

ABSTRACT

Title of Dissertation: TAKING THE PERSPECTIVE OF A SELLER
AND A BUYER: IMPLICATIONS FOR PRICE
ELICITATION AND PRICE FRAMING

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This dissertation consists of two essays which investigate how assuming the role of a seller or a buyer affects valuations in a price elicitation task (essay I) and how different presentations of an equivalent price affect evaluations when a consumer plays the dual roles of a buyer and a seller in transactions involving trade-ins (essay II).

Sellers' willingness to accept (WTA) to give up a good is typically higher than buyers' willingness to pay (WTP) to obtain the good. Essay I proposes that valuation processes of sellers and buyers are guided by a motivational orientation of "getting the best." For a seller (buyer) indicating WTA (WTP), getting the best implies receiving as much as possible to give up a specific good (giving up as little as possible to get the specific good). Results of six studies suggest that the WTA-WTP elicitation task activates different directional goals, leading to the WTA-WTP

disparity. The different directional goals lead sellers and buyers to focus on different aspects and bias their cognitive reasoning and interpretation of information. By connecting the valuation process to the general motivation of getting the best, this research provides a unifying framework to explain the disparate interpretations of the WTA-WTP disparity.

Many new purchases and replacement decisions involve consumers' trading in their old products. In such transactions, the overall exchange may be priced either as separate transactions (partitioned) with price tags for the payment and the receipt or as a single net price (consolidated) which takes into account the value of the trade-in. Essay II examines whether consumers prefer a partitioned price versus a consolidated price presentation. The findings suggest that when consumers are trading in a product which has a low value relative to the price of a new product, they prefer a consolidated price. In contrast, when trading in a product which has high value, they prefer a partitioned price. The results suggest that consumers use the price of the new product as an anchor to evaluate the trade-in value, and the perception of the trade-in value influences the overall evaluation especially when the transaction is partitioned.

TAKING THE PERSPECTIVE OF A SELLER AND A BUYER: IMPLICATIONS
FOR PRICE ELICITATION AND PRICE FRAMING

by

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Chapter 1: Getting the Best: A Motivated Valuation Account for the Disparity between Willingness to Accept and Willingness to Pay

Introduction

An extensive literature across a variety of domains suggests that sellers' willingness to accept (WTA) to give up a good is typically higher than buyers' willingness to pay (WTP) to obtain the same good (e.g., Carmon and Ariely 2000; Brenner et al. 2007; Chatterjee, Irmak, and Rose 2013; Kahneman, Knetsch, and Thaler 1990; Knetsch 1989; Van Boven, Dunning, and Loewenstein 2000). The standard economic theory suggests that the minimum amount that an individual would accept to give up a good should be equivalent to the maximum amount that the individual would pay to obtain the good. However, the WTA-WTP disparity has been shown for common goods such as coffee mugs and pens that are small relative to income (Kahneman et al. 1990), for large-ticket items such as housing (e.g., Genesove and Mayer 2001), and non-market goods such as trash cleanup (e.g., Irwin 1994). Given the conflict with normative economic theory, and that WTA and WTP are commonly used as measures of value (Knetsch 1989), considerable research has examined the disparity between WTA and WTP.

The predominant psychological explanation relies on notions of reference dependence and loss aversion, ideas central to prospect theory (Kahneman and Tversky 1979). Loss aversion, derived from the prospect theory value function, suggests that the pain of a loss is greater than the pleasure of an equivalent gain. To the extent giving up a good is viewed as a loss and acquiring it is viewed as a gain, the value of a good being given up (WTA) should be higher than the value of acquiring the same good (WTP). The

overvaluation of goods by owners or the endowment effect is thus viewed as a manifestation of loss aversion (Kahneman et al. 1990). Loss aversion suggests that both sellers and buyers focus on what they are about to “give up” in a transaction. Thus, sellers ought to focus more on the good that they are giving up whereas buyers ought to focus more on the money that they are giving up (Carmon and Ariely 2000).

Building on loss aversion, research has examined the WTA-WTP disparity from other theoretical perspectives. Spurred by the idea that material possessions may be representations of an extended self (Belk 1988), studies suggest that to the extent loss of such possessions is perceived as a threat to the self (Chatterjee et al. 2013) or one’s identity (Dommer and Swaminathan 2013; Morewedge et al. 2009), owners’ willingness to accept is likely to be higher than buyers’ willingness to pay. Another perspective based on egocentric empathy gaps suggests that both sellers and buyers overestimate the similarity of each other’s valuation, and the lack of perspective taking leads to the WTA-WTP disparity (Van Boven et al. 2000). A third perspective based on transaction utility suggests that in contrast to loss aversion, the WTA-WTP disparity is a manifestation of a reluctance to trade on unfavorable terms relative to reference prices (Weaver and Frederick 2012). The WTA-WTP disparity may thus be “best construed as an aversion to bad deals rather than an aversion to losing possessions” (Weaver and Frederick 2012, p. 696).

Building on the existing literature, and drawing on the idea that individual behavior is largely goal driven (e.g., Bargh et al. 2001; Kruglanski et al. 2002; Kunda 1990), the present research offers a motivated valuation account to seek additional insight into sellers’ and buyers’ valuation process, leading to the disparity between WTA and

WTP. The basic premise underlying the motivated valuation account is that the valuation process of both sellers and buyers is guided by the motivational orientation of “getting the best.” Getting the best is an innate ideal state in almost every sphere of life. Getting the best is consistent with normative models that characterize economic agents as utility maximizers as well as with recent characterizations of specific mindsets (e.g., Ma and Roese 2014; Schwartz et al. 2002).

Importantly, given that goals relevant to a specific role or task can be activated by social roles and the cues inherent to the roles (e.g., Bargh et al. 2001; Ferguson, Hassin, and Bargh 2008), we propose that the WTA/WTP elicitation task itself activates the general orientation of getting the best. For a seller indicating WTA, getting the best implies receiving as much as possible to give up a specific good. For a buyer indicating WTP, getting the best implies giving up as little as possible to get the specific good. Getting the best thus suggests maximization of WTA by sellers and minimization of WTP by buyers (Espinoza and Srivastava 2012). To the extent getting the best, and the associated means to get the best by maximizing what one gets or minimizing what one gives up, is a primitive and ingrained motive, a motivated valuation account may potentially represent the motivational underpinnings of loss aversion as well.

Consistent with the idea that goals and motives guide reasoning and decision making (e.g., Bargh et al. 2001; Dai and Hsee 2013; Kruglanski et al. 2002), we propose that the different directional goals of sellers in indicating WTA and buyers in indicating WTP, affect the associated cognitive processes, judgmental, and evaluative criteria, thus leading to the disparity between WTA and WTP. Although the present research is generally consistent with prior research that argues for a differential focus of sellers and

buyers (e.g., Carmon and Ariely 2000; Irmak, Wakslak, and Trope 2013; Johnson, Häubl, and Keinan 2007; Nayakankuppam and Mishra 2005), our motivated valuation account suggests that it is because of the different directional motives that sellers and buyers focus on different aspects.

This research first demonstrates that the WTA/WTP elicitation task activates different directional motives such that the general motivational orientation of getting the best activates a goal of maximizing what one is getting when indicating WTA, and a goal of minimizing what one is giving up when indicating WTP (Espinoza and Srivastava 2012). In other words, the WTA/WTP elicitation task itself activates different directional goals and the WTA-WTP disparity should be manifested even without the explicit seller/buyer labels. Given that the directional goals are mirror images of each other, we further show that altering the medium of exchange or the mutable aspect of the transaction (e.g., money versus good) reverses the directional goals when sellers indicate WTP and buyers indicate WTA. Second, we demonstrate that the directional goals activated by the WTA/WTP elicitation task may carry over to subsequent, unrelated tasks and continue to produce behaviors that are consistent with it (e.g., Gollwitzer 1990; Ma and Roese 2014). Third, this research demonstrates that sellers and buyers focus on different aspects of the transaction because of the different directional goals activated by the WTA/WTP task. Specifically, unlike loss aversion which suggests a focus on what is being given up (e.g., Carmon and Ariely 2000), we show that sellers focus more on factors that allow maximization of WTA whereas buyers focus more on factors that allow minimization of WTP. Fourth, given that motivation affects reasoning through a biased set of cognitive processes whereby individuals attempt to be rational and construct

justifications in line with their directional motive (Kunda 1990), we demonstrate that the evaluation and interpretation of an ambiguous stimulus is biased as a function of the WTA/WTP elicitation task.

By connecting the valuation process to its underlying motivational orientation, this research highlights the cognitive processes and reasoning that are affected by the different directional goals. To the extent that the general goal of getting the best is an ubiquitous ideal state (Ma and Roese 2014; Schwartz et al. 2002), the motivated valuation account may provide a unifying framework to explain the differential focus of sellers and buyers (e.g., Carmon and Ariely 2000; Irmak et al. 2013; Johnson et al. 2007) and help reconcile the seemingly disparate interpretations of the WTA-WTP disparity in the literature including those based on loss aversion (Kahneman et al. 1990) and bad deal aversion (Weaver and Frederick 2012).

Conceptual Background

Previous Research on the WTA-WTP Disparity

The dominant explanation for the WTA-WTP disparity relies on loss aversion or the idea that individuals are generally more inclined to avoid losses than to obtain gains of an equal magnitude. To the extent that giving up a good is perceived as a loss, loss aversion suggests that the value of a good being given up (WTA) is likely to be higher than the value of acquiring the same good (WTP). Building on loss aversion, Carmon and Ariely (2000) suggest that both buyers and sellers are loss averse and consequently focus on what they are about to give up – the good for the seller and money for a buyer in most transactions. In the context of Duke University basketball tickets, they reported that sellers' WTA was more influenced by factors related to the good they were about to give

up (e.g., significance of game), whereas buyers' WTP was more influenced by factors related to the money they were about to give up (e.g., original list price).

Research also suggests that sellers are better than buyers at coding and accessing positive features of the good that they are giving up, but worse at coding and accessing the negative features of the good (Nayakankuppam and Mishra 2005). Johnson et al. (2007) reported that in assessing value, sellers recalled value increasing aspects whereas buyers recalled value decreasing aspects. Similarly, Irmak et al. (2013) reported that while sellers focus more on high-level construal aspects of the good, buyers focus more on low-level construal aspects. The WTA-WTP disparity has also been associated with emotional reactions. Shu and Peck (2011) showed that the more consumers develop emotional attachment to the products they own, the more loss averse they become. Zhang and Fishbach (2005) propose that a loss may generate negative emotions and anticipating such emotions leads to the disparity between WTA and WTP. Together, these findings unequivocally highlight the differential focus of sellers and buyers in assessing value and indicating WTA and WTP, respectively.

Building on loss aversion, a burgeoning literature examines the WTA-WTP disparity from different theoretical perspectives (e.g., Chatterjee et al. 2013; Morewedge et al. 2009; Van Boven et al. 2000; Weaver and Frederick 2012). Based on the notion that material possessions may be viewed as part of an extended self (Belk 1988), the association between the self and a product has been shown to be an important driver of the disparity. To the extent a seller perceives self-threat from the loss of a possession (Chatterjee et al. 2013) or one's sense of identity (Dommer and Swaminathan 2013), the value of the possession increases as a self-defense mechanism. Morewedge et al. (2009)

disentangle ownership and loss aversion and suggest that psychological ownership is a better predictor of the disparity than loss aversion alone. A second perspective based on egocentric empathy gaps (Van Boven et al. 2000) suggests that individuals typically overestimate the similarity between themselves and others such that sellers (buyers) overestimate (underestimate) the value of a good to buyers (sellers). Evidence also points to an intra-role empathy gap where sellers underestimate the price that other sellers are willing to accept and buyers overestimate the price that other buyers are willing to pay (Frederick 2012; Kurt and Inman 2013). A third perspective based on transaction utility argues that the WTA-WTP disparity is due to a reluctance to trade on unfavorable terms relative to reference prices (Weaver and Frederick 2012). Since avoiding a bad deal implies sellers (buyers) indicating a higher (lower) price than reference prices, the WTA-WTP disparity can be characterized as an aversion to bad deals rather than an aversion to losing one's possession.

Getting the Best and Motivated Valuation

Building on the existing literature, we draw on the idea that individual behavior is goal driven (Bargh et al. 2001; Kruglanski et al. 2002) and propose a motivated valuation account to seek further insight into the valuation process, and thus the WTA-WTP disparity. Considerable evidence points to the critical role of goals in providing individuals a sense of direction and purpose as well as in influencing reasoning and decision making (Gollwitzer 1990; Kruglanski et al. 2002; Kunda 1990). Goals relevant to a specific role or task may be activated automatically by the mere adoption of the social role or task, the cues inherent to the role, and the physical or social environment (e.g., Bargh et al. 2001; Ferguson et al. 2008; Kruglanski et al. 2002). For example, when

individuals adopt the role of best friend or son, motivational orientations consistent with these roles, such as helping and doing well in school, respectively, are automatically activated (Fitzsimons and Bargh 2003). As soon as individuals commit to engage in a specific role or task (e.g., selling or buying), a specific motivational orientation, consisting of a set of cognitive processes, judgmental, and evaluative criteria, is activated to help in successful task performance (Bargh et al. 2001; Fitzsimons and Bargh 2003; Gollwitzer 1990).

The current research proposes that the role of seller/buyer and/or the WTA/WTP elicitation task automatically activates a motivational orientation of “getting the best” that then guides the valuation process, leading to the disparity between WTA and WTP. Getting the best is considered an ideal state in almost every domain in life. The aspirational goal of getting the best is ingrained in individuals at a very young age. The belief is that striving to get the best leads to more focus and a higher likelihood of greater achievement or achieving one’s potential. For example, high school seniors are encouraged to get into the best college they can. Consistent with the modeling of economic agents as utility maximizers, and with research characterizing a maximizing mindset as the “tendency to compare and the goal to get the best” (Ma and Roese 2014, p. 71; Schwartz et al. 2002), we propose that the WTA/WTP elicitation process itself activates the general motivational orientation of getting the best.

The WTA/WTP elicitation process assumes the potential of trade or the transfer of ownership of goods in exchange for other goods or money. Since money is typically the token that functions as the medium of exchange (i.e., the mutable aspect) and the good is constant, sellers receive money in exchange for a good, whereas buyers receive

the good in exchange for money. Sellers thus state how much they are willing to accept in exchange for a good whereas buyers state how much they are willing to pay in exchange for the good. For a seller, getting the best is achieved by receiving as much as possible to give up a specific good. For a buyer, getting the best is achieved by giving up as little as possible to get the specific good. Getting the best thus implies maximization of WTA by sellers and minimization of WTP by buyers (Espinoza and Srivastava 2012). The different directional goals in indicating WTA and WTP, biases the cognitive processes, judgmental, and evaluative criteria, leading to the WTA-WTP disparity (Dai and Hsee 2013; Kruglanski et al. 2002). In other words, to the extent that getting the best is achieved by maximizing WTA and minimizing WTP, the cognitive processes of sellers and buyers are geared towards fulfilling and supporting these directional goals (Gollwitzer 1990).

This research first investigates the fundamental premise that the WTA/WTP elicitation task itself activates different directional goals. Although the general motivational orientation is getting the best, the means to achieve that goal is different when one indicates WTA versus WTP. Given the argument that the WTA/WTP elicitation task itself activates different directional goals, the social labels of seller and buyer are not necessary to observe the WTA-WTP disparity. Further, the goals are likely to be activated regardless of whether an individual is indicating WTA/WTP for oneself or is acting as an agent on behalf of someone else. The WTA-WTP disparity is thus likely to be manifested regardless of agency. Study 1 examines these ideas. Note that the distinction between self and agent is likely to be manifested in situations where a loss of one's possession is perceived as a threat to the self or one's identity (Chatterjee et al.

2013; Dommer and Swaminathan 2013). We do not examine such situations in this research.

Given that maximizing and minimizing goals are mirror images of each other, we extend prior research (Espinoza and Srivastava 2012) to show that altering the medium of exchange or the mutable aspect of the transaction (e.g., money versus divisible good) reverses the directional goals since sellers now indicate WTP (i.e., how many units of the good would they give up to receive a fixed amount) and buyers indicate WTA (i.e., how many units of the good would they accept to give up a fixed amount). Study 2 thus demonstrates that it is indeed the WTA/WTP task that activates different directional goals, leading to the WTA-WTP disparity. Study 3 then explores the extent to which the general directional goals carry over to subsequent, unrelated tasks and continue to produce behaviors that are consistent with them rather than immediately vanishing after completion of the task that activated the goals (Gollwitzer 1990).

