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# Sense and sensibility of ownership: Type of ownership experience and valuation of goods



X.T. (Xiao-Tian) Wang<sup>a,d,\*</sup>, Lay See Ong<sup>b</sup>, Jolene H. Tan<sup>c</sup>

<sup>a</sup> Psychology Department, University of South Dakota, 414 East Clark Street, Vermillion, SD 57069, USA

<sup>b</sup> School of Social Sciences, Singapore Management University, Singapore 178899, Singapore

<sup>c</sup> Center for Adaptive Behavior and Cognition, Max Planck Institute for Human Development, 14195 Berlin, Germany

<sup>d</sup> School of Management, Jinan University, Guangzhou 510632, China

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# ABSTRACT

This study examined how the type of ownership experience affects the valuation of a good. We hypothesized that the sense of ownership is a psychological derivative of resource acquisition and allocation. We predicted a valuation order of stable ownership or no-ownership < alternating (interchanging) ownership < sudden reversals in ownership. One hundred and sixty-six participants played an object-acquisition "game", a computer simulation of gaining or losing the ownership of an object (e.g., a pen, a mug, or a flashlight) with different outcome sequences, preprogramed but unbeknownst to the participants. After each game, the participant valued the target object by indicating their willingness-to-pay price, if the last outcome was a loss, or willingness-to-accept price, if the last outcome was a gain. The valuation of an object was highest after experiencing a final reversal in ownership from losses to a final gain or from gains to a final loss, followed by alternating ownership and stable (patrimonial) ownership or constant non-ownership. Wins or losses are not created equal due to different trajectories in how people come to own (lose) objects. The results also suggest that loss aversion is better understood as a specific result of ownership experience.

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# 1. Introduction

### 1.1. Valuation, loss aversion, and ownership

The aim of this research study is to go beyond the gain-loss dichotomy and explore the effects of ownership experience on the valuation of goods. The topic of resource acquisition, allocation, and exchange has been at the heart of studies in economics. We view ownership experience, factual or otherwise, as the psychological manifestation of resource acquisition. From this perspective, we expect that ownership experience systematically affects valuations of the same commodity, and the waxing and waning of key decision phenomena such as loss aversion and diminishing marginal utility. Yet little is known about how different types of ownership experience affect judgment and decision making.

Adam Smith (1776) raised an engaging question: Why does *Homo economicus* price diamonds much higher than water, even though water is far more essential and vital for living? One popular account of this perplexity is the notion of marginal utility

E-mail address: xtwang@usd.edu (X.T. (Xiao-Tian) Wang).

(e.g., Bernoulli, 1738/1954). The value of a good is determined not only by its maximal utility but also by its marginal utility, measured as the increase in utility resulting from each additional use or consumption of that good. Thus, the total value of a good is the sum of its initial utility plus its cumulated marginal utility. A key feature of marginal utility, as assumed by most expected utility models, is that it diminishes as the number of units of supply increases. For instance, the marginal utility of water, although essential for life, is smaller than that of diamonds because diamonds are scarce.

The law of diminishing marginal utility remains integral to modern economic theory and provides useful accounts for many economic phenomena, including time preference and the value of a good, market pricing, and supply-demand relations. Taken together with modern analyses of decision under risk and uncertainty (von Neumann & Morgenstern, 1947), the notion of diminishing marginal utility suggests risk aversion as a general feature of economic decisions. However, this is at odds with the ubiquity of both risk aversion and risk seeking observed in human decision making. Descriptive models of decision making focus more on the psychological evidence of actual choice preference. Most notably, prospect theory (Kahneman & Tversky, 1979) evaluates the outcomes of risky prospects by a value function that has three essential characteristics: First, the carriers of value are gains and losses defined relative to a reference point. Second, the notion of unidirectional diminishing

<sup>\*</sup> Corresponding author at: Psychology Department, University of South Dakota, 414 East Clark Street, Vermillion, SD 57069, USA. Tel.:1 605 677 5183.

marginal utility is replaced by the notion of diminishing sensitivity to incremental gains or losses. That is, the marginal value of both gains and losses decreases as the amount increases. Third, the value function is steeper in the loss domain than in the gain domain. This property of valuation is called *loss aversion*, which means losses are weighted heavier than corresponding gains.

Loss aversion is one of the most robust decision phenomena and has been replicated and demonstrated in a variety of studies (e.g., Kahneman, Knetsch, & Thaler, 1990, 1991; Köbberling & Wakker, 2005; Tversky & Kahneman, 1991) across different task domains (e.g., Haigh & List, 2005; Hardie, Johnson, & Fader, 1993; Jervis, 1992). It has also been shown to have unique neural activation signatures (e.g., Tom et al., 2007).

Although robust and ubiquitous, loss aversion has its boundaries (e.g., Ariely & Simonson, 2003; Novemsky & Kahneman, 2005) and antecedent conditions (Erev et al., 2010; Liu, Liang, & Li, 2009). Recent findings from a series of experiments by Li et al. (2012) show that mating motives selectively erased loss aversion in men, whereas selfprotection motives led both men and women to become more loss averse. Overall, loss aversion is not a general phenomenon but is taskdomain and motive dependent. These findings also suggest that loss aversion stems from more than just financial gains and losses.

