These Are Ours: The Effects of Ownership and Groups on Property Negotiation

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14. ABSTRACT

Ownership tends to affect negotiation by increasing the value that the negotiator places on the objects being negotiated. In this study, we invented a new computer-controlled negotiation task that presents negotiators pictures of objects on a screen and the negotiators grab the objects, or give them to an opponent, using a mouse. We experimentally varied ownership, telling negotiators in one case that they owned the objects (but needed the other?s agreement on the distribution of the objects), or the other owned the objects (but their agreement was needed for distribution), or neither party owned the objects (and both had to agree on the distribution). We also varied whether negotiations were conducted by 3-person groups, or by individuals, and we varied the opponent?s behavior in the negotiation (the other consistently demanded almost all the objects, hardly demanded any, or was totally responsive with a Tit-for-Tat strategy on the objects). We also varied the value of the objects, thus giving the task an integrative structure. One result was that groups were more likely than individuals to match the opponent?s competitiveness, but only when ownership of the objects was undefined. Ownership, either self or other, attenuated differences between groups and individuals, an effect not observable in studies that use abstract negotiation tasks or prisoner-dilemma?type games.

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Abstract

Ownership tends to affect negotiation by increasing the value that the negotiator places on the objects being negotiated. In this study, we invented a new computer-controlled negotiation task that presents negotiators pictures of objects on a screen and the negotiators grab the objects, or give them to an opponent, using a mouse. We experimentally varied ownership, telling negotiators in one case that they owned the objects (but needed the other's agreement on the distribution of the objects), or the other owned the objects (but their agreement was needed for distribution), or neither party owned the objects (and both had to agree on the distribution). We also varied whether negotiations were conducted by 3-person groups, or by individuals, and we varied the opponent's behavior in the negotiation (the other consistently demanded almost all the objects, hardly demanded any, or was totally responsive with a Tit-for-Tat strategy on the objects). We also varied the value of the objects, thus giving the task an integrative structure. One result was that groups were more likely than individuals to match the opponent's competitiveness, but only when ownership of the objects was undefined. Ownership, either self, or other, attenuated differences between groups and individuals, an effect not observable in studies that use abstract negotiation tasks or prisoner-dilemma–type games.

These Are Ours: The Effects of Ownership and Groups on Property Negotiation

The problem of ownership of property can be vexing in negotiation: for example, when contested territory is as an issue conflicts are prone to escalate (Holsti, 1991) and mediation is less likely to succeed (Ott, 1972). Are groups of people more likely to be affected by ownership than are individuals? Is the phrase, “These are ours!” more likely in negotiation than “These are mine!”? This was the question that guided the present study. For reasons to be detailed below, we believe the answer is yes, but it depends on the other’s behavior in negotiation, as well as the initial perception of ownership.

The problem of ownership is well-known in psychology and in economics: William James observed that it is often difficult to distinguish between what is described as "me" and what is described as "mine" (1890, p. 293); Heider (1958) suggested that ownership entails a "unit relation" between person and object; and Beggan reported evidence of a “mere ownership” effect, greater valuation of objects simply due to their being owned (1991). The problem was defined in economics and the decision literatures as “...an instant endowment effect: the value that an individual assigns to such objects as mugs, pens, binoculars, and chocolate bars appears to increase substantially as soon as that individual is given the object” (Kahneman, Knetsch, and Thaler, 1990, p. 1342). Loewenstein and Issacharoff (1994) found that the endowment effect is larger when people attribute possession to their skill rather than chance, and there is evidence that culture can moderate the effect (Carnevale, 1995; Maddux, et al., in press). Lerner, Small, and Loewenstein (2004) report the endowment effect vanishes when people feel disgust (both buyer and seller do not want the object, an expulsion effect), and it reverses when people feel sorrow (seller prices are lower than buyer prices), an effect due to both buyer and seller wanting to make a change.