Although the current research is generally consistent with previous research arguing for a differential focus of sellers and buyers (e.g., Carmon and Ariely 2000; Johnson et al. 2007; Nayakankuppam and Mishra 2005), the conceptualization that the WTA/WTP elicitation task itself activates different directional goals suggests why sellers and buyers focus on different aspects. Given that motivational orientation guides reasoning through a reliance on a biased set of cognitive processes (Kunda 1990), the different directional goals activated by the WTA/WTP elicitation task biases processing and interpretation of the information in a manner that allows for a rationalization of maximizing WTA and minimizing WTP. The motivated valuation account thus would predict that sellers are better (worse) than buyers at coding and accessing positive

(negative) features of the good (Nayakankuppam and Mishra 2005). Further, the findings that sellers (buyers) recall value-increasing (decreasing) aspects (Johnson et al. 2007) and focus more on high- (low-) level construal aspects (Irmak et al. 2013) are consistent with the argument that the cognitive reasoning, judgmental, and evaluative criteria of sellers and buyers is biased by the different directional goals. In fact, the motivated valuation account suggests that sellers will focus on and be more influenced by factors that allow for maximization of WTA whereas buyers will focus on and be more influenced by factors that allow for minimization of WTP. Study 4 examines this prediction and contrasts this to the idea that given both sellers and buyers focus on what they are giving up, sellers ought to be influenced more by factors related to the good or the experience and buyers ought to be influenced more by factors related to the expenses or the money (Carmon and Ariely 2000).

Given the general goal of getting the best is achieved in different ways as a function of whether one indicates WTA/WTP, the motivated valuation account suggests that the different directional goals will bias cognitive reasoning and interpretation of objectively equivalent information, particularly when the information is somewhat ambiguous and offers room to interpret it in accordance with one's directional goal (Kunda 1990). The bias in cognitive reasoning, processing, and interpretation of the information will be in a manner that allows individuals to rationalize and construct justifications to maximize WTA and minimize WTP. Studies 5 and 6 examine how the different directional goals activated by the WTA/WTP elicitation task bias interpretation of information (study 5), attribute weights (study 6), and valuations, thus leading to the WTA-WTP disparity.

Study 1

Study 1 examines the extent to which the WTA/WTP elicitation task itself activates different directional goals. Getting the best implies maximizing WTA and minimizing WTP and these directional goals should be activated without the explicit seller/buyer labels. Study 1 uses a scenario where participants were asked to barter commodities as traders rather than as sellers/buyers. Although WTA and WTP is elicited in a context which does not involve money, the motivational orientation of getting the best for “neutral” traders implies maximizing the number of units of a good to accept when indicating WTA and minimizing the number of units of the good to give up when indicating WTP, thus leading to the WTA-WTP disparity.

Study 1 also explores the extent to which the WTA/WTP elicitation task activates directional goals regardless of whether individuals indicate WTA/WTP for oneself or act as an agent on behalf of someone else. To the extent that there is a feeling of self-threat from losing one’s possession (e.g., Chatterjee et al. 2013), it is possible that the WTA-WTP disparity is more likely to be manifested when one is indicating WTA/WTP for oneself than when one is an agent. However, since we do not examine attachment to one’s possessions, we expect to observe the WTA-WTP disparity regardless of agency.

Method

One hundred and eighty-one undergraduate students (age range = 18-31; male = 55%) participated in a 2 (trader: corn and egg) x 2 (measure: WTA and WTP) x 2 (agency: self and agent) between-subjects design study in exchange for course credit. Participants read a brief description of how barter can be used to trade or exchange goods/services, without the use of money. They were informed that two individuals

would engage in an exchange where one individual would be a corn farmer and would trade corn whereas the other individual would be an animal farmer and would trade eggs. When the participants were trading for themselves, they were assigned randomly to play either the role of a corn trader or an egg trader and were told that they would have the opportunity to trade their corn or eggs for eggs or corn. When the participants were in the agent condition, they were asked to trade on behalf of a friend who was either a corn or an animal farmer. Participants either indicated WTA or WTP. In the WTA condition, the corn (egg) trader was asked to indicate the number of eggs (corn) s/he would accept for each corn (egg). In the WTP condition, the corn (egg) trader was asked to indicate the number of corn (eggs) s/he would be willing to give up for each egg (corn).

The main dependent measure was the quantity (in units) of the commodity that they were willing to accept or give up for one unit of the other commodity. Participants were then asked to respond to the following two seven-point scale items: “During the barter task, my primary focus was on” (1 = What I would give up; 7 = What I would get) and “During the barter task, my goal was to” (1= Minimize what I was giving up; 7= Maximize what I was getting).

Results and Discussion

The analyses reported are based on one hundred and seventy-eight participants, as three participants whose responses to the number of units exceeded three standard deviations from the mean (40 eggs, 50 eggs, and 100 corn) were excluded.

WTA-WTP. A 2x2x2 ANOVA on the number of units as the dependent measure revealed the main effect of measure ($F(1, 170) = 11.59, p < .001$). No other effects were significant (all p 's $> .19$). Aggregated over the two agency conditions, table 1 shows that

in indicating WTA, the number of eggs that corn traders were willingness to accept for each corn was significantly larger than the number of eggs that egg traders were willing to give up (WTP) (M 's = 2.90 and 2.09; $F(1, 170) = 4.74, p < .04$). Similarly, in indicating WTA, the number of corn that egg traders were willing to accept for each egg was significantly larger than the number of corn that corn traders were willing to give up (WTP) (M 's = 2.65 and 1.64; $F(1, 170) = 6.94, p < .01$). These findings point to the robustness of the WTA-WTP disparity to transactions that do not involve money and do not explicitly use the seller/buyer labels. Regardless of commodity type and agency, the number of units indicated as a measure of WTA was larger than the number of units indicated as a measure of WTP. Thus, consistent with the general motivational orientation of getting the best, the findings suggest that the WTA/WTP elicitation task itself activates different directional goals, leading to the WTA-WTP disparity.

Table 1. Means (and Standard Deviations) of Dependent Measures (Study 1)

	Indicating number of eggs to exchange for a corn				Indicating number of corn to exchange for an egg			
	Corn trader (WTA)		Egg trader (WTP)		Egg trader (WTA)		Corn trader (WTP)	
Number of products	2.90	(2.10)	2.09	(1.19)	2.65	(2.52)	1.64	(.78)
Focus on get (vs. give up)	4.61	(2.00)	3.26	(1.83)	4.67	(1.80)	4.16	(2.19)
Goal of maximizing (vs. minimizing)	5.02	(1.73)	3.15	(1.86)	5.00	(1.88)	4.07	(2.25)

Focus. Another 2x2x2 ANOVA revealed that participants focused more on what they were getting than on what they were giving up when indicating WTA compared to when indicating WTP ($M_{WTA} = 4.64$ and $M_{WTP} = 3.70$; $F(1, 170) = 10.50, p < .01$). Agency had a marginal effect ($M_{Self} = 4.44$ and $M_{Agent} = 3.89$; $F(1, 170) = 3.64, p = .06$). No other effects were significant (all p 's $> .11$). Following the bootstrapping procedure developed

by Preacher and Hayes (2008) to test for mediation (95% confidence interval; 5,000 bootstrap samples), we tested whether the effect of WTA/WTP elicitation task on the number of units was mediated by focus. The results support such a mediation (CI = [.01, .29]).

Activated Goal. A third 2x2x2 ANOVA revealed that participants indicated a goal of maximizing what they were getting than minimizing what they were giving up when indicating WTA compared to when indicating WTP ($M_{WTA} = 5.01$ and $M_{WTP} = 3.60$; $F(1, 170) = 24.45, p < .001$). The results also revealed a significant effect of agency ($M_{Self} = 4.67$ and $M_{Agent} = 3.91$; $F(1, 170) = 7.40, p < .01$) and a marginal effect of trader ($M_{Corn} = 4.54$ and $M_{Egg} = 4.04$; $F(1, 170) = 2.90, p = .09$). No other effects were significant (all p 's $> .14$). The results also support mediation where the different directional goals mediate the effect of WTA/WTP elicitation on the number of units (CI = [.06, .47]). In other words, regardless of whether the participant was a corn or an egg trader, the WTA task activates a goal to maximize what they are getting and the WTP task activates a goal to minimize that they are giving up, leading to the WTA-WTP disparity.

The findings suggest that indicating WTA implies maximizing what one is accepting whereas indicating WTP implies minimizing what one is giving up. The focus was thus on what one was getting when indicating WTA and on what one was giving up when indicating WTP.

Study 2

Study 2 further examines the extent to which the WTA/WTP elicitation task itself activates different directional goals in an actual valuation task. Specifically, since the directional goals of maximizing and minimizing are mirror images of each other, study 2

examines whether altering the task characteristic, the medium of exchange or the mutable aspect of the transaction (e.g., money versus divisible good) reverses the directional goals. When a divisible good is the mutable aspect and money is held constant for both sellers and buyers, getting the best as a seller (buyer) implies minimizing (maximizing) the number of units to give up (get) for a specified amount of money. In other words, given that sellers now indicate WTP and buyers indicate WTA, the directional goals should reverse as a function of indicating WTA versus WTP, leading to the WTA-WTP disparity regardless of the seller and buyer labels.

Study 2 also explores two methods of eliciting value. In one condition, participants were asked to indicate amount of dollar or number of products to “accept,” “pay,” or “give,” but in a second condition, participants were asked to indicate amount of dollar or number of products to “exchange.” While the value elicitation itself is expected to activate the directional goals in the first condition regardless of seller/buyer labels, in the second condition, the seller/buyer labels are likely to activate the directional goals.

Method

One hundred and eighty-eight undergraduate students (age range = 18 to 31; male = 54%) participated in a 2 (role: seller and buyer) x 2 (mutable aspect: money and divisible good) x 2 (value elicitation: willingness to accept/pay and exchange) between-subjects design in exchange for course credit. Participants engaged in an actual trade of M&M’s as a seller or a buyer. Upon arrival at the lab, participants found a clear cup containing M&M’s on their desks (1.69 oz.). In the willingness to accept/pay value elicitation condition, participants in the seller (buyer) role in the money condition read the following instructions: “Suppose that the M&M’s on the desk (do not) belong to you.

You have the opportunity of selling (buying) all the M&M's for a dollar amount that is acceptable to you. Please indicate the dollar amount that you would be willing to accept (pay) to sell (buy) the M&M's." Participants in the seller (buyer) role in the divisible good condition read "Suppose that the M&M's on the desk (do not) belong to you. You have the opportunity of receiving (paying) \$1 for any number of M&M's that is acceptable to you. Please indicate the number of M&M's you would be willing to give (accept) for \$1." The mutable aspect of the transaction in the divisible good condition is thus the number of M&M's a seller (buyer) is willing to give up (accept) for a specific amount of money (\$1). In addition, the following instruction was given to all the participants of this study: "It is very important that you give us your true assessment as sellers (buyers) will be randomly selected to conduct the trade at the end of the experimental session. Therefore, it is in your best interest to answer these questions as carefully as you can."

Unlike previous research, our value elicitation procedure did not include words such as the minimum (maximum) or the lowest (highest) price you would be willing to accept (pay) to rule out the influence of such wording on the directional goals activated by the WTA/WTP elicitation task. In the exchange value elicitation condition, sellers/buyers were not even exposed to words such as "accept," "pay," and "give." Participants in the seller (buyer) role in the money condition read the following instructions: "Suppose that the M&M's on the desk (do not) belong to you. You have the opportunity of selling (buying) all the M&M's for a dollar amount that is acceptable to you. Please indicate the dollar amount that you would be willing to exchange for the M&M's." Participants in the seller (buyer) role in the divisible good condition read

“Suppose that the M&M’s on the desk (do not) belong to you. You have the opportunity of receiving (paying) \$1 for any number of M&M’s that is acceptable to you. Please indicate the number of M&M’s you would be willing to exchange for \$1.”

After indicating their valuations, participants responded to the two seven-point scale items: “In the M&M’s exchange task, my primary focus was on” (1 = What I would give up; 7 = What I would get) and “During the M&M’s exchange, my goal was to” (1 = Minimize what I was giving up; 7 = Maximize what I was getting).

Results and Discussion

The analysis reported is based on 185 participants, as three participants were excluded whose responses to the dollar amount (\$100) or the number of M&M’s (100 M&M’s and 100 M&M’s) exceeded three standard deviations from the mean.

WTA/WTP. Since the valuation was in different units (\$ and number of M&M’s) across the two mutable aspect conditions, the measure was standardized and then subjected to a 2x2x2 ANOVA, revealing a significant two-way interaction between role and mutable aspect ($F(1, 177) = 24.37, p < .001$). Notwithstanding, in order to hold the mutable aspect of the transaction constant, we analyzed the money and divisible good conditions separately. Table 2 shows that in the money condition, the money that sellers were willing to accept for the M&M’s was significantly higher than the money that buyers were willing to give up ($M_{Seller} = .46$ (\$1.69) and $M_{Buyer} = -.47$ (\$.62); $F(1, 177) = 21.57, p < .001$). However, in the divisible good condition, the number of M&M’s sellers were willing to give up for a \$1 was significantly lower than the number of M&M’s buyers were willing to accept ($M_{Seller} = -.22$ (23.35 M&M’s) and $M_{Buyer} = .25$ (31.07 M&M’s); $F(1, 177) = 5.6, p < .02$). No other effects were significant (all p ’s $> .12$). The

findings also suggest that the disparity exists even in the exchange condition where sellers and buyers are not exposed to words such as “accept,” “pay,” and “give.” The findings suggest that it is indeed the WTA/WTP elicitation task that activates the different directional goals.

Table 2. Means (and Standard Deviations) of Dependent Measures (Study 2)

Mutable Aspect	Money		Divisible good	
	Seller	Buyer	Seller	Buyer
WTA/WTP	1.69 (1.39)	.62 (.41)	23.35 (15.72)	31.07 (16.43)
Focus on get (vs. give up)	5.10 (2.11)	3.26 (2.46)	4.54 (2.39)	5.19 (2.09)
Goal of maximizing (vs. minimizing)	5.19 (1.96)	3.09 (2.29)	4.21 (2.38)	5.19 (2.06)

Focus. Another 2x2x2 ANOVA on focus revealed a marginal effect of role ($M_{Seller} = 4.82$ and $M_{Buyer} = 4.17$; $F(1, 177) = 2.85$, $p = .09$) and significant main effects of mutable aspect ($M_{Money} = 4.19$ and $M_{Good} = 4.84$; $F(1, 177) = 4.34$, $p < .04$) and value elicitation ($M_{WTA/WTP} = 4.85$ and $M_{Exchange} = 4.14$; $F(1, 177) = 4.85$, $p < .03$), which were qualified by a significant interaction between role and mutable aspect ($F(1, 177) = 13.43$, $p < .001$). No other effects were significant (all p 's $> .21$). As in study 1, in the money condition, sellers focused on what they would get rather than on what they would give up compared to buyers ($M_{Seller-Money} = 5.10$ and $M_{Buyer-Money} = 3.26$; $F(1, 177) = 14.71$, $p < .001$). In the M&M's condition, although directionally consistent with the idea that sellers focus on what they would give up compared to buyers, there was no significant difference between sellers and buyers ($M_{Seller-M\&M's} = 4.54$ and $M_{Buyer-M\&M's} = 5.19$; $F(1, 177) = 1.9$, $p > .16$).

Activated Goal. A third 2x2x2 ANOVA on directional goal revealed a marginal effect of mutable aspect ($M_{Money} = 4.15$ and $M_{Good} = 4.67$; $F(1, 177) = 3.37$, $p = .07$)

which was qualified by a significant interaction between role and mutable aspect ($F(1, 177) = 22.44, p < .001$). No other effects were significant (all p 's $> .10$). Planned contrasts show that in the money condition, sellers had a goal of maximizing what they were getting than minimizing what they were giving up compared to buyers ($M_{Seller-Money} = 5.19$ and $M_{Buyer-Money} = 3.09; F(1, 177) = 20.87, p < .001$). In contrast, in the M&M's condition, buyers had a goal of maximizing what they were getting than minimizing what they were giving up compared to sellers ($M_{Seller-M\&M's} = 4.21$ and $M_{Buyer-M\&M's} = 5.19; F(1, 177) = 4.68, p < .04$). A mediation analysis using role as an independent variable, goal as a mediator, standardized measure of WTA/WTP as a dependent variable, and mutable aspect as a moderator revealed that the activated goal mediated the effect of role in both the money (CI = [.09, .43]) and divisible goods conditions (CI = [-.18, -.26]), but in the opposite direction.

Consistent with study 1 findings, study 2 demonstrates that it is the WTA/WTP elicitation task that activates different directional goals, leading to the WTA-WTP disparity. When money was the mutable aspect, sellers maximized what they were accepting and buyers minimized what they were giving up. In contrast, when a divisible good was the mutable aspect, sellers minimized what they were giving up and buyers maximized what they were accepting. Although the seller and buyer roles were constant, altering the medium of exchange from money to a divisible good shifted the elicitation task from WTA to WTP for sellers and from WTP to WTA for buyers, thus reversing the directional goals of sellers and buyers, respectively. Attesting to the fact that the directional goals are mirror images of each other, the findings suggest that the motivational orientation of getting the best implies maximizing WTA (sellers in the

money condition and buyers in the divisible good condition) and minimizing WTP (sellers in the divisible good condition and buyers in the money condition). Study 2 also shows that adopting the seller and buyer roles may activate directional goals. In the exchange condition, where presumably the value elicitation task did not activate directional goals, the roles of seller and buyer appear to have activated directional goals.

