

**THREE ESSAYS ON THE SOCIAL ASPECT OF CONSUMER DECISION  
MAKING: SOCIAL PRESENCE, SOCIAL POWER, AND SOCIAL PREDICTION**

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# **THREE ESSAYS ON THE SOCIAL ASPECT OF CONSUMER DECISION MAKING: SOCIAL PRESENCE, SOCIAL POWER, AND SOCIAL PREDICTION**

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University of Pittsburgh, 2012

Previous research suggests that social influence and social prediction (i.e., how would others behave in a similar situation?) can have a profound impact on individuals' consumption patterns. Despite the popularity of the social aspect of decision making in consumer research, there are certain topics that received very little attention to date. In my dissertation, I explore three such underresearched topics, namely (1) the effect of the presence of an accompanying friend on consumer spending, (2) the impact of social power on financial risk taking, and (3) the accuracy of social predictions in the context of endowment. Each essay addresses an issue that either stems from the difference in individuals' focus on the self versus others (Essays 1 and 2) or is a manifestation of the self-other difference (Essay 3).

My first essay documents that agentic consumers spend more when they shop with a friend as compared to when they shop alone, whereas the amount spent by communal consumer is about the same regardless of whether they shop with a friend. I attribute this to the notion that agentic consumers are self-focused and strive for status and thus, engage in self-promotion through increased spending while shopping with friends. On the other hand, spending more to impress a friend is not consistent with the modest nature of communal consumers, leading them to keep their spending under control in the presence of a friend.

My second essay demonstrates that having power versus lacking power over others increases financial risk taking among agentic, but not communal, individuals. I explain this finding with the notion that self-oriented individuals associate power with self-interest goals, whereas other-oriented individuals associate power with responsibility goals. That is, since increased wealth can fortify agentic individuals' powerful position and help them maintain their status, they tend to make risky financial decisions when they experience a state of power. However, taking risks with the goals of enhancing financial position and maintaining the status associated with power is inconsistent with communal goals. Mediation analysis provides support for the proposed underlying mechanism.

Finally, my third essay examines whether consumers accurately predict how valuable an object would be to other consumers. Building on research in several domains including affective psychology of value, empathy gaps, and social prediction, I propose and find that owners underestimate the average selling price stated by other owners, whereas buyers overestimate the average buying price stated by other buyers. I attribute this to a self-other difference in the value function arising from empathy gaps. Accordingly, I find that the documented effects are attenuated when either an external influence (e.g., similarity priming) or one's high cognitive and emotional ability to connect with others helps reduce empathy gaps.

Taken together, my dissertation examines the social aspect of consumer decision making from three different perspectives that are closely related to consumers' welfare and well-being: (1) the costly influence of friends' presence in the market place, (2) the propensity to take higher financial risk due to the possession of social power, and (3) the biased predictions of the valuations of other consumers. I discuss in depth the theoretical and practical implications of my dissertation.

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## 1.0 INTRODUCTION

Human beings are social creatures whose preferences and consumption decisions are shaped through their interactions with those around them. Every day consumers buy and use products that are observable to others. Thus, consumers are social actors whose decisions and choices have the potential to influence and be influenced by other consumers. Accordingly, considerable amount of research has been devoted to understand the social aspect of consumer decision making. This stream of literature suggests that social influence and social prediction (i.e., how would others behave in a similar situation?) can have a profound impact on individuals' consumption patterns.

Early studies of the social influence on consumer behavior find that consumers' brand choices and product evaluations are influenced by informal social groups as individuals exhibit tendency to conform the group norm (e.g., Stafford 1966; Venkatesan 1966). Other studies document that consumers rely heavily on others' product evaluations as a source of information about the product (e.g., Cohen and Golder 1972; Burnkrant and Cousineau 1975). However, social influence on consumer decision making has been shown to vary across product categories (Witt 1969; Witt and Bruce 1972) and depend on whether the product is privately or publicly consumed (Bearden and Etzel 1982; Childers and Rao 1992).

More recently, researchers have explored different dimensions of social influence in the shopping and consumption contexts such as the impact of public scrutiny on consumers' variety

seeking behavior (Rather and Kahn 2002) and the group influence in a sequential choice setting (Ariely and Levav 2000; Quester and Steyer 2010). Others have demonstrated the effect of social presence in the market place on consumers' emotions and product choices (Dahl, Manchanda, and Argo 2001; Argo, Dahl, and Manchanda 2005), coupon redemption behavior (Argo and Main 2008), food consumption (McFerran et al. 2010), and tendency to shop at a particular section of a store (Hui, Bradlow, and Fader 2009). While the majority of research to date has studied the impact of social influence in a rather non-descript fashion (i.e., it has studied public versus private settings), the impact of the specific source of the influence is not as clear. This is an important void to address as it seems that impression management concerns may be very different if the shopper is standing in the store aisle with a friend versus a stranger (as studied in Argo et al. 2005). My first essay attempts to address this research gap.

Another dimension of social influence that has been shown to determine individuals' consumption and spending patterns is social power. Lacking power versus having power increases consumers' willingness to pay for products associated with status (Rucker and Galinsky 2008, 2009) and leads them to spend more money on others than on themselves (Rucker, Dubois, and Galinsky 2011). Given these significant effects of experiencing high versus low power on consumers' welfare, it is important to investigate other channels (e.g., financial risk taking) through which social power can influence consumers' spending behavior, which is the focus of my second essay.

Social comparison has also been recognized by consumer researchers as an important factor determining consumer behavior (e.g., Moschis 1976; Bearden and Rose 1990). For instance, comparisons among consumers impact not only their conspicuous consumption tendency (Ordabayeva and Chandon 2011) but also their propensity to lie about their purchases

(Argo, White, and Dahl 2006). Further, Hamilton, Ratner, and Thompson (2011) find that people are more interested in buying and using a product when they believe that others would use the product less frequently than themselves. Although consumers often compare themselves with others and these comparisons shape their decisions, they seem to be not well calibrated about actual preferences of others who are in the same situation as themselves. People tend to mispredict how others would behave in various situations such as financial risk taking (Hsee and Weber 1997; Faro and Rottenstreich 2006) and public embarrassment (Van Boven, Loewenstein, and Dunning 2005). Given that individuals' behaviors are guided, at least in part, by their perceptions of others' behaviors in a similar situation, biased social predictions are expected to influence their consumption patterns (potentially in a harmful way), an issue that has not received much attention among consumer researchers. In view of that, my third essay focuses on consumers' endowment related social predictions.

As mentioned above, despite the popularity of the social aspect of decision making in consumer research, there are certain topics that received very little attention to date. In my dissertation, I explored three such underresearched topics, namely (1) the effect of the presence of an accompanying friend on consumer spending, (2) the impact of social power on financial risk taking, and (3) the accuracy of social predictions in the context of endowment.

## **1.1 SYNOPSIS OF ESSAY 1**

In my first essay, I examine how the presence of a friend in the market place influences how much consumers spend during a particular shopping trip. I propose that shopping with friends activates impression management concerns, leading consumers to adjust their spending to

conform to the expectations that their friends have of them. Across multiple studies, I document that agentic consumers (i.e., males) spend more when they shop with a friend as compared to when they shop alone, whereas the amount spent by communal consumers (i.e., females) is about the same regardless of whether they shop with a friend. I attribute this finding to the notion that agentic consumers strive for status and power (Bakan 1966) and thus, engage in self-promotion through increased spending while shopping with friends. On the other hand, spending more to impress a friend is not consistent with the modest nature of communion-oriented consumers, leading them to keep their spending under control in the presence of a friend.

Consistent with my impression management explanation, I also find that friends are especially influential for consumers high in self-monitoring, although the effects work in opposite directions for agentic and communal consumers. While agentic consumers high in self-monitoring spend more with a friend, communal consumers with high self-monitoring spend less when accompanied by a friend. Finally, these findings appear to be spending context dependent as I also document that when the spending is for a good cause (i.e., donating to a charity), communal consumers with high self-monitoring loosen their purse strings in the presence of a friend versus alone, while donation behavior of agentic consumers is not influenced by an accompanying friend.

## **1.2 SYNOPSIS OF ESSAY 2**

Although social power has long been recognized by social scientists as a determinant of human behavior, it is not until recently that researchers have started to examine its impact on individuals' consumption and spending patterns (e.g., Rucker and Galinsky 2008; Rucker et al.

2011). In my second essay, I investigate an alternative channel through which social power can influence consumers' welfare and well-being—financial risk taking. I propose that the impact of social power on consumers' financial risk taking is not simple but contingent on their agency-communion orientation (Bakan 1966).

Consistent with my thesis, I document that having power versus lacking power over others leads to greater financial risk taking when individuals are agency-oriented but not communion-oriented. I attribute this to the notion that agentic individuals associate power with self-interest goals aimed at enhancing one's wealth and status, while communal individuals link power with responsibility goals. Accordingly, when self-benefit obtained from the risky decision is low versus high, the effect of social power on agentic individuals' financial risk taking tendency is reversed (i.e., they take less risk). I also find that pursuit of self-interest goals mediates the interactive influence of power and agency-communion orientation on financial risk taking.

### **1.3 SYNOPSIS OF ESSAY 3**

In my third essay, I investigate whether consumers accurately predict how valuable an object would be to other consumers in the same role (i.e., owners or buyers). Building on research in several domains including affective psychology of value (e.g., Hsee and Rottenstreich 2004) and social prediction (e.g., Van Boven and Loewenstein 2005), I propose that *intrarole* empathy gaps impair consumers' perspective taking in the context of endowment, resulting in a self-other difference in the value function and thereby preventing them from accurately predicting others' valuations. Further, since owners and buyers tend to focus on what each stands to forgo in the

potential exchange—the object and the money, respectively— (Carmon and Ariely 2000), I contend that the self-other gap in valuation manifests itself in opposite directions between the two groups.

Across multiple studies, I find that owners underestimate the average selling price stated by other owners, whereas buyers overestimate the average buying price stated by other buyers. In addition, consistent with my prediction built on the self-other gap in valuation, I document that increased perceived similarity between the self and the target people attenuates the bias in owners' and buyers' predictions of valuations of others in the same role. I also find that greater perspective taking (i.e., the cognitive capacity to consider the world from others' viewpoints) is associated with lower estimation errors when participants are high, but not low, in empathy (i.e., the ability to connect emotionally with other individuals).

#### **1.4 CONTRIBUTION**

Taken together, my dissertation examines the social aspect of consumer decision making from three different perspectives that are closely related to consumers' welfare and well-being: (1) the costly influence of friends' presence in the market place, (2) the propensity to take higher financial risk due to the possession of social power, (3) the biased predictions of the valuations of other consumers. The findings of my dissertation further our current understanding of the social influence on individuals' consumption and spending behavior in several important ways.

First, prior research suggests that friends influence consumers' purchase decisions in a positive way by providing information related to the product (Urbany et al. 1989). My first essay extends this research by demonstrating that friends in the market place can also have deleterious

implications for a shopper's wallet, as agentic shoppers spend more when they are accompanied by a friend as opposed to when they shop alone. Second, my dissertation extends the recent work on the role of social power in consumer behavior in that I find agentic consumers experiencing a state of power tend to make riskier financial decisions to enhance their wealth and status. Third, my research contributes to the literature on social predictions by documenting that consumers fail to accurately predict how endowment and lack of ownership impact preferences and choices of others consumers, which may lead them to engage in suboptimal transactions (e.g., a buyer who tends to overestimate other buyers' valuations may overbid for an house). Finally, the findings of my dissertation also add to the nascent literature examining how agency-communion orientation impacts consumers' financial decisions (e.g., He, Inman, and Mittal 2008; Winterich, Mittal, and Ross 2009).

## **2.0 ESSAY 1: THE INFLUENCE OF FRIENDS ON CONSUMER SPENDING: THE ROLE OF AGENCY-COMMUNION AND SELF-MONITORING**

Social influences play a pervasive role in shaping consumers' affect, cognitions and behaviors (e.g., Argo, Dahl, and Manchanda 2005; Dahl, Manchanda, and Argo 2001; Ratner and Kahn 2002). To date, behavioral researchers have studied the impact of several social characteristics to determine the likelihood and the extent to which the social context will be influential. For instance, while high levels of attractiveness and credibility of a salesperson have been shown to enhance the effectiveness of an influence attempt (e.g., Argo, Dahl, and Morales 2008), high levels of persuasion knowledge and cognitive capacity on the part of consumers have been shown to inoculate them from such an influence (e.g., Campbell and Kirmani 2000).

Since occurrences of social influence are not always readily apparent or intentional, it seems likely that consumers may not always be prepared to draw from their repertoire of protective strategies to shield themselves from the influence. An example of such an occurrence may be when the social influence arises from an unexpected source such as other shoppers present in the store. Indeed, Argo et al. (2005) find that the mere physical presence of another shopper in a store aisle is sufficient to elicit emotional and behavioral responses in consumers that benefit the retail establishment. In the present research, we aim to push the envelope even further to determine whether the presence of a friend can also create an unintentional cost to the consumer when in the marketplace. We use the term "friend" to refer to relationships ranging

from the stage where the two parties like each other and seek out each other's company to the stage of friendly relations (Price and Arnould 1999). Research indicates that the behavioral implications of the interaction between two parties such as compliance to a request, tend to be similar across this range (e.g., Burger et al. 2001; Dolinski, Nawrat, and Rudak 2001).

In general, we predict and find that consumers' spending decisions are influenced by accompanying friends due to consumers' impression management concerns. Importantly, we find that the direction of a friend's effect on consumer spending is moderated by the consumer's agency-communion orientation (i.e., the tendency to focus on the self or others; Bakan 1966).<sup>1</sup> That is, agentic consumers (i.e., males) spend more when they shop with a friend as compared to when they shop alone, whereas communal consumers (i.e., females) are more likely to control their shopping while in the presence of a friend. We also find that this interactive effect is moderated by individual differences in self-monitoring such that friends are especially influential for consumers who are high in self-monitoring, albeit the effects occur in opposite directions for agency- and communion-oriented consumers (i.e., agentic (communal) consumers spend more (less) when shopping with a friend). Finally, consistent with our impression management explanation, we find that the interactive effect of a friend's presence, agency-communion orientation, and self-monitoring is reversed when consumers make a donation to a charity. Communion-primed individuals with high self-monitoring donate more when accompanied by a friend than when they are alone, while this effect is not observed for agency-primed individuals.

Our research contributes to the social influence literature by extending our understanding of the impact of friends in consumption. Foremost, the limited research that has studied a friend's influence assessed respondents' perceptions of an imaginary shopper's likelihood of

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<sup>1</sup> Agency/communion and agentic/communal are used to refer to the same concepts in the literature, so we use them interchangeably.

making unplanned purchases and spending more money in the context of hypothetical shopping situations (Luo 2005). The use of such an artificial methodology is questionable, especially in light of the fact that typical influence agents are salespeople and marketers (Friestad and Wright 1994); thus, consumers may not be cognizant of the extent to which their friends may influence their spending behaviors. Therefore, we study consumers' behavior both in actual shopping settings (i.e., mass merchandise stores, a bookstore, and a mall) and an experimental setting. Second, we contribute to social influence research (e.g., Argo et al. 2005; Luo 2005; Ratner and Kahn 2002) by showing that the effect of the social environment (i.e., presence vs. absence of a friend) on consumer spending is qualified by individual differences in agency-communion orientations. We achieve this by (a) using gender as a proxy for agency-communion orientation in the pilot study and Study 1, (b) measuring the orientations directly via an individual difference scale in Study 2, and (c) priming the orientations in Study 3. Next, we present our conceptual development. We then define the models used to test our hypotheses and report the results from a pilot and three studies. We conclude with a discussion of the implications of our results and directions for future research.

## **2.1 CONCEPTUAL DEVELOPMENT**

Social influence has been described as one of the primary factors that affect consumers' decisions. In fact, Yang and Allenby (2003, p.291) suggest that: "...people live in a world in which they are interconnected, information is shared, recommendations are made and social acceptance is important." Based on this, it is not surprising that the research studying social influence has found that the social environment can shape and sometimes misconstrue

consumers' opinions, preferences, and choice behaviors as they strive for social acceptance (e.g., Argo et al. 2005; Bearden and Etzel 1982; Dahl et al. 2001; Ratner and Kahn 2002). To illustrate, Ariely and Levav (2000) find that consumer choices made in group contexts differ systematically from those made in private consumption contexts, as the choices made in the former setting provide an opportunity for them to engage in impression management efforts. Netemeyer, Bearden, and Teel (1992, p.381) note that, "...in purchasing and using products, people are social actors whose behavior is open to observation of others...individuals use products as a form of impression management to influence the ascriptions others might make about them (i.e., form favorable attributions)."

While the majority of research to date has studied the impact of social influence in a rather non-descript fashion (i.e., it has studied public versus private settings), the impact of the specific source of the influence is not as clear. This is an important void to address as it seems that impression management concerns may be very different if the shopper is standing in the store aisle with a friend versus a stranger (as studied in Argo et al. 2005). Consistent with this expectation, research has shown that the presence of friends (as compared to when the shopper is alone) can be highly influential, serving as not only sources of information related to the product (e.g., Urbany, Dickson, and Wilkie 1989), but also as activators of impression management concerns on the part of the consumers (e.g., Childers and Rao 1992). However, extending previous research, we argue that the influence of an accompanying friend on consumers' shopping decisions and spending is moderated by consumers' agency/communion orientation since agentic and communal individuals are socialized differently regarding the relative

emphasis placed on self- and other-oriented goals (Bakan 1966; Eagly 1987), leading them to have different impression management concerns in the presence of their friends.<sup>2</sup>

Originally coined by Bakan (1966), the terms agency and communion capture the notion that people possess two fundamental modalities. In their most simplistic forms, agency refers to a tendency to reflect on one's individuality and emphasizes the self and its separation from other organisms whereas communion refers to the merging of an individual in a larger organism and social relationships and connections with others (Helgeson 1994). Wiggins (1991) construes agency as one's strivings for status and power that facilitate and protect the differentiation of the individual from others, whereas communion arises from strivings for cooperation and harmony that protect the unity of the individual with a social entity. Accordingly, research has shown that agency involves such qualities as instrumentality, self-confidence, and competence, whereas communion involves such qualities as cooperativeness, concern for others, and kindness (e.g., Eagly 1987). Furthermore, due to differences in their socialization processes, agency-oriented individuals enjoy putting themselves, their pleasures, and their activities at center stage, whereas communion-oriented individuals refrain from doing so (Bakan 1966).

The usefulness of agency-communion orientations in understanding human behavior has been explored in different domains such as consumers' responses to persuasive information (Meyers-Levy 1988), financial risk taking (He, Inman, and Mittal 2008), and donation behavior (Winterich, Mittal, and Ross 2009). To better understand why consumers' spending behavior in the presence of their friends should be influenced by their agency-communion orientation, we draw from the stereotype literature. This work has found that individuals are motivated to

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<sup>2</sup> Previous research (e.g., Funder and Colvin 1988; Stinson and Ickes 1992) points out that unlike strangers, our friends have a history of prior interaction with us and develop a store of knowledge regarding our personalities. Thus, the presence of friends provides people with both the opportunity and the motivation to conform to the expectations their friends have of them, which would bring about social rewards and help avoid social sanctions.

conform to the stereotypic expectations that other people hold about their behavior (e.g., Rosenthal and Rubin 1978). Such a motivation exists because while conforming to stereotypic expectations can produce rewards of social approval, violating these expectations risks social sanctions. For instance, in the gender domain, females who violate stereotypic expectations by engaging in behaviors typically regarded as masculine (i.e., self-promotion) are rated significantly lower in terms of their social attractiveness (Rudman 1998). Relatedly, research on the “feminine modesty effect” (e.g., Gould and Slone 1982) has shown that in response to normative pressures, females tend to be modest in public contexts. In contrast, society deems it normative and acceptable for males to engage in self-promotion (e.g., Miller et al. 1992).

Research by Eagly (1987) and Jost and Kay (2005) suggests that agentic stereotypes (e.g., ambitious, assertive, and competent) and communal stereotypes (e.g., warm, considerate, and modest) begin to emerge in childhood and are widely held and persistent. Thus, it seems reasonable to expect that these stereotypes would result in different objectives in a social situation and subsequently the use of different self-presentation strategies. There are two specific self-presentation strategies that seem applicable to the present context. The first strategy is acquisitive, which focuses on gaining valued outcomes and involves exerting effort to gain admiration, respect and attention of peers by presenting the self in the most favorable light (Arkin 1981). The second strategy is protective, which is adopted to avoid negative outcomes and is associated with “self-presentations that are cautious, modest, and designed to avoid attention” (Schelenker and Weigold 1992, p. 147; see also Wolfe, Lennox and Cutler’s (1986) distinction between self-presentations aimed at “getting ahead” of others versus “getting along” with others).

Based on our conceptual framework, we argue that to conform to the expectations that their friends have of them, agency-oriented consumers will adopt the acquisitive self-presentation style (i.e., “getting ahead”) while shopping with friends and engage in self-promotion through increased spending. However, spending more to impress a friend is not consistent with the modest nature of communion-oriented consumers. Thus, they are expected to adopt the protective self-presentation style (i.e., “getting along”) in the presence of a friend and will control their spending. While this suggests that communal consumers are not expected to spend more when shopping with a friend, it does not mean that they will decrease their spending. In particular, decreased spending in the presence of a friend represents self-neglect (i.e., focusing on others at the expense of the self) or “self-depreciation” and not all communal individuals have the skills or tendency to perform such behavior (Buss 1990; Fritz and Helgeson 1998). Thus, we do not predict a systematic decline in the spending of communal consumers when they are accompanied by a friend. Rather, we argue that the positive impact of a friend’s presence on agentic consumers’ spending will not be observed in the case of communal consumers. Formally:

**H1:** Agency-oriented, but not communion-oriented, consumers will spend more when they shop with a friend than when they shop alone.

## 2.2 PILOT STUDY

The Point of Purchase Advertising Institute (POPAI) periodically conducts field studies of consumers’ purchasing behavior. POPAI fielded its most recent study in 1995 and provided the data for the present analysis. In-store intercept interviews were conducted at fourteen mass merchandise stores. Consumers were intercepted randomly as they entered the store and were asked several questions. After respondents finished shopping, they returned to the interviewer

who collected their receipt and assessed demographics. The key dependent variable in the study was the amount of money spent by the participants. Data were collected from 1230 customers, 12 of which were excluded from the analysis due to missing responses. We also excluded 10 extreme observations identified based on studentized residuals, Cook's D, and hat diagonal.<sup>3</sup> Of the 1208 usable respondents, 555 shopped alone and 72 were accompanied by a friend.<sup>4</sup>

Based on previous research (e.g., He et al. 2008; Winterich et al. 2009), agency-communion orientation was operationalized as gender in this study (78% of respondents were female). Gender is a reasonable proxy for the orientation since Bakan (1966) suggests, and research has demonstrated (for review see Guimond et al. 2006), that agency orientation is more characteristic of males whereas communion orientation tends to pertain to females.

Data were analyzed using OLS regression where the dependent variable was the natural log of the dollar amount spent by the respondent.<sup>5</sup> Contrast coding was used for our two focal independent variables of gender (1 if male, -1 if female) and friend (1 if with friend, -1 if not accompanied by a friend). We controlled for a variety of factors that could potentially affect consumers' spending, such as the amount of money that they planned to spend, the amount of time they spent in the store, and the method they used to pay for their purchases (Inman, Winer, and Ferraro 2009). In addition, social variables were also included in the model to control for the impact of other types of relationships (e.g., spouse) and multiple accompaniers (Latané 1981;

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<sup>3</sup> These observations were deemed outliers due to the extremeness of the magnitude of their dependent variable (i.e., very low or very high actual spending as compared to that predicted by the model). For instance, 6 participants spent less than \$1.50. Since such observations have undue impact on the estimated coefficients and their standard errors (as well as on the overall fit of the model), excluding them enables us to avoid reporting potentially misleading results driven by the presence of a few outliers in the dataset. Note that the pattern of results is similar when we run the analysis without excluding these outliers. We perform the same outlier diagnostics in other studies as well and add a note if we exclude any outliers.

<sup>4</sup> Accompaniers are categorized into eight groups: friend (72), spouse (138), parent (42), child (298), someone else's child (48), adult family member (48), someone else (19), unknown (156); 229 shoppers were accompanied by more than one person.

<sup>5</sup> In the model, we control for the amount of money that the shoppers planned to spend. Our results remain unchanged when we use the difference between actual and planned spending as the dependent variable.

please refer to the Appendix A for details of the model specification, summary statistics, and the complete regression results).

The overall regression model is significant ( $F(25, 1182) = 45.24, p < .01$ ) and the model  $R^2$  is 48.9%. We find a significant and positive main effect for friend ( $\beta_2 = 0.12, p < .05$ ).

