column 2) as well as perceived seller trustworthiness (Column 3). Standard errors clustered by buyer and by seller in parenthesis. Statistical significance is denoted as: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A-5: Experts' Items' Effects on Persuasion

Row #	Variable	Coding	Mean	Beta	SE	Adj. R^2	Δ Adj. R^2†
1	Baseline			0.86***	0.05	0.730	
2	Increased valuation	1–5; 5 = a lot	2.26	18.23***	6.38	0.739	0.009
3	Trust seller	1–5; 5 = a lot	2.94	15.50**	7.48	0.737	0.007
4	Like seller	1–5; 5 = a lot	2.94	8.40	6.17	0.733	0.003
5	Buyer a man	0 = No; 1 = Yes	0.49	0.32	12.84	0.729	−0.001
6	Buyer man, Seller woman	0 = No; 1 = Yes	0.24	−15.25	12.21	0.731	0.001
7	Num. words spoken	Exact value	517.89	0.01	0.01	0.732	0.002
8	Num. "I"s, seller	Exact value	10.98	1.09*	0.64	0.737	0.007
9	First name use	Exact value	0.50	3.29	3.07	0.732	0.002
10	Num. "no"s	Exact value	0.76	6.21	6.64	0.734	0.004
11	Interruptions	Exact value	8.76	−0.02	0.28	0.731	0.001
12	Statements, experience	Exact value	0.18	8.12	9.98	0.732	0.002
13	Statements, others' experience	Exact value	0.06	−24.67	15.47	0.733	0.003
14	Statements, use	Exact value	0.70	0.57	4.12	0.731	0.001
15	Statements, not incentives	Exact value	0.01	−90.43***	25.52	0.734	0.004
16	15 × (12 + 13 + 14)	Exact value	0.02	−32.62**	13.37	0.734	0.004
17	Conv about object	0 = pros and cons; 1 = tangential	0.18	1.56	11.88	0.731	0.001
18	Downsides of object	0 = No, 1 = Yes	0.21	15.66	17.87	0.733	0.003
19	% of conv by buyer	Exact value	0.33	−11.61	50.10	0.731	0.001
20	Questions about buying	Exact value	2.66	0.06	2.26	0.734	0.004
21	Name, you, or your, seller	Exact value	1.90	0.97	4.47	0.731	0.001
22	Strength of arguments	1–5; 5 = many strong arguments	2.28	9.49*	4.88	0.736	0.006
23	Warm, likeable	1–5; 5 = very likeable	2.77	11.67*	6.24	0.734	0.004
24	Competent, expert	1–5; 5 = very competent or expert	2.70	7.02	5.45	0.732	0.002
25	Lie, exaggerate	Exact value	0.20	6.18	11.91	0.731	0.001
26	Panhandler plea	0 = No; 1 = Yes	0.06	42.73	46.95	0.736	0.006
27	Details of products	0 = No; 1 = Yes	0.56	4.49	16.33	0.684	−0.046
28	Actuarial values	0 = No; 1 = Yes	0				
29	Seller explain incentives	0 = No; 1 = Yes	0.51	8.37	10.15	0.732	0.002
30	Language style matching plus positive emotion words	Exact value	6.07	−0.55	2.84	0.731	0.001
31	Initial valuation (guess)	Exact value	170.07	0.02	0.03	0.732	0.002
32	How personal	1–5; 5 = very personal	2.15	−1.66	4.98	0.731	0.001
33	Initial interest	1–5; 5 = very interested	2.23	10.30	7.65	0.733	0.003

Note: *p<0.1; **p<0.05; ***p<0.01

† Denotes difference in adjusted R^2 compared to baseline regression in first row.