Study 3

Although studies 1 and 2 demonstrate that the WTA/WTP value elicitation task activates different directional goals, both studies relied on self-reports of goal activation and differential focus as a function of the WTA/WTP elicitation task. Study 3 explores whether the activated general goal carries over to subsequent, unrelated tasks and continues to produce behaviors that are consistent with it (e.g., Gollwitzer 1990; Ma and Roese 2014). If the cognitive processes associated with different directional goals are used in subsequent, unrelated tasks, it provides additional evidence that the WTA/WTP elicitation task activates the different directional goals.

One hundred and six undergraduate students (age range = 19 to 33; male = 58.5%) participated in an experimental session where they were told that they would be participating in two unrelated studies. In the first study, participants indicated WTA or WTP of a coffee mug in their role as a seller or buyer while engaging in an actual transaction of coffee mug in a similar manner to study 2. They were then asked to participate in a second, unrelated study where they were simply asked to indicate the value of a stylish pen in U.S. dollars. A different product category was used in the second task to minimize the effects of anchoring or reference prices.

The typical WTA-WTP disparity was observed for the coffee mug ($M_{WTA} = \$4.96$ and $M_{WTP} = \$2.90$; $F(1, 104) = 16.23, p < .001$). Importantly, in the unrelated task, participants who indicated WTA for the coffee mug in the seller role valued the pen significantly higher than those who indicated WTP for the coffee mug in the buyer role ($M_{WTA} = \$10.85$ and $M_{WTP} = \$7.39$; $F(1, 104) = 4.03, p < .05$). In addition, consistent with studies 1 and 2, participants indicating WTA focused more on what they were getting than what they were giving up ($M_{WTA} = 5.21$ and $M_{WTP} = 3.00$; $F(1, 104) = 35.09, p < .001$) and were more inclined to maximize what they were getting than minimizing what they were giving up ($M_{WTA} = 5.25$ and $M_{WTP} = 2.79$; $F(1, 104) = 43.12, p < .001$) compared to participants indicating WTP. These measures were collected after the second unrelated task.

Study 3 provides further evidence that it is the WTA/WTP value elicitation task that activates different directional goals, leading to the WTA-WTP disparity. Since the general motivational orientation of getting the best implies maximizing WTA and minimizing WTP, study 3 shows that the “workspace” consisting of specific cognitive processes associated with the directional goals, carries over to subsequent judgments. Although the WTA/WTP elicitation task was completed, the cognitive processes related to maximizing what one is receiving and minimizing what one is giving up appear to remain accessible thus affecting their valuations of the pen. Admittedly, despite the use of different product categories, an anchoring explanation for the results cannot be ruled out. However, it is noteworthy that the WTA/WTP valuations for the mug were quite different from valuations of the pen and that the pen valuation task did not involve indicating WTA/WTP and/or selling/buying.

Studies 1 to 3 have thus far focused on the extent to which WTA/WTP elicitation task activates different directional goals, leading to the WTA-WTP disparity. The findings provide converging evidence for the activation of different directional goals, and some preliminary evidence based on self-reports for the differential focus of sellers and buyers. Studies 4, 5, and 6 examine more directly how the different directional goals bias the associated cognitive reasoning, processing, and interpretation of information, and thus product valuations.

Study 4

The motivated valuation account suggests that the WTA/WTP elicitation task activates different directional goals such that getting the best when indicating WTA activates the goal of maximizing what one is getting whereas indicating WTP activates the goal of minimizing what one is giving up. Given that the activated directional goals guide reasoning and the associated cognitive processes, the motivated valuation account suggests that sellers are likely to focus on and be more influenced by factors that allow maximization of WTA whereas buyers will focus on and be more influenced by factors that allow minimization of WTP.

The motivated valuation account may appear to be in contrast to the idea based on loss aversion that both sellers and buyers focus on what they are about to give up (Carmon and Ariely 2000). Sellers thus ought to be more influenced by factors related to the good (or the experience) whereas buyers ought to be more influenced by factors related to the expenses (or the money). In the context of hypothetical Duke University basketball tickets, Carmon and Ariely (2000) reported that sellers' WTA was more influenced by factors related to the good, such as the significance of the game, whereas

buyers' WTP was more influenced by factors related to the money, such as the original list price. Given the importance and value of basketball tournament tickets to Duke University students, and that the demand is clearly expected to exceed supply, it is not surprising that both WTA and WTP for tickets were higher than the original list price (Carmon and Ariely 2000; study 3). However, it is not clear whether their findings will be generalizable to other contexts where scarcity is not an issue.

Following Carmon and Ariely (2000), study 4 uses a similar design in the context of a hypothetical outdoor concert ticket where the original list price was the factor related to the expenses (or money) and weather at the time of the concert was the factor related to the good (or experience). A focus on what is being given up suggests that sellers (buyers) will be more strongly influenced by the weather (original list price) than the original list price (weather). The motivated valuation account suggests that sellers will be more strongly influenced by the original list price than weather as it allows them to maximize WTA whereas buyers will be more strongly influenced by the weather as it allows them to minimize WTP. Study 4 thus examines the extent to which the different directional goals influence the differential focus of sellers and buyers in indicating WTA and WTP, respectively.

Method

Following Carmon and Ariely's (2000) study 3 design, one hundred and forty-eight U.S. residents were recruited from Amazon Mechanical Turk's panel (age range: 19-72; male = 41%) to participate in a 2 (role: seller and buyer) x 2 (weather: good and bad) x 2 (original list price: low and high) with-in subjects design, involving a hypothetical transaction of an outdoor concert ticket. Each participant received

information about a concert ticket, and then indicated their WTA for the ticket as a seller four times and WTP as a buyer four times, for a total of eight value elicitation conditions. The order of the eight value elicitation conditions was randomized.

We manipulated weather forecast at the time of the concert as a factor related to the good or the experience of the concert and the original list price of the ticket as a factor related to expense or money. The weather prediction at the time of the concert was given as temperature of 70°F with 5% probability of rain in the good condition and temperature of 95°F with 90% probability of rain in the bad condition. The original list price of the ticket, as listed on the official website, was given as \$40 in the low condition and \$80 in the high condition. After the eight value elicitation conditions, self-reported focus was measured by two seven-point scale items: “In your role as a seller (buyer) during the task, your thoughts were primarily about the” (1 = Money; 7 = Concert Ticket).

Results and Discussion

Eight participants were excluded whose WTA/WTP response exceeded three standard deviations from the mean in each condition.

A 2x2x2 repeated measures ANOVA on WTA/WTP revealed significant main effects of role, weather, and original list price. Participants indicated a higher WTA as a seller than WTP as a buyer ($M_{Seller} = 55.74$ and $M_{Buyer} = 52.99$; $F(1, 139) = 6.48, p < .02$). Participants indicated a higher valuation in the good versus bad weather conditions ($M_{Good\ weather} = 61.57$ and $M_{Bad\ weather} = 47.16$; $F(1, 139) = 135.44, p < .001$) and in the high versus low original list price conditions ($M_{High\ list\ price} = 70.01$ and $M_{Low\ list\ price} = 38.72$; $F(1, 139) = 1036.97, p < .001$). These main effects were qualified by the significant two-way interactions between role and weather ($F(1, 139) = 14.59, p < .001$)

as well as between role and original list price ($F(1, 139) = 11.99, p < .001$). Consistent with the motivation valuation account, sellers were more influenced by the original list price ($M_{High\ list\ price} = 72.17$ and $M_{Low\ list\ price} = 39.30$) compared to buyers ($M_{High\ list\ price} = 67.85$ and $M_{Low\ list\ price} = 38.13$), whereas buyers were more influenced by the weather ($M_{Good\ weather} = 61.43$ and $M_{Bad\ weather} = 44.55$) compared to sellers ($M_{Good\ weather} = 61.70$ and $M_{Bad\ weather} = 49.77$). Further, participants in the role of a seller, who were giving up the concert ticket, indicated that their thoughts were primarily about money than the concert ticket, compared to participants in the role of a buyer ($M_{Seller} = 2.15$ and $M_{Buyer} = 3.89$; $F(1, 139) = 68.20, p < .001$).

Study 4 demonstrates that although both sellers and buyers were influenced by factors related to the good (or experience) and expense (or money), sellers were more strongly influenced by the expense related factor compared to buyers whereas buyers were more strongly influenced by the experience related factor compared to sellers. Although our study design closely followed Carmon and Ariely's (2000) study 3, our findings are inconsistent with the idea that both sellers and buyers focus on what they are about to give up. It appears that their findings are specific to a situation where demand is clearly expected to exceed supply (Duke University tournament basketball tickets) and both WTA and WTP were higher than the original list price. In contrast, our findings suggest that when WTA and WTP are likely to be lower than the original list price, which may perhaps be more common, sellers focus on factors that allow maximization of WTA and buyers focus on factors that allow minimization of WTP, due to the different directional goals activated by the WTA/WTP elicitation task. Sellers thus focused more

on the original list price which allowed them to rationalize maximizing WTA whereas buyers focused more on the weather which allowed them to rationalize minimizing WTP.

At first blush, Carmon and Ariely's (2000) findings may appear to be inconsistent with the motivated valuation account. However, the fact that both WTA and WTP was expected to be higher than the original list price in their context allows us to reconcile their findings with the general premise that sellers (buyers) focus on factors that allows them to rationalize maximizing (minimizing) WTA (WTP). We address this issue in more detail in the general discussion.

Study 5

Despite the general motivational orientation of getting the best, the means to getting the best is directionally opposite for sellers and buyers. For sellers indicating WTA, getting the best implies maximizing what they are receiving, whereas for buyers indicating WTP, getting the best implies minimizing what they are giving up. We argue that the different directional goals bias cognitive reasoning, processing, and interpretation of information, particularly when the information is ambiguous and offers room to interpret it in accordance with one's goal (Kunda 1990). The motivation to arrive at very different conclusions leads sellers and buyers to rely on a biased set of cognitive processes and reasoning, as they attempt to rationalize and construct a justification to support their conclusion. Study 5 examines how the different directional goals activated by the WTA/WTP elicitation task bias interpretation of ambiguous information.

In study 5, all participants were exposed to a picture of a coffee mug with a partially torn price tag such that the price could potentially be interpreted as \$3 or \$8. The extent to which the different directional goals bias reasoning and interpretation of

information, sellers are more likely to interpret the number as 8 to justify maximization of WTA, whereas buyers are more likely to interpret the number as 3 to justify minimization of WTP.

Method

One hundred and eighty U.S. participants, recruited from Amazon Mechanical Turk's panel (age range: 18-66, male = 68%), were randomly assigned to one of three conditions (seller vs. buyer vs. control). All participants saw a picture of a coffee mug on the computer screen. The price information was ambiguous since the coffee mug had a partially torn price tag. The number could potentially be read as either 8 or 3 (see figure 1). Participants in seller (buyer) role were told to imagine that the coffee mug belongs (does not belong) to them, but they have the option of selling (buying) it for money. They were then asked to indicate the price they would be willing to accept (pay) to sell (buy) the coffee mug. In the control condition, participants were asked to indicate the value of the coffee mug in U.S. dollars. Participants were then asked to write down what they thought was the price of the coffee mug. Finally, participants responded to the two seven-point scale items: "While stating price of coffee mug, my primary focus was on" (1 = What I would give up; 7 = What I would get) and "While stating price of coffee mug, my goal was to" (1 = Minimize what I was giving up; 7 = Maximize what I was getting).

Figure 1. Coffee Mug with Ambiguous Price Tag (Study 5)



Results and Discussion

One participant whose response to the price of the coffee mug exceeded three standard deviations from the mean (\$20) was excluded.

WTA-WTP. A one-way ANOVA (seller, buyer, control) on WTA/WTP/value as the dependent measure revealed a significant effect of role ($M_{Seller} = \$3.16$, $M_{Buyer} = \$2.22$, and $M_{Control} = \$4.05$; $F(2, 176) = 11.21$, $p < .001$). As shown in table 3, planned contrasts reveal that WTA was significantly higher than WTP ($p < .02$). WTA and WTP were both significantly lower than the value of the cup in the control condition (both p 's $< .01$), implying perhaps that both sellers and buyers anticipated the transaction to occur below the market price.

Table 3. Means (and Standard Deviations) of Dependent Measures (Study 5)

	Seller		Buyer		Control	
WTA/WTP	3.16	(2.21)	2.22	(1.72)	4.05	(2.33)
Focus on get (vs. give up)	5.48	(1.77)	4.75	(2.23)	4.56	(1.70)
Goal of maximizing (vs. minimizing)	5.13	(1.67)	4.07	(2.25)	4.21	(1.78)
Price tag interpretation (mean)	5.57	(2.96)	4.12	(2.34)	4.63	(2.34)
Price tag interpretation (frequency)						
3	31	(50.8%)	41	(67.2%)	38	(66.7%)
8	26	(42.6%)	14	(23.0%)	18	(31.6%)
Other	4	(6.6%)	6	(9.8%)	1	(1.8%)

Price Tag Interpretation. The manner in which the price tag was interpreted was analyzed in two different ways. First, a one-way ANOVA on the interpretation of price tag as a dependent variable revealed a significant effect of role ($M_{Seller} = \$5.57$, and $M_{Buyer} = \$4.12$, and $M_{Control} = \$4.63$; $F(2, 176) = 5.00, p < .01$). Planned contrasts show that participants inferred the price tag to be significantly higher in the seller condition relative to both the buyer and the control conditions (both p 's $< .05$). There was no difference across the buyer and control conditions ($p > .28$) suggesting that individuals in the control condition may have been naturally interpreting the tag from the perspective of a buyer. Following the bootstrapping procedure developed by Hayes and Preacher (2014) to test for mediation (95% confidence interval; 5,000 bootstrap samples), we tested whether the interpretation of the price tag mediated the effect of role (seller and buyer) on WTA/WTP. Two dummy variables were created (D_{seller} and $D_{control}$) with the buyer condition as a reference category. To test indirect effect of the role (seller vs. buyer), a mediation model was run using D_{seller} as an independent variable and $D_{control}$ as a covariate. The 95% confidence intervals using 5,000 bootstrap samples showed that the interpretation of price tag fully mediated the relationship between role and WTA/WTP (CI = [.243, 1.241]). The result shows that compared to buyers, sellers were more likely to interpret the ambiguous number as a higher number, and thus justify maximizing WTA.

Second, the frequency with which participants interpreted the price tag to be 3, 8, and other across the three conditions was analyzed. In the control condition, 66.7% (38 of 57) participants interpreted the price tag as \$3, 31.6% (18 of 57) participants interpreted

the price tag as \$8, and 1.8% (1 of 57) participant interpreted the price tag as some other number. In the buyer condition, 67.2% (41 of 61) participants interpreted the price tag as \$3, 23% (14 of 61) participants interpreted the price tag as \$8, and 9.8% (6 of 61) participants interpreted the price tag as some other number. In the seller condition, 50.8% (31 of 61) participants interpreted the price tag as \$3, 42.6% (26 of 61) participants interpreted the price tag as \$8, and 6.6% (4 of 61) participants interpreted the price tag as some other number. The difference in the percentage of participants who indicated 3, 8, or other was marginally significant across the three conditions ($\chi^2(4, N = 179) = 8.52, p = .07$).

Focus. An ANOVA on the focus revealed a significant effect of role ($M_{Seller} = 5.48, M_{Buyer} = 4.75, \text{ and } M_{Control} = 4.56; F(2, 176) = 3.78, p < .03$). Planned contrasts revealed that participants were more focused on what to get rather than on what to give up in the seller condition than in the buyer and the control conditions (all p 's $< .05$). The focus did not differ across the buyer and the control conditions ($p > .58$).

Activated Goal. An ANOVA on the goal revealed an effect of role ($M_{Seller} = 5.13, M_{Buyer} = 4.07, \text{ and } M_{Control} = 4.21; F(2, 176) = 5.50, p < .01$). Planned contrasts showed that participants were more likely to have the goal to maximize what they were getting than to minimize what they were giving up in the seller condition relative to both the buyer and control conditions (all p 's $< .05$). There was no difference across the buyer and control conditions ($p > .68$).

Study 5 demonstrates that the different directional goals activated by the WTA/WTP elicitation task biases reasoning and judgment such that the same information is interpreted differently by sellers and buyers. In indicating WTA (WTP), sellers

(buyers) interpret the information to rationalize and construct a justification to maximize WTA (minimize WTP). The different directional goals of sellers and buyers thus provide the impetus to muster up evidence to support a high WTA and low WTP.