Importantly, this main effect is qualified by a positive and significant interaction between friend and gender ( $\beta_{18} = 0.15, p < .01$ ). That is, controlling for planned spending, male (i.e., agentic) consumers spend 56% more when they shop with a friend than when they shop alone, while female (i.e., communal) consumers spend 4% less when they shop with a friend than when they shop alone, albeit this latter difference is not significant. This result provides initial support for our hypothesis. The interaction effect is visually depicted in Figure 2.1.

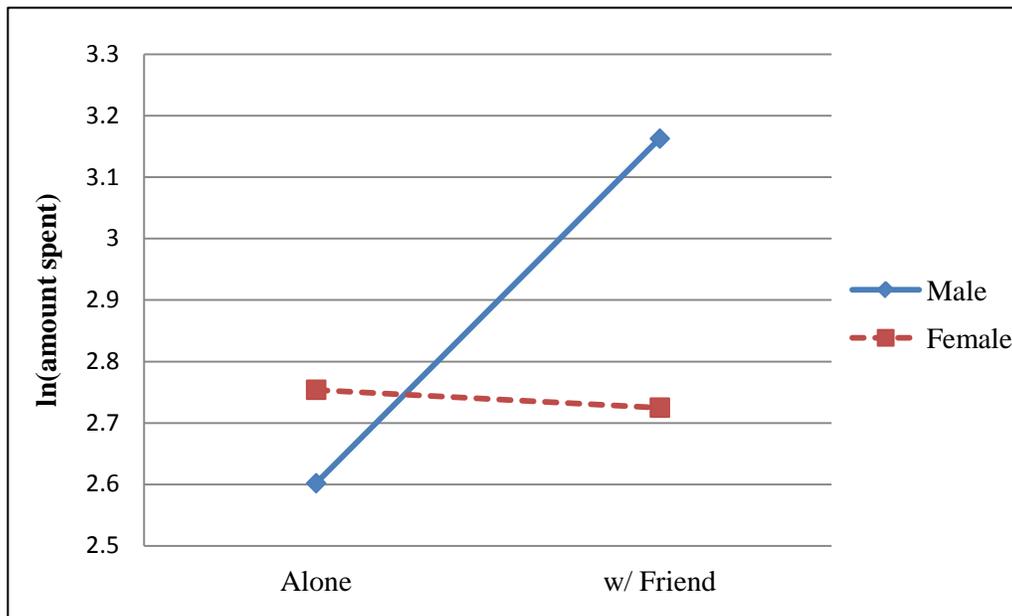


Figure 2.1: Moderating Effect of Gender on the Relationship between Presence of a Friend and Consumers' Spending

The results also reveal that the main effects for the other relationship categories are not significant ( $p$ 's > .17). More importantly, none of the interactions between gender and other social influence categories are significant ( $p$ 's > .16), implying that males (i.e., agentic) and females (i.e., communal) do not exhibit differential sensitivity to social influence stemming from sources other than their friends. One key limitation of the pilot study is that the classification of the “friend” was provided by participants and thus, it is a subjective perception. To address this limitation, in Study 1 we manipulate the friend’s presence via a trained confederate assuming the role of a friend that is present during a shopping trip.

## 2.3 STUDY 1

### 2.3.1 Method

Study 1 uses a retail shopping setting to test a 2 (orientation: agency vs. communion) x 2 (social presence: alone vs. accompanying friend) between-subjects experimental design. The key dependent variable is amount spent. Orientation was again operationalized as participants’ gender. Eighty-seven undergraduate students (43 males and 44 females) from a large North American university completed the study.

*Procedure.* Participants took part in what ostensibly were two unrelated studies. In the first study, participants were run in groups of two or three. In half of the groups, unknown to participants, a confederate assumed the role of one of the study participants.<sup>6</sup> The goal of the confederate was to become acquainted with the actual participants. This was achieved by having

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<sup>6</sup> To control for potential impact of gender match/mismatch between the confederate and participants, two confederates (one female, one male) were used in the study and participants were randomly assigned to each confederate. As we discuss in the results section, neither the gender of the confederate nor the gender match/mismatch between the confederate and participants impacts our results.

the researcher leave the participants and the confederate alone for an extended period of time (i.e., she went to photocopy more surveys). The confederate followed a script to both initiate and maintain a conversation with the participants during the researcher's absence. Upon the researcher's return, the confederate responded to the same survey as the participants. Within the next couple of days, participants individually completed a second study that took place at the university student center. Upon arrival they were informed that the purpose of the study was to collect marketing research information for the university bookstore and that to do this they would be asked to go to the store, make a product purchase, and then return to the experimenter to complete a short survey. They were further told that to determine which product they would purchase, they would select an envelope that contained the name of a product under \$5.00.

Unknown to the participants, each of the envelopes identified a package of four AA batteries as the product to purchase. Participants were given \$5.00 and told that they could keep both the product and any remaining change from the purchase. Participants then went to the bookstore to locate and purchase the designated product. The battery display was comprised of five brands of AA batteries that varied in price and quality levels. Pretesting established the prices of the five brands to reflect differences in their perceived quality: Duracell/Energizer were rated the best (1;  $M_{\text{average}} = 5.92$ ) and were priced at \$4.29, Rayovac/Panasonic were rated average (2;  $M_{\text{average}} = 4.39$ ) and were priced at \$3.99, and Chateau was rated the worst (3;  $M_{\text{average}} = 2.85$ ) and was priced at \$3.69. Paired samples t-tests reveal that differences between group means are significant ( $p$ 's < .01). In the *friend* condition, when participants entered the store aisle, the confederate they had met previously was standing next to the battery display. In the *alone* condition, no one else was present in the store aisle. Participants selected and purchased their brand and then returned to the experimenter where they completed a short questionnaire. In

the survey amidst questions related to the cover-story, participants were asked to indicate the brand of batteries they had purchased. Participants' responses to this question were compared to that recorded by an observer situated two aisles away from the battery display with a clear view of participants. In addition, participants indicated their gender, age, major, and completed an open-ended suspicion probe. Examination of the suspicion probe indicated that none of the participants were aware that the two studies were related or guessed the research's hypotheses.

While the confederate cannot be considered as a friend per se, previous research (e.g., Burger et al. 2001; Dolinski et al. 2001) shows that short conversations with strangers lead individuals to treat them as if they were friends. For instance, by using a similar manipulation to ours, Burger et al. (2001) find that participants in a conversation (versus a control) condition complied with a request from the confederate at a higher rate, as if they had been asked by a friend. Similarly, Dolinski et al. (2001, p. 1405) point out: "...people involved in a dialogue [but not in a monologue] with a stranger automatically treat him or her as a friend and, consequently comply with his or her request." Thus, our manipulation allows us not only to control for closeness of friendship and avoid potential problems arising from participant provided "friend" classifications but also to create an experimental setting in which we can observe participants' spending decisions as if they were made in the presence of a friend.

### **2.3.2 Results**

We conducted regression analysis with amount spent as the dependent variable and the independent variables of accompanying friend, participant's gender and their interaction term. Contrast coding was used for both gender (1 if male, -1 if female) and friend (1 if with friend, -1 if alone). The overall regression model is significant ( $F(3, 87) = 8.02, p < .01$ ) and the model  $R^2$

is 22.5%. We find significant main effects for friend ( $\beta = 0.08, p < .01$ ) and gender ( $\beta = 0.05, p < .05$ ). Importantly, the analysis reveals a positive and significant friend x gender interaction ( $\beta = 0.06, p < .01$ ). Consistent with H1, males spend significantly more in the presence of a friend as compared to the alone condition ( $M_{\text{friend}} = \$4.25$  vs.  $M_{\text{alone}} = \$3.96, p < .01$ ), whereas the average spending for females did not differ as a function of the social presence ( $M_{\text{friend}} = \$4.02$  vs.  $M_{\text{alone}} = \$3.98, p > .54$ ; see the Appendix B for the percentage of brands selected in each condition). The interaction effect is visually depicted in Figure 2.2. Moreover, as shown in Table 2.1, the confederate's gender does not impact our results as males increase their spending in both the male and female friend conditions (vs. alone condition), whereas no significant change is observed in the spending of females across conditions.

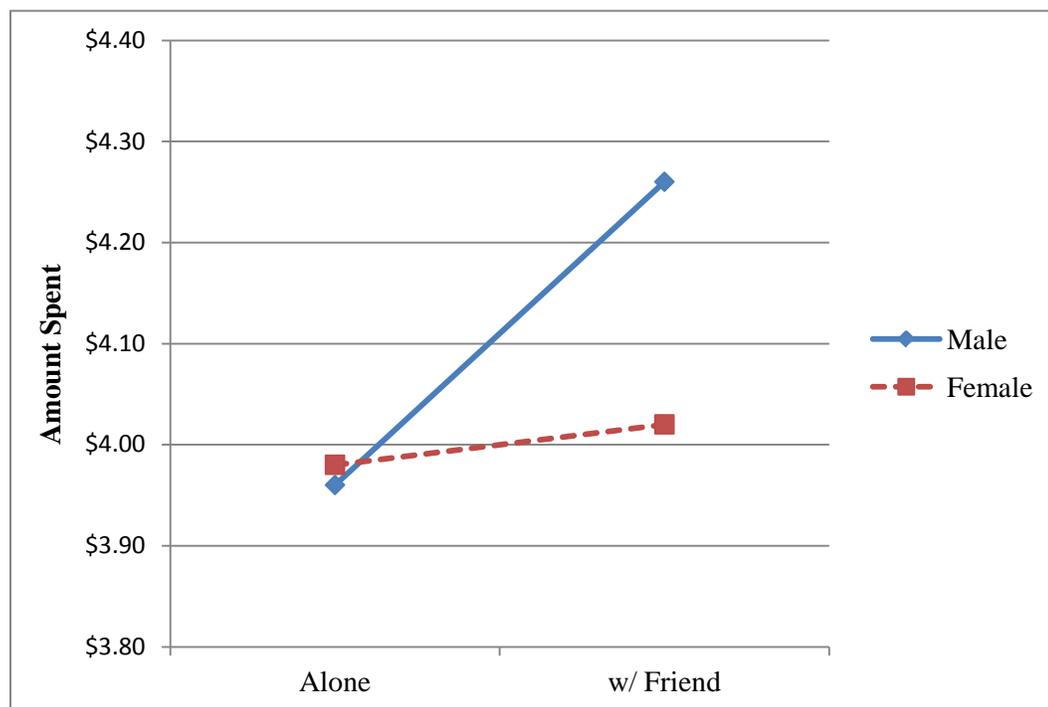


Figure 2.2: Moderating Effect of Gender on the Relationship between Presence of a Friend and Consumers' Spending

Table 2.1: Sample Statistics and Average Actual Spending across Conditions

	Alone (1)	w/ Friend (2)	w/ Male Friend (2a)	w/ Female Friend (2b)	Dif: (2) – (1)	Dif: (2a) – (1)	Dif: (2b) – (1)
Male	\$3.96 (n = 23)	\$4.25 (n = 20)	\$4.26 (n = 11)	\$4.22 (n = 9)	\$0.29 (p < .01)	\$0.30 (p < .01)	\$0.26 (p < .01)
Female	\$3.98 (n = 24)	\$4.02 (n = 20)	\$3.99 (n = 13)	\$4.07 (n = 7)	\$0.04 (p > .54)	\$0.01 (p > .88)	\$0.09 (p > .37)

Further, we re-estimated our model by including gender match (1 if the participant and the confederate’s genders match, -1 otherwise) and gender mismatch (1 if the participant and the confederate’s genders do not match, -1 otherwise) variables in lieu of the friend variable. Under this specification, both variables being -1 indicates that the participant is alone. Furthermore, we interact these variables with the gender of the participant. The results reveal positive and significant coefficients for gender match ( $\beta = 0.10, p < .01$ ) and gender mismatch ( $\beta = 0.07, p < .05$ ). The difference between the two coefficients is not significant ( $F(1, 81) = 0.82, p > .36$ ). In addition, the coefficients of the interaction terms are positive and significant ( $\beta_{\text{gender} \times \text{match}} = 0.05, p < .10$  and  $\beta_{\text{gender} \times \text{mismatch}} = 0.06, p < .05$ ). There is no significant difference between the two coefficients ( $F(1, 81) = 0.11, p > .73$ ), indicating that the friend’s effect is not driven by gender match/mismatch.

### 2.3.3 Discussion

Study 1 demonstrates that agentic consumers (i.e., males) spend significantly more money when they shop with a friend than when they shop alone, whereas communal consumers (i.e., females) tend to control their spending in the presence of a friend. The finding that males spend more

while females are more modest in the presence of a friend is consistent with our impression management framework. Study 2 has two primary objectives. First, we directly measure individual differences in consumers' agency-communion orientation instead of using gender as a proxy. Second, because research has found that consumers differ in their responsiveness to social and interpersonal cues of situationally appropriate behavior (Gangestad and Snyder 2000), we explore the moderating role of self-monitoring.

## **2.4 STUDY 2**

### **2.4.1 Self-Monitoring as a Moderator**

Effective impression management efforts require that individuals accurately scan the social situation for cues to determine how to respond and adjust their behavior accordingly. The theory of self-monitoring (Lennox and Wolfe 1984; Snyder 1974, 1987) posits that people differ in terms of their ability and willingness to engage in expressive control and strategically manage their public appearances. More specifically, according to Gangestad and Snyder (2000), high (versus low) self-monitors are better at monitoring their behavior and regulating their self-presentation in order to convey desired public appearances.

However, previous research documents that self-monitoring has an asymmetric impact on the public behavior of agentic and communal individuals (e.g., Bozin and Yoder 2008; Flynn and Ames 2006). For instance, Flynn and Ames (2006) find that higher self-monitoring provides additional benefits to communal individuals (i.e., females), but not to agentic individuals (i.e., males), in the context of self-enhancement. In their first study, an analysis of peer evaluations of the participants who completed a semester-long group project documents that high and low self-

monitoring males are rated as equally valuable and influential contributors to the group by their peers. On the other hand, female group members with high (as compared to low) self-monitoring are considered more valuable and influential contributors. Moreover, in their second study, results of a dyadic negotiation exercise reveal that males high in self-monitoring do not perform better than those who are low in self-monitoring, whereas the negotiation outcome increases with high self-monitoring in the case of females. The authors attribute these findings to the notion that males tend to naturally exhibit the valued traits of competence and self-confidence; hence monitoring the situation and realizing the demand for self-confidence does not boost their performance. Females, on the other hand, increase their portrayal of competence and self-confidence when they are high self-monitors who realize that the situation demands this; hence, they perform better. The authors point out: “We do not predict (nor find evidence) that men and women exhibit different levels of self-monitoring. Instead, we propose that the impact of self-monitoring may be different for men and women because they experience different gender stereotypes” (p. 279).

In light of these findings and the results of our first study, we anticipate that regardless of the level of their self-monitoring, agency-oriented consumers will spend more when accompanied by a friend as compared to when they are alone. This is because higher self-monitoring is not expected to provide additional benefits to them in the process of self-enhancement. Specifically, in context of shopping for the self, increased spending is often associated with self-promotion (Griskevicius et al. 2007), which is a typical behavior exhibited by agentic individuals. Thus, agentic consumers will not obtain additional benefits from monitoring the situation and realizing that engaging in self-promotion through increased spending would be a stereotype consistent self-presentation style. However, this should not be

the case for communion-oriented consumers for whom the impact of high self-monitoring on public behavior should be stronger. In particular, communals with high (vs. low) self-monitoring have the ability and tendency to adopt the “protective” self-presentation strategy that the situation calls for and engage in stereotypic consistent behavior to convey a favorable impression. Hence, high self-monitors will exert even more control on their spending in the presence of a friend and exhibit heightened level of modesty (or “self-depreciation”), leading them to reduce their spending as compared to when they are alone.

In contrast, communals with low self-monitoring are not expected to decrease their spending in the presence of a friend. These consumers have difficulty in creating favorable impressions in the eyes of others (Bozin and Yoder 2008; Flynn and Ames 2006) due to a lack of skills in reading cues regarding socially appropriate behavior which results in them failing to alter their behavior accordingly. Our predictions can be summarized as follows:

**H2:** Self-monitoring will moderate the impact of a friend’s presence on spending for communion-oriented consumers, but not for agency-oriented consumers. Specifically, (a) agentic consumers with both high and low self-monitoring will spend more when they shop with a friend than when they shop alone, and (b) communal consumers with high, but not low, self-monitoring will spend less when they shop with a friend than when they shop alone.

## 2.4.2 Method

One hundred thirty-six shoppers were intercepted randomly as they entered a large shopping mall located in Turkey. Respondents were compensated with two movie tickets (worth approximately \$10) in exchange for their participation in the study. Only customers shopping alone or accompanied by a single friend were invited to participate in this study.<sup>7</sup> Although 136

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<sup>7</sup> We did not invite shoppers accompanied by more than one friend to participate in the study as previous research (e.g., Argo et al. 2005; Latané 1981) shows that the strength of a social influence increases with the number of

customers participated in our study, 7 respondents were excluded from the sample due to missing responses. We also excluded 3 extreme observations, leaving 126 respondents, of which 53% were female and 45% were accompanied by a friend. Table 2.2 summarizes the sample statistics.

Table 2.2: Sample Statistics

<i>Gender</i>	Frequency	Percent
Male (alone)	33	26.19
Female (alone)	35	27.77
Male (w/ Friend)	28	22.22
Female (w/ Friend)	30	25.00

<i>Payment Method</i>	Frequency	Percent
Cash	55	43.65
Credit	57	45.24
Cash & Credit	14	11.11

Respondents were asked to complete two surveys. Following Erdem, Swait, and Valenzuela (2006), to ensure that the items included in the surveys were correctly translated and conveyed the same meaning in Turkish, the standard technique of back-translation (from English to Turkish and then back to English) was used.<sup>8</sup> The entry survey included questions such as “How often do you visit this shopping mall?” and “How much do you plan to spend in this shopping mall today?”, whereas the exit survey assessed the amount they spent, agency-communion orientations, self-monitoring, payment method and demographics. Buying impulsiveness (Rook and Fisher 1995) was also measured as an additional control variable.

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sources, which might have confounded our results. Limiting number of accompanying friends to one provides a more conservative test of our theory.

<sup>8</sup> The scales were translated by two Turkish doctoral students studying at a North American university and a translation agency operating in Turkey. Disagreements were resolved through discussion.

### 2.4.3 Measures

*Agency/Communion.* Sixteen five-point (1 = low, 5 = high) bipolar adjective scales from the Extended Version of Personal Attributes Questionnaire (EPAQ; Spence, Helmreich, and Holahan 1979) were used to measure agency and communion. The reliability and validity of these widely used scales have been well documented (e.g., Helgeson 1994). Examples of items that assess agency are “not at all independent—very independent” and “feels very inferior —feels very superior.” Examples of items that assess communion are “very cold in relations with others—very warm in relation with others” and “not at all aware of others’ feelings—very aware of others’ feelings”. The responses were averaged to create their respective orientations ( $\alpha_{\text{agency}} = 0.67$  and  $\alpha_{\text{communion}} = 0.76$ ). As agency and communion dimensions are both embodied by an individual and a high score on agency or communion does not necessarily suggest a low score on the other dimension, a measure was needed to capture the difference between the two dimensions. Thus, after calculating agency and communion scores for each respondent, we created a new measure to assess relative agency orientation, “ACDIF”, by subtracting each respondent’s communion score from his/her agency score.<sup>9</sup> The ACDIF measure allows us to assess not only the direction but also the relative magnitude of each respondent’s agency-communion orientation.

*Self-monitoring.* We measured self-monitoring using Lennox and Wolfe’s (1984) revised self-monitoring scale, which consists of 13 items rated on seven-point scales (1= strongly

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<sup>9</sup> Dindia (2006, p.11) rationalizes this measure: “Women and men differ in degree if both possess the same trait or display the same behavior but one possesses or displays more of it. Thus, if both women and men are agentic and communal, but women are more communal and men are more agentic, then with respect to agency and communion, they differ in degree, not kind.” Winterich et al. (2009, p.213) also point out: “individuals who are not distinctly categorized as either masculine or feminine may experience identity conflict.” In their study examining donation behavior, they find that the pattern of results for androgynous and undifferentiated participants is inconsistent with the pattern exhibited by either those with masculine gender identity or those with feminine gender identity.

disagree, 7 = strongly agree). The scale includes items such as “In social situations, I have the ability to alter my behavior if I feel that something else is called for” and “When I feel that the image I am portraying isn’t working, I can readily change it to something that does”. These items were combined and averaged together to create a self-monitoring index ( $\alpha = .75$ ).<sup>10</sup>

#### 2.4.4 Results

The regression model included a contrast-coded variable for being accompanied by a friend (1 if with friend, -1 if alone), while relative agency-communion (“ACDIF”) and self-monitoring were included in the model as continuous variables. The model also includes two-way interactions and three-way interaction of these variables. To reduce multicollinearity, the continuous variables were mean-centered (Aiken and West 1991). Similar to the analysis in the pilot study, several control variables such as income and buying impulsiveness are also included in the model (please refer to the Appendix C for details of the model specification and the measures).

The OLS regression results indicate that the overall model is significant ( $F(16, 109) = 12.89, p < .01$ ) and the model  $R^2$  is 66.9% (see Table 2.3). In addition, all VIFs are less than 1.7, suggesting that our results do not suffer from multicollinearity. The main effect for friend is both positive and significant ( $\delta_2 = 0.14, p < .05$ ). Further, consistent with H1, the interaction between friend and ACDIF is positive and significant ( $\delta_{14} = 0.28, p < .05$ )<sup>11</sup>, indicating that the level of the difference between agency and communion orientation of an individual affects the degree to which s/he is influenced by the presence of a friend during a shopping trip. More important, as predicted by H2, there is a significant three-way interaction between friend, ACDIF, and self-

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<sup>10</sup> Consistent with Flynn and Ames (2006), we do not find a significant correlation between agency/communion orientation (i.e., ACDIF) and self-monitoring ( $\rho = -0.15, p > .10$ ).

<sup>11</sup> Consistent with our results in previous studies, when we use gender as a proxy for agency-communion, there is again a positive and significant interaction between friend and gender ( $\beta = 0.14, p < .05$ ), as well as a significant main effect for friend ( $\beta = 0.12, p < .05$ ).

monitoring ( $\delta_{17} = 0.31, p < .05$ ).<sup>12</sup> In addition, the coefficients of all the main control variables have the expected signs, but only planned amount ( $\delta_1 = 0.71, p < .01$ ) and paying with a credit card ( $\delta_5 = 0.14, p < .05$ ) are statistically significant. We also conducted several re-estimations of the model (e.g., correcting for potential sample selection bias) to provide more insight into our findings. The results are substantively unchanged. These analyses are presented in the Appendix C.

Table 2.3: Regression Results

Equation: ln(amount spent)		
	Parameter Estimate	t-value
Intercept	3.99**	34.46
ln(planned amount)	0.71**	9.90
Friend	0.14*	2.16
Time spent in the store	0.003	1.61
ln(income)	0.02	0.24
Credit	0.14*	2.00
Mixed Payment (Cash + Credit)	0.15	1.21
In-store special	0.12	1.82
Buying Impulsiveness	0.01	0.23
Visit	-0.04	-0.99
Self-monitoring (SM)	-0.13	-1.40
ACDIF	0.08	0.76
Age	0.001	0.17
Gender	-0.03	-0.50
Friend x ACDIF	0.28*	2.60
Friend x SM	-0.10	-1.19
SM x ACDIF	0.10	0.70
Friend x ACDIF x SM	0.31*	2.12
*p < .05 **p < .01	R <sup>2</sup> = 67.0%	

<sup>12</sup> We also estimated a modified version of our model where the dependent variable was the difference between actual and planned spending and ln(planned) was dropped from the right hand side of the model. The coefficients on the friend x ACDIF and friend x ACDIF x self-monitoring are still positive and significant at the 5% level, whereas the coefficient on friend is positive, but not significant.

To facilitate the interpretation of the three-way interaction, we follow the post-hoc probing procedure recommended by Aiken and West (1991). We first calculate high (low) values for ACDIF and self-monitoring by adding (subtracting) the standard deviation to (from) the mean. We then conduct simple slope analysis, which examines the interaction between ACDIF and presence of a friend during a shopping trip on amount spent at low and high levels of self-monitoring. This analysis enables us to assess whether the pattern of results is consistent with the specific predictions of the second hypothesis. The moderating effect of self-monitoring is visually depicted in Figure 2.3. We also report the average actual spending across conditions in Table 2.4.