Table A-6: Experts' Items' Effects on Perceived Self-Interest

Row #	Variable	Coding	Mean	Beta	SE	Adj. R^2	Δ Adj. R^2†
1	Baseline			0.78***	0.06	0.61	-0.004
2	Increased valuation	1–5; 5 = a lot	2.26	−0.97	6.42	0.602	-0.004
3	Trust seller	1–5; 5 = a lot	2.94	14.15*	8.17	0.607	0.001
4	Like seller	1–5; 5 = a lot	2.94	11.23	6.96	0.605	-0.001
5	Buyer a man	0 = No; 1 = Yes	0.49	7.59	13.99	0.604	-0.002
6	Buyer man, Seller woman	0 = No; 1 = Yes	0.24	−16.11	12.98	0.606	0.000
7	Num. words spoken	Exact value	517.89	0.03*	0.02	0.608	0.002
8	Num. "I"'s, seller	Exact value	10.98	0.98	0.70	0.607	0.001
9	First name use	Exact value	0.50	0.24	6.57	0.602	-0.004
10	Num. "no"'s	Exact value	0.76	−5.67	5.60	0.605	-0.001
11	Interruptions	Exact value	8.76	0.65	0.45	0.605	-0.001
12	Statements, experience	Exact value	0.18	9.11	11.66	0.603	-0.003
13	Statements, others' experience	Exact value	0.06	−25.72*	15.30	0.604	-0.002
14	Statements, use	Exact value	0.70	7.14	4.85	0.605	-0.001
15	Statements, not incentives	Exact value	0.01	−69.43***	25.80	0.604	-0.002
16	15 × (12 + 13 + 14)	Exact value	0.02	−28.31***	9.01	0.604	-0.002
17	Conv about object	0 = pros and cons; 1 = tangential	0.18	−5.21	17.00	0.602	-0.004
18	Downsides of object	0 = No, 1 = Yes	0.21	4.31	18.22	0.602	-0.004
19	% of conv by buyer	Exact value	0.33	−66.65	52.44	0.607	0.001
20	Questions about buying	Exact value	2.66	−0.89	2.19	0.599	-0.007
21	Name, you, or your, seller	Exact value	1.90	0.71	8.08	0.602	-0.004
22	Strength of arguments	1–5; 5 = many strong arguments	2.28	14.93***	4.89	0.615	0.009
23	Warm, likeable	1–5; 5 = very likeable	2.77	13.51	9.52	0.607	0.001
24	Competent, expert	1–5; 5 = very competent or expert	2.70	4.04	7.08	0.603	-0.003
25	Lie, exaggerate	Exact value	0.20	38.84**	16.40	0.618	0.012
26	Panhandler plea	0 = No; 1 = Yes	0.06	36.43	36.67	0.606	0.000
27	Details of products	0 = No; 1 = Yes	0.56	−0.71	22.25	0.460	-0.146
28	Actuarial values	0 = No; 1 = Yes	0				
29	Seller explain incentives	0 = No; 1 = Yes	0.51	16.32	13.65	0.605	-0.001
30	Language style matching plus positive emotion words	Exact value	6.07	3.79	3.11	0.604	-0.002
31	Initial valuation (guess)	Exact value	170.07	−0.04	0.04	0.604	-0.002
32	How personal	1–5; 5 = very personal	2.15	−1.83	7.68	0.602	-0.004
33	Initial interest	1–5; 5 = very interested	2.23	11.28	9.59	0.604	-0.002

Note:

*p<0.1; **p<0.05; ***p<0.01

† Denotes difference in adjusted R² compared to baseline regression in first row.

