

**Evidence and Consequences of Egocentric Accounting Biases in  
Consumer-Seller Relationships**

TIFFANY BARNETT WHITE\*

THOMAS P. NOVAK

DONNA L. HOFFMAN

September 9, 2007

*Do not cite or quote without permission of the first author*

\*Tiffany Barnett White is Assistant Professor of Business Administration (Marketing Group) at the University of Illinois, Urbana-Champaign (1206 S. Sixth Street; Champaign, IL 61820; [tbwhite@uiuc.edu](mailto:tbwhite@uiuc.edu)). Thomas P. Novak is an Albert O. Steffey Professor of Marketing, Cooperating Faculty, Psychology, and Co-Director, Sloan Center for Internet Retailing at the University of California, Riverside (900 University Avenue, 237 Anderson Hall; Riverside, California 92521-0203; [tom.novak@ucr.edu](mailto:tom.novak@ucr.edu)). Donna L. Hoffman is Chancellor's Chair and Professor of Marketing, Cooperating Faculty, Psychology, and Co-Director, Sloan Center for Internet Retailing at the University of California, Riverside (900 University Avenue, 250 Anderson Hall; Riverside, California 92521-0203; [donna.hoffman@ucr.edu](mailto:donna.hoffman@ucr.edu)). This research received support from the UCR Sloan Center for Internet Retailing.

We investigate egocentric biases in mental accounting within the context of information-driven consumer seller relationships. Our research suggests that consumers keep “loose mental accounts” of exchange benefits and costs that are balanced when resource exchanges are either contingent or temporally integrated (i.e., exchanged in the same transaction). However, when *non-contingent* resource exchange is temporally separated (specifically when exchange benefits precede exchange costs), or when bias correction is impeded in the same transaction, consumers keep two mental accounts, assigning differential value to marketers’ versus their own resources. Consequently, consumers egocentrically devalue- and therefore feeling less obligated to reciprocate- firms’ benefit offerings.

A key aspect of marketing endeavors aimed at establishing close customer relationships is information gathering. Firms in possession of information about consumers' individualized preferences are better able to tailor their offerings to meet those preferences, potentially increasing commitment and retention among valued customers (Deighton 1996). Despite the possibility for mutual gain, consumers' motivations for disclosing (and refusing to disclose) personal information to relationship-seeking marketers remain relatively understudied (Hoffman and Novak 1997; Phelps, Nowak and Ferrell 2000; White 2004).

Existing research suggests that, when making the decision to reveal personal information, consumers engage in "disclosure management" - actively considering potential benefits and costs of disclosing, and doing so only to the extent that net benefits are perceived (Olivero and Hunt 2004; Sheehan and Hoy 2000; White 2004). One implication of this research is that a firm's ability to enhance net benefit perceptions will play an important role in consumers' disclosure decisions. However, key questions remain unanswered. For example, how can (and how should) marketers affect net benefit perceptions in ongoing exchanges? What factors influence how consumers judge the relative value of benefits versus costs in exchange? To what extent, and under what conditions, might these judgments be biased?

We address these questions in this research. Specifically, we explore the notion of egocentric biases in consumer-seller exchange and draw from the mental accounting literature to make predictions about the moderating effects of the types of resources offered by marketers (i.e., in exchange for disclosure) and the order in which resources are exchanged on consumers' willingness to engage in information disclosure. We then discuss two experiments in which our

predictions are tested, followed by a discussion of the theoretical and practical implications on our research.