Study 6

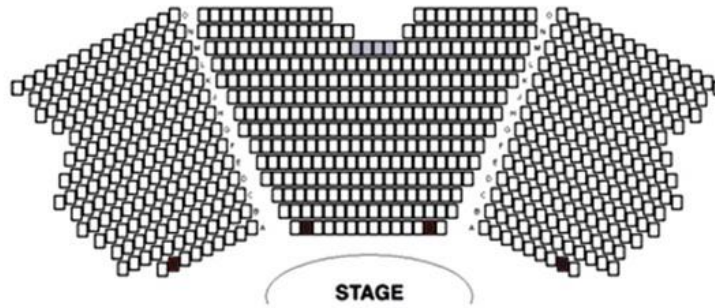
Study 6 examines whether the different directional goals activated by the WTA/WTP elicitation task biases the manner in which sellers and buyers weight product attributes, particularly when they have to make a tradeoff (versus no tradeoff) among attributes. Sellers (buyers) are likely to put more weight on the attribute that allows them to rationalize and justify maximizing (minimizing) WTA (WTP). In an adaptation of a scenario used by Paolacci, Burson, and Rick (2011), participants had to sell or buy a set of four concert tickets where the attributes considered were distance from stage and proximity of the seats. The set of four tickets were either clearly inferior to reference tickets on both attributes or were inferior in terms of proximity of seats but superior in terms of distance from stage thus making the tradeoff salient. To the extent that the WTA/WTP elicitation task activates different directional goals, when the tradeoff between attributes is made salient (vs. when the focal seats are clearly inferior on both dimensions), sellers are likely to weight the superior attribute more (i.e., distance from stage) to rationalize and justify maximizing WTA. On the other hand, buyers are likely weight the inferior attribute more (i.e., proximity of the seats) to rationalize and justify minimizing WTP. The WTA-WTP disparity is thus likely to be stronger when a tradeoff has to be made between the attributes than when no tradeoff has to be made and the focal option is clearly inferior.

Method

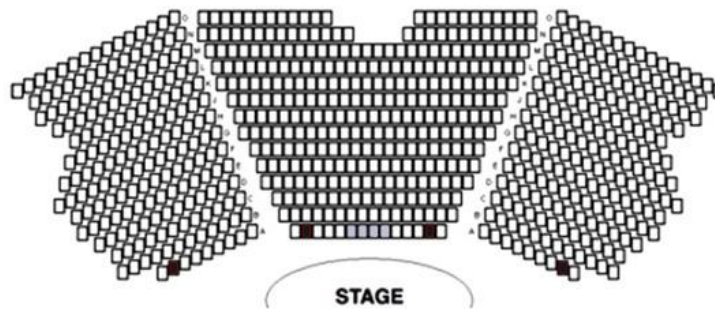
One hundred and thirty-three undergraduate students (age: 18 – 48; male = 51%) participated in a 2 (role: seller vs. buyer) x 2 (tradeoff: present vs. absent) between-subjects design in exchange for course credit. Participants read a scenario where they were selling (buying) concert tickets. In the seller role, participants were told to imagine that they had four concert tickets and were considering selling all four tickets to a group of four people. In the buyer role, participants were told to imagine a situation where they were planning to attend a concert with three friends and wanted to buy four tickets. Participants were informed that the most recent purchase history indicated that four seats shown in blue (lighter in figure 2) on the seat map were sold for a total price of \$120. The four tickets that participants were about to sell or buy were shown in red (darker in figure 2) on the seat map (see figure 2). In the tradeoff absent condition, the reference seats in blue were close to the stage and the seats were in close proximity relative to the focal tickets. In the tradeoff present condition, the reference seats in blue were farther from the stage but the seats were in close proximity relative to the focal tickets.

Figure 2. Map of Concert Tickets (Study 6)

A. Seat Map in Tradeoff Present Condition



B. Seat Map in Tradeoff Absent Condition



■ Focal Seats

□ Reference Seats (Sold at \$120 for 4 seats)

After reading the scenario, sellers' WTA (buyers' WTP) was measured by asking "If you were considering selling your four concert tickets (buying the four concert tickets), what is the minimum (maximum) price that you would be willing to accept (pay) for all four tickets?" The weight that participants gave to the two attributes was measured by three seven-point scales ($\alpha = .82$, second item was reverse scaled): "Which of the following did you consider more when stating your price? (1 = Distance to stage; 7 = Distance between seats)," "In deciding your price, how much weight did you give to the distance to the stage?" and "In deciding your price, how much weight did you give to the distance between seats?" (1= No weight at all; 7 = A lot of weight). Evaluation of the focal seats relative to the reference seats was measured by asking "Seats in RED are

better than the seats in BLUE (1 = Strongly disagree; 7 = Strongly agree).” Finally, focus and goal were assessed as in the earlier studies.

Results and Discussion

Two participants were eliminated as their responses to the ticket price exceeded three standard deviations from the mean (\$2,000 and \$3,600).

WTA-WTP. A two-way ANOVA on WTA/WTP revealed a significant main effect of tradeoff condition ($F(1, 127) = 40.93, p < .001$) which was qualified by the significant two-way interaction between role and tradeoff condition ($F(1, 127) = 5.84, p < .02$). No other effects were significant ($p > .10$). Table 4 shows that while WTA was higher than WTP when the tradeoff was present ($M_{Sellers-Tradeoff} = \$336.41$ and $M_{Buyers-Tradeoff} = \$234.39, p < .01$), there was no difference between WTA and WTP when the focal tickets were clearly inferior and there was no tradeoff to be made ($M_{Seller-Inferior} = \$113.33$ and $M_{Buyer-Inferior} = \$133.64, p > .57$). When there was no tradeoff to be made and the focal option was clearly inferior, both sellers and buyers may have relied on the reference price more than when there was a tradeoff to be made.

Table 4. Means (and Standard Deviations) of Dependent Measures (Study 6)

	Tradeoff present		Tradeoff absent	
	Seller	Buyer	Seller	Buyer
WTA/WTP of tickets	336.41 (212.37)	234.39 (159.00)	113.33 (77.55)	133.64 (90.85)
Attribute weights	2.25 (1.36)	3.46 (1.65)	4.17 (1.62)	4.18 (1.87)
Evaluation of focal seats	5.28 (1.65)	3.64 (1.87)	2.03 (1.40)	1.73 (1.46)
Focus on get (vs. give up)	5.59 (1.76)	4.64 (2.10)	5.76 (1.30)	4.91 (2.11)
Goal of maximizing (vs. minimizing)	5.84 (1.42)	4.55 (2.09)	5.45 (1.62)	5.30 (1.88)

Attribute Weights. A two-way ANOVA on the weight given to distance between seats (vs. distance to the stage) as the dependent variable revealed significant effects of both role ($F(1, 127) = 4.59, p < .04$) and tradeoff ($F(1, 127) = 21.31, p < .01$), which were qualified by a significant two-way interaction between role and tradeoff ($F(1, 127) = 4.44, p < .05$). Planned contrasts revealed that in the tradeoff condition, buyers put more weight on the distance between seats (vs. distance to stage) relative to sellers ($M_{Seller-Tradeoff} = 2.25$ and $M_{Buyer-Tradeoff} = 3.46; F(1, 127) = 8.96, p < .01$). However, the weight on distance between the seats (vs. distance to the stage) did not vary significantly across buyers and sellers when the focal tickets were clearly inferior to the reference tickets ($M_{Seller-Inferior} = 4.17$ and $M_{Buyer-Inferior} = 4.18; F(1, 127) = .00, p > .98$). In other words, when there is a tradeoff to be made between attributes, sellers put more weight on the superior attribute whereas buyers put more weight on the inferior attribute. A mediation analysis using the same procedure as in earlier studies showed that the attribute weight fully mediated the relationship between role (seller vs. buyer) and WTA/WTP only in the tradeoff present condition (CI = [10.66, 66.42]) but not in the absent condition (CI = [-25.07, 25.45]).

Evaluation of Focal Seats. A two-way ANOVA on evaluation of the focal seats relative to the reference seats revealed an effect of both role ($F(1, 127) = 12.04, p < .01$) and tradeoff ($F(1, 127) = 84.49, p < .001$), which was qualified by a two-way interaction between role and tradeoff condition ($F(1, 127) = 5.71, p < .02$). Planned contrasts revealed that while sellers evaluated the focal seats more favorably than buyers in the tradeoff present condition ($M_{Sellers-Tradeoff} = 5.28$ and $M_{Buyer-Tradeoff} = 3.64; F(1, 127) = 17.04, p < .01$), there was no difference in evaluations across sellers and buyers in the

tradeoff absent condition ($M_{Sellers-Inferior} = 2.03$ and $M_{Buyer-Inferior} = 1.73$; $F(1, 127) = .59, p > .44$). When there was a tradeoff to be made, consistent with the motivated valuation account, sellers maximizing WTA evaluated the focal seats more favorably compared to buyers minimizing WTP.

Focus. A two-way ANOVA on the focus revealed a significant main effect of role ($M_{Seller} = 5.68$ and $M_{Buyer} = 4.77$; $F(1, 127) = 7.81, p < .01$) such that participants were focused more on what to get than on what to give up in the seller condition relative to the buyer condition. No other effects were significant (p 's $> .50$).

Activated Goal. A two-way ANOVA on the goal revealed a significant effect of role ($M_{Seller} = 5.65$ and $M_{Buyer} = 4.92$; $F(1, 127) = 5.47, p < .03$) with a marginally significant interaction ($F(1, 127) = 3.42, p = .07$). When a tradeoff had to be made, planned contrasts revealed that the goal to maximize what to get rather than to minimize what to give up was higher in the seller condition than in the buyer condition ($M_{Seller} = 5.84$ and $M_{Buyer} = 4.55$; $F(1, 127) = 8.70, p < .01$). There was no difference across the seller and the buyer conditions when there was no trade-off ($M_{Seller} = 5.45$ and $M_{Buyer} = 5.30$; $F(1, 127) = .12, p > .72$).

Study 6 provides further evidence that the different directional goals activated by the WTA/WTP elicitation task influence the manner in which sellers and buyers process and interpret information. Although exposed to identical information, when there was a tradeoff between attributes, sellers gave more weight to the superior attribute whereas buyers gave more weight to the inferior attribute, allowing them to rationalize and justify the valuations consistent their directional goals. In contrast, when there was no tradeoff to be made, there was little room to interpret the information in a manner that is consistent

with their goals. Sellers and buyers may have thus relied more on the reference price, thereby attenuating the WTA-WTP disparity.

General Discussion

Spurred by the burgeoning research using different theoretical perspectives (Chatterjee et al. 2013; Weaver and Frederick 2012) to explain the WTA-WTP disparity, this research proposes a motivated valuation account to provide further insight into sellers' and buyers' valuation process. Consistent with the idea that individual behavior is largely goal driven, and that relevant goals can be activated by mere adoption of a social role/task (Bargh et al. 2001; Ferguson et al. 2008), this research suggests that both sellers and buyers are guided by the general motivation of "getting the best" (Ma and Roesch 2014; Schwartz et al. 2002). Getting the best when indicating WTA (WTP) implies maximizing (minimizing) what one is getting (what one is giving up). This research thus proposes that the WTA/WTP elicitation task itself activates different directional goals, leading to the WTA-WTP disparity. The different directional goals and the associated cognitive processes, judgmental, and evaluative criteria lead sellers and buyers to focus on different aspects. Further, the different directional goals bias the cognitive reasoning, processing, and interpretation of information in a manner that allows sellers and buyers to rationalize and construct a justification for their valuations. Although previous research has argued for a differential focus of sellers and buyers (e.g., Carmon and Ariely 2000; Irmak et al. 2013; Johnson et al. 2007), our conceptualization connects the differential focus to the different directional goals emanating from the general motivational orientation of getting the best.

Study 1 used a barter task to demonstrate that it is the WTA/WTP elicitation task that activates the different directional goals. The directional goals were activated even without the seller/buyer labels and regardless of agency when indicating WTA and WTP. Study 2 provides further evidence that the value elicitation task activates the different directional goals. Altering the mutable aspect shifts the value elicitation from WTA to WTP for the seller and from WTP to WTA for the buyer. The directional goals thus shift from maximizing WTA (minimizing WTP) for the seller (buyer) to minimizing WTP (maximizing WTA), thus affecting the WTA-WTP disparity in a predictable and systematic manner. Although studies 1 and 2 provide evidence for the activation of different directional goals as a function of WTA/WTP elicitation and that sellers tend to focus on what they are getting and buyers tend to focus on what they are giving up, both studies relied on self-reported measures of goal and focus. Study 3 shows that the directional goals and the associated cognitive processes activated by the value elicitation task carry over to an unrelated task and produce judgments that are consistent with the directional goals. Together, studies 1, 2, and 3 provide evidence that the WTA/WTP elicitation task activates different directional goals, thus leading to the WTA-WTP disparity.

Study 4 provides a more direct test of the differential focus of sellers and buyers due to the different directional goals. Consistent with the motivated valuation account, the findings demonstrate that sellers are more influenced by factors that allow maximization of WTA whereas buyers are more influenced by factors that allow minimization of WTP. Importantly, in contrast to the idea that both sellers and buyers focus on what they are about to give up (Carmon and Ariely 2000), sellers are more

influenced by the original list price, a factor related to money or expense, whereas buyers are more influenced by weather, a factor related to the good or the experience. The self-report measures corroborated the valuations and suggest that sellers appear to focus more on what they are receiving and buyers appear to focus more on what they are giving up, when indicating WTA and WTP, respectively.

Studies 5 and 6 examine how the different directional goals activated by the value elicitation task bias cognitive reasoning, processing, and interpretation of information, and thus valuations. Study 5 demonstrates a systematic bias in the interpretation of ambiguous price information as a function of the WTA/WTP elicitation task. Study 6 demonstrates that the weight given to attributes with tradeoffs can be biased towards the directional goals. Together, studies 5 and 6 suggest that since getting the best implies a different directional goal when indicating WTA versus WTP, the associated differences in cognitive reasoning bias the interpretation and processing of information in a manner that is consistent with the activated directional goals. Individuals process information in a manner that allows them to rationalize and construct a justification for their conclusions (Kunda 1990).

Building on existing research on the WTA-WTP disparity, the notion that the seller/buyer roles and/or the WTA/WTP elicitation task automatically activates a motivational orientation of “getting the best,” which then guides the valuation process, is consistent with recent characterizations of specific mindsets (Ma and Roese 2014). Getting the best is a general goal that underlies almost every domain in life. However, the directional goals and the means to achieve that may be different across situations, roles, and tasks. In the context of sellers indicating WTA and buyers indicating WTP, getting

the best implies maximizing WTA and minimizing WTP. These directional goals are not uncommon as evidenced by firms attempting to maximize revenues and minimize costs. The investment mantra of “buy low, sell high” is a manifestation of the different directional goals spurred by the general motivational orientation of getting the best. To the extent getting the best is a universally held ideal, the motivated valuation account has the potential to provide a unifying framework to not only explain the differential focus of sellers and buyers (e.g., Irmak et al. 2013) but also to reconcile the somewhat disparate interpretations of the WTA-WTP disparity in the literature, including those based on loss aversion (Carmon and Ariely 2000) and bad deal aversion (Weaver and Frederick 2012).

We discuss some of the previous findings in the literature using the conceptual lens of motivated valuation. For example, Nayakankuppam and Mishra (2005) reported that sellers (vs. buyers) were better (worse) at coding and accessing positive (negative) features of the good. Johnson et al. (2007) reported that sellers recalled value-increasing statements earlier whereas buyers recalled value-decreasing statements earlier. Similarly, Irmak et al. (2013) reported that sellers tend to focus more on high-construal aspects whereas buyers tend to focus more on low-construal aspects. These findings are consistent with our conceptualization that it is the different directional goals activated by the WTA/WTP elicitation task that bias cognitive reasoning, processing, and interpretation of information in a manner that is consistent with the goals. In studies 4, 5, and 6, we demonstrated that the same information is interpreted in a manner that allows maximizing WTA and minimizing WTP. Accessing and elaborating on the positive features and suppressing negative features are consistent with the idea that sellers and buyers seek to rationalize and construct a justification for their valuations in line with

their directional goals (Johnson et al. 2007; Nayakankuppam and Mishra 2005). Similarly, focusing on high- (low-) construal aspects allows a rationalization and justification of a high (low) WTA (WTP) (Irmak et al. 2013). The biased cognitive reasoning, processing, and interpretation of information as a function of the directional goals allow individuals to support their conclusions, and maintain an illusion of objectivity (Kunda 1990).

In the context of Duke University students indicating WTA and WTP for Duke University basketball tickets, Carmon and Ariely (2000) reported that that sellers' WTA was influenced more by the significance of the game, whereas buyers' WTP was influenced more by the original list price of the ticket. These findings were interpreted as being consistent with the idea that both sellers and buyers focus on factors related to what they are about to give up. In contrast, we found that sellers were influenced more by the original list price of the ticket and buyers were influenced more by weather (factor related to the experience). At first blush, Carmon and Ariely's (2000) findings may appear to be inconsistent with a motivated valuation account. However, in a situation where demand clearly exceeds supply, valuations for scarce tickets are expected to be higher than the original list price. Indeed, both WTA and WTP in their study were higher than the original list price. Sellers focused more on game significance since it allowed them to rationalize and justify maximizing WTA (higher than the original list price) whereas buyers focused more on the original list price since it allowed them to rationalize and justify minimizing WTP (as close to the original list price as possible). In other words, our findings as well as Carmon and Ariely's (2000) findings are consistent with the idea

that the sellers and buyers focus on factors that allow them to rationalize and justify maximizing WTA and minimizing WTP, respectively.