The interesting questions about the ownership effect are about the conditions under which it obtains, or vanishes, and of course about the mechanism that explain it (Korobkin, 2003; if the effect is not a trivial artifact of procedure, cf. Plott & Zeiller, 2005). Kahneman, et al. evoke loss aversion as an explanation; Morewedge, Shu, Gilbert, and Wilson (2009) tie the effect to the sense of *ownership*, an association of goods with the self (cf. Beggan, 1991). There is evidence that motivational processes are important to the endowment effect (Mandel, 2002), as well as emotional attachment to property: if both sides to a negotiation have emotional attachment to the property, property valuation is highest, which implies that agreement on an exchange of such property is least likely to occur (Ledgerwood, Liviatan, & Carnevale, 2007).

It is interesting to note that most, if not all, demonstrations of the ownership effect have used negotiation tasks that are one-shot, that is, there is one issue in the negotiation (e.g., the price of a coffee mug) and a party indicates a price they are willing to sell (if the mug is owned) or buy (if the mug is not owned), or a choice between these values. Will the ownership effect occur in bilateral negotiation when there is more than one object in negotiation and they vary in value, that is, the objects have an integrative bargaining structure?

We expected that other's behavior in negotiation would be matched, that is, when the other was generous, the negotiator would also be generous, and this should be the case for both groups and individuals (Smith, Pruitt, & Carnevale, 1982). But this effect should be moderated by perceived ownership. When the objects to be negotiated are seen as owned by the other, the other's behavior in the negotiation should be less salient and the negotiators should demand fewer of the objects. In other words, we expected a standard ownership effect: greater demands when the objects were self-owned than when other-owned, relative to a no-ownership control condition. When the objects are not owned by either party, under conditions of no ownership of

the objects negotiated, the other's behavior regarding the objects should be particularly salient. In this case, we expected heightened matching of the others behavior: especially competitive, selfish behavior when the other was selfish. And we expected this effect to be particularly strong for groups, compared to individuals, because groups tend toward greater competitiveness in general, and groups also tend toward greater likelihood of conflict escalation (Mikolic, Parker, & Pruitt, 1997; Morgan & Tindale, 2002).

Method

Participants

The participants were 211 male and female undergraduate business students at a large private university on the west coast, in the USA, who participated for partial credit in their introductory strategy and organization behavior courses.

Design

The experimental design was a 2 (Unit: Individual vs. Group) x 3 (Ownership: self-ownership vs. other-ownership vs. neutral) x 3 (Counterpart's policy: tit-for-tat vs. conceder vs. non-conceder) factorial. Each participant engaged in 3 different negotiations with 3 different opposing negotiators, via computer (actually the opposing negotiator was a computer program that implemented the counterpart policy independent variable). Thus the counterpart policy factor was within subjects. To assess possible order effects, we implemented six different orders of counterpart's policy, e.g., tit for tat then conceder then non-conceder, conceder then non-conceder then tit for tat, non-conceder then conceder then tit for tat, and so on. Participants were randomly assigned to individual or group condition when they arrived at the experimental room and groups were three persons with the same gender, only male or only female groups.

Participants were randomly also assigned to one of the ownership conditions, and they were in the same ownership condition for all three negotiations.

Procedure

For each session, 12 to 16 participants were invited to a laboratory. On arrival, participants were welcome to the experiment and seated in separate cubicles in front of computer or seated in three-persons-group cubicles. From that point on, all instructions, questionnaires, and experimental tasks were presented on the computer screen.

Negotiation task. The negotiation was a computer-based task about the ownership of an assortment of Market food items (such as apples and peppers, see Figure 1), which were shown as pictures on the computer screen. There were 3 negotiations, and each negotiation had 4 different market items that were to be negotiated, e.g., four bananas, four oranges, four mangos, four strawberries. Each item had a different point value payoff.

In all cases, negotiators were given a BATNA of a value of 5. There were 4 items to be negotiated in each negotiation, and they had a payoff value as follows: [item1, item2, item3, item4]: Participant = [2;10;3;5]; Counterpart = [2;3;10;5]. Thus there was integrative potential, with the first and fourth items being distributive and the second and third being tradable. Participants were not shown the payoff values to the other player.