## **EGOCENTRIC BIASES IN EXCHANGE RELATIONSHIPS**

The successful initiation and maintenance of exchange relationships is largely driven by consumers' perceptions of the benefits, less the costs, of patronizing a particular provider (Bagozzi 1985; Johnson and Selnes 2004). In general, exchange willingness increases as the net perceived benefits of doing so increase (Phelps et al 2000; Roloff 1985; Sayre and Horne 2000; White 2004). Implicit in these premises is the assumption that individuals maintain "loose mental accounts" of the benefits received from an exchange relationship and reconcile these outputs against the costs necessary to receive them (Clark 1984; Clark, Mills, and Corcoran 1989; Flynn 2003). Importantly, this perspective also implicitly assumes that these costs and benefits are objectively assessed and equally weighted in net benefit perceptions. Yet, a convergence of research has shown evidence of *egocentric accounting biases*, whereby individuals tend to believe that they have given more of their own economic and/or social resources in a given exchange than they have received (Flynn 2003; Robinson, Kraatz, and Rousseau 1994). For example, this bias is evident in the preponderance of research showing that people overestimate their own contributions to joint tasks and positive exchange outcomes relative to others' (Babcock and Loewenstein 1997; Greenwald 1980; Ross and Sicoly 1979). Moreover, such biases persist in estimates of individuals' own versus others' costs and contributions to interpersonal (Lerner and Somers 1991; Ross and Sicoly 1979) financial (e.g., Fellner et al. 2004), and organizational (Robinson et al. 1994; Specher 1988) outcomes.

An attribution theory account of egocentric accounting biases would suggest that they occur because individuals' own, versus others', motivations, actions and intentions are more salient and/or accessible to them, and are therefore more likely to be over-weighted in judgments (Ross and Sicoly 1979). Consequently, individuals in social and economic exchanges may be more likely to view situations and/or outcomes from differential (i.e., their own) perspectives (Malholtra 2004; Pillutla, Malholtra and Murnighan 2003). For instance, Malholtra (2004) has argued that givers (e.g., trustors) are likely to focus on the risks and/or costs associated with giving, while receivers (e.g., trusted parties) tend to base their perceptions on the benefits they have received. Similarly, prospect theory (Kahneman and Tversky 1979) suggests that, since losses (e.g., exchange costs) loom larger than gains (e.g., exchange benefits), individuals may focus disproportionately on their own costs versus others' in a given exchange. Indeed, extensive research on the endowment effect, which can be derived using a prospect theory account, has demonstrated that sellers overwhelmingly perceive their products to have more value than do buyers (Kahneman, Knetsch and Thaler 1990, 1991; van Dijk & van Knippenberg 1996).

Thus, egocentric accounting biases likely reflect a differential focus on one's own, versus others' exchange inputs (outputs). To the extent that consumers differentially attend to their own contributions to a given exchange relationship, specifically to the value of their personal information, relative to the value of the goods, services, information or other resources offered by marketers in exchange for the information, they may perceive fewer net benefits and therefore be less likely to disclose. In the section below, we discuss two factors that may moderate the extent to which egocentric accounting biases occur: the type of benefits offered by marketers to initiate the exchange (i.e., whether these benefits are offered on a contingent versus non-

contingent basis) and the order in which marketers' benefits and consumers' information are exchanged.

### Marketer Offer Type

*Contingent Exchange.* From a marketer's perspective, exchange is typically initiated through one of two categories of offers. The first category can be referred to as *contingent offers*, the provision of which are explicitly conditional upon the yielding of specific, unambiguous resources on recipients' (e.g., consumers') parts in the current or future time periods. For example, just as marketers typically offer goods and/or services in exchange for money from consumers, they may similarly offer market-relevant information (e.g., access to real estate listings) in exchange for information about consumers' contact information, lifestyles and/or preferences. Among other motivational factors, marketers' contingent offers are often aimed at enhancing the perception of net exchange benefits (i.e., the belief that the offer is worth more than what must be given up in order to obtain it), and therefore consumers' willingness to engage in the exchange. To the extent that consumers provide the resources (e.g., money, information, etc.) required to obtain a given offering (e.g., products, goods, services, etc.), we suggest *contingent exchange* has occurred.

*Non-Contingent Exchange.* A second category of offers can be referred to as non-contingent. In contrast to contingent offers, *non-contingent offers* are those provided by marketers for "free," in the sense that the consumers is not required to provide resources in order to receive the benefit. Examples of non-contingent offers include free (i.e., no purchase obligation) introductory subscriptions, free limited-time Internet access (e.g., from AOL or

Earthlink), and free samples (Raghubir 2004). Among other reasons, non-contingent offers may proliferate marketing practice because they are typically offered for “free,” but are motivated by the expectation of reciprocation in the current or future time periods (e.g., by joining AOL or purchasing a sampled brand). To the extent that consumers respond to [anticipate] such offers and are subsequently willing to provide resources (e.g., money, personal information, etc.) to firms making non-contingent offers, we suggest *non-contingent exchange* has occurred [will occur].