Based on transaction utility, Weaver and Frederick (2012) argued that the WTA-WTP disparity emerges due to a reluctance to trade on unfavorable terms relative to reference prices and characterized this as bad deal aversion rather than loss aversion. In the context of salient reference prices, bad deal aversion is a manifestation of getting the best with respect to salient reference prices. The existence of salient reference prices may simply reframe the directional goal to be more specific to the reference point. The motivated valuation account thus appears to provide a unifying conceptual framework that may not only subsume many of the previous theoretical explanation but also reconcile the seemingly disparate interpretations of the underlying reason for the disparity between WTA and WTP.

In sum, this research offers a motivated valuation account for the WTA-WTP disparity. While studies 1, 2, and 3 focused on demonstrating that the WTA/WTP elicitation task activates different directional goals, studies 4, 5, and 6 focused on how the different directional goals bias cognitive reasoning, processing, and interpretation of information in a manner that is consistent with the goals. The malleable nature of motivations (Kruglanski et al. 2002) however leaves open many avenues for future research. Future research should examine the systematic effect of factors such as goal fluency and pursuit of multiple goals on the WTA-WTP disparity. For example, the match or the mismatch between the stimulus or the manner in which individuals engage in goal pursuit and the activated directional goal may attenuate the WTA-WTP disparity (Zhang and Fishbach 2005).

Chapter 2: To Partition or Not to Partition: Effect of Partitioning Prices on Consumer Evaluations of Purchases Involving Trade-Ins

Introduction

Many new purchases and replacement decisions involve consumers trading in their old product. In product categories such as automobiles, cellular phones, electronics, furniture, home appliances, musical instruments, sports equipment, and time share, new purchases often include trading in an old or used product. The value received for the trade-in helps not only in reducing the economic burden of the new purchase but also in alleviating the psychological burden by writing off the remaining mental book value of the used product (Okada 2001). Such transactions involve acquiring a new asset and giving up an existing asset, requiring the consumer to assume the dual role of a buyer and a seller in the overall exchange (Kim et al. 2011; Okada 2001; Purohit 1995; Srivastava and Chakravarti 2011). Since the overall exchange occurs together in time, an identical net payment may be apportioned differently between the payment for the new purchase and the receipt for the trade-in (Kim et al. 2011; Srivastava and Chakravarti 2011; Zhu, Chen, and Dasgupta 2008). Further, the overall exchange may be priced as separate transactions with separate price tags for the payment and the receipt or as a single net price which takes into account the value received for the trade-in (Stremersch and Tellis 2002).

To illustrate, consider a consumer contemplating upgrading her cellular phone to the latest model. She comes across two offers, one which offers \$150 for her used cell phone when she purchases the new cell phone for \$199, and the other where she has to pay \$49 for the new cell phone when she trades in her used cell phone. Which of the two

offers will she prefer? Now consider another consumer, with a relatively old cell phone, contemplating upgrading to the latest model and evaluating two offers. In one, she is offered \$30 for her used cell phone when she purchases the new cell phone for \$199, whereas in the second offer she has to pay \$169 for the new cell phone when she trades in her used cell phone. Although both consumers face objectively equivalent offers in terms of net outlay and the goods exchanged, the price presentation differs such that in the first offer the overall price is partitioned in terms of the payment and receipt, whereas in the second offer the price is consolidated in terms of a net payment taking into account the receipt for the trade-in. Will there be a systematic preference for one price presentation over the other? Will both consumers prefer the partitioned or the consolidated price presentation? Or, will the consumer, who owns a cell phone with a high trade-in value relative to the price of the new phone, prefer one price presentation, and the other consumer who owns a cell phone with a relatively low trade-in value prefer another price presentation? If so, which one, and why? The current research addresses these issues.

Although the standard economic theory suggests that consumer preferences should not vary across two offers where the same total price is represented differently, there is considerable evidence across various domains that the normative principle of descriptive invariance is commonly violated (Raghubir and Srivastava 2009; Tversky, Sattath, and Slovic 1998). In the context of pricing, research shows that consumers are susceptible to how the total price is presented (e.g., Gourville 1998; Hamilton and Srivastava 2008). Specifically, consumer evaluations and choices are influenced by whether the total price is partitioned (unbundled) or consolidated (bundled) (Chakravarti et al. 2002; Morwitz, Greenleaf, and Johnson 1998; Xia and Monroe 2004; Yadav 1994).

However, much of the existing literature examines transactions in which consumers are buyers for all goods acquired and/or services received.

Given the economic and substantive importance of transactions involving trade-ins, a few studies have begun to examine transactions where consumers play the dual role of a seller and a buyer in the same overall exchange (Kim et al. 2011; Okada 2001; Srivastava and Chakravarti 2011; Zhu et al. 2008). Rooted in prospect theory and the related endowment effect, these studies suggest because of the mental book value (Okada 2001) and overvaluation of goods by owners, consumers may be more sensitive to the value received for the trade-in. Thus, for an equivalent net price, consumers prefer to be overpaid for the trade-in resulting in a higher payment for the new purchase (Zhu et al. 2008). Srivastava and Chakravarti (2011) showed that the preference between receiving a higher price for the trade-in (and paying a higher price for the new purchase) and paying a lower price for the new purchase (and receiving a lower price for the trade-in) depends on whether the consumer engages in the overall exchange with a predominantly seller versus buyer mindset. Kim et al. (2011) draw directly on the properties of the prospect theory value function to show that while consumers prefer to be overpaid on the trade-in when the value received for the trade-in relative to the price of the new product is low, this preference is reversed when the value received for the trade-in relative to the price of the new product is high.

The current research contributes to the burgeoning literature on price presentation effects in purchases involving trade-ins by examining how partitioning the overall price in terms of the payment and receipt versus consolidating the price in terms of a net payment (after taking into account the value for the trade-in) affects consumer

evaluations. Further, this research examines the role of the value of the trade-in relative to the price of the new product in affecting consumer evaluations. As in the introductory illustration, the two consumers varied in terms of the value of the used cell phone relative to the price of the new cell phone. Consider a couple with a newborn baby trading in their almost new car that they bought just a year or so back to purchase a new van. In such situations, the value of the trade-in relative to the price of the new product is high. However, consider a recent college graduate who is purchasing a new car and trading in a used car which has been in the family for a long time. In such situations, the value of the trade-in relative to the price of the new product is low. This research thus examines whether consumer preferences for partitioned versus consolidated pricing of transactions involving a trade-in vary as a function of the value received for the trade-in relative to the price of the new product.

This research shows that consumer evaluations and choice are systematically influenced by how the overall price is presented in purchases involving trade-ins. For an equivalent net price, consumer evaluations of partitioned pricing in terms of a receipt and a payment versus consolidated pricing in terms of a net payment (i.e., payment – receipt) are a function of the value received for the trade-in relative to the price of the new product. When the value received for the trade-in is relatively low, consumer evaluations are higher with consolidated pricing than partitioned pricing. In contrast, when the value received for the trade-in is relatively high, consumer evaluations are higher with partitioned pricing relative to consolidated pricing. Our basic premise is that partitioned pricing, relative to consolidated pricing, enables consumers to assess the payment and receipt relative to respective reference prices (Chakravarti et al. 2002; Srivastava and

Chakravarti 2011) and may heighten sensitivity to the respective gains and losses. In other words, partitioning the overall price has its downside relative to consolidated pricing by accentuating the negative, but may also have its upside by accentuating the positive aspect. We begin with two pilot studies that demonstrate that consumer preferences for partitioned versus consolidated pricing varies systematically as a function of the value received for the trade-in relative to the price of the new product. The findings also suggest that these preferences cannot be accounted by the prospect theory value function.

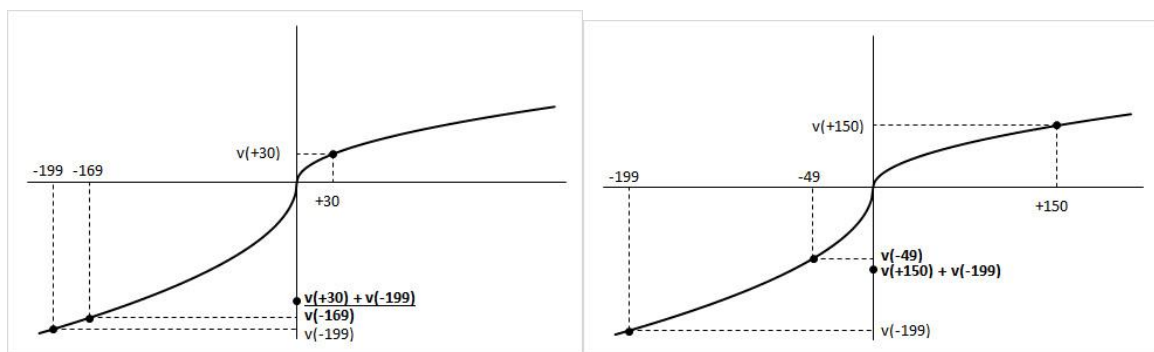
Study 1: Pilot Studies

The pilot studies explore whether partitioning the price of purchases involving trade-ins in terms of payment and receipt versus consolidating the price as a net payment affects consumer preferences, given an equivalent net price. Further, the studies explore whether the preference for partitioned versus consolidated pricing varies as a function of the value received for the trade-in relative to the price of the new product. Given that much of previous research on purchases involving trade-ins is rooted in prospect theory (Kim et al. 2011; Okada 2001; Zhu et al. 2008), the prospect theory value function was used to derive the preliminary predictions (Thaler 1985).

Kim et al. (2011) decomposed purchases with trade-ins into two parts and assumed that the price for the new purchase is a loss whereas the value received for the trade-in is a gain. Following Kim et al.'s (2011) assumptions, and the prospect theory value function (Kahneman and Tversky 1979; Thaler 1985), which is concave for gains and convex for losses, and steeper for losses than gains (loss aversion), consider the first consumer in the introductory illustration. The consumer is contemplating an offer where

she pays (loses) \$199 for the new cell phone and receives (gains) \$150 for her used cell phone versus another offer where she pays (loses) a net of \$49 for the new cell phone. When the value received for the trade-in relative to the price of the new product is high, consumers are likely to prefer the consolidated offer ($v(-199) + v(150) < v(-49)$), because the reduction of the loss to \$49 ($v(-49)$) will be valued more since it is not only closer to the origin but also that the value function is steeper in the loss domain (see figure 1). In contrast, the second consumer, who is contemplating an offer where she pays (loses) \$199 for the new cell phone and receives (gains) \$30 for her used cell phone versus another offer where she pays (loses) a net \$169 for the new cell phone, is likely to prefer the partitioned offer ($v(-199) + v(30) > v(-169)$). Figure 1 shows that when the value received for the trade-in relative to the price of the new product is low, consumers will be more sensitive to a small gain, $v(30)$, which is close to the origin relative to a decrease in a large loss, $v(-169)$, which is in the relatively flat portion of the value function. Thaler (1985) referred to this as the silver lining principle.

Figure 3. Value Function from the Prospect Theory



Study 1a

Study 1a examines consumer preferences for a partitioned versus a consolidated price as well as whether this preference varies as a function of the value received for the

trade-in relative to the price of the new product. Holding constant the price of the new product, the value received for the trade-in was either relatively low or high. Participants compared an offer where the price was partitioned to an offer where the price was consolidated and then indicated their preference. Although the net payment was equivalent across the partitioned and consolidated offers, the net payment differed across the relatively high and low trade-in value conditions.

Method. Eighty-three U.S. residents were recruited from Amazon Mechanical Turk's panel (age range: 18-70, male = 41%) to participate in a study with two between-subjects conditions. Participants read a scenario where they purchased a new digital camera and traded in a used camera. In both conditions, the manufacturer's suggested retail price for the new camera was given as \$320. In addition, they were also told that the original price of the used camera they were trading in, at the time of its purchase, was \$100 (\$300) in the low (high) trade-in value condition. Participants were shown two offers, one where the price was partitioned and the other where the price was consolidated (see table 5). In the relatively low trade-in value condition, while store A quoted \$300 for the price of the new digital camera and offered to pay \$40 as the trade-in value for the old camera, store B quoted a price of \$260 for the price of the new digital camera after accounting for the trade-in value of the old camera. In relatively high trade-in value condition, store A quoted \$300 for the price of the new digital camera and offered to pay \$220 as the trade-in value for the old camera, whereas store B quoted a price of \$80 for the price of the new digital camera after accounting for the trade-in value of the old camera.

Participants indicated their preference between the two stores on a nine-point scale (+4 = Store A; +4 = Store B, coded at -4 to +4) and then made a choice between the two offers. They were then asked to indicate how they felt about each of the offers on two nine-point scale items (both r 's = .94): "I feel good about the offer from store A (B)" and "I take a positive attitude toward the offer from store A (B)" (1 = Strongly disagree; 9 = Strongly agree).

Table 5. Stimuli and Dependent Measures (Study 1a)

	Low relative trade-in value		High relative trade-in value	
MSRP of new camera	\$320		\$320	
Original price of the used camera	\$100		\$300	
Offer	Partitioned Price		Consolidated Price	
	Pay \$300	Get \$40	Pay \$260	Pay \$80
Preference for consolidated price	1.07 (2)		.05 (2.45)	
Choice	31% (13/42)	69% (29/42)	65.9% (27/41)	34.1% (14/41)
Feelings about offer	5.49 (2.22)	6.26 (2.18)	6.68 (1.67)	6.13 (2.07)

Results. A one-way ANOVA revealed that the preference for the consolidated price (store B) relative to partitioned price (store A) was significantly stronger in the low trade-in value condition than in the high trade-in value condition ($M_{Low} = +1.07$ and $M_{High} = +.05$; $F(1, 81) = 4.34, p < .05$). Similarly, while 69% (29/42) of the participants chose the consolidated price (store B) when the trade-in value was relatively low, only 34.1% (14/41) chose the consolidated price when the trade-in value was relatively high ($\chi^2(1) = 10.12, p < .01$). The findings suggest that in contrast to the predictions based on the

prospect theory value function, when the trade-in value was low, participants appear to prefer the consolidated price which did not explicitly show the low trade-in value.

However, when the trade-in value was high, they appear to prefer the partitioned price which explicitly showed the high trade-in value.

A 2 (trade-in value: low vs. high) x 2 (feeling: store A vs. store B) repeated measures ANOVA with feelings about each store as the with-in subjects variable showed a significant interaction between trade-in value and feeling ($F(1, 81) = 5.90, p < .02$).¹

While participants felt more positive from the consolidated price relative to the partitioned price when the trade-in value was low ($M_{\text{Low-Consolidated}} = 6.26$ and $M_{\text{Low-Partitioned}} = 5.49$; $F(1, 81) = 4.09, p < .05$), there was no difference between the consolidated and partitioned prices when the trade-in value was high ($M_{\text{High-Consolidated}} = 6.13$ and $M_{\text{High-Partitioned}} = 6.68$; $F(1, 81) = 2.01, p > .16$). Saying differently, when the prices were partitioned and the trade-in values were explicitly shown, participants felt more positive from the offer when the trade-in value was high than low ($M_{\text{High-Partitioned}} = 6.68$ and $M_{\text{Low-Partitioned}} = 5.49$; $F(1, 81) = 7.64, p < .01$). However, when the prices were consolidated and the trade-in values were thus masked, there was no difference between the high and low trade-in value conditions ($M_{\text{High-consolidated}} = 6.13$ and $M_{\text{Low-Consolidated}} = 6.26$; $F(1, 81) = .07, p > .78$).

¹Participants' feelings about each offer was initially measured with six items ("The offer from store A (B) makes me feel good about myself," "The offer from store A (B) makes me feel confident about my abilities," "The offer from store A (B) makes me feel like I'm not doing well (reverse coded)," "I feel good about the offer from store A (B)," "I am satisfied with the offer from store A (B)," "I take a positive attitude toward the offer from store A (B)," (1 = Strongly disagree; 9 = Strongly agree)). Analysis using a composite of the six measures replicated the pattern reported based on the two measures. The two items were used in reporting the results in order to be consistent across the studies reported in this essay.

Study 1b

While study 1a varied the value received for the trade-in, study 1b holds constant the trade-in value and changes the price of the new product to vary the value received for the trade-in relative to the price of the new product. Further, unlike study 1a, information about the original price at the time of purchase for the used product was not provided. Study 1b thus tests the generalizability and robustness of the findings of study 1a.

Method. One hundred nineteen U.S. residents were recruited from Amazon Mechanical Turk's panel (age range: 19-63, male = 53%) to participate in a two between-subjects conditions study. Similar to the camera purchase scenario in study 1a, the manufacturer's suggested retail price for the new camera was given as \$320 (\$60) in the low (high) trade-in value condition (see table 6). The value received for the trade-in was given as \$40 to both of the low and high trade-in value conditions. In the relatively low trade-in value condition, seller A quoted \$300 for the price of the new digital camera and offered to pay \$40 as the trade-in value for the old camera, whereas seller B quoted a price of \$260 for the price of the new digital camera after accounting for the trade-in value of the old camera. In relatively high trade-in value condition, seller A quoted \$50 for the price of the new digital camera and offered to pay \$40 as the trade-in value for the old camera, whereas seller B quoted a price of \$10 for the price of the new digital camera after accounting for the trade-in value for the old camera. The value of the trade-in relative to the price of the new product was thus varied by altering the price of the new product and holding constant the value received for the trade-in at \$40.