Table 2.4: Average Actual Spending across Conditions

	<b>Alone</b>		<b>w/ Friend</b>	
	<b>Low SM</b>	<b>High SM</b>	<b>Low SM</b>	<b>High SM</b>
<b>High ACDIF</b>	58.29 (n=19)	68.31 (n=16)	90.72 (n=17)	177.61 (n=12)
<b>Low ACDIF</b>	75.48 (n=16)	87.46 (n=17)	82.07 (n=11)	64.61 (n=18)

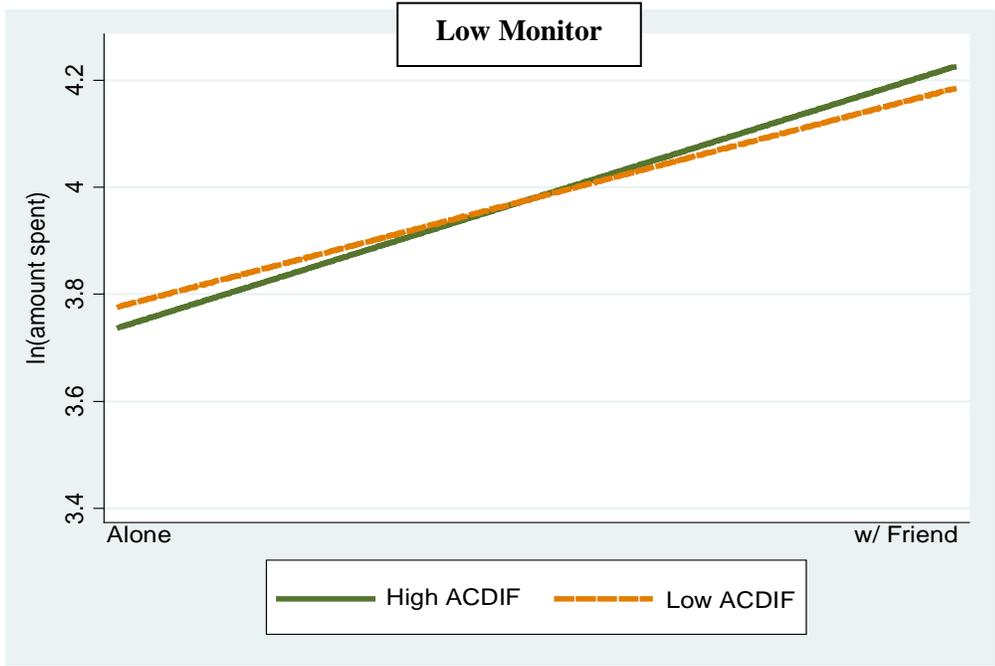
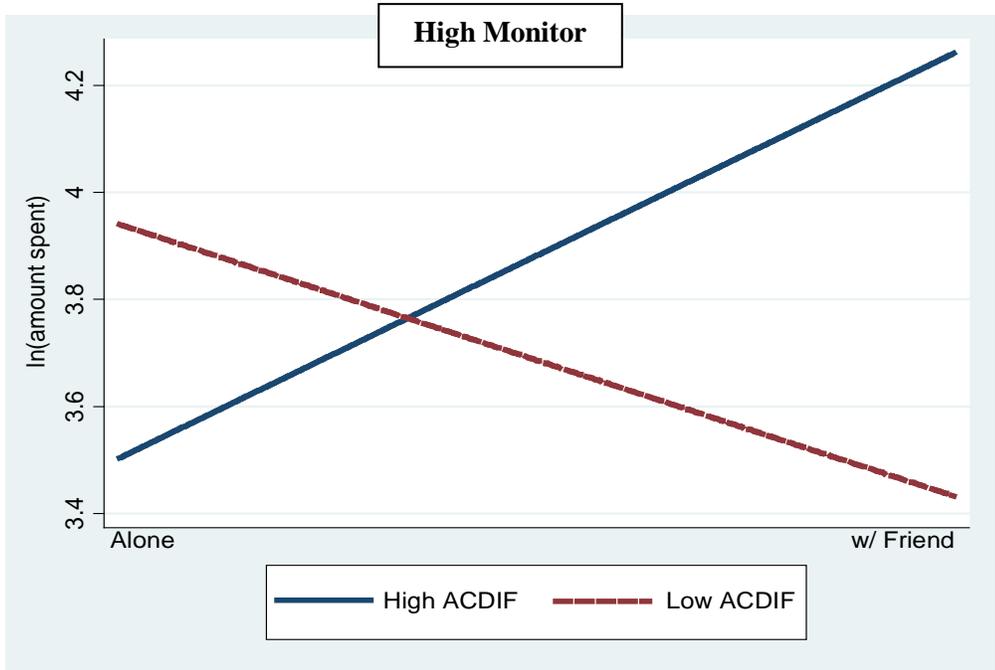


Figure 2.3: Three-Way Interaction between Presence of a Friend, ACDIF (Agency-Communion) Score and Self-Monitoring

As predicted by H2a, we find that the slopes for high self-monitor/high-ACDIF ( $b = 0.378, t = 2.90, p < .01$ ) and low self-monitor/high-ACDIF ( $b = 0.243, t = 2.15, p < .05$ ) are both significantly different from zero, indicating that regardless of their level of self-monitoring, consumers with high ACDIF scores spend significantly more when they are with a friend than when they are alone. Although the slope for high self-monitors is greater than that of low self-monitors, the difference between the slopes is not significant ( $t = 0.82, p > .41$ ).

Furthermore, the slope for high self-monitor/low-ACDIF is negative and significant ( $b = -0.254, t = 1.84, p < .05$ , one tailed), implying that high self-monitors with low ACDIF spend less when they shop with a friend as compared to when they shop alone. Although the slope for low self-monitor/low-ACDIF is positive, it is not statistically significant ( $b = 0.203, t = 1.33, p > .18$ ). Finally, the difference between the two slopes is statistically significant ( $t = 2.06, p < .05$ ). These results support H2b.

#### **2.4.5 Discussion**

The results support our thesis that self-monitoring qualifies the impact of the presence of a friend on spending for communion-oriented consumers, but not for agency-oriented consumers. We find that agentic consumers consistently spend more when they are accompanied by a friend as compared to when they are alone regardless of self-monitoring. However, higher self-monitoring moderates the impact of a friend's presence on the spending of the communion-oriented consumers. Communal consumers with high self-monitoring spend less in the presence of a friend, whereas there is no difference in the amount spent by communal consumers with low self-monitoring when they shop alone as compared to with a friend.

Thus far in our analysis, we either use gender as a proxy for the agentic or communal nature of participants (pilot study and Study 1) or measure agency-communion orientation (Study 2). Although both methods have been employed in the literature (e.g., He et al. 2008; Helgeson 1994; Winterich et al. 2009), priming agency-communion orientation will enable us to test our hypotheses in a more controlled setting. This is one of the objectives of Study 3.

Furthermore, a basic premise of our research is that communion-oriented consumers' impression management concerns lead them to control their spending in the presence of their friends. While the spending context utilized in the first three studies is self-focused (i.e., counter to a communion-oriented perspective) there are certain instances where increased spending is consistent with communal stereotypes. One such instance might involve donations to a charity, because the communal stereotypic beliefs mainly describe a concern with the welfare of other people and communion-oriented individuals embody such traits as caring, being helpful, and sympathetic (i.e., characteristics inherent in a charity; Eagly 1987). Conversely, agency-oriented individuals place emphasis on independence from others and embody such traits as being self-reliant (i.e., characteristics not inherent in donating to a charity). Thus, if differences in impression management concerns of agency- and communion-oriented consumers are the underlying reason for their differential sensitivity to a friend's influence, our findings should reverse when we examine communion- and agency-primed individuals' donation behavior in the presence of their friends. Specifically, agency-primed consumers with both high and low self-monitoring should adapt a "protective" self-presentation strategy (instead of "acquisitive" style as they do in the spending context); thus they should neither increase nor decrease their donation in the presence of their friends. It is important to note that although decreased donation is consistent with the self-reliant nature of agentic consumers, it will increase the risk of being seen

as “greedy” and “cheap”, which is inconsistent with agentics’ aspiration for status among their peers. As a result, we predict no effect (rather than a decline) of the presence of a friend on the amount donated by agentic consumers regardless of their self-monitoring. Communion-primed individuals with high self-monitoring are expected to donate more to a charity in the presence of a friend (vs. when they are alone), whereas communion-primed individuals with low self-monitoring should not change their donation when they are accompanied by a friend (vs. alone).

## 2.5 STUDY 3

### 2.5.1 Method

A 2 (orientation: agency vs. communion) x 2 (social presence: alone vs. friend) x 2 (self-monitoring: high vs. low) between-subjects experimental design was employed. Orientation and social presence were manipulated, whereas self-monitoring was measured. One hundred ninety-two undergraduate students from a large North American University completed the study in exchange for course credit.

*Procedure.* Undergraduate students signed up for the study with a friend who was also a registered undergraduate student at the same university. Upon arrival, the pairs of friends were informed that three randomly selected participants would receive \$50 after the study. They were then randomly assigned to agency/communion and friend/alone conditions. Participants in the alone condition were told that they would complete the study in separate rooms, whereas participants who were assigned to the friend condition remained in the same room until the end of the study. The experimenters (two males and two females) were also randomly assigned to the different conditions.

The first part of the survey included a priming task and manipulation check exercise. The experimenter then presented participants with a list of eight (fictitious) charities and verbally asked each participant whether s/he would like to donate to a charity if s/he won the \$50, and if so how much. In the friend condition, while the experimenter asked the donation question to both participants simultaneously, only the first participant's answer was included in the analysis as the other participant's response might be influenced by the first participant's response. Finally, participants in both the friend and alone conditions were given the second part of the survey, which contained the self-monitoring scale<sup>13</sup>, demographic questions, and an open-ended suspicion probe. None of the participants guessed the focal hypotheses of the research.

## 2.5.2 Measures

*Agency-Communion Prime.* To manipulate agency-communion orientation we used a scrambled-sentence task. Participants were presented with 20 scrambled sentences of which 15 were related to agency or communion orientation depending on the prime. The remaining five sentences were not related to either prime and were categorized as neutral (see the Appendix D for the full list of sentences). Words and phrases used for each prime were taken from Eagly (1987), Myers-Levy (1988), and Winterich et al. (2009). For example, the agency prime included sentences such as “personal beliefs are important” and “I try to be assertive”, while the communion prime included sentences such as “social norms are important” and “I try to be selfless”.

*Self-monitoring.* We again measured self-monitoring ( $\alpha = 0.74$ ; Lennox and Wolfe 1984).

*Manipulation Check.* To verify that the agency-communion prime was successful, we used Kuhn and McPartland's (1954) task where participants completed ten “I am ...” statements.

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<sup>13</sup> Neither the agency-communion prime nor the presence of a friend has a significant impact on the self-monitoring scores ( $\rho_{AC-SM} = 0.14, p > .10$ ;  $\rho_{F-SM} = -0.06, p > .50$ )

Two independent research assistants coded each response as either agentic or communal (95% agreement with any disagreements resolved through discussion). Agentic statements referred to a personal description, attitude or belief focusing on self (e.g., I am independent, I am tall).

Communal statements referred to either relationships or sensitivity to others (e.g., I am helpful, I am a daughter) or a demographic group or category to which the participant belongs to (e.g., I am a marketing major, I am a Christian). Statements that did not relate to either category were classified as other (e.g., I am hungry) and were excluded from the analysis. Participants in the agency-priming condition wrote more agentic statements than those in the communion-priming condition ( $M_{\text{agency}} = 5.30$  vs.  $M_{\text{communion}} = 4.62$ ,  $t = 2.38$ ,  $p < .05$ ). Participants in the communion-priming condition wrote more communal statements relative to those in the agency-priming condition ( $M_{\text{agency}} = 3.42$  vs.  $M_{\text{communion}} = 4.55$ ,  $t = 4.00$ ,  $p < .01$ ). These results indicate that agency-communion orientation was successfully primed.<sup>14</sup>

### 2.5.3 Results

Excluding accompanying friends and two outliers from the analysis resulted in a final sample size of 124 respondents (45% female; 52% with friend). The average donation was \$23.14 (SD = \$17.44). Table 2.5 reports the average donation across conditions.

Table 2.5: Average Actual Donation across Conditions

	Alone		w/ Friend	
	Low SM	High SM	Low SM	High SM
<b>Agency Priming</b>	\$25.28 (n=18)	\$29.17 (n=12)	\$22.67 (n=15)	\$23.42 (n=19)
<b>Communion Priming</b>	\$28.13 (n=16)	\$17.50 (n=14)	\$12.69 (n=13)	\$24.71 (n=17)

<sup>14</sup> Given that agency-communion orientation may be difficult to manipulate due to internalization of these characteristics through socialization at an early age (Eagly 1987, Winterich et al. 2009), an experimental design in which agency-communion orientation is primed provides a conservative test of our hypothesis.

We use regression to test our hypothesis, with self-monitoring mean-centered to minimize multicollinearity (all VIFs < 1.5). Contrast coding was used for agency-communion prime (1 if agency, -1 if communion), friend (1 if with friend, -1 if alone), and gender (1 if male, -1 if female). We regressed donation amount on the agency-communion prime, friend, self-monitoring, two-way interactions, three-way interaction of these variables, and gender. The results indicate that the overall model is significant ( $F(8, 115) = 2.17, p < .05$ ) and the model  $R^2$  is 13.14% (see Table 2.6). As predicted, there was a significant three-way interaction among agency-communion prime, friend, and self-monitoring ( $\beta = -6.67, p < .05$ ). The friend x self-monitoring interaction was also significant ( $\beta = 7.00, p < .01$ ). No other effects were significant. To facilitate the interpretation of the three-way interaction, we follow the post-hoc probing procedure recommended by Aiken and West (1991; see Figure 2.4).

Table 2.6: Regression Results

	Equation: Amount Donated	
	Parameter Estimate	t-value
Intercept	23.06**	14.86
Friend	-2.49	-1.60
Agency-Communion (AC)	2.38	1.54
Self-monitoring (SM)	3.54	1.33
Gender	-1.23	-0.80
Friend x AC	0.97	0.63
Friend x SM	-0.10	-1.19
SM x AC	7.00**	2.64
Friend x AC x SM	-6.67*	-2.51
* $p < .05$ ** $p < .01$	$R^2 = 13.1\%$	

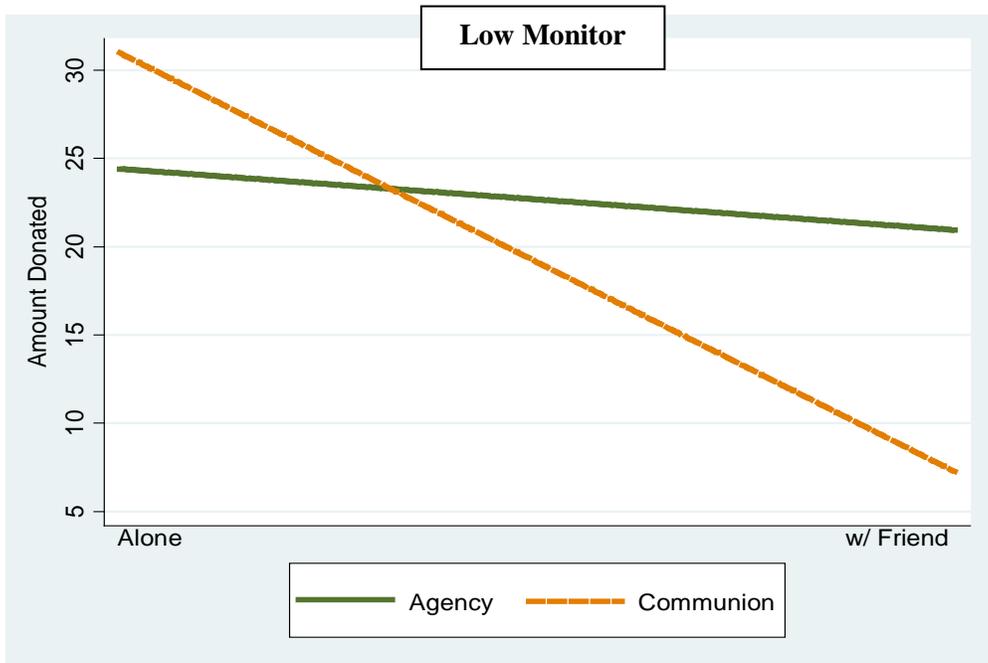
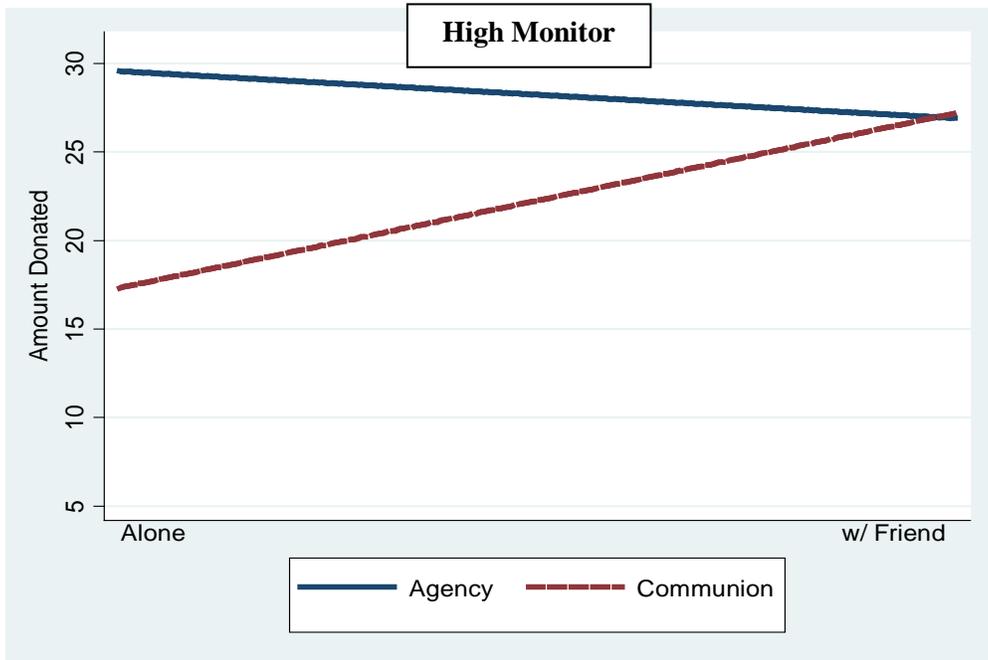


Figure 2.4: Three-Way Interaction between Presence of a Friend, Agency-Communion Orientation and Self-Monitoring

Consistent with our hypothesis, for both high and low self-monitors in the agency-priming condition there is no significant relation between presence of a friend and donation amount ( $b_{A-HSM} = -1.32, t = -0.42, p > .60$ );  $b_{A-LSM} = -1.73, t = -0.59, p > .55$ ). Conversely, for those with communion-prime and high-self monitoring, the presence of a friend has positive and significant impact on donation amount ( $b_{C-HSM} = 4.93, t = 1.65, p = .05$ , one-tailed test); the presence of a friend (vs. alone) leads to higher donations by communion-primed participants with high self-monitoring. This result is consistent with the argument that since communal individuals tend to be caring and nurturing, displaying a portrait that is consistent with these characteristics in front of a friend may bring about social rewards. Conversely, communion-primed participants with low self-monitoring donated less in the presence of a friend as compared to the alone condition ( $b_{C-LSM} = -11.85, t = -3.29, p < .01$ ). This result is unexpected and we speculate on why it arose in the discussion section. However, overall our results provide support for the predicted reversal of the friend effect in the donation (vs. spending) context.

#### **2.5.4 Discussion**

Study 3 demonstrates that the presence of a friend and self-monitoring interact to influence donation behavior of communion-oriented individuals, but not agency-oriented individuals. Stated differently, the direction of the interaction among presence of a friend, agency-communion orientation, and self-monitoring documented in Study 2 reversed when the consumer decision under examination changed from “spending for the self” to “donation to a charity”. Jointly, Studies 2 and 3 provide a test of the underlying role of impression management concerns. We document that individuals, with the exception of communals with low self-

monitoring, shape their spending decisions in the presence of their peers to avoid counteracting the stereotypes associated with their orientation.

One puzzling finding obtained in this study is that communalists with low self-monitoring decrease their donation to a charity in the presence of a friend (vs. alone). A possible explanation for this finding is that low self-monitors may simultaneously exert less effort and try to avoid being seen as making an effort to create a good impression, which may sometimes lead them to exhibit context inappropriate behavior (i.e., donating less to a charity in the presence of a friend since they were primed to think that others value nurturance). This is consistent with the items appearing in Snyder's (1987) self-monitoring scale that describes low self-monitors (e.g., "At parties and social gatherings, I do not attempt to do or say things that others will like" and "I feel a bit awkward in company and do not show up quite so well as I should"). Noteworthy is that previous research has also documented unexpected findings regarding the public behavior of low self-monitors (e.g., Ratner and Kahn 2002; White and Gerstein 1987). Future research is needed to reconcile theoretical arguments and empirical findings on the behavior of low self-monitors in different types of public contexts.

## **2.6 GENERAL DISCUSSION**

Across three field studies and a lab experiment, we demonstrate the expensive impact of a "friendly" social influence on consumers' actual spending decisions. In general, our findings suggest that the effect has the greatest implications for agentic consumers (e.g., males) as a decision to shop with a friend (versus alone) tends to have negative ramifications for their pocketbook – they spend more with an accompanying friend. This caveat does not appear to hold

for communal consumers (e.g., females). In fact, communal consumers with high self-monitoring spend significantly less money when they shop with a friend than when they shop alone. These findings appear to be spending context dependent as we also document that when the spending is for a good cause (i.e., donating to a charity), communals with high self-monitoring loosen their purse strings in the presence of a friend (versus alone), while donation behavior of agentic consumers is not influenced by an accompanying friend.

Our investigation of the impact of an accompanying friend on consumer spending makes important contributions with implications for both consumers and managers. First, previous research on social influences has found that friends influence consumers' purchase decisions in a positive way by providing information related to the product (Urbany et al. 1989). We extend this research by demonstrating that friends can also have deleterious implications for a shopper's wallet, as agentic shoppers spend more when they are accompanied by a friend as opposed to when they shop alone. Furthermore, the variability in our empirical design allows us to control for any confounding social factors including "mere presence effect" (Argo et al. 2005). For instance, our second study was conducted in a large shopping mall where both solo shoppers and those accompanied by a friend were subject to the mere presence effect of other shoppers in the stores, but we document a significant friend effect which is beyond any mere presence effect.

Our research also explores the underlying mechanism that drives our effects. We theorize that the presence of a friend impacts consumer spending because it motivates consumers to engage in impression management. To empirically explore this possibility, we identify and test the moderating roles of a consumer's agency-communion orientation and individual differences in self-monitoring, and test the impact of the spending context. First, we argue that support for an impression management mechanism would be provided if consumers engage in stereotypic

consistent behaviors in the presence of their friends. According to the stereotype literature (e.g., Rosenthal and Rubin 1978) individuals are motivated to engage in behaviors that are consistent with existing stereotypes when they are in public settings. A stereotype of agency-oriented individuals is that they are self-oriented and thus, in the present context, a consistent behavior could be self-promotion manifesting through increased spending. Conversely, because a stereotype of communion-oriented individuals is that they are group-focused, a behavior that would be consistent with this stereotype in the current research would be one that would prevent the person from standing out (i.e., they would be modest and would limit their spending). We find support for such effects.

Second, the definition of self-monitoring revolves around the idea that those who are high in this individual difference are likely to adapt and change their behaviors (i.e., manage their impressions) when in the presence of others. However, previous research (e.g., Flynn and Ames 2006) also suggests that higher self-monitoring provides additional benefits to communal individuals, but not to agentic individuals, in the process of impression management. Thus, Study 2's demonstration that our effects arise asymmetrically for communal and agentic consumers lends additional credence to the proposed underlying mechanism. The impact of an accompanying friend on the spending of agentic and communal consumers who are high in self-monitoring is positive and negative, respectively, whereas it is positive for both groups who are low in self-monitoring (though the impact is not significant for communal consumers with low self-monitoring). Finally, we provide evidence for the underlying role of impression management concerns by finding that the pattern of results is dependent on the spending context. In particular, agentic/communals with high self-monitoring spend more in the presence of a

friend (versus alone) in contexts when impression management concerns are paramount (agentic = self-focused situations, communal = other-focused situations).

In addition to extending the current literature on social influence in the market place, our research contributes to the nascent literature examining how agency-communion orientation impacts consumers' monetary decisions. While previous studies demonstrate the role of agency and communion on consumers' financial risk taking (He et al. 2008) and donation behavior (Winterich et al. 2009) in a private decision-making context, our study focuses on impression management related spending implications of the orientations.

Our findings have important implications for managers. Given that agentic consumers' spending appears to be highly susceptible to the presence of a friend, managers should focus on strategies that will help them attract a higher number of male consumers who shop with their friends. By creating shopping environments that prime an agentic orientation and encourage shopping with friends, retailers may be able to boost sales. For example, offering promotions such as "bring a friend and both get an extra X% off" targeted to male consumers can be effective in that increased spending by both consumers can cover expenses of the promotion and generate additional revenue. In fact, such a promotion might also legitimize spending for females since both shoppers will be receiving a discount.