The participants always made the first offer and the last decision (to agree or not). When they made an offer, the programmed counterpart decided to accept or reject the offer based on the payoff matrices. To enhance participant's involvement in the negotiation task, participants were informed that points would be converted to lottery tickets at the end of the experiment, and the more points earned, the more lottery tickets obtained and the greater the chance of winning a 100 dollar cash prize.

Manipulation of strategy. All participants did three different computer-based negotiation tasks as an individual or a three-person group with the programmed counterpart. Counterpart's offer policy was manipulated with the counteroffers in each round. Participants got offers from the counterpart reciprocally in the tit-for-tat condition. For distributive items, item 1 and 4, if participants gave less than 2, the counterpart returned the same amount. If participants gave more than 2, the counterpart returned four minus what the participant gave. For instance, if participant offered 1, *, *, 1 to the counterpart, it returned exactly same amount like 1, *, *, 1. Besides, if participant gave 4, *, *, 1 to the counterpart, it returned 1, *, *, 4 as a counteroffer.

For the integrative items, items 2 and 3, the counterpart offered in a complementary way. Item 2 was more valuable to the participants than item 3, whereas item 3 was more valuable to the programmed counterpart than item 2. If the participant offered *, 0, 1, *, the counterpart returned *, 1, 0, *. If the participant offered more than 1 of item 2, the counterpart returned one more item that participants offered for item 2 and zero for item 3. For instance, if participant offered *, 1, 3, *, the counterpart gave *, 2, 0, *.

In the "conceder" condition, the counterpart offered 2, 1, 1, 2 of items at the first round and 1, 2, 2, 1 of items at the second round, and 2, 2, 2, 2 of items at the third round, and finally 4, 3, 3, 4 of items at the final, twelfth round. Questionnaire data supported the notion that the participants felt the counterpart was quite cooperative in this condition.

The "non-conceder" counterpart offered no items and took all at the first and second rounds. It offered 1, 0, 0, 0 of items at the third and fourth round, and at the last round it only offered 2, 1, 1, 2 items. Compared to the conceder condition, participant felt that the non-conceder was quite competitive.

Manipulation of ownership. The manipulation of ownership paralleled the manipulation used by Leliveld, van Dijk, and van Beest (2008). Participants read the instruction to explain task rules, as shown below, with text modified appropriately for each of the three ownership conditions:

> You currently [own/do not own] some market items, but [neither do] the other negotiators [do not own/do own] any. The items will be shown to you in a few minutes. The negotiations are about how many items [you are willing to give to the other negotiators/the other negotiators are willing to give to you/you can get]. You will negotiate with them to try to reach agreement on how many items you are willing to [give them/give you/they get and you get].
>
> (…..) You will be shown the items that [you have/other negotiators have], and you will see that these items are on [their side/your side/center] of the computer screen.
>
> (……) If you accept it, you will get to keep the items that [you did not give/they give you/you have], and the associate number of points.

Thus the ownership conditions were defined by what the instructions stated about who owned the items at the start, and thus resemble the instructions used by Kahneman, et al. (1990). In addition, the items were located in participant's side of the screen at the first round in the self-ownership condition. In contrast, all items were located on the counterpart side at the first around in the other-ownership condition. In the neutral ownership condition, the items were located in the center of the bargaining table shown on the computer screen. In all cases, the participants were able to move the items to their side, or to the counterpart's side, during negotiation,

and the computer recorded their movements, which represented their offers in the negotiation. The BATNA given to the participants implied that this was the value of the objects to them if there was no agreement, in the ownership condition, which was held constant in the neutral and other-ownership conditions.

Results

Two dependent variables are reported here: (a) the number of rounds it took the negotiators to reach agreement, which was referred to as "length" (ranging from 1 to 12), and (b) the number of items demanded across rounds of the negotiation, which was referred to as "demand." Demand ranged in value from 0 to 16 on each round, that is, there were 4 object categories (e.g., strawberries) and 4 items in each category, as can be seen in Figure 1.