Participants first indicated their choice between the two offers and then responded to three nine-point scale items intended to measure their price perceptions: "Seller A's

price that you have to pay for the new camera is,” “Seller A’s price that you will receive for your old camera is,” and “Seller B’s price for the new camera after taking into account the trade-in value of your old camera is” (1 = Lower than expected; 9 = Higher than expected).

Table 6. Stimuli and Dependent Measures (Study 1b)

	Low relative trade-in value		High relative trade-in value		
MSRP of new camera	\$320		\$60		
Offer	Partitioned Price		Consolidated Price		Consolidated Price
	Pay \$300	Get \$40	Pay \$260	Pay \$50	
Choice	33.9% (20/59)		66.1% (39/59)		46.7% (28/60)
Perception of seller A’s new product price	5.29 (1.53)		-		4.22 (2.08)
Perception of seller A’s trade-in price	4.51 (1.69)		-		6.18 (2.01)
Perception of seller B’s net price	-		5.08 (1.64)		4.45 (2.39)

Results. While 66.1% (39/59) of the participants chose the consolidated price (seller B) when the trade-in value was relatively low, only 46.7% (28/60) chose the consolidated price when the trade-in value was high ($\chi^2(1) = 4.57, p < .04$). As in study 1a, the preference for the consolidated price (seller B) relative to partitioned price (seller A) was significantly stronger when the trade-in value was relatively low than when high.

Participants’ perceptions of the individual prices also varied across the conditions. As expected, participants perceived seller A’s price for new camera to be significantly higher when it was priced at \$300 in the relatively low trade-in value condition than when it was priced at \$50 in the relatively high trade-in value condition ($M_{Low} = 5.29$ and

$M_{\text{High}} = 4.22$; $F(1, 117) = 10.24$, $p < .001$). Similarly, perceptions of seller B's net price were marginally higher when it was priced at \$260 in the relatively low trade-in value condition than when it was priced at \$10 in the relatively high trade-in value condition ($M_{\text{Low}} = 5.08$ and $M_{\text{High}} = 4.45$; $F(1, 117) = 2.84$, $p < .1$).

Importantly, although the trade-in value was equivalent at \$40 in both conditions, perceptions of seller A's price for the trade-in were significantly higher when the value of the trade-in relative to the new product (\$50) was high than when it was low (\$300) ($M_{\text{Low}} = 4.51$ and $M_{\text{High}} = 6.18$; $F(1, 117) = 24.18$, $p < .001$). Further, following the bootstrapping procedure of Preacher and Hayes (2008), a mediation analysis revealed that only perceptions of seller A's price for the trade-in significantly mediates the effect of the two conditions on choice ($b = -.60$, 95% CI [- 1.17, -.21]) but not perceptions of seller A's price for the new product ($b = .05$, 95% CI = [- .25, .40]) and perceptions of seller B's net price ($b = -.01$, 95% CI = [- .24, .16]).

In contrast to the prospect theory value function predictions, the pilot studies show that consumer preferences for consolidated relative to partitioned price is stronger when the value received for the trade-in relative to the price of the new product is low than when it is high. Consumers prefer a consolidated price when the value received for the trade-in relative to the price of the new product is low but seem to prefer a partitioned price when it is high. In addition to the systematic preference for consolidated versus partitioned prices as a function of the relative value of the trade-in, the results suggest perceptions of the price received for the trade-in are affected by the price of the new product even when the trade-in price is held constant (1b). Together, the studies suggest that when the price is partitioned, perceptions of the value received for the trade-in are

affected by the relative value of the new product thus affecting how consumers feel about the overall offer. The next section develops a conceptual framework to provide a more complete account of consumer preferences for different price presentations in purchases involving trade-ins.

Conceptual Background

Price Presentation of Trade-in

Research suggests that partitioned versus consolidated prices affect consumer evaluations and choice (e.g., Chakravarti et al. 2002; Morwitz et al. 1998; Yadav 1994; Xia and Monroe 2004). Partitioning prices may elicit heuristic processing such that consumers process one component (base price) more thoroughly than another component (surcharge), leading to underestimation of the total price compared to when the prices are not partitioned (Morwitz et al. 1998). Variations in how a total price is partitioned across different components also affect consumer preferences (Chakravarti et al. 2002; Hamilton and Srivastava 2008).

Research also suggests that partitioning prices affects the salience or attention paid to the partitioned (unbundled) components than when the prices are consolidated (bundled) (Chakravarti et al. 2002; Yadav and Monroe 1993). For example, consumer evaluations for the price of an airline ticket were affected more by the price of the entertainment and meal service when the prices were partitioned than when it was consolidated (Bertini and Wathieu 2008; Burman and Biswas 2007). The findings suggest that when the total price is partitioned than consolidated, consumers pay relatively more attention to the partitioned components, which may then have a greater impact on evaluations and choice. In the context of a refrigerator purchase along with an icemaker

and a warranty, Chakravarti et al. (2002) reported that partitioning the price of a warranty may raise concerns about product performance risk and thus lowering evaluations compared to when the price of an icemaker is partitioned or when the price is consolidated. The differential salience or attention due to partitioning of prices may thus moderate the effect of partitioned versus consolidated prices on consumer evaluations.

Based on previous research, our basic premise is that in the context of purchases involving trade-ins, partitioning increases the salience of the partitioned components, enables consumers to clearly link each partitioned component to its price (Chakravarti et al. 2002; Hamilton and Srivastava 2008), and allows consumers to assess the gains/losses associated with each component with respect to referents. The differential sensitivity to the gains/losses on the partitioned components when the price is partitioned is likely to influence the overall evaluations of the transaction compared to when the price is consolidated wherein the component prices are masked and somewhat ambiguous.

Purchases Involving Trade-Ins

In new purchases involving trade-ins, the value received for the trade-in directly reduces the acquisition price of the new purchase. However, for such transactions, consumers may consider not only the price of acquiring the new product but also the mental cost of retiring the old product before getting their money's full worth (Okada 2001). Mental accounting ideas suggest that consumers open a specific mental account when making a new purchase, mentally track the costs and benefits associated with that account, and then close the account when the transaction (e.g., consumption or usage) has been completed (Okada 2001; Thaler 1985). When the product is consumed fully, the mental account is closed by balancing the cost (e.g., price paid) against the benefits

received. However, if the product is not consumed fully or as intended, consumers may be forced to close the account in the red and feel the pain of loss as the cost appears to outweigh the accrued benefits. As the product is consumed, consumers mentally depreciate the original purchase price against the benefits obtained, thus creating a “mental book value” for the product (Okada 2001, p. 434).

A new purchase involving a trade-in forces closure of the mental account for the old product, which would no longer be used but has a remaining mental book value. Consumers are likely to feel the pain of loss if they close the mental account related to the old product in the red, or unless the mental book value is written off. Consistent with the idea that closing an account in the red is painful, in the context of a new car purchase involving the trade-in of an old car, Zhu et al. (2008) reported that consumers prefer a gain on the trade-in (loss on the new car) to a gain on the new car (loss on the trade-in). Although the value received for the trade-in alleviates the pain associated with closing the account in the red by writing off the mental book value, the extent to which the pain is alleviated is likely to depend on consumer perceptions of the value received for the trade-in. Thus, when the price is partitioned and the component prices are salient, the higher (lower) the perceptions of the value received for the trade-in, the less (more) likely that the mental book value will be closed in the red and thus written off more fully. In contrast, when the price is consolidated, perceptions of the value received for the trade-in will be less polarized as the component prices are masked.

The pain associated with closing the mental account related to the old product in the red is consistent with the idea that individuals may feel a threat to the self when giving up one's possessions. Material possessions may be viewed as part of an extended

self (Belk 1988) and simple ownership may activate an association between self and the object (Maddux et al. 2010). To the extent which an individual perceives self-threat from the loss of a possession (Chatterjee, Irmak, and Rose 2013; Dommer and Swaminathan 2013), the value of the possession increases as a self-defense mechanism. In fact, perceived self-threat from the loss of one's possession has been invoked to explain the endowment effect. Thus, when selling one's possession, in order to preserve self-worth, sellers' willingness to accept is typically higher than buyers' willingness to pay for the same product. In the context of purchases involving trade-ins, consumers are not only losing the product they will trade in but also assume the role of a seller for that product. Thus, when the price is partitioned and perceptions of the value received for the trade-in are low, it may trigger feelings of self-threat given that one's possession is undervalued. Since consolidating the price masks the value received for the trade-in, consumer preferences for consolidated versus partitioned prices are likely to be much stronger when perceptions of the value received for the trade-in is low than when it is high.

Perceptions of Value Received for Trade-In

According to transaction utility (Thaler 1985), consumers evaluate transactions by considering the merits of the deal relative to some expectation or reference price. When the transaction price is unfavorable (favorable) compared to a referent (or expectation), consumers experience disutility (utility) and the attractiveness of the transaction is diminished (enhanced). Given that partitioning increases the salience of the partitioned components and enables each of the components to be linked to its respective price (Hamilton and Srivastava 2008), consumers can evaluate each component price relative to its specific referent.

When prices are partitioned for purchases involving trade-ins, in evaluating the overall exchange, consumers may evaluate the price of the new product as well as the value received for the trade-in relative to specific referents for each. The differential assessment of gains/losses on each of the components is likely to affect the overall evaluations. While such a process is reasonable when specific referents are available and present for each of the components, how do consumers assess the value received for the trade-in in the absence of specific referent?

We argue that consumers may use the price of the new product as an anchor to evaluate the value received for the trade-in. As study 1b demonstrated, perceptions of the value received for the trade-in (\$40) were higher when the new product was priced at \$50 than when it was priced at \$300. In the absence of specific referents, consumers anchor on the price of the new product and perceive that their trade-in is being undervalued (overvalued) when the value received for the trade-in is low (high) relative to the price of the new product.

The notion that the transaction utility of the value received for the trade-in may be affected by the price of the new product is consistent with the recent literature on the contextual influence of unrelated prices on willingness to pay (Adaval and Wyer 2011; Palmeira and Srivastava 2013). Numerous studies demonstrate that individuals often use unrelated numbers as anchors which then guide subsequent judgments (Tversky and Kahneman 1974). Adaval and Wyer (2011) suggest that unrelated price anchors not only provide a reference against a focal price to be evaluated, but also activate thoughts that are consistent with the anchor (Strack and Mussweiler 1997; Tversky and Kahneman 1974). An anchor may thus act as a numeric prime, making individuals think about

features of the target consistent with the anchor value, even when the anchor and target are unrelated. For example, Nunes and Boatwright (2004) reported that consumers were willing to pay \$9 for a CD after being exposed to a sign for sweatshirts at \$80. The willingness to pay decreased to \$7.29 when the sweatshirt was priced at \$10.

Our conceptualization suggests when the value received for the trade-in relative to the price of the new product is low, partitioning (versus consolidating) prices is likely to make the disutility associated with the trade-in value salient by exacerbating the pain associated with closing the mental account in the red and not writing off the remaining mental book value as much as expected (Okada 2011). However, when the value received for the trade-in relative to the price of the new product is high, partitioning (versus consolidating) prices is likely to accentuate the utility associated with the trade-in value by not only alleviating the pain associated with closing a mental account in the red but also more fully writing off the remaining mental book value. Said differently, partitioned (versus consolidated) pricing may have its downside (upside) when the value received for the trade-in relative to the price of the new product is low (high). Consumer evaluations are thus likely to be more polarized when the prices are partitioned than when the prices are consolidated masking the component prices. We report the results of three studies that test our predictions.

Study 2

Study 2 examines the core prediction that in the absence of specific referents for the trade-in, consumers will anchor on the price of the new product to evaluate the value received for the trade-in. When the value received for the trade-in relative to the price of the new product is low, partitioning prices will accentuate the disutility associated with

the trade-in and overall evaluations are thus likely to be lower with partitioned than consolidated prices. However, when the value received for the trade-in relative to the price of the new product is high, partitioning prices may accentuate the utility associated with the trade-in and overall evaluations are likely to be higher with partitioned than consolidated prices.

In the pilot studies, participants were involved in a choice task where it is possible that some referents could be imputed based on the prices of the two options being evaluated jointly. Study 2 uses a single evaluation task where no referent was provided for the trade-in to more clearly examine the extent to which perceptions of the value received for the trade-in are influenced by the price of the new product. In order to generalize the findings beyond the product category used in the pilot studies, study 2 was set in the context of a new textbook purchase involving the trade-in of an old textbook, which is very relevant for the undergraduate participants in the study. Further, in order to mimic an actual task as much as possible, the stimuli or the price information was customized for each participant depending on the price they indicated they had paid for a textbook which they would now trade in. Although the value received for the trade-in differed across participants, the depreciation rate was held constant.

Method

One hundred and twenty-one undergraduate students (age: 19-43, male = 50.4%), who had purchased a new textbook in the last semester, participated in a 2 (relative trade-in value: low vs. high) x 2 (price presentation: partitioned vs. consolidated) between-subjects study design. Participants were first asked to name and price a textbook they had purchased new in the last semester. They then read a scenario in which they were

purchasing a new textbook for the current semester and trading in the book they had identified earlier. In all conditions, the value received for the trade-in was held constant at 40% of the price participants had indicated. In the relatively high (low) trade-in value condition, the price of the new textbook was given as 50% (200%) of the price participants had indicated. In other words, the value received for the trade-in relative to the price of the new textbook was set at 80% (20%) in the high (low) condition. For example, if a participant indicated \$100 as the price paid for the textbook they would be trading in, the value received for the trade-in would be \$40 and the price for the new textbook would be \$50 (\$200) in the relatively high (low) trade-in value condition. In all conditions, a reference price for the new textbook was provided as a range of 90%-100% of the price of the new textbook (i.e., 45%-50% of the price participants had indicated in high ratio / 180%-200% of the price participants had indicated in low ratio). No additional reference price was provided for the trade-in. Participants received the price information in the form of an offer from a local bookstore (Store A). In the partitioned price condition, store A clearly provided both trade-in value and price of the new textbook, whereas in consolidated price condition, store A provided the net price to be paid after taking into account the value of the trade-in (see table 7).

Participants' overall evaluations of the offer was first measured by four nine-point scale items (all items coded at 1 to 9; $\alpha = .94$): "How likely are you to purchase the new textbook and trade in the used textbook at store A (-4 = Not at all likely; 4 = Very likely)," "In your opinion, store A's offer is (-4 = Unattractive; 4 = Attractive), (-4 = Undesirable; 4 = Desirable)," and "How fair do you think the store A's offer is (1 = Not at all fair; 9 = Very fair)." Although the trade-in value was masked in the consolidated

condition, we measured perceptions of the value received for the trade-in in all conditions by three nine-point scales ($\alpha = .90$, the second and third items were reverse scaled): “The price that store A is offering for my old textbook is (1 = Much lower than expected; 9 = Much higher than expected),” “You should be getting more trade-in value for your old textbook than what store A is offering,” and “Store A is undervaluing your old textbook (1 = Strongly disagree; 9 = Strongly agree).” Participants were also asked to indicate their willingness to accept at another store: “If you have a chance to sell the used text book at a different place (e.g., Amazon.com), what will be the lowest price that you are willing to accept in exchange for the used textbook?” In the consolidated condition, these measures not only provide benchmarks to compare the partitioned condition but may also shed insights into participants’ inferred value for the trade-in (e.g., reference price of new product – net price).

Table 7. Stimuli and Dependent Measures (Study 2)

	Low relative trade-in value		High relative trade-in value			
Price of new textbook in online stores	\$180-200* (1.8 to 2*price paid for own textbook)		\$45-50 (.45 to .5*price paid for own textbook)			
Offer	Partitioned Price		Consolidated Price	Partitioned Price		Consolidated Price
	Pay \$200 (2*price paid for own textbook)	Get \$40 (.4*price paid for own textbook)	Pay \$160 (1.6*price paid for own textbook)	Pay \$50 (.5*price paid for own textbook)	Get \$40 (.4*price paid for own textbook)	Pay \$10 (.1* price paid for own textbook)
Evaluation	4.43 (2.20)		5.60 (2.34)	7.67 (1.18)		6.12 (2.68)
Perceptions of trade-in value	3.00 (1.63)		3.61 (2.12)	5.53 (1.62)		4.83 (2.11)

*Numbers given using \$100 as an example of the price stated by the participant.

Results

Overall Evaluations. A 2x2 ANOVA on overall evaluations of the offer revealed a significant effect of relative trade-in value ($F(1, 117) = 22.39, p < .001$), which was qualified by a significant two-way interaction ($F(1, 117) = 11.82, p < .001$). Consistent with our conceptualization, planned contrasts revealed that when the relative value received for the trade-in was low, evaluations were higher when the price was consolidated than when it was partitioned ($M_{\text{Low-Consolidated}} = 5.60$ vs. $M_{\text{Low-Partitioned}} = 4.43$; $F(1, 117) = 4.42, p < .04$). In contrast, when the relative value for the trade-in was high, evaluations were higher when the price was partitioned than when it was consolidated ($M_{\text{High-Partitioned}} = 7.67$ vs. $M_{\text{High-Consolidated}} = 6.12$; $F(1, 117) = 7.61, p < .01$). Said differently, partitioning (vs. consolidating) prices polarized the overall evaluations across the relatively low and high trade-in value conditions.