Future research is needed to explore whether there are conditions (other than donating to a charity) under which communion-oriented individuals will purchase *more* when in the presence of a friend. It seems likely that there are instances in which communion-oriented consumers may not want to convey an impression of being modest such as when they are purchasing a gift for someone else. In this instance, modesty concerns may go by the wayside in favor of creating other types of impressions (e.g., a generous friend). Research should also examine the conditions

under which the type of store inhibits communion-oriented consumers from imposing mental constraints on their behavior (i.e., behaving modestly) or spurs them to spend more when in the presence of a friend. For instance it is possible that in environments that are more experiential in nature (e.g. salon or spa), the physical relaxation from receiving the treatment might simultaneously relax tendencies to engage in the stereotypic-consistent behavior of modesty and as a result communion-oriented individuals may be more likely to spend more when a friend is present (e.g., try additional services).

Few purchase decisions are made in a social void. Thus, it is important to examine how others influence our purchase decisions and spending. In this research, we took a crucial step toward achieving this goal by presenting a comprehensive analysis of the impact of shopping with friends, a major source of social influence in the shopping context, on consumers' spending. However, more research is needed to better understand the nature of the relationship between a friend's presence and a consumer's spending.

### **3.0 ESSAY 2: SOCIAL POWER AND FINANCIAL RISK TAKING: THE ROLE OF AGENCY-COMMUNION**

Often described as individuals' ability to control resources of their own and others without social interference, power has been shown to impact different aspects of human behavior. Recently researchers have begun to explore the effects of power on individuals' consumption and spending patterns. This stream of literature documents that experiencing a state of powerlessness versus powerfulness leads consumers to spend more money on status related items (Rucker and Galinsky 2008), as well as on the items they purchase for others versus themselves (Rucker, Dubois, and Galinsky 2011). In the present research, I investigate an alternative channel through which social power can influence consumers' welfare, namely financial risk taking.

Consumers often face risky monetary decisions such as investing in a stock versus bond fund, buying a lottery ticket or making a bet in a gamble. These decisions, in turn, have important implications for their welfare and well-being. However, little is known how individuals' interactions with others influence their financial risk taking. In a recent study, Levav and Argo (2010) document that an interpersonal touch can influence individuals' propensity to make risky financial decisions through altering their sense of security. In this study, I focus on the link between financial risk taking and a more prevalent social force that generally has negative connotations, i.e., social power.

I propose that having power versus lacking power over others does not unconditionally affect people's risk seeking in their financial choices. Rather its impact depends on individuals' agency-communion orientation (i.e., the tendency to focus on the self or others; Bakan 1966). Consistent with my thesis, I find that having power versus lacking it increases financial risk taking by agentic, but not communal, individuals. I attribute this to the notion that self-oriented individuals link power with self-interest goals, whereas other-oriented individuals associate power with responsibility goals (Chen, Lee-Chai, and Bargh 2001). In other words, agentic individuals experiencing a state of power take greater financial risk since increased wealth can fortify their powerful position and help them maintain their status. On the other hand, taking risk to enhance wealth and maintain the status associated with power is inconsistent with communal goals. I provide evidence supporting the proposed underlying mechanism by documenting that the effect of social power on agentic individuals' financial risk taking is reversed such that they take less risk when the risky decision offers low versus high personal benefit. However, communal individuals experiencing a sense of power refrain from taking higher financial risk regardless of the level of potential self-benefit associated with a risky decision. Further, I find that pursuit of self-interest goals mediates the interactive influence of power and agency-communion orientation on individuals' tendency to take financial risk.

This study contributes to the literature in several important ways. First, the present research adds to the growing body of work examining the role of social power in consumer behavior. To date, related studies have explored this role by looking at the changes in consumers' product preference and spending patterns (e.g., Rucker and Galinsky 2008, 2009; Fisher, Gregorie, and Murray 2011). I extend this stream of research by investigating how social power alters consumers' risk preferences in the financial domain. Second, the findings of this

research further our understanding of how consumers' interactions with those around them influence their financial risk taking (e.g., Levav and Argo 2010; Zhu et al. 2012). Finally, this research adds to the recent literature on the link between consumers' agency-communion orientation and their monetary decisions (e.g., He, Inman, and Mittal 2008; Kurt, Inman, and Argo 2011, Winterich, Mittal, and, Ross 2009). The rest of the paper is organized as follows. Next, I present the conceptual framework along with my hypothesis. Then I report the results from three studies and conclude with a discussion of the results.

### **3.1 CONCEPTUAL DEVELOPMENT**

Power, defined as "asymmetric control over valuable resources and outcomes within a situation and set of social relations" (Galinsky et al. 2008, p. 1451), has long been recognized by social scientists as an important determinant of human behavior. The possession of power has been shown to influence various psychological processes such as perspective taking (e.g., Tjosvold and Sagaria 1978), stereotyping (e.g., Fiske 1993), and group decision making (e.g., Fodor and Smith 1982). Other studies have also documented that having power versus lacking power over others increases individuals' propensity to act (Galinsky, Gruenfeld, and Magee 2003) and facilitates goal pursuit (Guinote 2007). The documented effects of power are prevalent as individuals are often assigned to powerful and powerless roles in their everyday lives. That is, managers have power over their employees, teachers have power over their students, and team leaders have power over other team members, etc.

Recently, researchers have started to examine whether experiencing a state of powerfulness or powerlessness impacts individuals' consumption and spending patterns (for a

detailed review see Rucker, Galinsky, and Dubois 2012). For instance, Rucker and Galinsky (2008) find that consumers who are in a state of low versus high power are willing to spend more on status-related products (e.g., an executive pen, a silk tie) which can help them restore their sense of power. In a related study, Rucker and Galinsky (2009) investigate how social power affects consumers' relative preference between products that are perceived as offering utility (e.g., performance and quality) and those that are viewed as signaling status to others. They document that high power consumers hold more favorable attitudes toward high-quality product of low-status than low-quality product of high-status, whereas the opposite is true for low power consumers. Further, Rucker et al. (2011) find that consumers experiencing a state of high power spend more money on the items they purchase for themselves than on the items they purchase for others, while the opposite effect is observed among those experiencing a state of low power. They attribute this to the notion that for the powerful, self is associated with greater psychological utility as compared to others, resulting in higher monetary worth allocated to spending on the self versus others.

In the present research, I focus on the impact of social power on a different aspect of consumer decision making, i.e., financial risk taking. This is an important issue to address since consumers' risky decisions in the financial domain can significantly alter their wealth and thereby have a major impact on their current and future spending ability. To date, however, limited research has examined the link between social power and individuals' risk perceptions and only in non-financial contexts such as health. Anderson and Galinsky (2006) find that high power, relative to low power, individuals perceive the world as less dangerous and filled with lower risk. Accordingly, for instance, high power individuals are more likely than low power individuals to engage in unprotected sex. In a recent study, Kim and McGill (2011) document

that higher power leads to lower risk perceptions only when individuals are facing risk-bearing mechanisms that are anthropomorphized (e.g., when skin cancer is described as if it has humanlike intentions to hurt people). The authors argue that this effect occurs because individuals who feel powerful tend to believe that they can transfer this feeling of mastery to the anthropomorphized entity, helping them control it. Overall, these studies suggest that social power affects individuals' risk perceptions by altering their optimism and sense of control over risk-bearing mechanisms.

While conceptualizing the relation between social power and financial risk taking, it is important to note that in addition to affecting individuals' overall well-being, the outcomes of risky financial decisions directly impact individuals' wealth. Thus, I maintain that the effect of having power over others on consumers' risk taking in the financial domain is not simple but contingent on whether or not people associate social power with self-interest goals aimed at enhancing their own wealth and maintaining the status associated with power.

As a basis for my theoretical framework, I use the agency-communion theory (Bakan 1966), which postulates that all humans possess two fundamental modalities, i.e., agency and communion. Previous research has explored the usefulness of agency-communion in different aspects of human behavior such as psychological and physical well-being (e.g., Helgeson 1994, Helgeson and Palladino 2012), information processing (Woike, Lavezzary, and Barsky 2001), and social comparison (e.g., Locke and Nekich 2000). In their most simplistic forms, agency refers to a tendency to reflect on one's individuality and emphasizes the self and its separation from other organisms, while communion refers to the merging of an individual in a larger organism and social connections with others (Helgeson 1994). That is, agency involves self-assertion and self-expansion, putting the pleasures and activities of the self at the center stage. In

contrast, communion involves such qualities as selflessness and emotional expressivity (Eagly 1987). Thus, agentic individuals strive for status and authority that facilitate and protect the differentiation of the individual from others. And, their behavior is primarily oriented toward achieving independence and mastery experiences. On the other hand, communal individuals strive for cooperation and harmony that protect the unity of the individual with a social entity (Wiggins 1991).

Consistent with the agency-communion theory, prior studies document that power motivation is positively correlated with agentic traits, while it is negatively related to communal qualities (e.g., Brunstein, Schultheiss, and Grassman 1998; McAdams et al. 1996; Saragovi et al. 2002). In parallel, low versus high status individuals are perceived to be less agentic and more communal (Conway et al. 1996). Researchers have also found that greater agency is ascribed to those who are wealthy versus poor (Christopher and Schlenken 2000) and those with higher versus lower earning potential (Sprecher 1989). Furthermore, Johannesen-Schmidt and Eagly (2002) document that higher income conveys agentic qualities (e.g., competence) and a lower level of communion (e.g., warmth).

More recently, within their promoting interests scheme, Frimer et al. (2011, p. 150) conceptualize agency as “the motive to promote the interests of the self, which manifests as the themes of social power, dominance, material wealth, and achievement”, while communion pertains to the “motive to promote the interests of others [rather than the self].” This is consistent with Chen et al.’s (2001) relationship-orientation based conceptualization of power’s effects, which proposes that self-focused individuals associate social power with self-interest goals, whereas other-focused individuals link power with responsibility goals. Based on prior literature, I contend that agency-communion orientation moderates the effect of social power on

individuals' financial risk taking behavior such that feeling powerful versus powerless leads to greater financial risk taking only for those individuals who are agency-oriented. Specifically, while agentic individuals with high (versus low) power are predicted to make riskier financial decisions to enhance their own wealth and highlight their status, communal individuals with high (versus low) power are expected to act responsibly and refrain from taking higher financial risk.

Formally:

**H1:** Having power versus lacking power leads to greater financial risk taking for agency-oriented, but not communion-oriented, individuals.

## 3.2 STUDY 1

### 3.2.1 Method

Study 1 employs a 2 (social power: high vs. low) x 2 (orientation: agency vs. communion) between-subjects experimental design. Power was manipulated, whereas agency-communion orientation was measured. One hundred undergraduate students (45 female, 55 male) registered for an introductory marketing course at a large mid-Atlantic university completed the study in exchange for course credit.

Participants first filled out the agency-communion scale and then completed the social power manipulation followed by a task designed to measure their financial risk taking tendency.

Power was manipulated using an episodic prime adapted from Galinsky et al. (2003). In the high-power condition, participants read:

“Please recall a particular incident in which you had power over another individual or individuals. By power, we mean a situation in which you controlled the ability of another person or persons to get something they wanted, or were in a position to evaluate those individuals. Please describe this situation in which you had power—what happened, how you felt, etc.”

In the low-power condition, participants read:

“Please recall a particular incident in which someone else had power over you. By power, we mean a situation in which someone had control over your ability to get something you wanted, or was in a position to evaluate you. Please describe this situation in which you did not have power—what happened, how you felt, etc.”

### 3.2.2 Measures

*Agency-Communion orientation.* Sixteen seven-point (1 = low, 7 = high) bipolar adjective scales from the Extended Version of Personal Attributes Questionnaire (EPAQ; Spence, Helmreich, and Holahan 1979) were used to measure agency and communion. The reliability and validity of these widely used scales have been well documented (e.g., Helgeson 1994). Examples of items that assess agency are “not at all independent—very independent” and “not at all self-confident—very self-confident.” Examples of items that assess communion are “very cold in relations with others—very warm in relation with others” and “not at all aware of others’ feelings—very aware of others’ feelings”. The responses were averaged to create their respective orientations ( $\alpha_{\text{agency}} = .75$  and  $\alpha_{\text{communion}} = .85$ ).

As agency and communion dimensions are both embodied by an individual and a high score on agency or communion does not necessarily suggest a low score on the other dimension, a measure was needed to capture the difference between the two dimensions. Thus, following previous research (e.g., Kurt et al. 2011), after calculating agency and communion scores for each respondent, I created a new measure to assess relative agency orientation, “ACDIF”, by subtracting each respondent’s communion score from his/her agency score. The ACDIF measure allows for assessing not only the direction but also the relative magnitude of each respondent’s agency-communion orientation. Consistent with Kurt et al. (2011), I classify participants with high ACDIF scores as agentic and those with low ACDIF score as communal.

*Financial risk taking.* Participants' financial risk taking was measured using a task adapted from Kermer et al. (2006). Participants were asked to imagine that they were given \$100 and told that they could participate in a 50-50 gamble in which they could win an additional \$100 or lose \$10, \$20, \$30, \$40, \$50, \$60, \$70, \$80, \$90, or \$100. Participants indicated whether they would accept each of these offers. Among the offers accepted by a participant, his/her highest potential loss (i.e., highest amount s/he is willing to risk to earn additional \$100) is used as the dependent variable in the analysis.

### **3.2.3 Results and Discussion**

Six participants who failed to complete the power manipulation task were excluded from the analysis, leaving 94 usable responses for the analysis.<sup>15</sup> The mean (median) amount wagered by participants is \$42.90 (\$40.00). The results were analyzed using OLS where the dependent variable is the financial risk taking measure and independent variables are power condition (contrast coded: 1 for high-power, -1 for low-power), ACDIF, and their interaction. The regression model also includes gender as a covariate. The model R-square is 10.7%. As suggested by Aiken and West (1991), ACDIF score is mean-centered to reduce multicollinearity (VIFs < 1.17) and facilitate the interpretation of main effects.

Consistent with my prediction, there is a positive and significant interaction between power and ACDIF ( $\beta = 3.56, p < .05$ ). Further, the results also reveal a positive and marginally significant main effect for ACDIF ( $\beta = 3.24, p = .08$ ). No other effects are significant. To facilitate the interpretation of the two-way interaction, I follow the post-hoc probing procedure

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<sup>15</sup> Four excluded participants that were assigned to the high-power condition provided the following responses: "I cannot think of a time", "I can't recall such an experience", "I can't think of an instance at the moment", and "I really don't think this ever happened before". Similarly, one of the excluded participants that were in the low-power condition indicated: "I honestly cannot recall a single instance". The other participant did not answer the question.

recommended by Aiken and West (1991). I first calculate high (low) values for ACDIF by adding (subtracting) the standard deviation to (from) the mean. I then conduct simple slope analysis, which examines the effect of social power at high and low levels of ACDIF. The moderating effect of ACDIF is visually depicted in Figure 3.1.

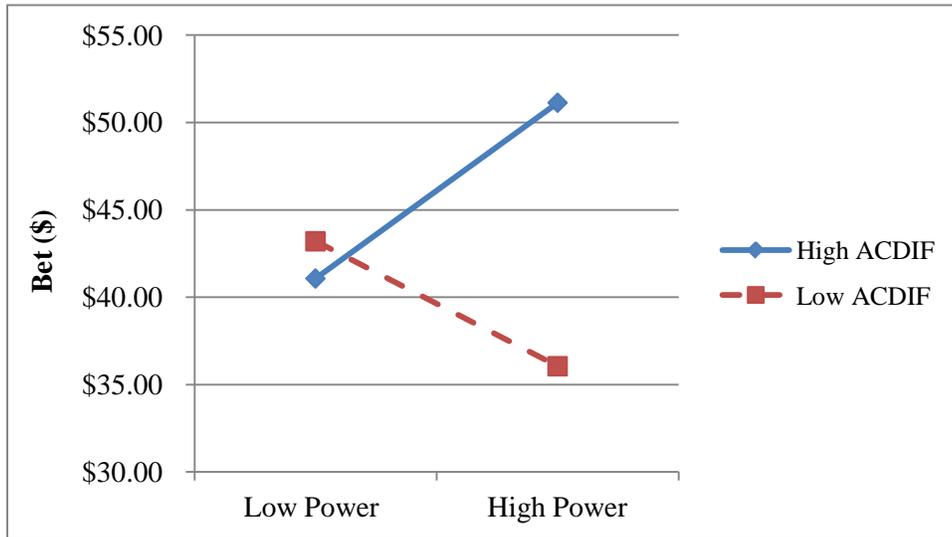


Figure 3.1: The Moderating Role of Agency-Communion on the Relation between Social Power and Financial Risk Taking

Supporting H1, I find that the slope for high ACDIF (i.e., agentic) participants is positive and significant ( $b = 5.031, t = 1.71, p < .05$ , one-tailed test), indicating that the experience of power increases agentic individuals' tendency to take financial risk. On the other hand, the slope for low ACDIF (i.e., communal) participants is negative and insignificant ( $b = -3.575, t = -1.20, ns$ ). This result suggests that having power versus lacking it does not result in greater financial risk taking among communal individuals.

Study 1 provides the initial evidence that social power does not unconditionally affect consumers' propensity to make risky financial decisions but its effect depends on individuals' agency-communion orientation. That is, while agentic individuals take greater financial risk when they experience a sense of power over others (versus when others have power over them), this is not the case for communal individuals. Although this study documents the interactive influence of power and agency-communion orientation on financial risk seeking, it does not test the mechanism underlying the documented effect. The next study is designed to achieve this goal. I argue that agentic individuals with high (versus low) power make riskier financial choices since a potential increase in their own wealth will help them enhance their powerful position and maintain the status associated with power. Thus, when the level of potential self-benefit associated with a risky decision is low, agentic individuals with high power are not expected to seek greater financial risk. Further, given that having power versus lacking it induces a sense of responsibility among communal individuals, possession of power will not lead them to make riskier financial decisions regardless of the level of self-benefit expected from putting their money at risk.

### **3.3 STUDY 2**

#### **3.3.1 Method**

Study 2 employs a 2 (social power: high vs. low) x 2 (orientation: agency vs. communion) x 2 (self-benefit: high vs. low) between-subjects experimental design. Power and self-benefit were manipulated, whereas agency-communion orientation was measured. Three hundred and forty five US participants (191 female, 154 male; Median age = 29.5) recruited from an online

marketplace (www.MTurk.com) completed the study in exchange for \$1.00 payment. Previous research (e.g., Buhrmester, Kwang, and Gosling 2011) has shown that the data obtained from MTurk participants are as reliable as those obtained via traditional methods.

After participants filled out the agency-communion scale, they completed the episodic power priming task used in Study 1.<sup>16</sup> Subsequently, they completed the financial risk taking task as described below. Following Oppenheimer, Meyvis, and Davidenko (2009), participants were also presented with a task designed to detect those who were not following instructions (see Appendix E). Seven participants who failed the instructional manipulation check were discarded from the sample.

### 3.3.2 Measures

*Agency-communion orientation.* Agency-communion was again measured using the 16-item agency-communion scale ( $\alpha_{\text{agency}} = .76$  and  $\alpha_{\text{communion}} = .80$ ). Then, each participants' ACDIF score was calculated as defined in Study 1.

*Financial risk taking.* Participants were asked to imagine that they have participated in a charity event where they could play “Odd-Even?”, which is a game of chance based on correctly guessing whether the winning number is odd or even (see Appendix F). If they guess correctly, they double amount they bet, otherwise they lose the bet. They were told that the amount they lose went to the charity. They were also asked to imagine that they have \$100 to bet. Further, participants assigned to the high self-benefit condition were told that they could keep 75% of

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<sup>16</sup> A pre-test conducted with MTurk subjects revealed that the power manipulation worked as intended. Following Duguid and Goncalo (2012), upon completing the episodic power priming task, the pre-test participants were asked to indicate to what extent they agree with the following statements on a seven-point scale (1 = Strongly Disagree, 7 = Strongly Agree): “I feel powerful”, “I feel influential”, “I feel unimportant” (R), “I feel subordinate” (R),  $\alpha = 0.85$ . As expected, the participants in the high power condition felt more powerful than those in the low power condition ( $M_{\text{High-Power}} = 4.91$  vs.  $M_{\text{Low-Power}} = 4.16$ ,  $p < .01$ ).

their winnings in a particular game, whereas 25% of their winnings were automatically donated to the charity. On the other hand, participants in the low self-benefit condition were informed that they could only keep 25% of their winnings in a play, while 75% of their winnings went to the charity. Each participant then indicated whether they would bet on odd or even in their first play along with how much they would bet. The amount wagered by participants is used as the measure of their financial risk taking tendency.

### 3.3.3 Results and Discussion

Eleven participants who failed to complete the power manipulation task were excluded from the analysis. I also excluded twenty participants who indicated that they are against gambling even if it is for a good cause, leaving 307 usable responses for the analysis.<sup>17</sup> The mean (median) bet amount is \$28.91 (\$21.00). There is no significant difference in the amount wagered between the high and low self-benefit conditions ( $M_{\text{high}} = \$30.14$  vs.  $M_{\text{low}} = \$27.65$ ,  $t = 0.95$ , *ns*).

The results were analyzed with OLS where the dependent variable is the amount wagered by participants. The independent variables are power condition (contrast coded: 1 for high-power, -1 for low-power), self-benefit condition (contrast coded: 1 for high self-benefit, -1 for low self-benefit), ACDIF (mean-centered), and their two-way and three-way interactions. The regression model also includes gender and age as covariates ( $R^2 = 7.4\%$ , VIFs < 1.12). As predicted, there is a significant three-way interaction among power, self-benefit, and ACDIF ( $\beta = 2.25$ ,  $p < .05$ ). The power x self-benefit interaction is also significant ( $\beta = 3.20$ ,  $p < .05$ ). Further, there is a marginally significant interaction between ACDIF and self-benefit ( $\beta = 2.05$ ,  $p = .06$ ).

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<sup>17</sup> Keeping these participants in the sample reduces the significance of the results but the direction and magnitude of the documented effects remain essentially unchanged.

No other effects are significant. To facilitate the interpretation of the three-way interaction, I follow the post-hoc probing procedure recommended by Aiken and West (1991; see Figure 3.2).

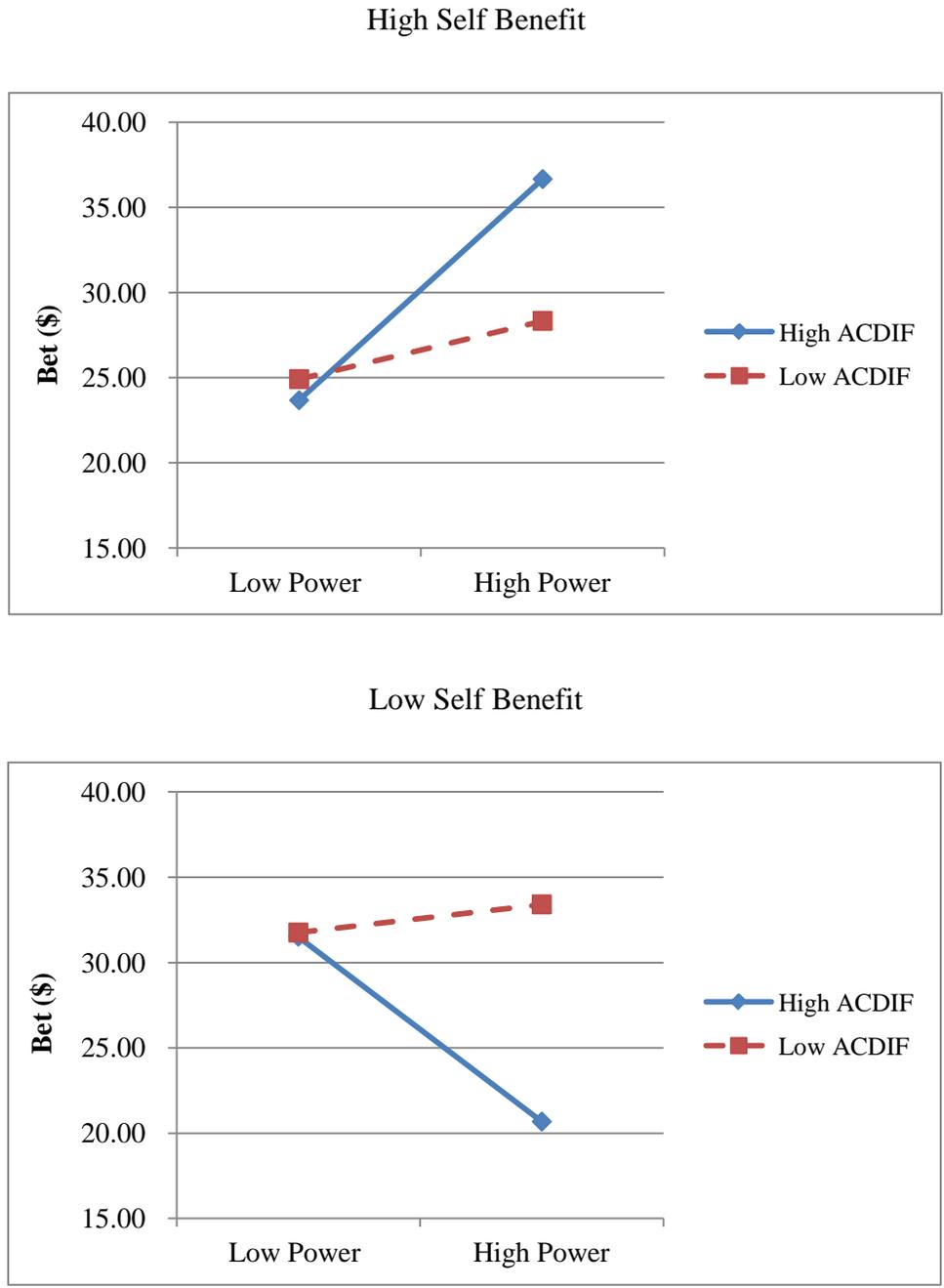


Figure 3.2: Three-Way Interaction among Social Power, Agency-Communion and the Level of Self-Benefit Derived from the Risky Financial Decision

Replicating the result of the first study, the simple slope for high ACDIF (i.e., agentic) and high self-benefit is positive and significant ( $b = 6.495, t = 2.37, p < .05$ ). That is, agentic individuals again are more risk seeking when they experience a sense of power and the risky financial decision they make offers high benefit for them. On the other hand, the simple slope for low ACDIF (i.e., communal) and high self-benefit is insignificant ( $b = 1.706, t = 0.64, ns$ ). More important, the simple slope for high ACDIF and low self-benefit is negative and significant ( $b = -5.421, t = -2.06, p < .05$ ). This finding suggests that when the potential self-benefit associated with the risky decision is low, agentic individuals with high versus low power actually take less financial risk. However, the simple slope for low ACDIF and low self-benefit is insignificant ( $b = 0.825, t = 0.32, ns$ ), indicating that having power versus lacking it does not have any impact on financial risk taking tendency of communal individuals regardless of the level of self-benefit.