Research on mental accounting (Thaler 1985; Thaler and Johnson 1990) suggests that the distinction between contingent and non-contingent offers has important implications for the manner in which exchange costs and benefits are mentally integrated versus separated, and therefore on the extent to which egocentric biases occur. Mental *integration* occurs when two or more aspects of a given outcome (e.g., costs and benefits) are combined to form an overall outcome evaluation (e.g., perceived net exchange value) (Linville and Fischer 1991; Thaler 1985; Thaler and Johnson 1990). Consumers’ decisions to engage in contingent exchange entail reconciling known information about what they will receive (e.g., a customized listing of available real estate in a targeted area) against the resources they must provide in order to receive the offer (e.g., their name, email address, and \$19.95, plus tax). In this sense, exchange inputs and outputs must be mentally integrated in order for consumers to assess net exchange value and therefore their willingness to engage in a given contingent exchange.

On the other hand, non-contingent exchanges may facilitate mental *separation*. Mental separation occurs when two or more aspects of a given outcome are evaluated separately before being combined to form a subjective evaluation of that outcome ( Linville and Fischer 1991; Thaler 1985; Thaler and Johnson 1985). Unlike contingent exchange, the decision to engage in

non-contingent exchange (e.g., to provide personal information prior to – or in reciprocation of – a non-contingent offer) entails keeping track of two separate mental accounts. In one account is the marketer’s non-contingent offer (benefit). In the other, however, there is essentially a request for a withdrawal – the provision of a resource from the consumer that may or may not be accompanied by a second, or prior, inducement (cost).

We suggest that egocentric accounting biases should be less likely in contingent (versus non-contingent) exchanges. This is because, although individuals’ own costs may be salient to them during a given exchange (Ross and Sicoly 1979), the nature of contingent exchange is such that these exchanges require that costs be actively reconciled against benefits received – or to be received - in order to determine the overall attractiveness of the exchange. While the pain of giving (e.g., revealing information) may still be greater than the pleasure of receiving (e.g., receiving customized information from marketers) (Kahneman and Tversky 1979; Kivetz 1999), the need for simultaneous consideration of anticipated benefits as well as costs should decrease the possibility that consumers will focus on their costs while devaluing the benefits to be received in exchange for those costs. In this sense, we suggest that contingent exchanges facilitate *bias correction*, that is, a reduced tendency to egocentrically devalue marketers’ benefits (outputs) versus consumers’ own costs (inputs) in a given exchange. In contrast, those deciding whether to reciprocate a non-contingent offer need not duly consider these sunk or “free” benefits when deciding whether to provide a perhaps especially salient exchange output (e.g., personal information). Indeed, research examining the norm of reciprocity over time suggests that favors are often devalued over time, resulting in a lower perceived obligation to reciprocate them (Flynn 2003; Flynn and Brockner 2003).

The prediction that egocentric accounting biases may be relatively more prevalent in non-contingent versus contingent exchanges is consistent with findings from the price promotions literature, namely those related to price/quality perceptions (Kirmani and Rao 2000; Rao and Monroe 1989; Raghurir 2004). Indeed, Raghurir's (2004) *value discounting hypothesis* argues that free gifts are valued less. For example, consumers were less willing to pay for – or provide resources in exchange for- goods that have previously been offered for free (Raghurir 2004). However, in the section below, we examine the role of one factor, namely the order in which (contingent versus non-contingent) benefits and costs are exchanged, which suggests that egocentric accounting biases may persist over and above consumers' tendencies to devalue free (non-contingent) offerings.