Perceptions of Value Received for Trade-In. A 2x2 ANOVA on perceptions of the value received for the trade-in revealed a significant effect of relative trade-in value ($F(1, 117) = 29.85, p < .001$) and a marginally significant two-way interaction ($F(1, 117) = 3.65, p < .06$). As expected, perceptions of the value received for the trade-in were higher when the value of the trade-in relative to the price of the new textbook was high than low ($M_{\text{High}} = 5.18$ vs. $M_{\text{Low}} = 3.31$). Consistent with our conceptualization, even when the depreciation rate was held constant and in the absence of specific referents for the trade-in, perceptions of the trade-in value varied with the price of the new textbook. Further, although directionally consistent with expectations, perceptions of the value received for the trade-in did not differ across the partitioned versus the consolidated condition when the relative trade-in value was high ($M_{\text{High-Partitioned}} = 5.53$ vs. $M_{\text{High-Consolidated}} = 4.83$; $F(1,$

117) = 2.06, $p > .15$) as well as when it was low ($M_{\text{Low-Partitioned}} = 3.00$ vs. $M_{\text{Low-Consolidated}} = 3.61$; $F(1, 117) = 1.60, p > .20$). However, consistent with the overall evaluations and as expected, partitioned (vs. consolidated) prices polarized perceptions of the value received for the trade-in more across the relatively low and high trade-in value conditions ($F(1, 117) = 26.97, p < .001$ in partitioned; $F(1, 117) = 6.36, p < .02$ in consolidated).

A mediation analysis was conducted using relative trade-in value condition as an independent variable, perceptions of value received for the trade-in as a mediator, overall evaluations as a dependent variable, and price presentation as a moderator. The indirect effect of relative trade-in value through perceptions of value received for the trade-in was tested using the bootstrapping procedure (Preacher and Hayes 2008). The 95% confidence intervals using 5,000 bootstrap samples showed that the perceptions of value received for the trade-in mediated the relationship between relative trade-in value and offer evaluations in both the partitioned ($b = 1.17, 95\% \text{ CI} = [.46, 2.04]$) and consolidated price conditions ($b = .57, 95\%, \text{ CI} = [.14, 1.22]$). The indirect effect was larger when the price was partitioned than consolidated.

Willingness to Accept for Trade-In. A 2x2 ANOVA on willingness to accept for the trade-in revealed only a significant effect of relative trade-in value ($F(1, 117) = 19.21, p < .001$). No other effects were significant (p 's $> .24$). Participants' willingness to accept for the trade-in was significantly higher when the value of the trade-in relative to the price of the new textbook was low than when high ($M_{\text{Low}} = 97.64$ vs. $M_{\text{High}} = 53.89$; $F(1, 155) = 5.66, p < .02$). In other words, although the depreciation was fixed at 40%, participants felt that they should be paid a higher price for the trade-in when the value received for the trade-in relative to the price of the new textbook was low.

Discussion

Corroborating the findings of the pilot studies, study 2 shows that consumer evaluations are higher with consolidated than partitioned price when the trade-in value relative to the price of the new product is low. However, consumers appear to prefer partitioned price when the relative value of the trade-in is high. Although the depreciation was held constant, perceptions of the value received for the trade-in are influenced by the price of the new product. Consistent with our conceptualization, in the absence of a specific referent, consumers appear to use the price of the new product as an anchor to evaluate the value received for the trade-in. Given partitioning (vs. consolidating) prices allows consumers to assess the gain/loss on each component, when the value received for the trade-in compared to the price of the new product is low, consumers experience disutility, exacerbating the pain associated with closing the mental account in the red and not writing off the mental book value, thus diminishing the attractiveness of the overall exchange. When the trade-in value is high relative to the price of the new product, consumers may experience more utility, alleviating the pain of closing a mental account in the red and writing off the remaining mental book value more fully, thus enhancing the attractiveness of the overall transaction. The conceptual underpinnings and the generalizability of our findings are examined further in studies 3 and 4 where a referent specific to the trade-in is clearly provided.

Study 3

Consistent with our conceptualization, studies 1b and 2 suggest that the price of the new product is used as an anchor to evaluate the value received for the trade-in. As such, the effect of price presentation on consumer evaluations and choice depends on the

value received for the trade-in relative to the price of the new product, particularly in the absence of specific referents for the trade-in. The presence of a specific referent for the trade-in is likely to attenuate the reliance on the price of the new product as an anchor against which the value received for the trade-in is evaluated. Studies 3 and 4 examine this general idea by providing a clear and explicit reference price for the trade-in (e.g., blue book value).

When the value received for the trade-in is favorable compared to its specific referent, the immediate gain not only increases utility from the transaction but also allows consumers to more fully write-off the remaining mental book value. Since the price of the new product is unlikely to be used as an anchor to evaluate the trade-in value, the value of the trade-in relative to the price of the new product is unlikely to affect consumer evaluations of consolidated versus partitioned prices. However, when the value received for the trade-in is unfavorable compared to its specific referent, the immediate loss not only diminishes the utility from the transaction but also highlights the pain of closing the mental account in the red and not being able to write-off the remaining mental book value. Given the presence of a clear specific referent against which the trade-in value is evaluated, it is possible that the trade-in value relative to the price of the new product may not influence consumer evaluations of consolidated versus partitioned prices.

Alternatively, when the value received for the trade-in is unfavorable compared to its specific referent, consumers may be motivated to alleviate the pain of the loss and perhaps even to lower the heightened self-threat one may feel in losing one's possession in the red (Chatterjee et al. 2013). Consistent with ideas of self-defense mechanisms and motivated reasoning (Kunda 1990), the motivation to alleviate the pain of the loss may

affect reasoning through a biased set of cognitive processes whereby consumers attempt to rationalize and construct justifications in line with their directional motive. The underlying motive may thus trigger “motivated opportunism” providing the impetus to muster up evidence in line with one’s motive. As such, in addition to the comparison relative to the specific referent, consumers are likely to use the price of the new product as an anchor to assess the value received for the trade-in. When the value received for the trade-in is high relative to the price of the new product, it helps in alleviating the pain of the loss, and consumers are likely to prefer a partitioned price to a consolidated price. In contrast, when the value received for the trade-in is low relative to the price of the new product, it exacerbates the pain of the loss, and consumers are likely to prefer a consolidated price to a partitioned price. In other words, the overall evaluations and perceptions of the value received for the trade-in are likely to be more polarized when the price is partitioned versus consolidated.

Method

Three hundred and two U.S. residents were recruited from Amazon Mechanical Turk’s panel (age range: 18-75, male = 49%) to participate in a 2 (relative trade-in value: low vs. high) x 2 (trade-in referent: favorable vs. unfavorable) x 2 (price presentation: partitioned vs. consolidated) between-subjects design study. Participants read a scenario where they were purchasing a new digital camera and trading in their old camera. They read about an offer from a store called Electro Mart. The manufacturer’s suggested price for the camera was given as \$310 in all conditions. In low (high) relative trade-in value condition, participants were told that they were considering trading in their used camera which they had purchased for \$100 (\$300). A specific referent for the trade-in was

provided by suggesting the typical trade-in value for the used camera. In the favorable (unfavorable) condition, the typical trade-in value was \$20 lower (higher) than what the store was offering for the trade-in. When the price was partitioned and the relative trade-in value was low (high), Electro Mart quoted \$300 for the new camera and offered \$40 (\$220) for the trade-in. When the price was consolidated, Electro Mart quoted a net price of \$260 (\$80) as the price of the new camera after taking into account the value of the trade-in.

Table 8. Stimuli and Dependent Measures (Study 3)

	Low relative trade-in value				High relative trade-in value			
MSRP of new camera	\$310				\$310			
Original price of the used camera	\$100				\$280			
Offer	Partitioned Price		Consolidated Price		Partitioned Price		Consolidated Price	
	Pay \$300	Get \$40	Pay \$260		Pay \$300	Get \$220	Pay \$80	
Trade-in referent	Fav.	Unfav.	Fav.	Unfav.	Fav.	Unfav.	Fav.	Unfav.
	\$20	\$60	\$20	\$60	\$200	\$240	\$200	\$240
Overall evaluations	7.63 (1.47)	5.07 (2.33)	7.38 (1.58)	6.37 (2.01)	7.84 (1.70)	7.10 (1.56)	7.27 (2.17)	6.02 (2.51)
Perceptions of value of trade-in	7.16 (1.84)	3.53 (1.86)	6.61 (1.82)	4.73 (1.71)	6.86 (1.85)	5.02 (1.70)	6.71 (2.18)	4.85 (2.10)
Feelings about offer	7.20 (1.77)	4.56 (2.42)	7.16 (1.71)	6.08 (2.17)	7.45 (1.93)	6.80 (1.67)	6.94 (2.44)	5.71 (2.47)

Overall evaluations were measured by four nine-point scale items (all items coded as 1 to 9; $\alpha = .95$): “How likely are you to purchase the new camera and trade in the used camera at Electro Mart (-4 = Not at all likely; 4 = Very likely),” “In your opinion, Electro

Mart's overall offer is (-4 = Unattractive; 4 = Attractive), (-4 = Undesirable; 4 = Desirable),” and “I am satisfied with the offer from Electro Mart (1 = Not at all; 9 = Very satisfied).” Perceptions of the value received for the trade-in were measured as in study 2 ($\alpha = .90$). In addition, feelings about the offer were measured by two nine-point scale items ($r = .93$): “I feel good about the offer from Electro Mart” and “I take a positive attitude toward the offer from Electro Mart” (1 = Strongly disagree; 9 = Strongly agree).

Results

Overall Evaluations. A 2x2x2 ANOVA on overall evaluations revealed significant effects of relative trade-in value ($F(1, 294) = 3.93, p < .05$) and trade-in referent ($F(1, 294) = 37.93, p < .001$), a significant interaction between relative trade-in value and price presentation ($F(1, 294) = 8.91, p < .001$), and a marginally significant interaction of relative trade-in value and trade-in referent ($F(1, 294) = 3.04, p < .09$). Importantly, these effects were qualified by a significant three-way interaction ($F(1, 294) = 5.16, p < .03$). Follow-up of the three-way interaction revealed that the two-way interaction between relative trade-in value and price presentation was significant when the trade-in referent was unfavorable ($F(1, 294) = 14.40, p < .01$) but not when it was favorable ($F(1, 294) = .24, p > .62$). Table 8 shows that when the trade-in referent was favorable, evaluations did not differ across the partitioned and consolidated conditions either in the relatively high trade-in value ($M_{\text{Favorable-High-Partitioned}} = 7.84$ vs. $M_{\text{Favorable-High-Consolidated}} = 7.27; F(1, 294) = 1.59, p > .20$) or in the relatively low trade-in value conditions ($M_{\text{Favorable-Low-Partitioned}} = 7.63$ vs. $M_{\text{Favorable-Low-Consolidated}} = 7.38; F(1, 294) = .28, p > .59$).

However, when the trade-in referent was unfavorable and the relative value for the trade-in was low, overall evaluations were higher when the price was consolidated than when it was partitioned ($M_{\text{Unfavorable-Low-Consolidated}} = 6.37$ vs. $M_{\text{Unfavorable-Low-Partitioned}} = 5.07$; $F(1, 294) = 8.75, p < .01$). In contrast, when the relative value for the trade-in was high, evaluations were higher when the price was partitioned than when it was consolidated ($M_{\text{Unfavorable-High-Partitioned}} = 7.10$ vs. $M_{\text{Unfavorable-High-Consolidated}} = 6.02$; $F(1, 294) = 5.83, p < .02$). As in study 2, partitioning (vs. consolidating) prices polarize the overall evaluations as a function of the relative trade-in value.

Perception of Value Received for Trade-In. A 2x2x2 ANOVA on perceptions of the value received for the trade-in revealed an effect of trade-in referent ($F(1, 294) = 111.89, p < .001$), a significant interaction between relative trade-in value and trade-in referent ($F(1, 294) = 4.34, p < .04$), and a significant interaction of trade-in referent and price presentation ($F(1, 294) = 3.95, p < .05$). These effects were qualified by a significant three-way interaction ($F(1, 294) = 4.12, p < .05$). No other effects were significant (all p 's $> .10$). The main effect of trade-in referent suggests that participants coded the gain and loss associated with the favorable and unfavorable referent provided for the trade-in. As expected, perceptions of the trade-in value were higher in the favorable versus the unfavorable referent conditions ($M_{\text{Favorable}} = 6.84$ vs. $M_{\text{Unfavorable}} = 4.52$).

As with the overall evaluations, following up the three-way interaction revealed that the two-way interaction between relative trade-in value and price presentation was significant when the trade-in referent was unfavorable ($F(1, 294) = 5.09, p < .05$) but not when it was favorable ($F(1, 294) = .42, p > .52$). Consistent with our conceptualization,

when the trade-in referent was favorable, perceptions of the value received for the trade-in did not differ across the partitioned and consolidated conditions either in the relatively high trade-in value ($M_{\text{Favorable-High-Partitioned}} = 6.86$ vs. $M_{\text{Favorable-High-Consolidated}} = 6.71$; $F(1, 294) = .11, p > .74$) or in the relatively low trade-in value conditions ($M_{\text{Favorable-Low-Partitioned}} = 7.16$ vs. $M_{\text{Favorable-Low-Consolidated}} = 6.61$; $F(1, 294) = 1.50, p > .22$).

However, when the trade-in referent was unfavorable, perceptions of the value received for the trade-in were higher in the consolidated condition than in the partitioned condition when the trade-in value was relatively low ($M_{\text{Unfavorable-Low-Consolidated}} = 4.73$ vs. $M_{\text{Unfavorable-Low-Partitioned}} = 3.53$; $F(1, 294) = 8.04, p < .01$), whereas there was no significant difference when the trade-in value was relatively high ($M_{\text{Unfavorable-High-Partitioned}} = 5.02$ vs. $M_{\text{Unfavorable-High-Consolidated}} = 4.85$; $F(1, 294) = .14, p > .70$). Notwithstanding, consistent with overall evaluations, perceptions of value received for the trade-in were significantly more polarized with partitioned prices ($F(1, 294) = 21.25, p < .01$) than with consolidated prices ($F(1, 294) = .09, p > .76$).

Two separate mediation analyses were conducted using the relative trade-in value condition as an independent variable, perceptions of value received for the trade-in as a mediator, overall evaluations as a dependent variable, and price presentation as a moderator in each of the trade-in referent conditions. A bootstrapping procedure was used to test the indirect effect of relative trade-in value through perceptions of value received for the trade-in. In the unfavorable trade-in referent condition, perceptions of trade-in value mediated the relationship between relative trade-in value and overall evaluations when the price was partitioned ($b = 1.20, 95\% \text{ CI} = [.53, 1.93]$) but not when the price was consolidated ($b = .10, 95\% \text{ CI} = [-.60, .77]$). In the unfavorable trade-in

referent condition, the indirect effects were not statistically different from zero in both price presentation conditions.

*Feelings About Offer.*² A 2x2x2 ANOVA on feelings about the offer revealed a marginally significant effect of relative trade-in value ($F(1, 294) = 3.85, p < .06$), a significant effect of trade-in referent ($F(1, 294) = 33.34, p < .01$), a marginally significant interaction between relative trade-in value and trade-in referent ($F(1, 294) = 3.57, p < .06$), and a significant interaction between relative trade-in value and price presentation ($F(1, 294) = 10.05, p < .01$). These effects were qualified by a significant three-way interaction ($F(1, 294) = 4.90, p < .03$). No other effects were significant (p 's $> .31$). Consistent with the pattern in the earlier measures, follow-up of the three-way interaction revealed that the interaction between relative trade-in value and price presentation was significant when the trade-in referent was unfavorable ($F(1, 294) = 12.52, p < .01$) but not when it was favorable ($F(1, 294) = .21, p > .64$).

When the trade-in referent was favorable, feelings about the offer did not differ across the partitioned and consolidated conditions either in the relatively high ($M_{\text{Favorable-High-Partitioned}} = 7.45$ vs. $M_{\text{Favorable-High-Consolidated}} = 6.94; F(1, 294) = 1.08, p > .29$) or low ($M_{\text{Favorable-Low-Partitioned}} = 7.20$ vs. $M_{\text{Favorable-Low-Consolidated}} = 7.16; F(1, 294) = .01, p > .93$) trade-in value conditions. However, when the trade-in referent was unfavorable and relative trade-in value was high, participants felt more positive about the offer in the

²Feelings about the offer was initially measured with six items (“The offer from Electro Mart makes me feel good about myself,” “The offer from Electro Mart makes me feel confident about my abilities,” “The offer from Electro Mart makes me feel like I’m not doing well,” “I feel good about the offer from Electro Mart,” “I am satisfied with the offer from Electro Mart,” “I take a positive attitude toward the offer from Electro Mart,” (1 = Strongly disagree; 9 = Strongly agree)). The same interaction pattern of relative trade-in value, price presentation, and trade-in referent was observed when the average of the six items was used and when average of the two items (“I feel good about the offer from Electro Mart,” “I take a positive attitude toward the offer from Electro Mart”) was used. As in study 1, the average of two items is reported here.

partitioned versus the consolidated price conditions ($M_{\text{Unfavorable-High-Partitioned}} = 6.80$ vs. $M_{\text{Unfavorable-High-Consolidated}} = 5.71$; $F(1, 294) = 5.23, p < .03$). In contrast, when the relative trade-in value was low, participants felt more positive about the offer in the consolidated versus the partitioned conditions ($M_{\text{Unfavorable-Low-Consolidated}} = 6.08$ vs. $M_{\text{Unfavorable-Low-Consolidated}} = 4.56$; $F(1, 294) = 10.37, p < .01$).