This study sheds light on the process underlying the interactive influence of social power and agency-communion orientation on individuals' risk seeking in their financial choices. The results suggest that agentic individuals with high power make riskier financial decisions only when the benefit they obtain from a risky decision is high enough. In fact, when the outcome of a particular risky financial decision does not provide enough benefit to the self, agentic individuals with high power exhibit less risk seeking. On the other hand, consistent with the notion that possession of power leads communal individuals to act responsibly, having power versus lacking it does not induce greater financial risk taking among communal individuals irrespective of the amount of personal benefit derived from putting their money at risk.

At the first glance, the pattern of behavior exhibited by communal participants in this study may seem to be inconsistent with their caring nature. In particular, one might argue that communal participants with high power are expected to risk a higher amount in the low self-

benefit condition. The lack of support for this argument can be attributed to two reasons. First, using risky financial instruments with uncertain outcomes may not be an appropriate vehicle for communal individuals to display their nurturance. Second, the fact that the game offers a potential material benefit to the self (either high or low) distinguishes it from directly donating money to a charity. So, the personal benefit offered by the game may prevent communal participants from betting a higher amount regardless of their power. In fact, positive but marginally significant interaction between ACDIF and the level of self-benefit is consistent with this explanation (i.e., lower ACDIF, i.e., communal, participants are at least directionally more willing to take higher risk in the low versus high self-benefit condition as shown in Figure 2).<sup>18</sup>

Study 3 is designed to provide further evidence on the underlying mechanism of the documented effect via mediation analysis. I maintain that agentic individuals with high versus low power tend to promote their own interests (i.e., enhance their wealth), whereas communal individuals refrain from doing so. In other words, having power over others affects agentic's propensity to make risky financial decisions through increased pursuit of self-interest goals. In the next study, I test this proposed indirect effect of power and agency-communion interaction on financial risk taking.

## **3.4 STUDY 3**

### **3.4.1 Method**

Study 3 employs a 2 (social power: high vs. low) x 2 (orientation: agency vs. communion) between-subjects experimental design. Power was again manipulated using the episodic priming

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<sup>18</sup> Further, Winterich et al. (2009) document that the donation behavior of communal individuals is affected by various factors such as individual differences in moral identity and the type of donation targets (i.e., in-group versus out-group). Since the current research focuses on self-benefit of risk taking in the financial domain, addressing these issues is beyond the scope of this paper.

task. Agency-communion orientation was measured ( $\alpha_{\text{agency}} = .76$  and  $\alpha_{\text{communion}} = .80$ ). And, each participant's ACDIF score was calculated as defined previously. Eighty seven undergraduate students (33 female, 54 male) registered for an introductory marketing course at a large mid-Atlantic university completed the study in exchange for course credit.

After completing the power manipulation, participants indicated to what extent they agree with the following statements intended to measure the degree to which they associate power with self-interest goals: "Power should be used to benefit the self" and "Unless it is used to benefit the self, having power is meaningless" (1 = Strongly Disagree, 7 = Strongly Agree),  $\alpha = 0.61$ .

### **3.4.2 Measures**

*Financial risk taking.* Participants' risk seeking in their financial decisions was measured using a task adapted from He et al. (2008) and Levav and Argo (2010). Participants were asked to imagine that they have saved \$5,000 over the last few years and were considering two investment vehicles for their savings: (1) a bank account that offers a guaranteed return of 4%, and (2) a stock fund that offers 45% chance of generating a return of 16%, 10% chance of generating a return of 4%, and 45% chance of incurring a loss of 8% (i.e., a return of -8%). They were asked to allocate their savings between the two investment vehicles. I reasoned that the percentage of wealth invested in the stock fund increases with risk seeking because the stock fund offers the potential of generating a higher return but has a possibility of a loss. On the other hand, a modest return is guaranteed for the bank account.

### **3.4.3 Results and Discussion**

Three participants who failed to complete the power manipulation task are excluded from the analysis, leaving 84 usable responses for the analysis. The mean (median) percentage of savings

invested in the stock fund by participants is 36.44% (30.00%). The results were analyzed using OLS where the dependent variable is the percentage investment in the stock fund and the independent variables are power condition (contrast coded), ACDIF (mean-centered), and their interaction ( $R^2 = 13.2\%$ , VIFs  $< 1.11$ ). The regression model also includes gender as a covariate. As expected, there is a positive interaction between power and ACDIF ( $\beta = 6.00$ ,  $p < .05$ ; see Figure 3.3).

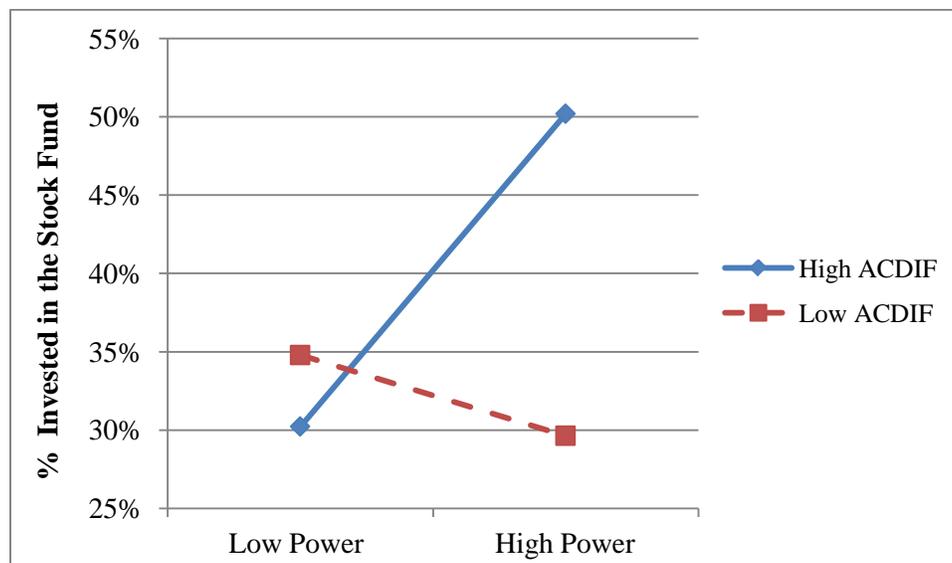
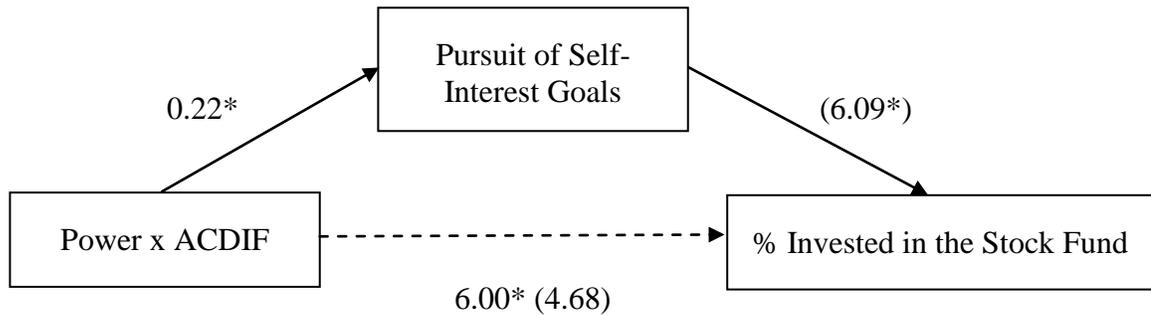


Figure 3.3: The Moderating Role of Agency-Communion on the Relation between Social Power and Financial Risk Taking

Replicating the results of prior studies, post-hoc analysis reveals that high-ACDIF (i.e., agentic) individuals with high power invest a higher percentage of their savings in the risky stock fund versus the bank account ( $b = 10.274$ ,  $t = 2.51$ ,  $p < .05$ ), while the same effect is not observed among low-ACDIF (i.e., communal) individuals ( $b = -2.281$ ,  $t = -0.55$ ,  $ns$ ). Next, I examine whether associating power with self-interest goals mediates the effect of power x

orientation interaction on financial risk taking. Consistent with my prediction, the analysis fulfills the criteria for a mediation model (Zhao, Lynch, and Chen 2010; see Figure 3.4).



Notes: Numbers outside the parentheses are standardized regression coefficients; numbers inside the parentheses are simultaneous regression coefficients. The estimated 95% confidence interval around the indirect effect of Power x ACDIF on % allocated to the stock fund through pursuit of self-interest goals does not contain zero (0.12 to 4.40). An asterisk indicates a *p*-value less than 0.05.

Figure 3.4: The Mediation Analysis

First, as reported above, the interaction between power and agency-communion orientation significantly impacts participants' tendency to take financial risk. Second, power x ACDIF interaction significantly predicts the extent to which participants link power with self-interest goals ( $\beta = 0.22, p = .05$ ). That is, having versus lacking power increases the tendency of agentic, but not communal, individuals to promote their self-interests. Finally, including pursuit of self-interest goals as an independent variable in the main regression model significantly reduces the effect of power x ACDIF interaction ( $\beta = 4.68, p > .10$ ), while the effect of pursuit of self-interest goals is significant ( $\beta = 6.09, p < .05$ ). I formally test the mediation model using Preacher and Hayes's (2008) macro with 5,000 bootstrapped samples as recommended by Zhao et al. (2010). The indirect effect of power x ACDIF interaction on financial risk seeking through

pursuit of self-interest goals is significant, with the 95% confidence interval excluding zero (0.12, 4.40).

Study 3 provides further evidence on the underlying mechanism of the interactive effect of power and agency-communion orientation on individuals' tendency to make risky financial decisions. In particular, pursuit of self-interest goals mediates the positive impact of having versus lacking power over others on agentic individuals' financial risk taking. This result is consistent with my thesis that having power over others leads agentic individuals to act in a self-enhancing manner, namely taking higher risk to increase their own wealth. However, this effect is not observed among communal individuals, who refrain from promoting their self-interests when having power.

### **3.5 GENERAL DISCUSSION**

Power is a force that touches on different facets of human life. One intriguing aspect of social power is that the possession of power over others does not only shape our social interactions but also our individual preferences and choices that do not have a direct impact on others. The present research explores a major aspect of consumer welfare that is affected by whether or not people have social power, i.e., financial risk taking. Across three studies, I document that the impact of power on individuals' risk seeking in their financial choices is contingent upon whether they are agency-oriented or communion-oriented. Specifically, agentic individuals, who tend to associate power with self-interest goals, make riskier financial decisions when they have power versus lack power over others. On the other hand, communal individuals, who tend to link

power with responsibility goals, refrain from taking greater financial risk when they experience a sense of power.

The asymmetric impact of social power on financial risk taking of agentic and communal individuals is due to differences in their self-orientation. Among agentic individuals, the possession of power is expected to elicit behavior that mainly focuses on promoting one's self-interests (Chen et al. 2001). Hence, agentic individuals possessing power tend to make riskier financial choices, which have the potential to enhance their personal wealth and thereby enable them to live up to their status and powerful position. Accordingly, I document that having power versus lacking it leads to greater financial risk seeking among agentic individuals only when the potential personal benefit they derive from putting their money at risk is high enough. On the other hand, agentic individuals with high power are willing to take less financial risk when the risky decision they make provides only a modest level of personal benefit. As opposed to its self-promoting impact on agentic individuals, the possession of power among communal individuals is expected to elicit behavior that reflects responsibility (Chen et al. 2001). Consequently, regardless of the level of self-benefit derived from a risky financial decision, communal individuals with high power do not seek higher risk as compared to those with low power. As an additional support on the proposed underlying mechanism, I find that the interactive influence of power and agency-communion orientation on financial risk taking is mediated by pursuit of self-interest goals.

These findings primarily extend our current understanding of the role of social power in consumer behavior. Previous research has demonstrated that powerful and powerless consumers differ in terms of their consumption and spending patterns. I add to this stream of literature by documenting that the possession of power impacts how consumers manage their wealth in the

face of risk and uncertainty. The main contribution of the present research lies in the fact that power induced changes in the financial risk seeking behavior can significantly affect not only current but also future spending ability of consumers. On the one hand, increased risk seeking can generate higher financial gains, enabling risk takers to command greater wealth and power. On the other hand, excessive risk seeking can have a detrimental impact on consumers' welfare (and thus their status) if individuals realize losses on their investments. Future research should explore the possibility that agentic individuals with high power avoid risk seeking in the financial domain if their attention is directed to potential losses associated with a risky monetary decision. It would also be interesting to examine how the impact of social power on financial risk taking changes when agentic and communal consumers make risky decisions on behalf of others rather than put their own wealth at risk. Another potentially fruitful avenue for future research is to investigate the interactive effect of power and agency-communion orientation on risk taking outside the financial domain such as health. Given that agency involves placing high emphasis on one's own well-being, powerful agentic individuals may be less likely to engage in risky health behaviors, which would pose a threat to their well-being and thus power.

This research also contributes to the growing body of literature examining how interactions with others impact individuals' willingness to take financial risk. Previous research documents that physical contact (Levav and Argo 2010) and participation in an online community (Zhu et al. 2012) result in greater financial risk taking. This effect stems from an illusionary sense of security and perceived support. In this paper, I document that a sense of power over others, a social force which often has negative connotations, also affects the level of financial risk individuals are willing to take. In particular, agentic individuals' desire to maintain the status associated with power and highlight the differentiation of the self from others through

increased wealth leads them to make riskier financial choices. Thus, the current study extends the prior research focusing on social interactions and risk taking behavior in the financial domain.

This study also complements and extends the work of He et al. (2008) who document that higher issue capability (i.e., the extent to which decision makers perceive that they have the resources or skills to resolve an issue) increases financial risk seeking among agentic but not communal individuals. The authors argue that agentic individuals are more sensitive to achievement of gains than communal individuals and that the compatibility between their achievement focus and the nature of investment task makes issue capability more relevant in determining the extent to which agentic individuals take financial risk. While He et al. (2008) focus on issue capability, a non-social construct, I examine how having control over others' actions and resources impact individuals' risky financial decisions. Relatedly, my theoretical framework is based on the differences in agentic and communal individuals' strivings for status and wealth. Accordingly, I find that promoting the interests of the self leads agentic individuals with high (versus low) power to make riskier financial decisions. In particular, when self-benefit obtained from the risky choice is low, agentic individuals with high (versus low) power actually exhibit less risk seeking behavior. This suggests that the underlying processes for the documented effects of issue capability and social power on agentic individuals' financial risk taking propensity are different.

The findings of the present research are also of interest to practitioners. For instance, financial advisors may be better able to serve their clients by recognizing that agentic investors are more willing to accept financial risk when they take positions of power (e.g., a recent promotion at work). Accordingly, agentic investors may be willing to increase the share of riskier financial assets (e.g., stocks and options) in their investment portfolios. Further, as

defined at the outset of the paper, powerful people control valued resources and have the capacity to influence other people's welfare. For example, an agency-oriented CEO whose personal wealth is directly tied to corporate level outcomes may overinvest in highly risky projects, which may in turn negatively impact firm value and thus, the welfare of investors and other employees. In general, given that high status roles in organizations demand more emphasis on agentic qualities as compared to low status roles (Eagly 1987), organizations may benefit from having an understanding of how power and the level of personal benefit managers derive from organizational outcomes interact to influence managers' tendency to make risky financial decisions.

Power plays a pervasive role in people's everyday lives as they are constantly segmented into powerful versus powerless roles. Thus, it is important to further our understanding of the impact of social power on individuals' consumption and spending habits. In the present research, I took an important step towards achieving this goal by examining how experiencing a sense of power affects consumers' wealth management in the face of risk and uncertainty.

#### **4.0 ESSAY 3: SEEING THINGS FROM THE OTHER GUY'S POINT OF VIEW: SELF-OTHER DIFFERENCE IN THE CONTEXT OF ENDOWMENT**

People do not make decisions in a social vacuum. Perspective taking shapes our perception of the world around us and thus, our consumption decisions. However, an accurate understanding of others' perspective cannot always be easily achieved (Van Boven and Loewenstein 2005). For instance, Van Boven, Dunning, and Loewenstein (2000) report that although consumers exhibit the endowment effect, they fail to recognize its impact on others' preferences—both owners and buyers underestimate the dissimilarity between their valuations of an object and the valuation of those in the opposite role. The thesis of our research is that consumers are so prone to perspective taking errors that even being in the shoes of others (e.g., being an owner and estimating the valuation of other owners) does not enable consumers to accurately predict others' valuations. Accordingly, the goal of this research is to examine the economic magnitude of failed perspective taking among consumers assuming the same role in the context of endowment.

Van Boven, Loewenstein and Dunning (2003, p. 352) point out: "Given the importance of the endowment effect for everyday economic behavior, people's perceptions of the endowment effect may be similarly important." Our research offers new insights regarding individuals' perception of the impact of endowment (and lack of ownership) on others by investigating whether owners and buyers systematically mispredict the valuation of an object by others in the same role. This is an important question to address. For example, when setting an

asking price for a commodity, a seller should consider not only how much potential buyers would pay for it, but also the reservation price of other sellers. In parallel, a prospective home buyer has an interest in both estimating the home owner's lowest selling price and other potential buyers' maximum purchase price.

Biased predictions of the valuation of others in the same role may lead sellers and buyers to engage in transactions that are suboptimal (e.g., buyers may overbid). In addition, post-transaction upward external comparisons in trading (e.g., Is the price I paid higher than the price others in a similar situation paid?) have been shown to negatively impact both buyers' and sellers' satisfaction with a transaction (Novemsky and Schweitzer 2004). Thus, it is important for prospective sellers and buyers to engage in accurate perspective taking before determining their asking price and offer price, respectively.

In an interesting study, Van Boven et al. (2000) document that people who do not own an object systematically underestimate how much other people who own the object will require to part with it. They also find that people who do own an object overestimate how much those who do not own the object will pay to acquire it. The authors attribute these findings to empathy gaps between owners and buyers. In this paper, we argue that eliminating these *interrole* empathy gaps among consumers (e.g., asking owners, rather than buyers to predict the valuation of owners) does not enable them to correctly predict the valuations of others. We base our prediction on previous research suggesting that empathy gaps persist even among those in the same role (i.e., *intrarole* empathy gaps) such that individuals tend to underestimate the intensity of affective states held by others who are in similar situations as the self, as well as the impact of affective experiences on others' preferences and choices (e.g., Loewenstein 1996; Van Boven, Loewenstein, and Dunning 2005; Faro and Rottenstreich 2006).

We maintain that *intrarole* empathy gaps impair consumers' perspective taking in the context of endowment, resulting in a self-other difference in the value function. Further, since owners and buyers tend to focus on what each stands to forgo in the potential exchange—the object and the money, respectively— (Carmon and Ariely 2000), we contend that the self-other gap in valuation manifests itself in opposite directions between the two groups. In particular, we argue that owners fail to appreciate the extent to which endowment (and thus, forfeiting the item in an exchange and not getting to enjoy its benefits) affects other owners' valuations. Accordingly, we predict that owners will underestimate the average selling price demanded by other owners. On the other hand, we maintain that buyers underrate the extent to which lack of ownership (and thus, giving up money to obtain the ownership of the item) impacts other buyers' valuations. Thus, we predict that buyers overestimate the average purchase price offered by other buyers. In conjunction, biased estimations by both groups will translate into failed prediction of the endowment effect.

We report the results of three experiments that test our thesis. In studies 1A and 1B, we examine whether owners and buyers accurately predict how valuable a coffee mug would be to other people in the same role. Our results show that the predictions of both groups are significantly biased in the hypothesized directions. Participants fail to anticipate the impact of endowment and lack of ownership on others' preferences, even when they estimate the valuations of those in the same role they have been assigned to. This finding extends the previous literature by documenting that people cannot accurately predict the endowment effect even in the absence of *interrole* empathy gaps. In study 2, we manipulate the degree of participants' perceived similarity to other participants to test our prediction that this attenuates the magnitude of the bias in their predictions. Our findings reveal that when owners and buyers

consider their similarity to other owners and buyers, respectively, their mispredictions of others' valuation are attenuated. Further, we provide evidence supporting our proposed underlying mechanism by documenting that greater perspective taking (i.e., the cognitive capacity to consider the world from others' viewpoints) is associated with lower estimation errors when participants are high, but not low, in empathy (i.e., the ability to connect emotionally with other individuals). We achieve this by measuring perspective taking in study 3 and manipulating it in study 4.

Our research makes three important contributions to the literature. First, we document evidence of self-other differences in valuation and discuss their practical implications. Second, we study a previously unexplored dimension of perspective taking among owners and buyers—biases in their *intra*role comparative valuation judgments. Third, we document that the success of consumers' perspective taking attempts depends, at least in part, on their empathic ability in the context of endowment. Next, we present our conceptual development and derive testable hypotheses. We then describe the studies and present our results. We conclude with a general discussion of the implications of our results and directions for future research.

#### **4.1 CONCEPTUAL DEVELOPMENT**

Previous research (i.e., Loewenstein and Adler 1995; Van Boven et al. 2000) has examined interrole perspective taking in the context of endowment. First, in a series of studies, Loewenstein and Adler (1995) investigate whether potential owners who did not possess an object could anticipate the endowment effect. In one study, after the authors elicited hypothetical selling prices for a coffee mug from subjects who did not own the mug, they endowed these

subjects with mugs and elicited their actual selling prices. The results show that subjects underestimate how much they would require to sell their mugs by 30% (averaged across two samples reported in the same study). In another study, the authors develop an index of prediction bias, calculated as follows:

$$\beta = \frac{(s-s')}{(s-c)} \quad (1)$$

where,  $s$  and  $s'$  represent the minimum selling price for the mug stated by actual owners and potential owners, respectively, and  $c$  stands for choosers' highest price at which they would choose to receive the mug rather than money. The value of the index depends on how much potential owners anticipate the endowment effect:  $\beta$  equals 0 (i.e.,  $s' = s$ ) for those who correctly predict the endowment effect, and 1 (i.e.,  $s' = c$ ) for those who anticipate no endowment effect. The average  $\beta$  is 0.84, indicating a prediction bias of 84%. In other words, only 16% of the true impact of the endowment effect is reflected in hypothetical selling prices of potential owners. Overall, two studies show that individuals fail to recognize how much they would attach to objects once they possess these objects. That is, they underestimate the impact of the endowment on their own preferences. Loewenstein and Adler note that (p. 936): "It would be interesting to test whether people with objects overpredict the buying prices or choice values of those without such objects."

