

A Test of Weaver & Frederick's (2012) Account of the Endowment Effect

To test whether the endowment effect is caused by the desire to avoid a bad deal or by loss aversion, I ran an online survey on MTurk ($N = 321$).

After indicating consent and their MTurk ID number, all participants were asked to indicate how much they would pay for a pen. They all saw the following screen:

Imagine you have the opportunity to buy the following pen.



What is the highest price you would be willing to pay for the pen?

Please enter a numeric price in the box below. Please do not include a dollar sign.

They were then directed to a screen that asked them to imagine that they owned the pen and to indicate their selling price:

Now instead imagine that you own the pen, and the pen's retail price is \$X.XX.



Imagine that you have an opportunity to sell the pen. What is the lowest price you would accept in exchange for your pen?

Please enter a numeric price in the box below. Please do not include a dollar sign.

On this screen, participants were randomly assigned to one of three conditions. In the Low Retail condition ($n = 105$), they were told that the pen's retail price was equal to half of their stated buying price. In the Same Retail condition ($n = 108$), they were told that the pen's retail price was equal to their stated buying price. And in the High Retail condition ($n = 107$), they were told that the pen's retail price was equal to double their stated buying price. (One participant whose buying price was equal to \$0 was told that the pen's retail price was \$1.00, and s/he was removed from the analyses).

After indicating their selling price, those who gave selling prices that were higher than their buying prices were reminded of their selling and buying prices, and asked to check off reasons for the discrepancy. Two of the reasons were consistent with a loss aversion explanation (e.g., "I would dislike losing the pen more than I would like getting it"), and two were consistent with a desire to avoid a bad deal (e.g., "As a seller, I didn't want to get a bad deal on the pen"). They saw the following screen, with the reasons presented in a randomized order (except that the "None of these reasons" option was always last).

You said the lowest price you would be willing to accept to sell the pen was \$5.00.

You said the highest price you would be willing to pay to buy the pen was \$3.00.

Why did you say that you'd be willing to buy the pen for less than you were willing to sell it for?

Please check all the reasons you had considered when setting your prices. If you didn't think of any of the reasons listed, please check the "None of these reasons" box.

- ☐ I would dislike losing the pen more than I would like getting it.
- ☐ I wouldn't want to sell the pen for much less than the retail price.
- ☐ As a seller, I didn't want to get a bad deal on the pen.
- ☐ It would be more painful to sell the pen than it would be pleasurable to acquire it.
- ☐ None of these reasons

Participants were then asked to recall the retail price of the pen, and then, on the survey's last page, they indicated their gender and age.

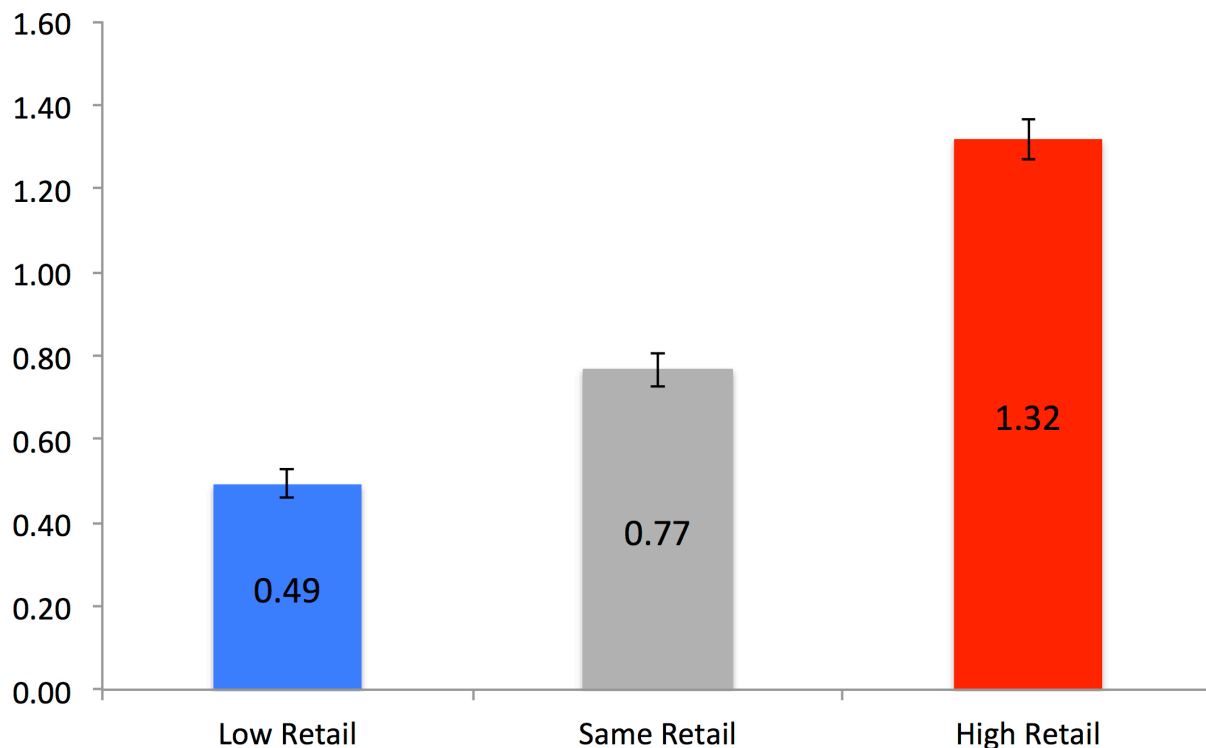
Results

The critical dependent variable in this study was the ratio of selling prices to buying prices. A ratio greater than one indicates an endowment effect, with selling prices higher than buying prices, whereas a ratio less than one indicates a reverse endowment effect. After computing these ratios, I noticed two extreme outliers – a ratio of 50 in the Low Retail condition and a ratio of 6 in the High Retail condition. I removed them from all the analyses below. Retaining the ratio of 50 renders all comparisons nonsignificant, as retaining this ridiculous value masks what is otherwise a very clean pattern.