Table A-7: Experts' Items' Effects on Other-Regard

Row #	Variable	Coding	Mean	Beta	SE	Adj. R^2	Δ Adj. R^2†
1	Baseline			0.23^{***}	0.08	0.05	
2	Increased valuation	1–5; 5 = a lot	2.26	14.59^{**}	6.60	0.069	0.018
3	Trust seller	1–5; 5 = a lot	2.94	2.37	5.11	0.047	-0.004
4	Like seller	1–5; 5 = a lot	2.94	3.21	5.65	0.048	-0.003
5	Buyer a man	0 = No; 1 = Yes	0.49	2.40	8.41	0.047	-0.004
6	Buyer man, Seller woman	0 = No; 1 = Yes	0.24	−10.15	11.93	0.050	-0.001
7	Num. words spoken	Exact value	517.89	−0.01	0.01	0.048	-0.003
8	Num. "I"s, seller	Exact value	10.98	0.19	0.45	0.047	-0.004
9	First name use	Exact value	0.50	6.05^{*}	3.43	0.053	0.002
10	Num. "no"s	Exact value	0.76	7.69^{*}	3.94	0.068	0.017
11	Interruptions	Exact value	8.76	−0.41	0.43	0.052	0.001
12	Statements, experience	Exact value	0.18	4.23	8.88	0.047	-0.004
13	Statements, others' experience	Exact value	0.06	−2.60	7.38	0.047	-0.004
14	Statements, use	Exact value	0.70	−4.99	4.28	0.052	0.001
15	Statements, not incentives	Exact value	0.01	−29.70	21.44	0.048	-0.003
16	15 × (12 + 13 + 14)	Exact value	0.02	−9.45	9.02	0.048	-0.003
17	Conv about object	0 = pros and cons; 1 = tangential	0.18	6.43	11.24	0.048	-0.003
18	Downsides of object	0 = No, 1 = Yes	0.21	15.07	12.43	0.054	0.003
19	% of conv by buyer	Exact value	0.33	0.05	24.89	0.047	-0.004
20	Questions about buying	Exact value	2.66	0.22	1.87	0.047	-0.004
21	Name, you, or your, seller	Exact value	1.90	0.22	5.32	0.047	-0.004
22	Strength of arguments	1–5; 5 = many strong arguments	2.28	−2.78	4.38	0.048	-0.003
23	Warm, likeable	1–5; 5 = very likeable	2.77	4.88	5.24	0.049	-0.002
24	Competent, expert	1–5; 5 = very competent or expert	2.70	4.27	5.59	0.049	-0.002
25	Lie, exaggerate	Exact value	0.20	−11.49	15.39	0.052	0.001
26	Panhandler plea	0 = No; 1 = Yes	0.06	−6.90	28.41	0.047	-0.004
27	Details of products	0 = No; 1 = Yes	0.56	15.40	16.55	0.005	-0.046
28	Actuarial values	0 = No; 1 = Yes	0				
29	Seller explain incentives	0 = No; 1 = Yes	0.51	−10.95	8.95	0.052	0.001
30	Language style matching plus positive emotion words	Exact value	6.07	$−3.97^{**}$	1.97	0.056	0.005
31	Initial valuation (guess)	Exact value	170.07	0.04	0.04	0.056	0.005
32	How personal	1–5; 5 = very personal	2.15	1.38	4.32	0.047	-0.004
33	Initial interest	1–5; 5 = very interested	2.23	5.29	6.84	0.048	-0.003

Note:

*p<0.1; **p<0.05; ***p<0.01

† Denotes difference in adjusted R^2 compared to baseline regression in first row.

A.1 Analysis including mixed session data

In this section we replicate the analysis from the main text but also including data from the Communication arm in sessions 12-15. As a reminder, these sessions were conducted after our primary data collection finished in response to feedback on those results. We considered these sessions as ex post and separate; had we planned to include data from their in our main analysis we would have interspersed Communication-only sessions (as was done in the first 11 sessions) to control for subject pool effects, seasonality, and so on while simultaneously measuring potential spillovers from running the Communication arm and No-Communication arm within-subject in mixed sessions. For the sake of transparency, however, we also present here analysis pooling data from the Communication arm data from all sessions. Generally speaking the results are qualitatively similar, though the relationships we describe are generally moderately smaller – perhaps due to spillovers across arms, perhaps due to subject pool effects, or perhaps by chance.

Table A-8: Averages displayed in Figure 3 including mixed sessions

	Dependent variable:		
	Persuasion	Self-Interest	Other-Regard
	(1)	(2)	(3)
Tablet	12.27	26.06***	−13.79
	(9.67)	(9.56)	(9.18)
Constant	7.73	5.00	2.73
	(6.21)	(7.23)	(7.85)
Observations	264	264	264
R^2	0.01	0.02	0.01
Adjusted R^2	0.00	0.01	0.00
Note:		*p<0.1; **p<0.05; ***p<0.01	