Building on Loewenstein and Adler's work, Van Boven et al. (2000) assess owners' and buyers' predictions of one another's reservation prices. They find that subjects who are endowed with a coffee mug (i.e., owners) significantly overestimate the maximum purchase price stated by subjects who were not endowed with a mug (i.e., buyers). On the other hand, buyers underestimate owners' minimum selling price. For instance, across two studies, they report an average underestimation of 28% in buyers' estimations. The authors conclude that "egocentric

empathy gaps” between owners and buyers lead them to mispredict the impact of the endowment effect on preferences of others in the opposite role. In order to compare owners’ and buyers’ egocentric empathy gaps, the authors construct egocentrism indices as follows:

$$\gamma_o = \frac{(b' - b)}{(s - b)} \quad (2a)$$

$$\gamma_b = \frac{(s - s')}{(s - b)} \quad (2b)$$

where  $b$  and  $b'$  represent the actual valuation of buyers and the owners’ prediction of average buyer’s maximum purchase price, respectively. Analogously,  $s$  and  $s'$  represent the actual valuation of owners and the buyers’ prediction of average owner’s minimum selling price, respectively. The index equals 0 if a participant correctly predicts the other role’s valuation. It increases with the participant’s underestimation of the endowment effect and becomes 1 when the participant is completely unaware of the endowment effect. Van Boven et al. (2000) find that egocentrism scores are significantly positive for both owners and buyers. Across two studies, egocentrism indices of owners ( $\gamma_o$ ) and buyers ( $\gamma_b$ ) are both equal to 0.39, suggesting that both groups underestimate the endowment effect by 39%.

Individuals’ misperceptions about the endowment effect are expected to have important practical implications since, as pointed out by Hastie and Dawes (2001, p. 308), “the endowment effect is surely part of the explanation for the malfunction of some markets in which trading occurs at inefficiently slow rates.” Relatedly, Van Boven et al. (2003) document that since “buyer’s agents” (i.e., study participants who make the offer on behalf of the experimenter) underestimate the impact of the endowment effect on owners’ selling prices, they make suboptimally low offers to buy an object from an owner, leaving them with less money than they could have made.

Although previous research has documented the role of *interrole* (i.e., non-owner vs. owner) empathy gaps in shaping people's perceptions of the impact of the endowment effect on both their own and other people's preferences, it has not been documented whether people can correctly anticipate the impact of endowment and lack of ownership on consumers in the absence of *interrole* empathy gaps. It is possible that perspective taking even among those who are in the same role may be impaired due to individuals' tendency to underestimate the similarity between their own perceptions and the perceptions of others who are in the same psychological state (Dunning, Van Boven, and Loewenstein 2001). Accordingly, we hypothesize that even being in the shoes of other people—being an owner (buyer) and estimating the valuation of other owners (buyers)—does not necessarily help people accurately predict the valuations of those in the same role. This failure in turn leads to misprediction of the endowment effect.

Our thesis is based on previous research (e.g., Loewenstein 1996, Van Boven et al. 2005; Faro and Rottenstreich 2006) documenting that people underestimate the extent to which an affective experience influences preferences and behaviors of others in the same situation as themselves, giving rise to *intra-role* empathy gaps. This stream of literature proposes that people tend to believe that others in the same role experience less intense emotional reactions than they actually do and that emotional reactions experienced by others have less impact on their choices than they actually do. For instance, Van Boven et al. (2005) examine emotional perspective taking in the context of individuals' predictions of others' reactions to embarrassing situations and find that individuals systematically underestimate the impact of fear of embarrassment on others' preferences and choices. In particular, they document that while participants, on average, required \$53 to dance in front of an auditorium full of people to Rick James' song "Super Freak", they predicted that the average performance price stated by their classmates was only

\$19. This finding suggests that people expect others to be more willing to dance in front of an audience (in exchange of money), which they actually consider as a potentially embarrassing situation. The authors conclude that while people view public performances as inherently uncomfortable, both to the self and to others, they unrealistically believe that the reaction of others to such uncomfortable situations is somewhat different than that of the self.

Furthermore, Faro and Rottenstreich (2006) investigate how accurate people are in predicting others' decisions under risk. They maintain that although people experience such feelings as hope, anxiety, and fear when confronting risky decisions, they underestimate the extent to which others in the same situation feel similar emotions and make decisions based on these emotions. Accordingly, they document that such emotional empathy gaps among individuals translate into a self-other difference in the *probability weighting function* of prospect theory. In particular, Faro and Rottenstreich (2006) find that people do not properly anticipate others' overweighting and underweighting, leading them to underestimate others' tendency to take risk when they are themselves risk seeking in the same situation and overestimate others' risk aversion when they are themselves risk averse in the same situation. To illustrate, the median participant in their sample was indifferent between a sure gain of \$10 (\$3,250) and the chance of winning \$4,000 with 0.01% (99%) probability but predicted that another participant would ask for \$5 (\$3,900) in the same situation. Furthermore, they find that people's mispredictions of others' probability weighting in the same role covary with the closeness of the target and individual differences in empathy, supporting their proposition that empathy gaps among those in the same role prevent people from accurately predicting others' decisions under risk. In a related study, Burson, Faro, and Rottenstreich (2010) examine people's predictions of others' evaluations of incentive pay contracts and find that people mispredict not only others'

weighting of probabilities but also their likelihood judgments (i.e., probability of completing a task).

People's tendency to mispredict the impact of affective experiences on others' preferences and choices may also impair their accuracy in predicting how much others who are in the same situation as themselves value an object. As Hsee and Rottenstreich (2004, pp. 27-28) point out, "valuation is a complex process...most real-world valuations mix calculation and feeling." Thus, in line with the framework proposed by Faro and Rottenstreich (2006), we maintain that the inability of the average owner and buyer to connect emotionally with others in the same role leads them to misstep into the shoes of others in the process of perspective taking, resulting in a self-other difference in the value function. Put differently, since people tend to underestimate the intensity of emotional states held by others, they are expected to predict that others' choices will exhibit a more muted form of the value function, particularly in the domain of losses as owners and buyers tend to focus on what each stands to forego in the potential exchange—the object and the money, respectively (Carmon and Ariely 2000).

We argue that self-other differences in valuation arising from *intra*role empathy gaps will prevent consumers from correctly anticipating the reservation prices of others in the same role. Specifically, when consumers own an object, they will underestimate how much other owners would require to part with the same object. That is, owners incorrectly surmise that the disutility of forfeiting an object will be lower for others as compared to themselves (i.e., their value function lies below the predicted value function of other owners in the domain of losses). On the other hand, consumers who are not endowed with an object will fail to realize the extent to which lack of ownership affects preferences of other buyers such that they will underestimate the amount of disutility (or pain) others experience from the payment required to obtain the object.

In other words, when consumers do not own an object, they overestimate how much money others would be willing to give up to acquire the object. Formally:

**H1a:** Owners will underestimate the actual minimum selling price stated by other owners.

**H1b:** Buyers will overestimate the actual maximum purchase price stated by other buyers.

**H1c:** Due to H1a and H1b, when estimating the valuations of others in the same role, owners and buyers will not anticipate the endowment effect.

## 4.2 STUDY 1A

For the initial investigation of whether individuals make biased predictions of the valuation of others in the same role, we built on the methodology of Kahneman, Knetsch, and Thaler (1990) and Van Boven et al. (2000). One group of participants (“owners”) who were endowed with a university coffee mug indicated the lowest price at which they would be willing to sell their mugs.<sup>19</sup> After they indicated their selling prices, participants estimated the average lowest price at which other owners would be willing to sell their mugs. In a separate session, another group of participants (“buyers”) who were not endowed with mugs indicated the highest price at which they would be willing to receive the mug instead of that amount of cash. After they indicated their own prices, participants estimated the average highest price at which other buyers would choose to receive the mug instead of cash. Note that technically we are eliciting choice prices instead of buying prices and thus, the participants in the “buyer” condition are actually choosers. This helps us control for income effects or cash constraints (Lerner, Small, and Loewenstein

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<sup>19</sup> In the endowment effect studies, the terms “owners” and “sellers” are used to define the group of participants who own an object and are asked to indicate their willingness to sell the object at different prices. For ease of exposition, we use the term “owners” throughout the paper.

2004). Following previous literature (e.g., Morewedge et al. 2009; Peck and Shu 2009), we refer to these participants as “buyers” rather than “choosers” for ease of exposition.

#### **4.2.1 Method**

Fifty undergraduate students registered for two sections of a marketing course at a large mid-Atlantic university participated in the study. There were twenty-nine students in the “owner” session and twenty-one students in the “buyer” session. Owners were given a dark blue porcelain coffee mug with the university’s name and logo on it along with the following written instructions:

You now own a university mug that is yours to keep and take home. In a few minutes, you and other participants of this study will have an opportunity to sell the mug to the experimenter in exchange for cash. For each of the prices below, please indicate whether you choose to: (1) receive that amount of money and return the mug to the experimenter, or (2) not sell the mug at that price. The experimenter will randomly select one of the prices listed below and your choice for that price will be honored.

Buyers were shown the identical coffee mug and given the following instructions:

You now do not own a university mug that is yours to keep and take home. In a few minutes, however, you and other participants of this study will have an opportunity to receive a mug from the experimenter or some amount of cash. For each of the prices below, please indicate whether you choose to: (1) receive a mug from the experimenter, or (2) receive that amount of money instead of a mug. The experimenter will randomly select one of the prices listed below and your choice for that price will be honored.

Owners indicated for each price on a list of prices ranging from \$0.50 to \$10.00 (in \$0.50 increments) whether they would sell their mugs. Buyers indicated for every price on the same list whether they would choose to receive the mug or receive that amount of cash. Neither owners nor buyers were told that the mug was sold for \$6.95 at the university bookstore. Owners’ valuation of the mug was defined to be the lowest price at which they would sell their mug, whereas buyers’ valuation was specified to be the highest price at which they would choose to receive the mug instead of that amount of cash.

After indicating their own valuation, participants estimated the average valuation of other participants in the same role. Owners read the following: “Please estimate, on average, the lowest price at which *other participants* of this study will be willing to sell the mug”, whereas buyers read the following: “Please also estimate, on average, the highest price at which *other participants* of this study will choose to receive the mug instead of that amount of cash.” In order to provide an incentive for accuracy, they were offered a \$2.00 reward if their estimation was within \$0.50 of the actual average valuation. After all the participants completed and returned their surveys, the randomly selected price was announced by the experimenter and all resulting transactions were conducted.

#### 4.2.2 Results

Table 4.1: Actual and Estimated Average Reservation Prices

<b>CONDITION</b>	<b>ACTUAL (1)</b>	<b>ESTIMATED (2)</b>	<b>DIFFERENCE* (2) – (1)</b>
<b>OWNER</b> (n=29)	\$5.34	\$4.32	-\$1.02 ( $t = -2.93, p < .01$ )
<b>BUYER</b> (n=21)	\$3.14	\$3.94	\$0.80 ( $t = 1.98, p < .05$ )

\*one-tailed test is used to test these predictions.

As reported in Table 4.1, we find a significant endowment effect; the average lowest selling price ( $M_{\text{owners-actual}} = \$5.34$ ) is higher than the average buying price ( $M_{\text{buyers-actual}} = \$3.14$ ),  $t(48) = 3.44, p < .01$ . More importantly, consistent with H1a, owners underestimated the average lowest selling price stated by other owners ( $M_{\text{owners-estimated}} = \$4.32$ ). The average

underestimation, which is the average of owners' individual estimation errors (i.e., estimated average minus actual average of selling prices of other owners), is  $-\$1.02$ ,  $t(28) = -2.93$ ,  $p < .01$ .<sup>20</sup> That is, owners, on average, underestimated the valuation of other owners by 19%. On the other hand, buyers overestimated the average highest buying price stated by other buyers ( $M_{\text{buyers-estimated}} = \$3.94$ ), supporting H1b. The average overestimation, which is the average of buyers' individual estimation errors, is  $\$0.80$ ,  $t(20) = 1.98$ ,  $p < .05$ . This suggests that buyers, on average, overestimated the valuation of other buyers by 26%.

We also calculate adjusted valuations of both owners and buyers. That is, for an owner, we subtract his or her estimation of the average lowest selling price of other owners from his or her own selling price. Similarly, for a buyer, we subtract his or her estimation of the average buying price of other buyers from his or her own buying price. This procedure yields two valuation components for each participant: (1) adjusted valuation (i.e., own price - estimated average) and (2) estimated market valuation (i.e., estimated average). Consistent with H1c, the results show that there is no significant difference in the estimated market valuations between owners and buyers ( $M_{\text{owners-estimated}} = \$4.32$  vs.  $M_{\text{buyers-estimated}} = \$3.94$ ),  $t(48) = .72$ , *ns*. On the other hand, the difference in the adjusted valuations between two groups is statistically significant ( $M_{\text{owners-adjusted}} = \$1.02$  vs.  $M_{\text{buyers-adjusted}} = -\$0.80$ ),  $t(48) = 3.16$ ,  $p < .01$ . These results suggest that when estimating other people's valuations, the participants do not anticipate the endowment effect. It is the significant difference in the adjusted (or personal) valuations of the two groups that drives the endowment effect.

An integrated index of anticipation of the endowment effect by the participants is shown below:

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<sup>20</sup> Since we had clear directional predictions and theoretical justification for these predictions, all reported p-values are based on one-tailed test. However, using two-tailed test does not change our conclusions.

$$I = \frac{(s' - b')}{(s - b)} \quad (2)$$

where,  $b$  and  $b'$  represent the average actual and predicted maximum purchase price of buyers, respectively.  $s$  and  $s'$  represent the average actual and predicted minimum selling price of owners, respectively. The lower the index, the higher the underestimation of the endowment effect. In our study, the index is equal to 0.17  $[(\$4.32 - \$3.94) / (\$5.34 - \$3.14)]$ , suggesting that the participants underestimate the true impact of the endowment effect on preferences of others in the same role by 83%. To provide a sense of the substantiveness of our results, we also calculate the index of Van Boven et al. (2000)— equations 2a and 2b— for our sample as if the prediction of owners' minimum selling price (buyers' maximum purchase price) was provided by owners (buyers) on behalf of buyers (owners). Remember that in Van Boven et al.'s study, buyers and owners are asked to predict the reservation prices of those in the other role. Using Van Boven et al.'s indices enables us to see what happens if a buyer does not himself predict the minimum selling price of owners, but rather he asks for help from an owner (since she will have a better understating of the psychological state of owners) to predict the average minimum selling price. If owners have an advantage over buyers to predict the valuations of owners, then our hypothetical calculation should generate a lower egocentrism score than that reported by Van Boven et al. We find egocentrism scores of 46%  $[(\$5.34 - \$4.32) / (\$5.34 - \$3.14)]$  and 36%  $[(\$3.94 - \$3.14) / (\$5.34 - \$3.14)]$  for owners and buyers, respectively. Comparing these figures to 39% reported for both groups by Van Boven et al. reveals that eliminating *interrole* empathy gaps does not help the participants at all in predicting the endowment effect with higher accuracy.

### 4.2.3 Discussion

The results of study 1A reveal self-other differences in valuation. While owners, on average, require \$5.34 to surrender their mugs, they predict that other owners would require only \$4.32 to part with their mugs. On the other hand, buyers, on average, offer \$3.14 for the mug, whereas they believe that other buyers would be willing to give up \$3.94 for the same mug. Overall, the evidence supports our thesis that both owners and buyers make biased predictions of valuation of an object (i.e., mug) by others in the same role, but in opposite directions – buyers overestimate other buyers' offer prices and owners underestimate other owners' asking prices. Notably, these prediction errors are documented despite the fact that a monetary incentive was offered for accurate prediction. The results also suggest that biased predictions of participants prevent them from anticipating the endowment effect.

It is possible that participants' own valuation may serve as a basis for predicting others' valuations (Van Boven et al. 2000). Epley et al. (2004) document that people adopt others' perspective by serially adjusting from their own and that their adjustments tend to be insufficient since they stop adjusting once a plausible estimate is reached. However, if both owners and buyers anchor on their own valuations while predicting others' valuations, this makes it harder for us to find a systematic bias in their predictions. It is also hard to explain why anchoring-and-adjustment would generate a negative prediction error in the case of owners, but a positive prediction error in the case of buyers. Nonetheless, in the next study, we use a between-subject experimental design where participants are randomly assigned to the valuation and estimation groups. And, we compare the figures provided by the two groups in the owner and buyer conditions.

## 4.3 STUDY 1B

### 4.3.1 Method

A 2 (owner vs. buyer) x 2 (valuation vs. estimation) between-subjects experimental design was employed. Ninety five undergraduate students registered for an introductory level marketing course at a large mid-Atlantic university participated in the study to receive course credit. There were forty eight students in the “owner” session and forty seven students in the “buyer” session. Participants reported to the lab, where sessions were run separately. They were randomly assigned to either the valuation or the estimation condition. The procedures regarding the selling and buying price elicitation were identical to those in study 1A. However, owners in the estimation condition were given the following instructions and asked to provide their estimation of other owners’ valuation using the same price list provided to the owners in the valuation condition:

You now own a university mug that is yours to keep and take home. In a few minutes, you and other participants of this study will have an opportunity to sell the mug to the experimenter in exchange for cash. For each of the prices below, please indicate whether you think that other participants, on average, will choose to: (1) receive that amount of money and return the mug to the experimenter, or (2) not sell the mug at that price. The experimenter will randomly select one of the prices listed below and their choice for that price will be honored.

Buyers were given the following instructions:

You now do not own a university mug that is yours to keep and take home. In a few minutes, however, you and other participants of this study will have an opportunity to receive a mug from the experimenter or some amount of cash. For each of the prices below, please indicate whether you think that other participants, on average, will choose to: (1) receive a mug from the experimenter, or (2) receive that amount of money instead of a mug. The experimenter will randomly select one of the prices listed below and their choice for that price will be honored.

All the participants were again offered \$2.00 reward for accurately estimating the valuation of others in the same role.

### 4.3.2 Results

As reported in Table 4.2, owners' and buyers' valuations demonstrate an endowment effect; the average lowest selling price ( $M_{\text{owners-actual}} = \$5.96$ ) is higher than the average buying price ( $M_{\text{buyers-actual}} = \$2.76$ ,  $t(46) = 6.13$ ,  $p < .01$ ). Also, replicating the results of our previous study, owners in the estimation condition significantly underestimated the average selling price of those in the valuation condition ( $M_{\text{owners-estimated}} = \$4.91$  vs.  $M_{\text{owners-actual}} = \$5.96$ ,  $t(45) = -2.13$ ,  $p < .05$ ), while buyers in the estimation condition overestimated the average buying price of those in the valuation condition ( $M_{\text{buyers-estimated}} = \$4.18$  vs.  $M_{\text{buyers-actual}} = \$2.76$ ,  $t(46) = 3.41$ ,  $p < .01$ ). These results again support our predictions.

Table 4.2: Actual and Estimated Average Reservation Prices

<b>CONDITION</b>	<b>ACTUAL (1)</b>	<b>ESTIMATED (2)</b>	<b>DIFFERENCE* (2) – (1)</b>
<b>OWNER</b>	\$5.96 (n=25)	\$4.91 (n=22)	-\$1.05 ( $t = -2.13$ , $p < .05$ )
<b>BUYER</b>	\$2.76 (n=23)	\$4.18 (n=25)	\$1.42 ( $t = 3.41$ , $p < .01$ )

\*one-tailed test is used to test these predictions.

### 4.3.3 Discussion

This study demonstrates that participants' estimation errors do not stem from an anchoring-and-adjustment bias. In the next study, we examine whether increased perceived similarity to the target reduces the self-other gap in valuation and thereby enhances the accuracy of owners' and buyers' predictions. Previous research has shown that a higher level of perceived general

similarity to a target is associated with greater empathy (Batson et al. 1995; Krebs 1975; Stotland 1969) and social projection (Ames 2004a, 2004b). It has also been suggested that perceived similarity may promote increased perspective taking (e.g., Batson and Shaw 1991). Krebs (1975, p. 1143) notes: “perception of similarity increases the disposition to imagine how one would feel in another’s place.” Accordingly, we argue that priming similarities between participants and comparison targets should enhance participants’ perspective taking tendency and empathy, attenuating the magnitude of documented errors in owners’ and buyers’ predictions of the valuations of others in the same role. Formally:

**H2:** Priming similarities between the self and the target will attenuate the negative estimation error (i.e., underestimation) exhibited by owners and the positive estimation error (i.e., overestimation) exhibited by buyers when predicting selling and purchase price of other owners and buyers, respectively. Consequently, when estimating the valuations of others in the same role, owners and buyers primed with similarity will anticipate the endowment effect.

## 4.4 STUDY 2

### 4.4.1 Method

A 2 (owners vs. buyers) x 2 (prime similarities vs. control) between-subjects design was employed. Eighty-two undergraduate students registered for two introductory level marketing courses at a large mid-Atlantic university participated in the study. There were thirty five students in the “owner” session and forty seven students in the “buyer” session. Participants in each session were randomly assigned to either the similarity or the control condition. Following previous studies (Menon, Kyung, and Agrawal 2009; Moore and Small 2008), participants who were assigned to the similarity condition were asked to write down “Three ways in which you are similar compared to the average undergraduate student at <school name>.” On the other

hand, participants who were in the control condition were not given this task. The procedures regarding the selling and buying price elicitation and average estimation were identical to those in study 1A.

A pre-test with participants from the same subject population was conducted to investigate whether the similarity priming was successful. Consistent with Menon et al. (2009), all the participants in the pre-test rated the extent to which they saw themselves similar to the average undergraduate student on a seven-point scale anchored at “Not at all” and “Very much”. The results revealed that the self and the average undergraduate student were perceived as more similar in the similarity priming condition than the control condition ( $M_{\text{similarity}} = 4.89$  vs.  $M_{\text{control}} = 4.27$ ,  $t(70) = 1.83$ ,  $p < .05$ ), indicating that the similarity manipulation worked as intended.

#### 4.4.2 Results

Table 4.3: Actual and Estimated Average Reservation Prices

<b>CONDITION</b>	<b>ACTUAL (1)</b>	<b>ESTIMATED (2)</b>	<b>DIFFERENCE*† (2) – (1)</b>
<b>OWNER CONTROL</b> (n=17)	\$6.57	\$4.44	-\$2.13 ( $t = -5.48$ , $p < .01$ )
<b>OWNER SIMILARITY</b> (n=18)		\$5.69	-\$0.88 ( $t = -1.81$ , $p < .05$ )
<b>BUYER CONTROL</b> (n=24)	\$4.06	\$4.58	\$0.52 ( $t = 1.74$ , $p < .05$ )
<b>BUYER SIMILARITY</b> (n=23)		\$3.74	-\$0.32 ( $t = -0.99$ , $ns$ )

\*one-tailed test is used to test these predictions.

†For both owners and buyers, the difference in the estimation errors between the similarity condition and control condition is significant,  $ps < .05$ .

As reported in Table 4.3, owners' average lowest selling price ( $M_{\text{owners-actual}} = \$6.57$ ) is again significantly higher than buyers' average highest purchase price ( $M_{\text{buyers-actual}} = \$4.06$ ),  $t(80) = 5.00, p < .01$ . In addition, owners in the control condition underestimate the average selling price stated by other owners ( $M_{\text{owners-estimated}} = \$4.44$ ). The average prediction error is  $-\$2.13, t(16) = -5.48, p < .01$ . Importantly, owners in the similarity condition underestimate the actual average selling price by only  $-\$0.88 (t(17) = -1.81, p < .05)$ , which corresponds to a 59% decrease in the prediction error. The difference in the prediction errors between the similarity prime and control conditions is statistically significant ( $t(33) = 2.01, p < .05$ ).

Buyers in the control condition overestimate the average buying price stated by other buyers ( $M_{\text{buyers-estimated}} = \$4.58$ ). The average overestimation is  $\$0.52, t(23) = 1.74, p < .05$ . However, as predicted, similarity priming eliminated buyers' overestimation. The average prediction error in the similarity condition is  $-\$0.32, t(22) = -0.99, ns$ . Thus, as we argue, priming similarity to other participants attenuates the prediction bias.

Additionally, similar to study 1A, we compare the estimated market valuation of both groups to see whether the similarity priming helped participants predict the endowment effect. For the group of participants primed with similarity, the results reveal that the average estimated market valuation of owners ( $M_{\text{owners-estimated}} = \$5.69$ ) is significantly higher than that of buyers ( $M_{\text{buyers-estimated}} = \$3.74$ ),  $t(39) = 3.59, p < .01$ . This suggests that when estimating others' valuations, these participants anticipate the endowment effect, supporting H2. However, replicating the finding of study 1A, participants in the control condition fail to predict the endowment effect ( $M_{\text{owners-estimated}} = \$4.44$  vs.  $M_{\text{buyers-estimated}} = \$4.58, t(39) = -0.25, ns$ ). Consistent with these results, the index of anticipation of the endowment effect is 0.78 and 0 (i.e., the negative value is truncated at 0) for the similarity condition and control condition, respectively. This result

suggests that perceived similarity significantly enhances the participants' perspective taking in the context of endowment. That is, while the participants in the control condition underestimate the true impact of the endowment effect by 100%, the underestimation is reduced to 22% when they are primed with similarity.