### Exchange Order

As noted above, an attribution-based account for the egocentric accounting bias suggests that the bias occurs because individuals' personal contributions are more salient to them than the contributions of others. To the extent this salience argument holds, the disproportionate dominance of one's own relative contribution should *decrease* as the salience [accessibility] of the benefits received in the exchange *increase*. One implication of this premise in the context of consumer disclosure is that, when benefits from marketers are provided in transactions *preceding* requests for personal information, consumers should – in line with the egocentric accounting bias effect - be more likely to focus on the “value” of the information being requested in the current transaction (which is more accessible at the time of exchange) and perceive it as high relative to benefits received in earlier transactions. However, in contrast to the value discounting hypothesis,

the salience account also implies that when non-contingent requests for resources are *simultaneous with* the offer of benefits, consumers should be more likely to incorporate the “latest” information available, thereby diminishing the egocentric accounting bias effect. Thus, even when marketer provided resources aimed at initiating ongoing exchanges are free, egocentric accounting biases (and value discounting) may still be suppressed when benefits are salient for consumers - that is, when non-contingent benefits are exchanged simultaneous with costs.

On the other hand, exchange order should not influence consumers’ willingness to engage in contingent exchanges. Because benefits and costs are known – and must be duly considered in order to evaluate the attractiveness of contingent exchanges - whether the benefit precedes the costs (e.g., consumers obtain goods or services today, but must pay later), whether costs precede benefits (e.g., the consumer pays by credit card today, but must wait for the goods to be sent by mail), or the exchange occurs simultaneously, is of relatively little consequence since the consumer must evaluate the value of both given and received resources prior to responding to the contingent marketer offer. In other words, though the predicted effect of exchange order should hold for non-contingent offers, we predict that order will not influence consumers’ decisions to provide information in response to contingent offers.

Taken together, these premises suggest the following hypotheses:

**H1a:** Willingness to disclose among consumers receiving non-contingent offers will depend upon exchange order (i.e., the order in which offers (referred to hereafter as *benefits*) and requests for personal information (referred to hereafter as *costs*) occur). Specifically, consumers receiving non-contingent offers (benefits) *prior to* requests for personal

information (costs) will be less likely to disclose compared to when costs *precede* benefits or when non-contingent benefits and costs occur in the *same* transaction,

**H1b:** Willingness to disclose among consumers receiving contingent offers will not depend upon exchange order.

Below, we explore one moderating and one mediating variable that clarify and bolster our account of the interactive effects of exchange type and exchange order on consumers' exchange behaviors. Specifically, we discuss bias correction and perceived disclosure obligation.

*Bias Correction – Facilitation and Impediment.* We have argued that egocentric accounting is less likely when non-contingent costs and benefits are simultaneously exchanged, since the heightened salience of benefits as well as costs in the same transaction should facilitate bias correction – that is, the reduced tendency to underweight others' versus one's own exchange inputs. Insofar as bias correction entails the active consideration of exchange benefits as well as costs, then diminishing the mental capacity to consider both exchange components should compromise individuals' ability to engage in bias correction. In such a situation, we predict that egocentric accounting will occur in non-contingent exchanges, even when such exchanges occur in simultaneous transactions. Specifically, we hypothesize that:

**H2:** When non-contingent costs and benefits are exchanged in the *same* transaction, individuals' disclosure willingness will depend upon their ability to engage in bias correction. When this ability is [not] impeded, egocentric accounting should be [less] more likely to occur.

*Perceived Disclosure Obligation.* If, in line with H1a, egocentric accounting is more likely when non-contingent benefits precede costs, then consumers should perceive fewer net exchange benefits from these types of exchanges. Moreover, to the extent that exchange benefits

are devalued, consumers should feel less obligated to reciprocate these benefits by disclosing. In contrast, in exchanges in which egocentric accounting *does not occur* (i.e., in either contingent exchanges or those in which non-contingent costs and benefits are simultaneously exchanged), perceived disclosure obligation should be relatively higher, resulting in greater exchange (i.e., disclosure) willingness. Thus, we predict that:

**H3:** Perceived obligation to disclose will mediate the interactive effects of offer type and exchange order on consumers' disclosure willingness.

These predictions were tested in two experiments, which we describe below. Experiment 1 tests the effects of contingent versus non-contingent offers in simultaneous exchanges versus those in which benefits precede costs on consumers' disclosure willingness. This design is augmented in Experiment 2, in which we also examine the impact of contingent and non-contingent exchanges in which costs precede benefits. We also counterbalance the order in which perceived costs and benefits are evaluated, and – in order to test H2 – manipulate the extent to which bias correction is impeded versus facilitated. Finally, in order to test H3, we examine the mediating role of perceived obligation to disclose.