The length of negotiation variable was submitted to a 3 (Ownership: self-ownership vs. other-ownership vs. neutral) x 3 (Opponent's behavior policy: tit-for-tat vs. conceder vs. non-conceder) x 2 (Unit: group vs. individual) mixed-model analysis of variance (ANOVA) with ownership and group as a between-participant factors and opponent's behavior policy as a repeated-measure factor. The analysis indicated that there were main effects for both ownership, $F(2, 114) = 6.30$, $p < .01$, and opponent's behavior policy, $F(2, 228) = 49.88$, $p < .001$. Negotiators took longer to reach agreement when they had ownership ($M = 6.80$ rounds) and when neither had ownership ($M = 6.10$ rounds) than when the opponent had ownership ($M = 5.13$ rounds). Negotiators faced with an opponent who made few concessions (the "non-conceder") took longer to reach agreement on average ($M = 10.06$ rounds) than did negotiators faced with an opponent who made many concessions ($M = 3.53$ rounds) or an opponent who was responsive with a Tit-for-Tat strategy ($M = 4.44$ rounds). There were no differences between

groups and individuals on this variable, and there were no other statistically significant effects including interactions among the three independent variables.

The demand variable was also submitted to a 3 (Ownership: self-ownership vs. other-ownership vs. neutral) x 3 (Opponent's behavior policy: tit-for-tat vs. conceder vs. non-conceder) x 2 (Unit: group vs. individual) mixed-model analysis of variance (ANOVA) with ownership and unit as a between-participant factors and opponent's policy as a repeated-measure factor. The analysis indicated that there was a main effect for both ownership, $F(2, 114) = 5.70$, $p < .01$. Negotiators in the other-ownership condition demanded fewer items ($M = 8.123$) than did negotiators in the self-endowment condition ($M = 9.24$) and neutral endowment condition ($M = 8.87$). The group versus individual factor did not interact with this variable, indicating that the ownership effect is the same for groups as it is for individuals.

Interestingly, and consistent with our expectations, there was a statistically significant three-way interaction for demand involving the group, ownership, and other's behavior factors, $F(4,228) = 3.192$, $p < .02$. This interaction effect is shown in Figure 2. There was only a significant difference between group and individual negotiations when the negotiation was with an opponent who made few concessions and when the objects were not owned (for group: M = 10.47 and for individual, M = 8.79). Note the bar to the far right in Figure 2. Here, the negotiators are demanding quite a lot, they are being tough, when the opponent is being tough. And they are being soft, not demanding so much, when the other is the soft conceder. This is matching, and it is evident for groups, and not individuals, when ownership is not clearly defined. When the other owns the objects, the negotiators generally demand less, and the other's behavior does not have an impact on the negotiation.

Discussion

The most important result from this study was that groups were more likely than individuals to match the opponent's competitiveness, but only when ownership of the objects was undefined. Ownership, either self, or other, attenuated differences between groups and individuals. Note that this is an effect that is not observable in studies that use abstract negotiation tasks or prisoner-dilemma–type games. Most studies that have compared groups and individuals in negotiation, finding that groups are especially competitive (Morgan & Tindale, 2002), have used abstract negotiation tasks or variations on the PDG. In those tasks, the concept of ownership is not clear. But we find, in the present study, that when ownership is clear, either self or other, then differences between group and individual negotiations disappears.

Why might this be the case? One possibility is that ownership serves as a reference point from which judgments in negotiation derive; if the other negotiator demands an object that the other owns this has less an impact on one's response than if the other demands an object that is not owned. It is the latter demand that evokes a particularly strong response in negotiation. Further analyses of process data in the present data set should help illuminate these effects.