Finally, we investigated whether owners and buyers have a general tendency to make biased predictions about the values of objects. After all the participants completed and returned their surveys (but before the randomly selected price was announced), we asked them to provide their best guess for the actual selling price of the mug at the bookstore (\$6.95). Again, they were offered a \$2 reward if their estimation was within \$0.50 of the actual selling price of the mug. The results reveal that neither owners nor buyers in the control condition estimate the actual price with significant error, though their estimations are above the actual price. The average prediction error (i.e., estimated price minus actual price) for owners and buyers is \$0.64 ( $t(16) = 0.81$ , *ns*) and \$1.15 ( $t(23) = 1.26$ , *ns*), respectively.<sup>21</sup> Also, there is no difference in the prediction errors between the two groups. These results suggest that although both owners and buyers in the control condition tend to be fairly accurate while predicting the actual price of the mug, they fail to predict valuations of others in the same role.

#### **4.4.3 Discussion**

Overall, study 2 reveals that increased perceived similarity between the self and the target people eliminates the bias in buyers' prediction of valuation of other buyers and significantly reduces the bias in owners' prediction of other owners' valuation. Although these results provide initial support for our argument that reduction in the self-other gap enables consumers to more

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<sup>21</sup> The results are similar for the similarity priming condition. The average prediction error for owners and buyers is \$0.88 ( $t(17) = 1.63$ , *ns*) and \$0.02 ( $t(22) = 0.04$ , *ns*), respectively.

accurately predict valuations of others in the same role, it does not directly test the role of perspective taking and empathy in the observed effects. Thus, in the next study, we perform a test of the underlying mechanism for our results by examining the impact of individual differences in perspective taking and empathy on owners' and buyers' estimation errors.

We argue that if the prediction errors of owners and buyers are due to the inability of the average participant to emotionally connect with other participants and properly step into their shoes, we should observe that participants' estimation errors covary with their empathic ability and perspective taking tendency. Following previous research (e.g., Galinsky et al. 2008; Parker and Axtell 2001; Oswald 1996), we distinguish between perspective taking and empathy, which are two related but distinct social competencies. As defined by Galinsky et al. (2008, p.378), perspective taking refers to "the cognitive capacity to consider the world from another individual's view point", whereas empathy refers to "the ability to connect emotionally with another individual." Relatedly, it has been documented that perspective taking results in greater overlap between mental representations of the self and those of others (Davis et al. 1996; Galinsky and Moskowitz 2000). Thus, perspective taking ability enables individuals to anticipate the behavior and reactions of others (Davis 1983), whereas empathy is an other-focused emotional reaction, which allows individuals to establish affective connections with others (Galinsky et al. 2008).

We maintain that these distinct abilities interact to influence the accuracy of people's predictions of others' valuations. This is because valuation is a process that involves both calculation and feeling (Hsee and Rottenstreich 2004) and thus, accurately predicting the valuations of others in the same role requires individuals to connect with others on both a cognitive and emotional level. In other words, simply having the capacity to take others'

perspective is not sufficient to enhance prediction accuracy; it is also important to be able to anticipate others' feelings. Our argument is also supported by previous research suggesting that perspective taking skills or attempts may not always enable individuals to accurately identify others' mental states (e.g., Galinsky, Ku, and Wang 2005; Epley and Caruso 2009; Eyal and Epley 2010). For instance, Galinsky et al. (2005, p.120) point out: "Perspective-taking that lacks deep deliberation, however, can actually be costly to the self and others...pallid perspective-taking might increase pluralistic ignorance." Similarly, Epley, Caruso, and Bazerman (2006, p. 886) emphasize: "the impact of perspective taking on behavior among individuals or within groups depends critically on what people see when they look into the minds of others." Accordingly, we argue that higher level of perspective taking ability enhances the prediction accuracy of those who are high, but not low, in empathy, which enables them to emotionally connect with others in the process of perspective taking. Formally:

**H3:** Perspective taking will be associated with lower estimation errors in predicting the valuation of others in the same role when owners and buyers are high, but not low, in empathy.

## 4.5 STUDY 3

### 4.5.1 Method

Sixty two undergraduate students registered for an introductory level marketing course at a large mid-Atlantic university participated in the study to receive course credit. Students were randomly assigned to the owner ( $n = 31$ ) or buyer ( $n = 31$ ) condition. Participants reported to the lab, where each session was run separately. The procedures regarding the selling and buying price elicitation and average estimation were identical to those in study 1A. Participants'

perspective taking ability was measured using a four-item, 7-point scale ( $\alpha = 0.65$ ) adapted from Davis (1983). Examples of the items included in the scale are the statements “I believe that there are two sides to every question and try to look at them both” and “I sometimes try to understand my friends better by imagining how things look from their perspective.” We also measured participants’ empathy using a four-item, 7-point scale ( $\alpha = 0.71$ ) adapted from Davis (1983). To illustrate, the following items are included in the scale: “I would describe myself as a pretty soft-hearted person” and “Sometimes I don’t feel sorry for other people when they are having problems” (reversed).<sup>22</sup>

#### 4.5.2 Results

Owners’ and buyers’ valuations again demonstrated an endowment effect. Owners’ average lowest selling price ( $M_{\text{owners-actual}} = \$5.22$ ) is significantly higher than buyers’ average highest purchase price ( $M_{\text{buyers-actual}} = \$2.48$ ),  $t(60) = 5.48$ ,  $p < .01$ . Replicating our previous finding, owners underestimate the average selling price stated by other owners ( $M_{\text{owners-estimated}} = \$4.06$ ). The average prediction error is  $-\$1.16$ ,  $t(30) = -4.71$ ,  $p < .01$ . On the other hand, buyers overestimate the average buying price stated by other buyers ( $M_{\text{buyers-estimated}} = \$3.31$ ). The average overestimation is  $\$0.83$ ,  $t(30) = 3.25$ ,  $p < .01$ . Accordingly, the index of anticipation of the endowment effect is 0.27, suggesting that the participants underestimate the true impact of the endowment effect on preferences of others in the same role by 73%.

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<sup>22</sup> We find a positive and modest correlation between perspective taking and empathy scores ( $\rho = 0.318$ ,  $p < .01$ ), consistent with previous research documenting that the scales are measuring distinct but related constructs (e.g., Davis 1996; Galinsky et al. 2008; Gleason, Jensen-Campbell, and Ickes 2009). As pointed out by Gleason et al. (2009, p. 999), “it is possible that a person could be relatively good at seeing another person’s point of view while being relatively poor at inferring the specific content of the other person’s moment-to-moment thoughts and feelings (or vice versa).”

To test H3, we conducted separate regression analyses for owners and buyers with participants' estimation errors as the dependent variable and the independent variables of perspective taking score and empathy score and their interaction. As suggested by Aiken and West (1991), both perspective taking and empathy scores are mean centered to reduce multicollinearity (all VIFs are below 1.5). The results for owners and buyers are presented in Table 4.4 and 4.5, respectively.

Table 4.4: Regression of Owners' Estimation Errors on Perspective Taking, Empathy, and Their Interaction

	DV = Underestimation		
	Parameter Estimate	t-value	VIF
Constant	-1.443**	-5.48	
Perspective taking (P)	0.326	0.93	1.330
Empathy (E)	-0.088	-0.28	1.487
P x E	0.809*	2.29	1.181
Observations	31		
R-squared	19.58%		

\*\* p < .01, \* p < .05, one-tailed test.

As predicted, there is a positive and significant interaction between owners' chronic level of perspective taking and empathy ( $\beta = 0.809$ ,  $t(30) = 2.29$ ,  $p < .05$ ), whereas both main effects are insignificant. To facilitate the interpretation of the two-way interaction, we follow the post-hoc probing procedure recommended by Aiken and West (1991). We first calculate high (low) values for perspective taking and empathy by adding (subtracting) the standard deviation to (from) the mean. We then conduct simple slope analysis. The results suggest that higher level of perspective taking ability is associated with lower estimation errors (i.e., less underestimation of the average selling price of other owners) when participants are also high in empathy ( $M_{\text{High-}}$

PT/High-E =  $-\$0.67$  vs.  $M_{\text{Low-PT/High-E}} = -\$2.35$ ,  $t(30) = 2.20$ ,  $p < .05$ ). However, greater perspective taking is not associated with more accurate predictions when participants are low in empathy ( $M_{\text{High-PT/Low-E}} = -\$1.71$  vs.  $M_{\text{Low-PT/Low-E}} = -\$1.04$ ,  $t(30) = -0.91$ , *ns*).

Table 4.5: Regression of Buyers' Estimation Errors on Perspective Taking, Empathy, and Their Interaction

DV = Overestimation			
	Parameter Estimate	t-value	VIF
Constant	1.074**	4.20	
Perspective taking (P)	-0.517*	-1.93	1.344
Empathy (E)	-0.029	-0.12	1.316
P x E	-0.471*	-2.30	1.025
Observations	31		
R-squared	25.30%		

\*\*  $p < .01$ , \*  $p < .05$ , one-tailed test.

In the case of buyers, consistent with our prediction, we find a negative and significant interaction between perspective taking ability and empathy ( $\beta = -0.471$ ,  $t(30) = 2.30$ ,  $p < .05$ ). There is also a negative main effect for perspective taking ( $\beta = -0.517$ ,  $t(30) = 1.93$ ,  $p < .05$ ), whereas the estimated coefficient on empathy is not significant. Post-hoc probing of the interaction reveals that higher level of perspective taking ability is associated with more accurate predictions (i.e., lower overestimation of the average buying price stated by other buyers) when participants are high in empathy ( $M_{\text{High-PT/High-E}} = \$0.00$  vs.  $M_{\text{Low-PT/High-E}} = \$2.09$ ,  $t(30) = 2.75$ ,  $p < .01$ ). However, this effect is not observed among participants with low empathy ( $M_{\text{High-PT/Low-E}} = \$1.09$  vs.  $M_{\text{Low-PT/Low-E}} = \$1.12$ ,  $t = -0.04$ , *ns*).

### **4.5.3 Discussion**

Study 3 demonstrates that the magnitude of the bias in owners' and buyers' predictions of valuations of others in the same role covary with their perspective taking and empathy. We document that greater perspective taking tendency is associated with more accurate predictions when participants are high in empathic ability, providing support for the proposed underlying mechanism for our effects (i.e., self-other difference in valuation arising from *intra*role empathy gaps). However, the results also reveal that perspective taking may not always be fruitful. In particular, among participants with low empathic ability, perspective taking is not associated with lower prediction errors. Overall, the results suggest that the success of a perspective taking attempt in the context of endowment depends on one's ability to connect emotionally with others. One limitation of this study, however, is that participants' perspective taking tendency was measured. To address this limitation and provide a stronger and cleaner test of our hypothesis, we manipulate perspective taking in Study 4.

## **4.6 STUDY 4**

### **4.6.1 Method**

A 2 (owners vs. buyers) x 2 (priming perspective taking vs. control) between-subjects experimental design was employed. One hundred forty five undergraduate students registered for an introductory level marketing course at a large mid-Atlantic university participated in the study in exchange for course credit. There were seventy two students in the "owner" session and seventy three students in the "buyer" session. They reported to the lab, where sessions were run separately. Participants were randomly assigned to either the perspective taking or the control condition. The procedures regarding the selling and buying price elicitation and average estimation were identical to those in study 1A.

We manipulated perspective taking using a task adapted from Galinsky and Moskowitz (2000). In particular, participants in the perspective taking condition were asked to construct a narrative essay about how they think a typical student at the same university spends a day. The following instructions were provided to the participants:

Now, we are interested in what you think of other <university name> students. Please imagine a day in the life of a typical <university name> student, looking at the world through this person's eyes. And, in the space below, describe how you think the typical <university name> student spends a day, including activities, thoughts, etc.

Participants in the control condition were asked to write an essay about how they spent their day yesterday, including events, activities, etc. Prior to each task, we measured participants' empathy using the same four-item, 7-point scale ( $\alpha = 0.64$ ) employed in Study 3.

#### 4.6.2 Results

An endowment effect is again observed in owners' and buyers' valuations ( $M_{\text{owners-actual}} = \$5.14$  vs.  $M_{\text{buyers-actual}} = \$3.39$ ,  $t(143) = 4.25$ ,  $p < .01$ ). Also, consistent with our previous studies, owners in the control condition underestimated other owners' average selling price ( $M_{\text{owners-estimated}} = \$3.87$  vs.  $M_{\text{owners-actual}} = \$5.14$ ,  $t(34) = -5.53$ ,  $p < .01$ ), whereas buyers in the control condition overestimated other buyers' average purchase price ( $M_{\text{buyers-estimated}} = \$4.09$  vs.  $M_{\text{buyers-actual}} = \$3.39$ ,  $t(36) = 3.22$ ,  $p < .01$ ).

We test our prediction that the perspective taking manipulation attenuates participants' estimation errors only when they are high in empathic ability by conducting separate regression analyses for both groups. The dependent variable in each regression is the estimation error and the independent variables are perspective taking prime, empathy score (mean-centered), and their interaction. Table 4.6 and 4.7 present the regression results for owners and buyers, respectively.

Table 4.6: Regression of Owners' Estimation Errors on Perspective Taking Prime, Empathy, and Their Interaction

DV = Underestimation			
	Parameter Estimate	t-value	VIF
Constant	-1.095**	-5.98	
Perspective taking (P)	0.170	0.93	1.002
Empathy (E)	0.225	1.18	1.033
P x E	0.384*	2.02	1.032
Observations	72		
R-squared	7.59%		

\*\*  $p < .01$ , \*  $p < .05$ , one-tailed test.

As expected, we find a positive and significant interaction between perspective taking and empathic ability ( $\beta = 0.384$ ,  $t(71) = 2.02$ ,  $p < .05$ ). No other effects are significant. Consistent with our thesis, post-hoc analysis reveals that participants in the perspective taking condition make more accurate predictions when they are high in empathy ( $M_{PT/High-E} = -\$0.32$  vs.  $M_{Control/High-E} = -\$1.42$ ,  $t(71) = 2.09$ ,  $p < .05$ ). However, the same effect is not observed among those who are low in empathy ( $M_{PT/Low-E} = -\$1.53$  vs.  $M_{Control/Low-E} = -\$1.11$ ,  $t(71) = -0.80$ ,  $ns$ ).

Table 4.7: Regression of Buyers' Estimation Errors on Perspective Taking Prime, Empathy, and Their Interaction

DV = Overestimation			
	Parameter Estimate	t-value	VIF
Constant	0.547**	3.12	
Perspective taking (P)	-0.163*	-0.93	1.000
Empathy (E)	-0.152	-0.77	1.004
P x E	-0.387*	-1.97	1.004
Observations	73		
R-squared	7.44%		

\*\*  $p < .01$ , \*  $p < .05$ , one-tailed test.

The regression results for buyers are also consistent with our prediction. There is a negative and significant interaction between the perspective taking prime and empathic ability ( $\beta = -0.387, t(72) = -1.97, p < .05$ ). Specifically, while the perspective taking manipulation reduces participants' estimation errors when they are high in empathy ( $M_{PT/High-E} = -\$0.12$  vs.  $M_{Control/High-E} = \$0.91, t(72) = -2.06, p < .05$ ), it does not result in more accurate estimates among those participants with low empathy ( $M_{PT/Low-E} = \$0.88$  vs.  $M_{Control/Low-E} = \$0.51, t(72) = 0.75, ns$ ).

### **4.6.3 Discussion**

This study provides further evidence on the proposed underlying mechanism by manipulating perspective taking and documenting that perspective taking helps participants more accurately predict others' valuations only when they are high in empathic ability. However, trying to connect with others at the cognitive level does not bring about benefits in terms of prediction accuracy when participants are low in empathy.

## **4.7 GENERAL DISCUSSION**

Perspective taking influences consumers' attitudes and decisions. However, perspective taking even among those who are in the same psychological state is impaired by individuals' tendency to underestimate the extent to which affective experiences impact others' preferences. In other words, empathy gaps in emotional perspective taking persist among individuals assigned to the same role. Relatedly, in the context of the endowment, we document that even being in the shoes of others (e.g., being an owner and estimating the valuation of other owners) does not enable

individuals to accurately predict the valuations of others in the same role. We attribute this to the notion of a self-other difference in valuation arising from *intrarole* empathy gaps.

Specifically, we find that the average asking price set by owners for their own mugs is significantly higher than the price at which they believe other owners would be willing to sell their mugs. Conversely, the average price offered by buyers for the mug is less than the amount which they believe other buyers would be willing to give up for the same mug. That is, owners underestimate the average selling price stated by other owners, whereas buyers overestimate the average buying price stated by other buyers. However, consistent with our thesis built on the self-other gap in valuation, in study 2 we find that priming similarities between the self and the target reduces the magnitude of owners' underestimation by nearly 60% and eliminates buyers' overestimation. Finally, using both an individual difference measure (study 3) and experimental manipulation (study 4), we find that perspective taking decreases owners' and buyers' estimation errors when they are high, but not low, in empathic ability, providing additional support for the proposed underlying mechanism.

The documented bias in owners' and buyers' predictions of the valuation of others in the same role can have important economic implications. For instance, when demand for homes is high in an area, buyers may feel like they are elbow to elbow with other potential buyers. As a result, overestimating the price that other buyers are willing to pay for a particular home may cause a buyer to place a very high bid, resulting in a more costly transaction. Further, Novemsky and Schweitzer (2004) find that the price paid by other buyers in a similar situation plays an important role in determining a buyer's satisfaction with a particular transaction. Therefore, in addition to bearing the economic cost of overestimation of other buyers' purchase prices, buyers will suffer from reduced satisfaction with a transaction when they discover that other buyers are

actually willing to pay less (or already paid less) for the same or similar object as compared to their estimation.

In addition to being buyers, consumers also act as sellers when selling used items. In fact, recent years have witnessed a dramatic increase in the amount of selling by consumers as online trading channels (e.g., eBay, Overstock.com) have become more accessible. However, price setting for used items is not a simple process. As opposed to most brand new items that are traded in transparent markets at fixed market clearing prices, used items—especially those that have sentimental value to their owners— are traded at prices determined by both economic and psychological parameters. The price for the item should be low enough to attract potential customers, but it should not be so low that the seller cannot justify the transaction both economically and psychologically. The psychological aspect of price setting involves thinking about how much another seller would ask to sell the same or similar item. In fact, Novemsky and Schweitzer (2004) document that social comparison judgments are the most reliable predictor of satisfaction with a transaction for sellers as well. Therefore, underestimating the selling prices of other owners may lead an owner to sell an item at a lower price, reducing not only the economic benefit of the sale but also decreasing the overall satisfaction of the seller with the transaction.

Our findings extend previous research examining the role of *interrole* (i.e., non-owners vs. owners) empathy gaps in the context of endowment (Loewenstein and Adler 1995; Van Boven et al. 2000). We document that people fail to accurately predict others' valuations of an object even in the absence of *interrole* empathy gaps. From a conceptual point of view, our research focuses on a previously unexamined dimension of perspective taking among owners and buyers— biases in their *intra-role* comparative valuation judgments (i.e., owners vs. owners and buyers vs. buyers) and thereby, complements and extends the work by Van Boven et al. (2000).

Furthermore, we document practical implications of the self-other difference in the *value function*, extending the work of Faro and Rottenstreich (2006) who demonstrate the implications of self-other differences in the *probability weighting function*. At first glance, documented evidence on self-other differences in key aspects of prospect theory may seem inconsistent with the large body of evidence on “perceived consensus”—people’s tendency to overestimate the degree to which others are like themselves (e.g., Hoch 1987; Marks and Miller 1987; Dawes 1989). However, previous research (e.g., McFarland and Miller 1990; Monin and Norton 2003; Van Boven et al. 2005) suggests that perceived consensus and uniqueness bias can coexist in various settings. Faro and Rottenstreich (2006) argue that when predicting others’ decisions in a particular situation, people may correctly think that the type of feelings they experience will also be experienced by others (perceived consensus) but incorrectly anticipate that others will experience these feelings to a lesser extent (uniqueness bias). The prediction errors we documented in our endowment effect studies seem to be driven by this sort of misunderstanding.

We also contribute to the literature on social predictions by documenting that perspective taking and empathic ability interact to influence people’s predictions of others’ reactions to endowment and lack of ownership. Although previous research suggests that perspective taking and empathy are two related but distinct social competencies, to the best of our knowledge, our study is the first to document that the success of a perspective taking attempt depends on one’s level of empathic ability. In particular, trying to see things from others’ point of view may be a futile exercise unless someone has the capacity to emotionally connect with others.

Future research should explore personal and situational factors that could potentially affect the magnitude of the bias exhibited by individuals while predicting the valuations of others in the same role. For instance, Rottenstreich and Hsee (2001) propose that the probability

weighting function is more S-shaped for risky decisions with affect-rich outcomes than those with affect-poor outcomes. In parallel, the magnitude of the self-other difference in the value function may depend on whether an object is affect-rich or affect poor (e.g., personalized products vs. commodities). Previous literature (e.g., Hsee and Rottenstreich 2004) suggests that while consumers tend to evaluate affect-rich products based on the feelings they evoke, their evaluations of affect-poor products are generally based on objective criteria. Thus, the magnitude of the estimation error may be lower when owners and buyers are asked to estimate how valuable a relatively affect-poor object to others in the same role. Further, in our studies (and in most of the previous endowment effect studies), owners sold their possessions to the experimenter and thus, there is no competition among owners who are willing to sell their possessions. Similarly, buyers also do not compete with each other to acquire the object since the experimenter provided enough supply to meet potential demand. Future research should examine sellers' and buyers' decisions in an auction setting where their mispredictions of valuations of others in the same role may have a significant impact on the prices at which they offer to sell or buy an object.

Interactions with other consumers play a significant role in determining parameters of our economic transactions and the satisfaction that we obtain from these transactions. Thus, enhanced understanding of the perspective of others in the same role can help consumers avoid suboptimal economic decisions. This research contributes to our understanding of consumers' perspective taking by demonstrating that in the context of endowment, consumers fail to take an accurate perspective of others even when they are in the same shoes and that perspective taking can be enhanced by helping individuals appreciate similarities between themselves and others in the same role.

## 5.0 CONCLUSION

My dissertation builds on and extends the literature examining how consumers' decisions are influenced by their interactions with those around them. In particular, I focused on three different social aspects of consumer behavior: social presence, social power, and social prediction. And, I explored the link between each of these social forces and consumers' monetary decisions. Each essay addresses an issue that either stems from the difference in individuals' focus on the self versus others (Essays 1 and 2) or is a manifestation of the self-other difference (Essay 3).

I use the agency-communion theory (Bakan 1966) as basis for my first essay's conceptual framework and find that agentic individuals, who are self-focused and strive for status, engage in self-promotion through increased spending in the presence of their friends as compared to when they shop alone. In contrast, communal individuals, who are other-focused and place emphasis on social relations, adopt a modest self-presentation and keep their spending under control while shopping with their friends. Agency and communion also serve as the building blocks of the theoretical framework of my second essay, which documents that having versus lacking power over others increases financial risk taking among agentic individuals, who associate power with self-interest goals aimed at enhancing one's own wealth and status. However, this effect is not observed among communal individuals, who strive for cooperation and harmony rather than promote their self-interests. Finally, my third essay demonstrates the self-other difference in consumers' valuation of objects due to empathy gaps. In particular, buyers believe that other buyers would be willing pay more than themselves to acquire an object, while sellers believe that

other owners would ask a lower price than themselves to part with the object. These three essays together significantly advance our current understanding of the role of social influence in consumer behavior. But, naturally the findings of each essay give rise to new questions and research opportunities. In the remainder of this section, I will discuss the theoretical implications along with the limitations of my research and suggest several potential avenues for future research.

One aspect of social influence I have not studied in my dissertation is decision making in a group setting. Previous research examining group members' sequential choices provides evidence consistent with a dynamic decision process where individuals shift their choices based on prior selections of other group members, even at the expense of selecting non-favorite items (e.g., Ariely and Levav 2000; Quester and Steyer 2010). Agency and communion can provide a rich framework for future research aimed at extending this stream of literature. Bakan (1966, p.15) argues: "agency manifests itself in the formation of separations; communion in the lack of separations". Thus, in the context of group decision making, one would expect a systematic difference between agentic and communal individuals' choices such that agentic individuals diverge from the previous choices of others, while communal individuals converge to the group's most popular choice. However, one also needs to consider that agency involves putting pleasures of the self at the center stage. Therefore, deviating from others' choices at the cost of personal consumption satisfaction can create a tension between agentic individuals' eagerness to differentiate themselves from others and desire to please the self. Shared experiences (e.g., Raghunathan and Corfman 2006; Ramanathan and McGill 2007; Fisher et al. 2011) also provide an interesting setting within which to examine how individuals' self versus other orientation

impacts the choices they make with others and the level of satisfaction they derive from these choices.

Another interesting question for future research is how individuals' risk seeking tendency in the domain of financial decision making changes when they make decisions in a group setting versus alone. And, does agency-communion orientation play a moderating role in this process? One plausible argument is that prior risky choices of other members induce greater financial risk taking among both agentic and communal individuals but this effect is more pronounced for the first group. That is, agentic individuals' desire to get ahead of others is expected to lead them to make riskier financial decisions than other members, while communal individuals' tendency to get along with others causes them to exhibit a risk seeking behavior comparable to that of other members.