## EXPERIMENT 1

### Method

*Participants and Design.* Respondents were 127 undergraduates at a large Midwestern university, who completed the study on a voluntary basis in exchange for extra course credit. The experiment entailed a 2 (Exchange Order: Benefit preceding Cost, hereafter Benefit First (BF)

versus simultaneous exchange of benefits and costs, hereafter SAME)) X 2 (Benefit Type: Contingent (C) versus Non-Contingent (NC)) between-subjects design.

Respondents were recruited to participate as college panelists for a new website, FilmsandReviews.com (FR). FR was described as a website on which consumers post movie reviews. Respondents were informed that they would be asked to rate marketing materials that FR might use to attract and retain customers upon launching its website. All participants read and rated the FR website in the first stage of the experiment. Next, participants were asked to read an email sent by FR. Depending upon experimental condition, the email contained: 1) a coupon offer from FR (for a free movie rental); and/or 2) a personal profile requesting contact, demographic, and psychographic information to be kept on hand at FR, which they were either asked (NC) or required (C) to complete in exchange for the coupon. The email for those SAME conditions contained both the coupon offer and the personal profile, whereas those in the BF conditions saw only the coupon offer. Those receiving non-contingent offers were informed that the coupon was an opportunity for them to enjoy a treat from FR free of charge (i.e., “on us”), whereas those in the contingent conditions were informed that redeeming the coupon would require them to complete a personal profile (to be sent in a subsequent email) that would be kept on hand at FR.

After reading the email, participants in the SAME conditions were asked to rate their attitudes towards FR’s coupon offer using three semantic differential scales ranging from -3 to +3: bad/good, unpleasant/pleasant and dislike/like ( $\alpha = .86$ ). Next, these respondents indicated their willingness to complete FR’s personal profile on a scale ranging from 1 (very unwilling) to 7 (very willing). A similar procedure was used for those in the BF conditions, with the exception that, after rating the coupon offer, respondents completed a filler task, in which respondents were

asked to rate an advertisement by FedEx Kinkos. Specifically, participants were told that, although FedEx Kinkos was not affiliated with FR, the website was interested in panelists' reactions to advertisements using the tone and style of the FedEx Kinkos advertisements. The ad evaluation task took approximately 20 minutes to complete. Next, respondents in the BF conditions saw a second email from FR. This email contained FR's personal profile and the explanation that the profile was sent either because they were required to complete it in order to redeem the coupon previously sent to them (contingent condition), or because FR would "like to know you better," as an optional request (non-contingent conditions). These respondents then rated the coupon offer and their willingness to complete the personal profile, as described above. As a test of the offer type manipulation, respondents were then asked "To what extent do you feel completing the FR personal profile is necessary to receive the coupon offer?" (1-Not at all; 7-To a Great Extent).

Because consumers' trusting beliefs strongly influence their attitudinal and behavioral intentions (Moorman, Deshpandé and Zaltman 1993; Schlosser, White, and Lloyd 2006), particularly their disclosure willingness (White 2004), and because we sought to examine the influence of exchange order and offer type on disclosure willingness over and above effects related to trust, we measured trusting beliefs on 4 semantic differential scales ranging from 1 to 7: non-expert/expert, untrained/trained, inexperienced/experienced, has no integrity/has integrity ( $\alpha = .85$ ; Moorman et al. 1993). We control for these perceptions in all analyses reported below. In addition, because consumers vary substantially in their tolerance for correspondence from even well-liked companies, we asked respondents, "To what extent would you welcome future correspondence from Films and Reviews?" (1-not at all; 7-very much), and control for these perceptions as well. Finally, we also measured and controlled for the following variables in all

subsequent analyses: 1) respondents' propensity to post reviews on websites such as FR, by asking "How often do you post product reviews?" (1-Never; 7-Quite Often); 2) participants general interest in movies, which we measured by asking "How would you rate your level of interest in movies?" on a scale ranging from 1-No Interest to 7-Lots of Interest; and 3) task-induced affect (which was captured by administering Shiv and Fedorikhin's (1999) heart and mind scale).