Table A-9: Table 1 including mixed sessions

	Dependent variable:					
	Persuasion	Self-Interest	Other-regard	Persuasion	Self-Interest	Other-regard
	(1)	(2)	(3)	(4)	(5)	(6)
Targets Other-Regard	17.30	0.72	1.73	19.45	−11.15	16.27
	(13.05)	(13.19)	(8.75)	(21.35)	(23.16)	(10.76)
Targets Self-Interest	−5.63	−7.23	−1.05	7.74	−6.23	8.18
	(17.88)	(18.71)	(13.40)	(14.41)	(21.12)	(16.57)
Has Any Strategy	6.10	8.83	4.83	−4.87	1.80	4.12
	(19.04)	(19.11)	(11.11)	(19.10)	(23.53)	(15.53)
Seller FE	No	No	No	Yes	Yes	Yes
Observations	264	264	264	264	264	264
R^2	0.73	0.61	0.07	0.79	0.70	0.32
Adjusted R^2	0.72	0.60	0.05	0.71	0.60	0.06

Note: *p<0.1; **p<0.05; ***p<0.01

Table A-10: Table 2 including mixed sessions

	Dependent variable:								
	Persuasion	Self-Interest	Other-regard	Persuasion	Self-Interest	Other-regard	Persuasion	Self-Interest	Other-regard
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Similarity Score	5.11*** (1.38)	3.26 (2.04)	2.47* (1.28)						
Gender Match				21.74** (8.99)	25.22** (10.84)	2.59 (5.90)			
Buyer Female				0.27 (10.97)	−3.96 (12.23)	−4.68 (7.67)			
Seller Female				−1.14 (8.61)	−2.61 (11.28)	−11.23* (6.760)			
Citizenship Match							7.09 (7.63)	−1.52 (18.82)	13.91 (15.20)
Buyer Non-American							12.12 (8.51)	−5.20 (15.25)	19.14 (17.99)
Seller Non-American							−5.34 (7.57)	−16.98 (20.42)	15.58 (13.60)
Constant	51.83*** (19.45)	77.12*** (25.68)	0.96 (12.32)	67.65** (31.13)	90.47** (35.42)	37.59** (17.72)	66.24*** (19.55)	97.04*** (32.64)	−0.77 (17.58)
Observations	253	253	253	264	264	264	260	260	260
R²	0.74	0.61	0.08	0.73	0.62	0.08	0.73	0.62	0.08
Adjusted R²	0.73	0.60	0.06	0.73	0.61	0.05	0.73	0.61	0.06

Note: *p<0.1; **p<0.05; ***p<0.01

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B   Researcher Predictions for Correlates of Persuasion

Here, we present the predictions from the persuasion researchers who participated in our *Prediction Challenge*. The goal of the contest was to choose five features of the conversations that would best predict variance in net influence. We present them in no particular order.

Researcher 1

1. On a scale of 1 to 5, how much do you think this conversation increased the buyer's valuation for the product? (1=not at all, 5=a lot)

2. On a scale of 1 to 5, how much do you trust this seller? (1=not at all, 5=a lot)

3. On a scale of 1 to 5, how much do you like this seller? (1=not at all, 5=a lot)

4. Is the buyer a man?

5. Is the buyer a man and the seller a woman?

Researcher 2

1. The length (in words) of the conversation.

2. The number of times that the seller says "I" (first person singular).

3. The number of times the seller calls the buyer by first name.

4. The total number of times "no" is used.

5. The number of "overlaps/interruptions" (but people talking at the same time).

Researcher 3

1. How many statements of the form "I've used it and really like X" does seller make?

2. How many statements of the form "someone I know has used it and really liked X" does the seller make?

3. How many statements of the form "you can use it for X" does the seller make?

4. How many statements of the form "I'm not telling you this because of my incentives" does the seller make?

5. The interaction (4) x [(1) + (2) + (3)]

Researcher 4

1. Was the conversation about pros and cons of the object/the decision of buying, or was it was tangential?

2. Did the seller appear impartial by giving also cons of buying the object?

3. The duration (in words) of the conversation (though not certain in which direction this will go)

4. The fraction (of words) of the conversation during the buyer spoke.

5. How many questions RELATED to the buying decision (not questions about jobs or weather) did the seller ask?

Researcher 5

1. Look for the mere number of words used for buyer and seller

2. How many times does the seller say the buyer's name, the word "you", or the word "your"?

3. On a scale from 1 to 5, how many and how strong do you think the sellers arguments are? (1 = no arguments or only very weak arguments, 5 = many strong arguments)