Social influence does not necessarily entail face-to-face interaction. As more and more people began using social networking sites such as Facebook and Twitter during the last few years, the influence of peers in consumer decision making has gained more importance. Individuals now share information with their friends more commonly in the form of digital content. They write messages and blogs about their experiences and share photos and videos. Hence, similar to the physical presence of friends, the participation in social networking sites may fuel individuals' impression management concerns. One fruitful avenue for future research is to investigate the differences in the uses of social media in a self-enhancing manner between agentic and communal individuals. In particular, it would be interesting to examine whether agentic individuals' tendency to self-promote themselves in the social media impacts their spending decisions (e.g., going on an expensive trip, buying a new car, dining at a fancy restaurant, etc.). If so, the extensive use of online social networks coupled with a desire to get

ahead of others and present the self at the best possible light may have delirious effects on agentic consumers' welfare and well-being.

Another direction for future research involves the study of differences in the volume and type of digital content generated by agentic and communal individuals in social networking websites. Previous research suggests that although people are increasingly using social networking channels, they differ widely in terms of volume, type, and quality of the digital content they generate and consume (Trusov, Bodapati, and Bucklin 2010). For instance, while agentic individuals are predicted to share experiences that highlight their individuality and superiority, communal individuals' posts are expected to reflect their emotional expressivity and warmth. This tendency may in turn affect the traffic and attention their profiles attract, determining the success of their self-presentation efforts.

Participation in online social networks can also alter people's sense of connectedness to others and perceived support they receive from them. A recent study by Zhu et al. (2012) document that online community members are willing to take greater financial risk than those who do not participate in an online community. The authors explain this finding with the "cushion hypothesis", which posits that individuals are more likely to make risky financial decisions when they feel they are cushioned by their peers and family members in the event of a potential financial difficulty (Weber and Hsee 1998). One would expect that this effect is more prevalent among communal individuals, who place emphasis on social relationships and connections with others. On the other hand, agentic individuals are expected to rely less on the perceived support received from others when making risky financial choices. Future research should explore this possibility.

In addition to peers, salespeople have been shown to be an important source of social influence in the marketplace (e.g., Evans 1963; Davis and Silk 1972; Woodside and Davenport 1974). Previous research has examined how various consumer and salespeople characteristics impact the outcome of different persuasion and selling tactics (e.g., Richins 1983; Sujan, Bettman, and Sujan 1986; Friestad and Wright 1994; Campbell and Kirmani 2000). Evans (1963) was among the first to point out that a customer's purchase decision in part depends on whether s/he considers salesperson a friend. Others have also characterized a good salesperson as friendly (e.g., Mayer and Greenberg 1964; Rafaeli and Sutton 1987). Nonetheless, there has not been a systematic examination of "friendly" influence tactics of salespeople on consumers' spending decisions. In particular, future research should look into whether a friendly salesperson generates an impact similar to the presence of friends in a shopping trip on agentic and communal consumers' spending behavior. However, it is important to note that while agentic individuals are expected to alter their spending behavior to highlight their status vis-à-vis those around them, they may be less likely to establish friendly relations with salespeople due to their independent and self-reliant nature. Furthermore, while prior research has examined the economic implications of empathy gaps between buyers and owners (e.g., Van Boven et al. 2000), the presence and consequences of empathy gaps between buyers and salespeople have not received much attention. Future research could also address this issue.

Consumer decision making is not an isolated process but rather shaped through individuals' interactions with others. As the above discussion suggests, social influence research in consumer behavior can be advanced by paying close attention to the role of individuals' self versus other orientation in determining the impact of various social forces on their preferences and choices. In particular, the agency-communion theory provides a plausible framework for

future research. Empathy gaps among social actors in the marketplace are also topic of interest for further studies. Building on my essays and different streams of literature on social influence, I proposed several research opportunities for examining the interplay between internal and external factors in the context of consumer choice. As I demonstrated in my dissertation, social impact in various forms can significantly alter consumers' welfare and well-being. However, there are more related issues yet to be explored.

## APPENDIX A

Table A1. Sample Statistics for the Pilot Study (Essay 1)

	Frequency	Percent
<i>Relationship Type</i>		
Friend	72	5.96
Spouse	138	11.42
Parent	42	3.48
Child	298	24.67
Someone else's child	48	3.97
Adult family member	48	3.97
Someone else	19	1.57
Unknown relationship	156	12.91
<hr/>		
Male and w/Friend	16	1.32
Female and w/Friend	56	4.64
<hr/>		
Others	653	54.06
Alone	555	45.94
<hr/>		
<i>Sex</i>		
Male	265	21.94
Female	943	78.06
<hr/>		
<i>Payment Method</i>		
Cash	723	59.85
Check	267	22.10
Credit	218	18.05
<hr/>		
<i>Number of Accompanying People</i>		
1 person	423	35.02
2 person	165	13.66
3 person	54	4.47
4 person	10	0.83

Table A2. Mean Actual Spending by Condition for the Pilot Study (Essay 1)

	<b>Alone</b>	<b>w/ Friend</b>
<b>Male</b>	\$32.04 (n=131)	\$47.84 (n=16)
<b>Female</b>	\$39.31 (n=424)	\$38.42 (n=56)

**REGRESSION MODEL FOR THE PILOT STUDY (ESSAY 1)**

$$\ln(\text{AMOUNTSPENT}) = \beta_0 + \beta_1 \cdot \ln(\text{PLANNED}) + \beta_2 \cdot \text{FRIEND} + \beta_{3-9} \cdot \text{OTHERS} + \beta_{10} \cdot \text{TIME} + \beta_{11} \cdot \ln(\text{INCOME}) + \beta_{12} \cdot \text{CREDIT} + \beta_{13} \cdot \text{CHECK} + \beta_{14} \cdot \text{INSPECIAL} + \beta_{15} \cdot \text{GENDER} + \beta_{16} \cdot \text{AGE} + \beta_{17} \cdot \text{NUMBER} + \beta_{18} \cdot \text{FRIEND} \times \text{GENDER} + \beta_{19-25} \cdot \text{OTHERS} \times \text{GENDER} + \varepsilon_1$$

where,

AMOUNTSPENT = dollar amount spent by the respondent in the store. (Because of the skewness of the data, logarithmic transformation is used.)

PLANNED = dollar amount that the respondent planned to spend on that shopping trip. (Because of the skewness of the data, logarithmic transformation is used.)

FRIEND = 1 if accompanied by a friend, -1 if not accompanied by a friend.

OTHERS = dummy variables for other social influence categories: spouse, child, someone else's child, parent, adult family member, someone else, and unknown (e.g., SPOUSE = 1 if accompanied by spouse, -1 if not accompanied by spouse).

TIME = minutes elapsed between the time respondent entered the store and completed paying.

INCOME = total annual income of respondent's family. Respondents answered this question by selecting one of the eight categories (< \$15,000; \$15,000 < \$25,000; \$25,000 < \$35,000; \$35,000 < \$45,000; \$45,000 < \$55,000; \$55,000 < \$75,000; \$75,000 < \$100,000; \$100,000+). We created a continuous income variable by taking the median income for each category.

CREDIT = 1 if paid with a credit card, -1 otherwise.

CHECK = 1 if paid with a check, -1 otherwise.

INSPECIAL = 1 if took advantage of an in-store special, -1 otherwise.

GENDER = 1 if male and -1 if female.

AGE = age of the shopper. Respondents were provided with seven categories (under 18; 18-24; 25-34; 35-44; 45-54; 55-64; 65+). A continuous age variable was created by taking the median age for each category.

NUMBER = number of accompaniers.

Table A3. Regression Results for the Pilot Study (Essay 1)

Equation: ln(amount spent)		
	Parameter Estimate	t-value
Intercept	0.30	0.62
ln(planned amount)	0.73**	23.99
Friend	0.12*	2.02
Spouse	0.06	1.35
Parent	-0.04	-0.36
Child	0.04	0.85
Someone else's child	0.01	0.05
Adult family member	0.08	0.98
Someone else	0.03	0.33
Unknown relationship	0.09	1.83
Time spent in the store	0.01**	7.07
ln(income)	0.08**	2.70
Credit	0.20**	7.25
Check	0.20**	7.82
In-store special	0.05*	2.18
Gender	0.25	1.41
Age	-0.001	-0.97
Number	0.02	0.32
Friend x Gender	0.15**	2.88
Spouse x Gender	0.02	0.52
Parent x Gender	-0.05	-0.45
Child x Gender	0.02	0.70
Someone else's child x Gender	-0.05	-0.62
Adult family member x Gender	0.07	0.97
Someone else x Gender	0.12	1.38
Unknown rel. x Gender	0.04	1.12
*p<.05 **p<.01	R <sup>2</sup> =48.9%	

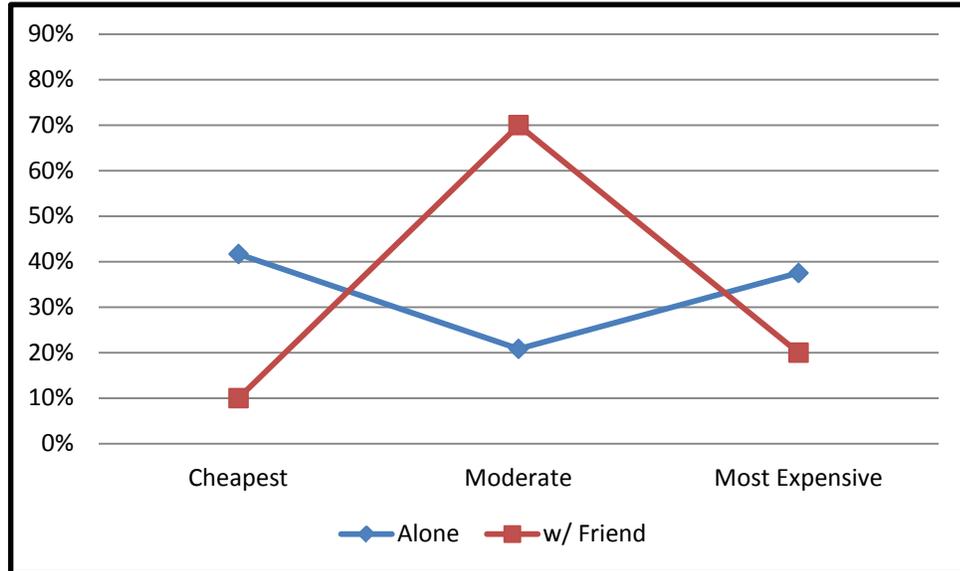
## APPENDIX B

Table B1. Brand Selection Frequency in Study 1 (Essay 1)

Brand Selection *	Male Shoppers			Female Shoppers		
	Alone	w/ Male Friend	w/ Female Friend	Alone	w/ Male Friend	w/ Female Friend
Expensive	26.09%	90.91%	77.78%	37.50%	15.38%	28.57%
Moderate	39.13%	9.09%	22.22%	20.83%	69.23%	71.43%
Cheap	34.78%	0%	0%	41.67%	15.38%	0%
n	23	11	9	24	13	7

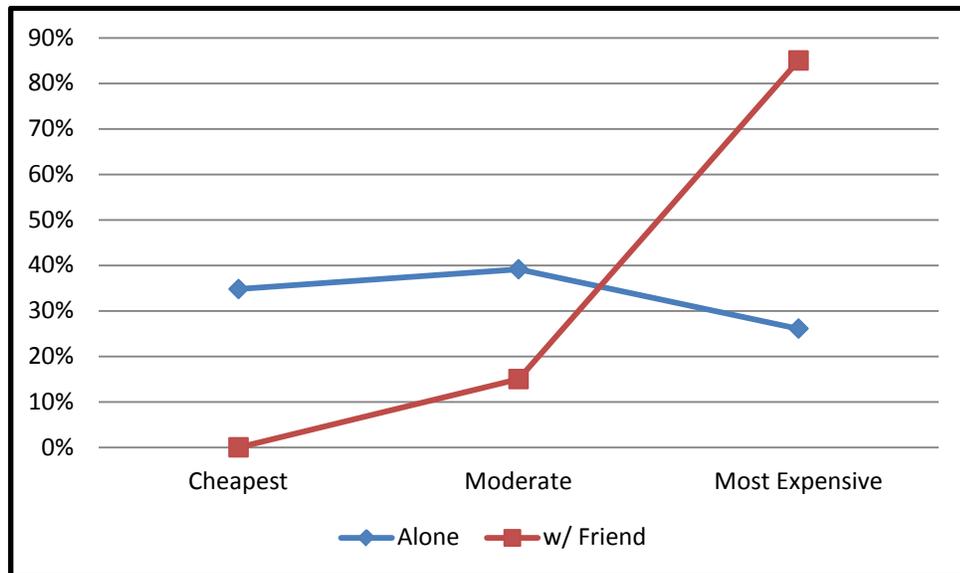
\* Expensive = Energizer/Duracell; Moderate = Rayovac/Panasonic, Cheap = Chateau

### Female



\* Expensive = Energizer/Duracell; Moderate = Rayovac/Panasonic, Cheap = Chateau

### Male



\* Expensive = Energizer/Duracell; Moderate = Rayovac/Panasonic, Cheap = Chateau

Figure B1. Percentage of Different Types of Brands Purchased in Study 1 (Essay 1)

## APPENDIX C

### REGRESSION MODEL FOR STUDY 2 (ESSAY 1)

$$\begin{aligned} \ln(\text{AMOUNTSPENT}) = & \delta_0 + \delta_1 * \ln(\text{PLANNED}) + \delta_2 * \text{FRIEND} + \delta_3 * \text{TIME} + \delta_4 * \ln(\text{INCOME}) \\ & + \delta_5 * \text{CREDIT} + \delta_6 * \text{MIX} + \delta_7 * \text{AGE} + \delta_8 * \text{GENDER} + \delta_9 * \text{INSPECIAL} + \delta_{10} * \text{VISIT} \\ & + \delta_{11} * \text{ACDIF} + \delta_{12} * \text{IMPULSE} + \delta_{13} * \text{SM} + \delta_{14} * \text{FRIEND} \times \text{ACDIF} + \delta_{15} * \text{FRIEND} \times \text{SM} + \\ & \delta_{16} * \text{ACDIF} \times \text{SM} + \delta_{17} * \text{FRIEND} \times \text{ACDIF} \times \text{SM} + \varepsilon_2 \end{aligned}$$

where,

AMOUNTSPENT = amount spent by the respondent in the mall. (Because of the skewness of the data, logarithmic transformation is used.)

PLANNED = amount that the respondent was planning to spend on that shopping trip as indicated by the respondent in the entrance interview.

FRIEND = 1 if accompanied by a friend, -1 otherwise.

ACDIF = difference between a respondent's agency and communion scores (ACDIF = Agency – Communion; positive values = a higher agency orientation, negative values = a higher communion orientation).

SM = respondent's self-monitoring score.

TIME = number of minutes spent between the time the respondent completed the first survey and purchased his or her last item in the mall (determined by looking at the time on the receipt of the consumer's last purchase).

INCOME = total annual income of the respondent's family. Respondents indicated their monthly incomes by selecting one of the nine categories (Less than 1,000 TL; 1000 TL - 1,999 TL; 2,000 TL – 2,999 TL; 3,000 TL – 3,999 TL; 4,000 TL – 4,999 TL; 5,000 TL – 5,999 TL; 6,000 YTL – 6,999 TL; 7,000 TL – 7,999; More than 8,000 TL ). \$1 was approximately 1.2 TL at the time of

the study. We created a continuous annual income variable by taking the median income for each category and multiplying that number by 12.

CREDIT = 1 if paid with a credit card, -1 otherwise.

MIX = 1 if paid with a credit card and cash, -1 otherwise.

AGE = age of the respondent.

GENDER = 1 if male and -1 if female.

INSPECIAL = 1 if took advantage of an in-store special, -1 otherwise.

VISIT = respondent's frequency of visiting the mall rated on a seven-point scale (1= not at all often, 7= very often).

IMPULSE= respondent's buying impulsiveness score. Respondents completed Rook and Fisher's (1995) buying impulsiveness scale, which contains nine seven-point item scales (1 = strongly disagree, 7 = strongly agree). The scale includes items such as "I often buy things without thinking" and "Sometimes I am a bit of reckless about what I buy" ( $\alpha = .85$ ).

### **ADDITIONAL ANALYSES FOR STUDY 2 (ESSAY 1)**

Our central thesis is that agency and communion orientations result in consumers exhibiting differential sensitivity to a friend's influence during a shopping trip. Since we used gender as a proxy for this individual difference in the pilot study and Study 1, we again test whether the inclusion of gender (in the place of ACDIF) reveals the same pattern of effects in the sample used in Study 2. As expected, we find a significant main friend effect ( $\gamma_2 = 0.12$ ,  $p < .05$ ) and friend x gender interaction ( $\gamma_{13} = 0.13$ ,  $p < .05$ ). However, the coefficient on friend x gender x self-monitor interaction is neither positive nor significant ( $\gamma_{16} = -0.02$ ,  $p > .70$ ). Interestingly, the results reveal a positive and significant gender x self-monitoring interaction ( $\gamma_{15} = 0.17$ ,  $p < .05$ ).

Second, to correct for a potential sample selection bias arising due to the fact that participants were not randomly assigned to the social presence conditions (i.e., alone vs. friend), we used the propensity score weighting technique (Hirano and Imbens 2001). That is, when

selection of participants for different experimental conditions are based on the observables rather than random assignment, it is important to adjust for different distributions of the observed characteristics in the treated (i.e., accompanied by a friend) and non-treated (i.e., alone) population. This adjustment can be done by weighting the non-treated population by the propensity score. Rosenbaum and Rubin (1983, p.41) define propensity score,  $p(x)$ , as “the conditional probability of assignment to a particular treatment given a vector of observed covariates”. In our case, propensity score is the conditional probability of shopping with a friend given a set of covariates including such variables as age and income. Propensity score can be estimated using either binary logit or probit model where the dependent variable is being accompanied by a friend. We calculated propensity scores for each individual in the sample following estimation of a logistic regression including age,  $\ln(\text{income})$ , gender, ACDIF, buying impulsiveness score, and self-monitoring score as independent variables. The results of the logistic regression show that age is the only significant predictor ( $\beta = -0.09$ ,  $\chi^2 = 8.68$ ,  $p < .01$ ) of the probability of shopping with a friend for the individuals included in our sample. That is, the higher the age of the respondent, the lower the probability of being accompanied by a friend. Importantly, the estimated coefficient on ACDIF is insignificant ( $\beta_{\text{communion}} = -0.13$ ,  $\chi^2 = 0.15$ ,  $p > 0.69$ ), suggesting that agency-communion orientation is not related to the probability of shopping with a friend vs. alone. Similarly, when agency and communion scores are entered separately into the model, the coefficients on both communion and agency are insignificant ( $\beta_{\text{communion}} = -0.02$ ,  $\chi^2 = 0.00$ ,  $p > 0.96$ ;  $\beta_{\text{agency}} = -0.35$ ,  $\chi^2 = 0.65$ ,  $p > 0.41$ ).

The inverse probability weights for the respondents in each group, alone and with a friend, are calculated as  $1/p(x)$  and  $1/(1-p(x))$ , respectively. Finally, we re-estimated our model with OLS using estimated inverse probability weights. This estimation procedure yields a

significant main effect for friend ( $\delta_2 = 0.14$ ,  $p < .05$ ), a positive and significant FRIEND x ACDIF interaction ( $\delta_{14} = 0.25$ ,  $p < .05$ ), and a positive and significant FRIEND x ACDIF x SM interaction ( $\delta_{17} = 0.32$ ,  $p < .01$ ). Overall, these results suggest that our findings do not suffer from sample selection bias.

Third, we test the possibility that agentic consumers may want to spend more and bring along their friends to the shopping trip to achieve that goal (i.e., licensing argument), whereas the opposite may be the case for communal consumers. In order to test this argument, we replace the dependent variable in our model with planned spending and reran the regression. However, neither the main effect for FRIEND nor the interactions are significant. Another possibility is that high ACDIF consumers accompanied by a friend may underreport their planned spending as compared to solo high ACDIF consumers. Comparison of mean planned spending between two groups reveal no evidence of underreporting ( $M_{\text{Friend}} = 89.31$  YTL vs.  $M_{\text{Alone}} = 91.66$  YTL,  $p > .90$ ). Finally, we include product category dummies (i.e., apparel, electronics, personal care, other (e.g., home textile, books), and mix) to examine whether our results are driven by specific product categories. Our results remain unchanged once we control for the types of products purchased by consumers.

## APPENDIX D

### AGENCY-COMMUNION PRIMING FOR STUDY 3 (ESSAY 1)

We are interested in how people form meaningful English sentences. Please form meaningful, non-question sentences from the following scrambled words. To complete the exercise successfully, you need to use all of the words given for each sentence.

<b>Agency</b>	<b>Communion</b>
Important personal are beliefs.	Important social are norms.
Being ambitious to success is key.	Assisting others to happiness is key.
Control individuals seek to others.	Conform with individuals seek to others.
Usually I on myself focus.	Usually I on others focus.
Achieve aspiring individuals goals their.	Make caring a difference people.
Virtuous is a quality displaying self-sufficiency.	Virtuous is a quality displaying nurturance.
Convictions I my stand by own.	While decisions making thoughts others' consider I
Being important a leader is.	Being important a follower is.
Respect get people accomplished.	Respect get people modest.
Separate individuals are others from.	Connected individuals are others to.
Try assertive to be I.	Try selfless to be I.
Competition enjoyable makes life more.	Cooperation enjoyable makes life more.
Concern for I have well-being my own.	Concern for I have of others the welfare
Power people for strive.	Togetherness people for strive.
Bring happiness alone spending time may.	Bring happiness with others spending time may.

<b>Neutral</b>
Listening to music our minds clear can.
Exercise a good way to jogging is.
Events I know college related.
Daily life a part of technology is.
Guided by life is knowledge.

## APPENDIX E

### INSTRUCTIONAL MANIPULATION CHECK USED IN STUDY 2 (ESSAY 2)

**Your responses to the questions in the second part were recorded. Please skip this screen without selecting any of the following activities. Just click on the next (>>) button to begin the third part of the survey.**

- 
- Running
  - Cycling
  - Reading
  - Watching TV
  - Playing instruments
  - Traveling



## APPENDIX F

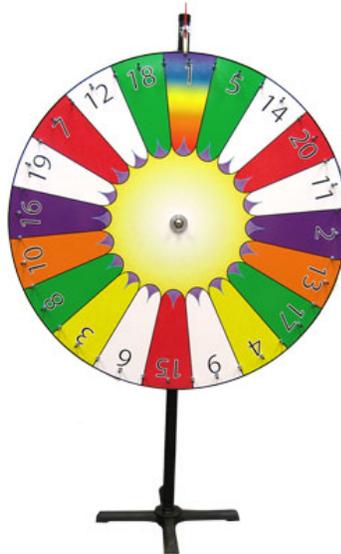
### STIMULI USED IN STUDY 2 (ESSAY 2)

#### High Self Benefit Condition

Suppose that you've participated in a Charity Event and are about to play "ODD or EVEN?", which is a game of chance. In this game, the dealer spins the wheel that contains numbers from 1 to 20. The main idea of the game is to guess whether the winning number is ODD or EVEN. If you guess correctly, you double the money you bet, otherwise you lose the bet. The amount you lose is donated to the charity.

Also, imagine that you have \$100 worth of chips.

Finally, remember that **25% of your winnings** will be donated to the charity on your behalf. Please go to the next page to answer a few questions regarding your play.

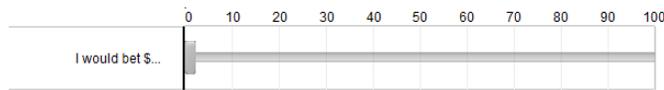


Would you bet on ODD or EVEN?

Odd

Even

How much money would you bet on your first play? Remember that 25% of your winnings will be donated to the charity on your behalf. Please answer this question by using the below sliding scale.



## Low Self-Benefit Condition

Suppose that you've participated in a Charity Event and are about to play "ODD or EVEN?", which is a game of chance. In this game, the dealer spins the wheel that contains numbers from 1 to 20. The main idea of the game is to guess whether the winning number is ODD or EVEN. If you guess correctly, you double the money you bet, otherwise you lose the bet. The amount you lose is donated to the charity.

Also, imagine that you have \$100 worth of chips.

Finally, remember that **75% of your winnings** will be donated to the charity on your behalf. Please go to the next page to answer a few questions regarding your play.



Would you bet on ODD or EVEN?

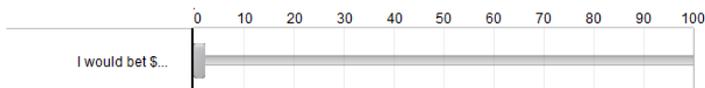
Odd



Even



How much money would you bet on your first play? Remember that 75% of your winnings will be donated to the charity on your behalf. Please answer this question by using the below sliding scale.



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