## Results

*Manipulation check.* In support of the offer type manipulation, a 2 (Offer Type) x 2 (Exchange Order) ANCOVA, controlling for the covariates described above yielded a significant effect of offer type ( $F(1, 120) = 182.17, p < .0001$ ): Participants in the contingent conditions agreed more that completing the profile was necessary in order to receive the offer than those in the non-contingent conditions ( $M_s = 6.71$  versus  $2.79$ ). In contrast, neither the main effect of exchange order nor the offer type x exchange order interaction were significant ( $F_s(1, 120) < .7; ns$ ).

*Benefit Perceptions.* We analyzed respondents' attitudes towards FR's coupon offer using the ANCOVA described above. The results yield a significant main effect for offer type ( $F(1, 120) = 14.88; p < .001$ ). Regardless of exchange order, respondents had more positive attitudes towards non-contingent than contingent offers ( $M_s = .82$  versus  $.35$ ). No other effects were significant.

*Profile (Cost) Willingness.* A significant main effect for exchange order ( $F(1, 120) = 4.81; p < .05$ ) suggests that respondents were more willing to complete the FR profile when the exchange occurred in the SAME versus in the BF conditions ( $M_s = 3.35$  versus  $2.72$ ). However, in support of H1a and H1b, this effect was qualified by a significant exchange order by offer type interaction ( $F(1, 120) = 4.20; p < .05$ ). Whereas willingness to complete the profile did not vary significantly by BF versus SAME exchange order when the offer type was contingent ( $M_s = 3.14$  vs.  $3.15$ , respectively;  $F(1, 120) = .06; ns$ ), respondents were significantly *less* willing to complete the profile in BF versus SAME transaction when the offer type was non-contingent ( $M_s = 2.29$  vs.  $3.45$ , respectively;  $F(1, 120) = 8.99; p < .005$ ).

## Discussion

The results of Experiment 1 offer initial evidence of egocentric accounting on consumers' parts in consumer-seller exchanges. Specifically, the results suggest that although consumers had more positive attitudes towards non-contingent versus contingent offers overall, their willingness to reciprocate these offers by completing the FR personal profile depended upon the exchange order (i.e., whether requests for this "favor" from consumers occurred in a separate versus simultaneous transaction). Our account above argues that this pattern of results can be explained by differential mental accounting of non-contingent versus contingent offers. Whereas non-contingent offers facilitate mental separation of exchange costs and benefits, and a corresponding tendency to devalue received benefits versus relinquished costs when benefits precede costs, we have suggested that contingent offers facilitate mental integration – and therefore bias correction – regardless of exchange order.

As noted above, Experiment 2 augments the design used in Experiment 1 several ways. First, we include a condition in which costs precede benefits, i.e., “cost first” conditions (CF). Second, we include conditions in which the capacity of those in engaging in simultaneous contingent and non-contingent exchange (i.e., the capacity of those likely engaging in bias correction), is diminished by a filler task. Third, we test H3 by examining the mediating role of perceived obligation to disclose. Finally, we test our predictions in a new product category: a coffee shop and Internet café.

## EXPERIMENT 2

### Method

*Participants and design.* 951 members of an Internet-based consumer panel affiliated with a southern university were recruited to complete the experiment in exchange for entry in a \$250 lottery drawing. The experiment was administered via the web outside of a lab setting. In order to reduce measurement error, we eliminated respondents who either did not complete the survey, or who completed it in a time frame that was in the top or bottom 5% of the range of total response times. Our effective sample size was therefore 856. These respondents were 51% female, with an average age of 44, and an average educational attainment of level of 16 years (i.e., college educated).