Discussion

Consistent with our conceptualization, the presence of a referent specific to the trade-in reduces the reliance on the price of the new product as an anchor to evaluate the value received for the trade-in. Study 3 demonstrates that when the trade-in value is favorable compared to its referent, overall evaluations, perceptions of trade-in value, and feelings about the offer do not differ across the partitioned and consolidated price presentations as a function of the value of the trade-in relative to the price of the new product.

However, when the value received for the trade-in is unfavorable compared to its referent, there is a motivation to alleviate the pain as much as possible. Although the trade-in value is coded as a painful loss, when the trade-in value is high (low) relative to the price of the new product, it alleviates (exacerbates) the pain of loss. The overall evaluations and feelings about the offer are thus higher (lower) when prices are partitioned and explicit value of the trade-in helps (hurts) relative to when the prices are consolidated and the trade-in value is masked. Importantly, study 3 shows that perceptions of the value received for the trade-in are affected by the price of the new product despite the presence of a clear and specific referent for the trade-in. The findings

are consistent with the idea that the motive of alleviating the loss biases the associated cognitive processes and the information that is attended to in line with one's motive.

Unlike study 2, the value of the trade-in relative to the price of the new product was altered by varying the value of the trade-in. Although the findings suggest that participants coded the gain/loss with respect to the trade-in referent, it is possible that the gain (loss) of \$20 was perceived larger when the trade-in value was low than high. Further, given the price information provided in all the conditions, it is possible to impute the value received for the trade-in in the consolidated condition. Perceptions of the value received for the trade-in in the consolidated condition may then be based on these imputed values which may be different across the partitioned and consolidated presentations, leading to the observed differences. Study 4 was designed to address these limitations and further examine the robustness of our findings.

Study 4

Focusing on situations where the trade-in referent is unfavorable, study 4 held constant the value received for the trade-in and varied the relative trade-in value by altering the price of the new product. Although the scenario and method were similar to those used in study 2, unlike study 2, the original price for the used textbook and the trade-in value was fixed and identical across all participants. Given the importance of a referent specific for the trade-in, study 4 explored the possibility that making an internal referent salient may reduce the reliance on price of new product as an anchor. As such, while half of the participants were asked to provide an estimate for the trade-in value based on the original price paid before being exposed to the price of the new product, the other half did not provide such an estimate. Finally, study 4 measured feelings towards

the self to explore the possibility that perceptions of undervaluing (overvaluing) one's possession may in fact be related to notions of self-threat.

Method

Four hundred and twenty two U.S. residents were recruited from Amazon Mechanical Turk's panel (age range: 18-68, male = 44%) to participate in a 2 (relative trade-in value: low vs. high) x 2 (price presentation: partitioned vs. consolidated) x 2 (prior estimate: present vs. absent) between-subjects design study. As in study 2, participants read a scenario where they were purchasing a new textbook and trading in a textbook they had purchased for \$200 in the last semester. In prior estimate present condition, participants were asked to indicate the price they would expect to receive for the textbook they are trading in whereas participants in the prior estimate absent condition did not provide such as estimate.

In all conditions, participants were informed that the trade-in value of the used textbook in the market varied from a low of \$90 to a high of \$100, with the typical trade-in value being about \$95. In low (high) relative trade-in value condition, the price of the new textbook was \$400 (\$100). The value received for the trade-in was held constant at \$75 in all conditions, representing an unfavorable offer relative to the referent of \$95. When the price was partitioned and the relative trade-in value was low (high), store A quoted \$400 (\$100) for the new textbook and offered \$75 for the trade-in. When the price was consolidated, store A quoted a net price of \$325 (\$25) as the price of the new textbook after accounting for the trade-in value.

Participants' overall evaluations ($\alpha = .94$) and perceptions of the value received for the trade-in ($\alpha = .82$) were measured as in study 2. In addition, unlike the other

studies, feelings towards the self were measured by five nine-point scale items ($\alpha = .90$): “The offer from store A makes me feel good about myself,” “The offer from store A makes me feel confident about my abilities,” “The offer from store A makes me feel like I’m not doing well (reverse coded),” “The offer from store A makes me satisfied with myself,” and “The offer from store A makes me take a positive attitude toward myself” (1 = Strongly disagree; 9 = Strongly agree).

Table 9. Stimuli and Dependent Measures (Study 4)

	Low relative trade-in value		High relative trade-in value			
Typical price of new textbook	\$400		\$100			
Original price of used textbook	\$200		\$200			
Typical trade-in value	\$95		\$95			
Offer	Partitioned Price		Consolidated Price		Pay \$25	
	Pay \$400	Get \$75	Pay \$325	Pay \$100		Get \$75
Overall evaluations	3.25 (1.83)		4.30 (2.02)		5.77 (2.04)	5.17 (2.39)
Perceptions of trade-in value	2.85 (1.45)		3.36 (1.43)		3.86 (1.83)	3.76 (1.81)
Feelings toward self	3.65 (1.64)		4.16 (1.74)		5.15 (1.76)	4.83 (1.91)

Results and Discussion

Prior Estimates. Participants in the prior estimate condition indicated that they expected to receive \$86.09 as trade-in value of the textbook for which they had paid \$200.

Overall Evaluations. ³A 2x2x2 ANOVA on overall evaluations revealed a significant effect of relative trade-in value ($F(1, 414) = 70.31, p < .001$), which was qualified by a significant interaction between relative trade-in value and price presentation ($F(1, 414) = 17.52, p < .001$). No other effects were significant (p 's $> .24$). Consistent with studies 2 and 3, planned contrasts revealed that when the relative value received for the trade-in was low, evaluations were higher when the price was consolidated than when it was partitioned ($M_{\text{Low-Consolidated}} = 4.30$ vs. $M_{\text{Low-Partitioned}} = 3.25$; $F(1, 414) = 13.69, p < .001$). In contrast, when the relative value for the trade-in was high, evaluations were higher when the price was partitioned than when it was consolidated ($M_{\text{High-Partitioned}} = 5.77$ vs. $M_{\text{High-Consolidated}} = 5.17$; $F(1, 414) = 4.98, p < .03$). As in prior studies, partitioning (vs. consolidating) prices polarized the overall evaluations across the relatively low and high trade-in value conditions. Further, results are robust regardless of whether participants indicated a prior estimate for the trade-in or not. More important, the findings replicate the results of study 3, when the trade-in referent was unfavorable, and suggest that the motivation to alleviate the pain of loss affects reasoning through a biased set of cognitive processes whereby consumers may attempt to rationalize and construct justifications in line with their directional motive.

Perceptions of Value Received for Trade-In. A 2x2x2 ANOVA on perceptions of the value received for the trade-in revealed a significant effect of relative trade-in value ($F(1, 414) = 19.63, p < .001$), a marginally significant interaction of relative trade-in

³Evaluation of offer was initially measured with five items “How likely are you to purchase the new textbook and trade in the used textbook at store A (-4 = Not at all likely; 4 = Very likely)” “In your opinion, store A’s offer is (-4 = Unattractive; 4 = Attractive), (-4 = Undesirable; 4 = Desirable),” “How fair do you think the store A’s offer is (1 = Not at all; 9 = Very much),” and “I feel that store A is taking advantage of me (1 = Strongly disagree; 9 = Strongly agree, reverse coded).” The same interaction pattern of relative trade-in value, price presentation, and prior estimate was observed whether the five items were used or four items. The average of the first four items is reported here.

value and prior estimate ($F(1, 414) = 2.99, p < .09$), and a significant interaction of relative trade-in value and price presentation style ($F(1, 414) = 4.16, p < .05$). No other effects were significant (all p 's $> .14$). As expected, perceptions of the value received for the trade-in were higher when the value of the trade-in relative to the price of the new textbook was high than low ($M_{\text{High}} = 3.81$ vs. $M_{\text{Low}} = 3.10$). Although store A's offer for the trade-in was identical and clearly lower than the referent across all conditions, perceptions of the trade-in value varied with the price of the new textbook. Consistent with study 3, perceptions of the value received for the trade-in in the partitioned condition did not differ from the consolidated condition when the relative trade-in value was high ($M_{\text{High-Partitioned}} = 3.86$ vs. $M_{\text{High-Consolidated}} = 3.76; F(1, 414) = .45, p > .50$) but were lower than the consolidated condition when the relative trade-in value was low ($M_{\text{Low-Partitioned}} = 2.85$ vs. $M_{\text{Low-Consolidated}} = 3.36; F(1, 414) = 4.95, p < .03$). Consistent with the prior studies and overall evaluations, partitioning polarized perceptions of the value received for the trade-in across the relatively low and high trade-in value conditions ($F(1, 414) = 21.36, p < .001$) compared to when the price was consolidated ($F(1, 414) = 2.80, p < .1$). The finding suggests that despite the presence of a clear and specific referent for the trade-in, consumers may use price of the new product as an anchor to alleviate the pain associated with the loss.

A mediation analysis was conducted with relative trade-in value as an independent variable, perception of trade-in value as a mediator, overall evaluations as a dependent variable, and price presentation as a moderator. The indirect effect of relative trade-in value through perceptions of value received for the trade-in was tested using the bootstrapping procedure (Preacher and Hayes 2008). Perceptions of value received for

the trade-in mediated the relationship between relative trade-in value and overall evaluations when the price was partitioned ($b = .85$, 95% CI = [.48, 1.26]) but not when it was consolidated ($b = .35$, 95% CI = [- .03, .72]).

Feelings Toward Self. A 2x2x2 ANOVA on feelings revealed a significant effect of relative trade-in value ($F(1, 414) = 39.58$, $p < .001$) which was qualified by a significant interaction between relative trade-in value and price presentation ($F(1, 414) = 12.58$, $p < .01$). Planned contrasts revealed that while feelings toward self from the partitioned versus the consolidated price did not differ when the relative trade-in value was high ($M_{\text{High-Partitioned}} = 5.15$ vs. $M_{\text{High-Consolidated}} = 4.83$; $F(1, 414) = 1.79$, $p > .18$), feelings were more positive in the consolidated versus partitioned condition when the relative trade-in value was low ($M_{\text{Low-Partitioned}} = 3.65$ vs. $M_{\text{Low-Consolidated}} = 4.16$; $F(1, 414) = 4.52$, $p < .04$). Consistent with the other measures, feelings were more polarized in the partitioned price condition ($F(1, 414) = 38.94$, $p < .001$) than in the consolidated condition ($F(1, 414) = 7.25$, $p < .01$) where the trade-in value was masked and could only be imputed by subtracting net payment from the new product price. The findings suggest that the pain of loss may in fact be related to self-threat one may feel when giving up one's possession, particularly when the loss is further exacerbated by the relatively low trade-in value. Participants thus prefer the consolidated presentation where the trade-in value is masked than the partitioned presentation where the loss associated with the trade-in value is further highlighted.

General Discussion

Given the economic and substantive importance of purchases involving trade-ins, existing literature examines how consumer preferences vary as a function of how an

overall price is split between the new purchase and the trade-in (Kim et al. 2011; Srivastava and Chakravarti 2011; Zhu, Chen, and Dasgupta 2008). The current research adds to this burgeoning literature by examining whether partitioning an equivalent overall price in terms of the payment and receipt versus consolidating the price in terms of a net payment (after accounting for the trade-in value) affects consumer evaluations and choice. Specifically, this research examines whether consumer evaluations of partitioned versus consolidated price presentations vary as a function of the value received for the trade-in relative to the price of the new product.

Taken together, the results of five studies suggest that for an equivalent net price, consumer evaluations and choice of partitioned versus consolidated price presentation vary systematically as a function of the value received for the trade-in relative to the price of the new product. Across both joint (pilot studies) and separate evaluation tasks, the results demonstrate that when the value received for the trade-in relative to the price of the new product is low, consumer choice and evaluations are higher with consolidated than partitioned pricing. However, when the value received for the trade-in is relatively high, consumer choice and evaluations reverse and are higher with partitioned than consolidated price presentation.

Consistent with our conceptualization that partitioning allows consumers to link each component to its price (e.g., Chakravarti et al. 2002; Hamilton and Srivastava 2008), our findings show that consumer evaluations are more polarized when the prices are partitioned than when the prices are consolidated. The findings further suggest that, in the absence of a specific referent for the trade-in, consumers use the price of the new product as an anchor to evaluate the value received for the trade-in. As such, when the trade-in

value relative to the price of the new product is low, partitioning the price accentuates the disutility associated with the trade-in value and exacerbates the pain of closing the mental account related to the trade-in in the red. In contrast, when the value received for the trade-in relative to the price of the new product is high, a partitioned price presentation is likely to accentuate the utility by alleviating the pain of closing the mental account in the red or more fully writing off the remaining mental book value. Consistent with our reasoning, the results of study 1b showed that although the trade-in value was equivalent across conditions, perceptions of the trade-in were higher when the trade-in value was high relative to the price of the new product. The results of study 2 also show that in a separate evaluation task, perceptions of the value received for the trade-in were more strongly influenced by the relative value of the trade-in in the partitioned conditions where the component prices could be compared to each other than in the consolidated conditions where the component prices are not readily available.

To the extent which consumers anchor on the price of the new product to evaluate the trade-in value in the absence of a specific referent, the reliance on the anchor should be weakened when a clear and specific referent for the trade-in is available. The results of study 3 show a more nuanced pattern. When the referent for the trade-in was favorable (i.e., gain on trade-in value or a good deal on the trade-in), given the increase in transaction utility and the ability to more fully write off the remaining mental book value, consumers did not use the price of the new product as an anchor to evaluate the value received for the trade-in. There was thus no difference in overall evaluations and perceptions of trade-in value across the price presentation conditions as a function of the value of the trade-in relative to the price of the new product.

However, when the referent for the trade-in was unfavorable (i.e., loss on trade-in value or a bad deal on the trade-in), similar to the findings of the pilot studies and study 2, consumer evaluations were higher with consolidated versus partitioned price presentation when the value received for the trade-in was relatively low but these evaluations reversed when the value received for the trade-in was relatively high. The findings appear to be consistent with the idea that faced with the loss, consumers' coping mechanisms may be triggered such that they are motivated to alleviate the pain of loss by any means available. The motivation to alleviate the pain of the loss affects reasoning through a biased set of cognitive processes whereby consumers attempt to rationalize and construct justifications in line with their directional motive. As such, although the unfavorable referent specific to the trade-in clearly suggests a loss, consumers are likely to use the price of the new product as an anchor to evaluate the value received for the trade-in and alleviate the pain of the loss. We conceptualize this process as "motivated opportunism" because consumers appear to use the price of the new product as an anchor when the referent for the trade-in is unfavorable but not when it is favorable. Consistent with this reasoning, overall evaluations, perceptions of the value received for the trade-in, as well as feelings about the offer were more strongly affected by the relative value of the trade-in when the price was partitioned and allowed explicit price comparisons than when the price was consolidated and the component prices were not readily available.

While the relative value of the trade-in was varied by holding the price of the new product constant and altering the value received for the trade-in in study 3, study 4 held the value received for the trade-in constant and altered the price of the new product. The consistent results across both studies attest to the robustness and generalizability of the

findings. Study 4 also demonstrated that making an internal referent salient did not affect consumer evaluations of the price presentation conditions as a function of the relative trade-in value. Although our conceptualization has relied on ideas related to salience and transaction utility, which in turn may affect how the remaining mental book value is closed or written off, study 4 measured feelings towards the self to suggest that feelings of self-threat from losing one's possessions in the red may also underlie our findings. Clearly, our findings serve to highlight the complexity associated with purchases involving trade-ins where a consumer plays the dual role of a buyer and a seller and the manner in which prices are presented may not only affect the coding of component as gains/losses but also salience of each component in the evaluation of the overall transaction.

From a managerial perspective, many new product purchase or replacement decisions involve trading in the old product. In fact, given the aversion towards giving up a product that still has a mental book value, firms use trade-in offers to promote sales of new purchases and help consumers write off the remaining mental book value. Some firms use a partitioned price presentation by explicitly showing both the payment for the new purchase and receipt for the trade-in, whereas others use a consolidated price presentation by emphasizing the net payment after taking into account the value of the trade-in. Our research findings suggest that one strategy does not dominate the other and the preference for one over the other is a function of the value received for the trade-in relative to the price of the new product. Returning to the opening illustration, a partitioned price presentation may be better for the consumer who is upgrading her phone after a short cycle where the value of the trade-in is likely to be high whereas a

consolidated presentation may be better for the consumer who is upgrading her phone after a long cycle where the value of the trade-in is likely to be low.

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