Weaver and Frederick's account of the endowment effect predicts that people will be sensitive to the value of the deal, and hence the manipulated retail price. In this study, buying prices could not be sensitive to the retail price, because the retail price was unknown at the time buying prices were made. However, only selling prices could be sensitive to the retail price. If their theory is correct, we would expect to observe the endowment effect only when the retail price was greater than the stated buying price. In this case, people may be reluctant to sell the pen for much less than the market price, even though they value it less than that.

The data support their claims:

Ratio of Selling To Buying Prices



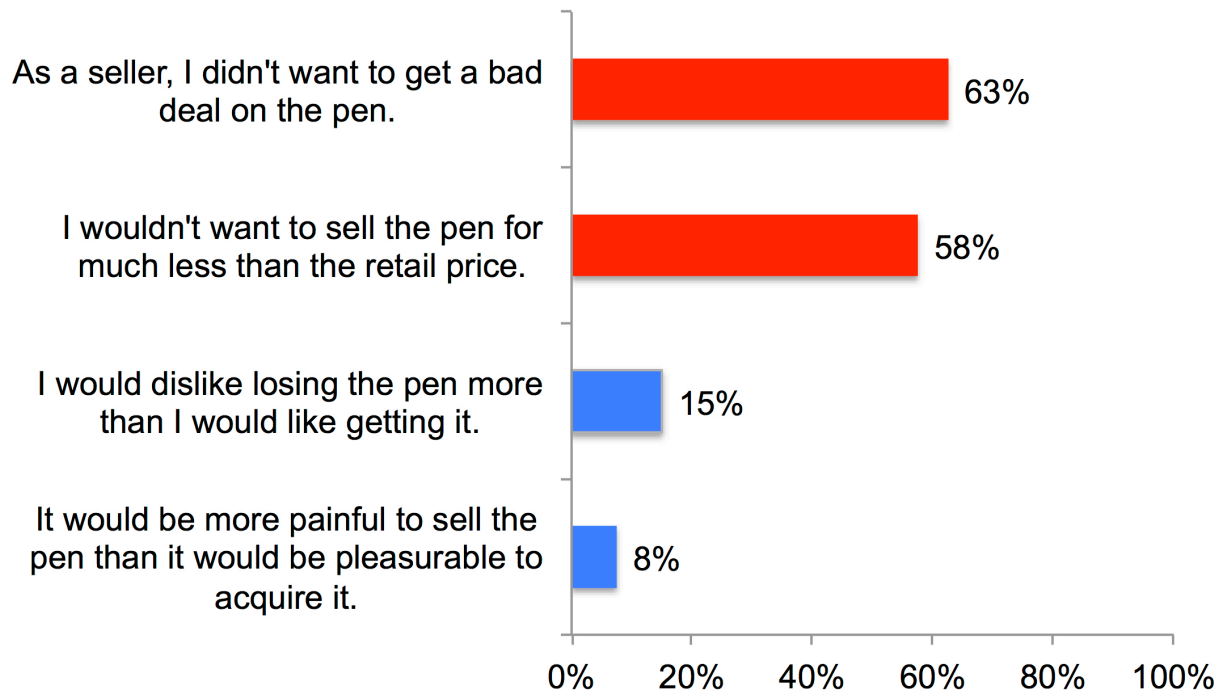
All conditions differ from each other (p 's < .001).

The endowment effect was observed only in the High Retail condition. Surprisingly, a *reverse* endowment effect was observed in the other two conditions, such that buying prices tended to be lower than selling prices. This unusual result may be attributable to some unusual features of this experiment, such as asking for buying prices before revealing the retail price. For example, saying that I'd pay \$5.00 for the pen but subsequently learning that it retails for only \$2.50, may cause me to change my value (and hence buying price) of the pen, meaning that the buying price I stated overestimates my value of it. This could lead to a reverse endowment effect.

Whatever the cause, the important thing is that, as Weaver and Frederick (2012) would predict, selling prices were highly sensitive to the retail price, and the endowment effect only emerged in the High Retail condition.

Perhaps even more important than these results, which have emerged in what is an admittedly unusual within-subjects endowment effect paradigm, are people's reasons for the endowment effect. For the 80 participants whose selling prices were greater than their buying prices, why?

% Endorsing Reason For Why Their Selling Price Was Higher Than Their Buying Price



As shown here, people were much more likely to say that they were concerned about getting a bad deal than they were to endorse a reason consistent with loss aversion. In fact, whereas 82.5% of participants endorsed at least one bad-deal reason, only 18.8% of participants endorsed at least one loss-aversion reason.

This is not the greatest study ever conducted on the endowment effect. Weaver and Frederick's non-hypothetical, fully between-subjects studies are much better. I ran this study to see for myself, in an easy, cost-effective way, whether their account of the endowment effect holds up to a straightforward manipulation of retail prices, and to the reasons people give for the endowment effect. It does, and I am now even more convinced that their account of the endowment effect is probably the best we've got.