The experiment was a 3 (Exchange Order: Benefit First (BF) versus Cost First (CF) versus SAME) x 2 (Offer Type: Contingent (C) versus Non-contingent (NC)) x 2 (Filler Task: Absent versus Present) between-subjects design. The order in which respondents answered questions about exchange benefits and costs were evaluated was also counterbalanced in this

experiment (x 2 Counterbalance Order: Profile items first versus Coupon items first). Additionally, the level of filler task was nested under levels of Offer Type (x 2 Filler Task: Present versus Absent; see Appendix for full design schematic). The filler task used in Experiment 1 was present when either the offer (benefit) or the profile (cost) was evaluated first (i.e., in all BF and CF conditions). Similarly, as in Experiment 1, half the respondents in the SAME conditions were given *no* filler task. However, in order to test Hypothesis 2, the other half of respondents in the SAME conditions were given a filler task *after* seeing both the profile and coupon in the same exchange, but *before* they were asked to evaluate these exchange components. Note that this design allows a test of whether bias correction occurs in the contingent and non-contingent SAME conditions in which no filler task is given (consistent with the results from Experiment 1), but is impeded in these SAME conditions when a filler/distraction task is given.

*Procedure.* Participants were randomly assigned to one of 16 experimental conditions. Respondents in all conditions were asked to participate in a national panel of consumers chosen to evaluate marketing materials for a new coffee shop, Café Java (CJ), which planned to open soon in various locations throughout the US. The procedure used in this experiment is similar to that used in Experiment 1, with exceptions detailed herein. The CJ email contained one or both of the following: 1) a coupon offer from Café Java (\$1.50 off any item); and/or 2) a 9-item personal profile (requesting contact, demographic, and psychographic information). Those in the CF conditions were informed that CJ would “like to know you better,” and either asked to complete the *optional* personal profile (non-contingent conditions), or informed that, in order to receive a future offer from CJ (to be described in a subsequent email), they would be *required to* complete the attached personal profile (contingent conditions).

After reading the email and, depending upon condition, completing the filler task, participants rated their attitudes and behavioral intentions towards either the coupon offer using the measures described in Experiment 1 ( $\alpha = .92$ ). Participants also rated the extent to which they felt obligated to redeem CJ's coupon offer (BF), to complete CJ's personal profile (CF), or both (SAME) on a scale ranging from 1 (not at all) to 7 (to a great extent). Respondents then indicated their intentions to redeem CJ's coupon offer (BF), to complete CJ's personal profile (CF), or both (SAME) using three semantic differential scales, ranging from 1 to 7: unlikely/likely, impossible/possible, improbable/probable ( $\alpha = .97$ ). Finally, respondents completed the manipulation check and covariate items described in Experiment 1 with two exceptions: 1) respondents indicated their coffee habits, rather than their interest in movies, by rating how much and how often they drink coffee (1-not at all – 7-a lot); 2) we measured and controlled for level of education.

## Results

*Manipulation Check.* Unless otherwise noted, data for this and all subsequent analyses were analyzed using a 3 (Exchange Order) x 2 (Offer Type) x 2 (Filler) x 2 (Counterbalance Order) ANCOVA, controlling for the covariates described above. In support of the offer type manipulation, we find a significant main effect for offer type ( $F(1, 835) = 61.62; p < .0001$ ). As expected, respondents agreed more that completing the personal profile was optional when they were non-contingent versus contingent conditions ( $M_s = 5.77$  versus 4.79). In contrast, neither the main effect of exchange order nor the offer type x exchange order interaction were significant ( $F_s(1, 835) < 3; ns$ ).

*Benefit Perceptions.* In line with Experiment 1, we find a significant main effect for offer type on benefit perceptions ( $F(1, 835) = 18.56; p < .0001$ ). Regardless of exchange order, respondents had more positive attitudes towards non-contingent versus contingent offers ( $M_s = 1.02$  versus  $.82$ ). In addition, a significant filler task main effect ( $F(1, 835) = 6.91; p < .001$ ) suggests that those in the SAME conditions in which a filler task was present evaluated the exchange benefit slightly higher overall (i.e., collapsing across contingent and non-contingent conditions) than did those in the SAME conditions in which no filler task was used ( $M_s = 1.01$  versus  $.85$ ;  $F(1, 835) = 6.93; p < .001$ ), yet equally as high as those in the CF and BF conditions ( $F_s(1, 835) = < 3; ns$ ).