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Figure 1

Computer display showing the objects of negotiation

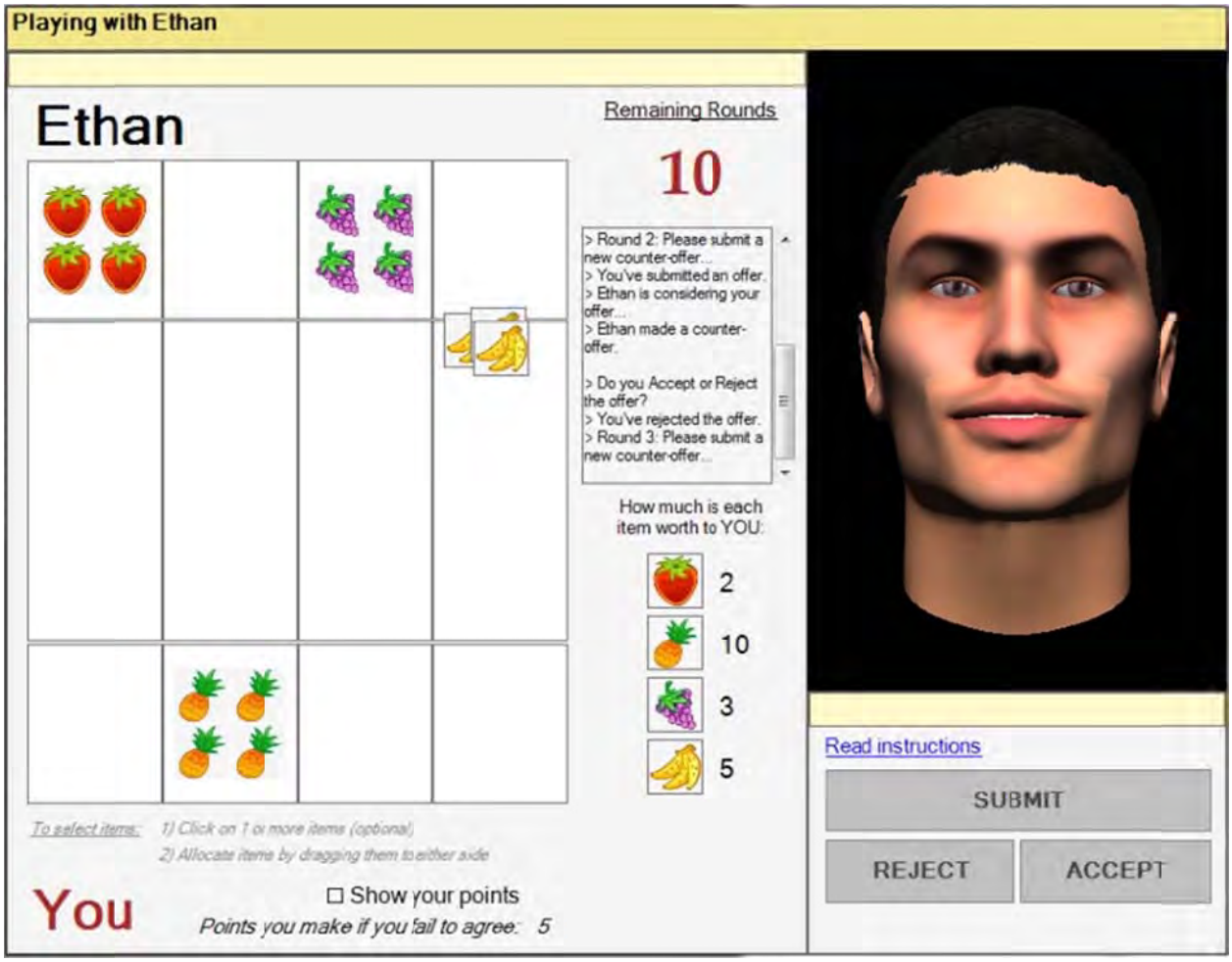

Figure 2

Number of items demanded in negotiation (range is 0 – 16, with higher numbers indicating wanting more) as a function of ownership (self-owned vs. other-owned vs. objects not defined as owned by either party), group vs. individual, and other's behavior in negotiation (Tit-for-Tat vs. other offers many objects, the "conceder," vs. the other hardly offers any objects, the "non-conceder"). The arrow indicates even division of the 16 items.