Although losses activate a greater autonomic arousal than the same amount of gains (Hochman & Yechiam, 2011), an increasing number of studies have failed to replicate loss aversion and found no higher behavioral sensitivity to negative outcomes in decisions under risk (Erev, Ert, & Yechiam, 2008; Ert & Erev, 2008; Kermer et al., 2006; Rozin & Royzman, 2001; Yechiam & Ert, 2007). It is worth mentioning that the lack of loss aversion is most evident when decision makers are engaged in repeated decisions from experience rather than one-shot decisions from descriptions (Erev et al., 2010).

Taking a broader perspective on the aforementioned studies reveals an important insight: Loss aversion may be better understood as a result of a far more general psychological construct of ownership. Psychological ownership has been defined as "a state in which individuals feel as though the target of ownership or a piece of it is theirs" (Pierce, Kostova, & Dirks, 2001, p. 299). The target of psychological ownership, although not necessarily a factual ownership (e.g., legal ownership), becomes part of the individual's identity and self. Psychological ownership has three dimensions: a sense of possession, a relationship with the object, and a cognitive and affective connection to the object (Pierce et al., 2001).

Thaler (1980) coined the term *endowment effect* to describe the finding that goods included in one's endowment (i.e., ownership) are valued more highly than identical goods not held in one's endowment. The effect was also referred to as the *viewpoint effect* (Birnbaum & Stegner, 1979). The potential gain of a non-owner through acquisition was found to be smaller than the potential loss of an owner through a sale, ceteris paribus (see also Kahneman et al., 1990, 1991). Furthermore, owning a good, particularly physically possessing it, increases its valuation (Beggan, 1992) and this effect persists even in the absence of factual ownership (Reb & Connolly, 2010). This effect of psychological ownership has been detected almost immediately after an individual has been endowed with an object, a phenomenon described as the instant endowment effect (Kahneman et al., 1990).

More recently, researchers have started to examine the psychological mechanisms of the endowment effect in greater detail. Novemsky and Kahneman (2005) presented evidence that loss aversion, and its consequent endowment effect, is found for goods that are owned for consumption but not for goods that are owned for exchange. Goods for exchange are thus given up "as intended" rather than as losses from an endowment. Carmon and Ariely (2000) reported findings suggesting that endowment effects can be explained as the result of buyers and sellers having different cognitive perspectives on the exchange. These results suggest that there is more to the endowment effect than simple factual ownership of an object.

Ownership from the perspective of the endowment effect has typically been studied as a single event where parting with an object that is part of one's endowment would be considered a loss while adding an identical object would be viewed as a gain (e.g., Kahneman et al., 1991). Extending ownership beyond such one-shot scenarios raises the question of whether the return of a once-owned object is psychologically the same as the initial gain of an identical object. There are good reasons to think that the two may be different. As demonstrated by Strahilevitz and Loewenstein (1998), a once-owned object is valued more than an identical but completely new object. This finding exposes the inadequacy of the standard account of the endowment effect in terms of loss aversion-the pain of losing a good is greater than the pleasure of acquiring it. An alternative account based on ownership experience suggests that the ownership experience after the endowment of a good adds value to the good. Thus, it is not simply that a loss looms larger than a gain of the same amount. Instead, the loss of an ownership (e.g., a theater ticket worth \$200) should be more valuable than a mere loss (e.g., a loss of \$200) and the restatement of an ownership should be more valuable than the initial gain of the identical property.

Previous studies have often confounded the roles of sellers and owners, leading to the ownership and loss aversion effects being confounded as well. Morewedge et al. (2009) conducted a critical test and demonstrated that ownership, not loss aversion per se, produced the endowment effect. In their experiments, buyers were willing to pay just as much for a coffee mug as sellers demanded if the buyers already happened to own an identical mug. In addition, brokers of both sellers and buyers traded the mugs at higher prices when they happened to own mugs that were identical to the ones they were trading. Thus, the experience of ownership caused the endowment effect to disappear.

#### 1.2. Hypothesis and predictions

In this paper, we examine how ownership history with an object affects object valuation. Ownership experience thus captures the origins of how an object becomes owned, and can inform how an object is valued.

Unlike description-based decisions, experience-based decisions should provide a stronger sense of ownership. Furthermore, gains and losses in ownership situations are not symmetrical. Gains involve a single transaction from no ownership to an initial ownership, whereas losses involve a two-way ownership exchange of a good. A gain is a de facto gain, but a loss implies a previous gain that was followed by a loss.

We hypothesized that the ownership experience (beyond mere ownership duration or mere monetary loss) would bestow additional value on a good, particularly when experiencing a final reversal in ownership. We predicted a valuation order of stable ownership (constant ownership or non-ownership) < alternating (transactional) ownership < final reversals in ownership from consecutive gains to a final loss or from consecutive losses to a final gain. As suggested by Thaler (1980), endowment and ownership experience shift reference points and, thus, the relativity of what a loss or a gain is. We argue that decisions under risk can be modeled without resorting to the notion of diminishing marginal utility or loss aversion.

The tri-reference point theory (Wang & Johnson, 2012) proposes that the decision reference points of goal (G), status quo (SQ), and minimum requirement (MR) in a task follow an order of MR > G > SQ for their psychological impact on valuation. We posit that ownership may result in a resetting of these reference points so that a previous G becomes the present SQ, and the previous SQ becomes the present MR. For instance, after the G of gaining a particular object is achieved, having the ownership of the object becomes the SQ. In the meantime, "not losing the object" becomes the MR for the owner. Given the priority order of the reference points (MR > G > SQ), the valuation of the Download English Version:

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