4. On a scale from 1 to 5, how warm or likeable do you find the participants (1 = not likeable at all, 5 = very likeable)

5. On a scale from 1 to 5, how competent or expert do you find the participants (1 = not at all competent or expert,, 5 = very competent or expert)

Researcher 6

1. How many times did the seller lie about or exaggerate the product attributes?

2. Does the seller making a 'panhandler' kind of plea for help?

3. Does the seller describe details about the products (for the two products)?

4. Does the seller provide the actuarial value of the items (for the check and lottery)?

5. Does the seller explain the incentive scheme to the buyer?

Researcher 7

1. Word count (the more words in the conversation, but especially the buyer)

2. Language style matching plus positive emotion words (LSM – this uses LIWC and calculates the relative use of the following function words: personal pronouns, impersonal pronouns, articles, prepositions, auxiliary verbs, negations, adverbs, conjunctions). In other words, high LSM and high positive emotion words will result in the highest amount.

3. What did the buyer say they were willing to pay at the beginning of the conversation – or if (s)he did not say, what do you think s(he) was willing to pay at the beginning of the conversation?

4. On a scale from 1 to 5, how personal does the buyer get? (Personal is defined by the buyer saying something about his background, emotions, or personal concerns. Also, more likely to say his/her name.) (1 = not at all personal, 5 = very personal)

5. One a scale from 1 to 5, how would you rate the buyer's initial desire or interest in the product?

Items added by authors

1. Do the buyer and seller make a side deal (agreed to payments outside of the experiment) and/or agree to meet afterwards?

2. On a scale from 1 to 3, how well does the buyer appear to understand the rules of the game? (1 = not at all, 2 = somewhat, 3 = very well)

3. On a scale from 1 to 3, how well does the seller appear to understand the rules of the game? (1 = not at all, 2 = somewhat, 3 = very well)

C   Additional conversation samples

We provide here a few further examples to illustrate the range of the conversations between buyers and sellers. The full data set of transcribed conversations (with identifiers removed) is available on request.

Some of our amateur sellers capitulate quickly:

```
Seller: Yeah, if I were--yeah if I were in your position, I would probably
think like only get like, 200,  \$300 profit. That would be a very
nice deal already.
Buyer:  Yeah, definitely.
Seller: [long pause] Well...[long pause] I don't know. I'm not a good sales
person.
Buyer:  It's okay.
Seller: We can talk about whatever.
Buyer:  So what year are you?
...
```

Others seem far more comfortable, to the point of monopolizing the conversation:

```
Seller: And uh I know judging by your lack of gambling experience and
nervousness with that, I think you would probably agree with me there.
But at this point, I would---I would say you might as well go for it.
I would do it. Cause you made fifteen bucks here. So, you're positive.
You're not going to lose any money. I'd say-I'd say it's not a safe
risk, but fifty-fifty shot on winning a \$1000 in addition to the big
one five that you're pulling in right now as your [inaudible]. I don't
--I don't--I don't think I could turn that down. I think I would have
to go for it.
Buyer:  Alright. Well, I'll keep that in mind.
...
```

Some sellers were not above lying: in this example, the seller (successfully) misleads the buyer about a key detail of the experimental design:

```
Seller: So I was thinking we could find a price to make sure that we both win...
Buyer:  Mhmm, okay.
Seller: So, what's your, basically, your bottom line, like, how much would you
be willing to pay for this?
Buyer:  Well, how much does it, I guess, retail for?
Seller: It retails for 500.
Buyer:  Okay, 500 dollars? Yeah. I'm thinking, probably then, my bottom would
be [long pause] I mean I would be willing to pay 250 dollars for it.
Seller: Well, yeah, but, [inaudible]
Buyer:  Ok, well, the highest I'd be willing to go, would probably be about 325.
Seller: Ok, well, see there's another thing. If we sell it for, we can't make
anything if we sell it for less than 360.
...
```