*Profile (Cost) Intentions.* Replicating the results of Experiment 1, consistent with H1a and H1b, we find a significant exchange order by offer type interaction ( $F(1, 835) = 3.63; p < .05$ ) (see table). Specifically, intentions to complete the profile did not vary significantly by BF versus SAME exchange order when the offer type was contingent ( $M_s = 6.75$  vs.  $6.55$ , respectively;  $F(1, 835) = .98; ns$ ), however, these intentions were significantly lower in BF versus SAME conditions when the offer type was non-contingent ( $M_s = 6.30$  vs.  $6.63$ , respectively;  $F(1, 835) = 3.88; p < .05$ ). Additionally, supporting H1a and H1b, whereas intentions to complete the profile did not vary between those in the BF versus CF and SAME conditions when the offer was contingent ( $M_s = 6.75$  versus  $6.55$  and  $6.55$ , respectively;  $F_s(1, 835) < 2; ns$ ), intentions varied significantly when these offers were non-contingent. Specifically, although intentions to complete the profile did not vary between those in the SAME and CF non-contingent conditions ( $M_s = 6.82$  versus  $6.63$ ;  $F(1, 835) = 1.29; ns$ ), intentions for those in the BF non-contingent conditions were significantly lower than either those in the CF non-

contingent conditions ( $M_s = 6.30$  versus  $6.83$ ;  $F(1, 835) = 6.81$ ;  $p < .01$ ) or those in the SAME non-contingent conditions ( $M_s = 6.30$  versus  $6.63$ ;  $F(1, 835) = 3.88$ ;  $p < .05$ ).

In support of H2, we find a significant offer type by filler task interaction ( $F(1, 835) = 4.64$ ;  $p < .05$ ), which suggests that the offer type by exchange order interaction described above is qualified by filler task. Although the pattern of results replicate those found in Experiment 1 when respondents in the SAME conditions were not given a filler task, examining the results for those who respondents who saw both exchange elements simultaneously, but were given a filler task before evaluating them, yields significantly different results. Specifically, although intentions to complete the profile were not significantly different among those in the SAME conditions in the presence ( $M = 6.67$ ) versus absence ( $M = 6.42$ ) of a distraction task when the benefit was *contingent* ( $F(1, 835) = 1.27$ ; *ns*), these intentions were significantly lower among those in the SAME conditions in the presence ( $M = 6.47$ ) versus the absence ( $M = 6.79$ ) of the distraction task ( $F(1, 835) = 2.72$ ;  $p_{1\text{-tailed}} < .05$ ) when benefits were *non-contingent*. In addition, whereas respondents in the SAME condition *without* a filler task were significantly more likely to complete the profile in exchange for non-contingent benefits than were those in BF conditions ( $M_s = 6.79$  versus  $6.31$ ;  $F(1, 835) = 5.81$ ;  $p < .05$ ), intentions for those in the SAME condition with a filler task versus those in the BF conditions did not vary significantly ( $M_s = 6.47$  versus  $6.31$ ;  $F(1, 835) = 2.10$ ; *ns*).

*Perceived Obligation.* Analysis of respondents' felt obligation to redeem the CJ coupon offer as well as to complete the CJ profile indicate that, whereas obligation to redeem the coupon varied only by offer type ( $F(1, 835) = 5.07$ ;  $p < .05$ ), with higher perceived obligation to redeem non-contingent ( $M = 3.99$ ) versus contingent offers ( $M = 3.67$ ), we find a significant offer type by filler task interaction for perceived obligation to complete the profile ( $F(1, 835) = 8.68$ ;  $p$

< .05) (see table). Specifically, perceived obligation to complete the profile did not vary significantly by BF versus SAME or CF exchange order when the offer type was contingent (Ms = 3.57, 3.31, and 3.20, respectively; (Fs (1, 835) < 2; *ns*), however, this perception was significantly lower for those in the BF non-contingent conditions versus either those in the CF non-contingent conditions (Ms = 3.01 versus 3.58; (F (1, 835) = 5.15;  $p < .01$ )) as well as versus those in the SAME non-contingent conditions (Ms = 3.01 versus 3.64; (F (1, 835) = 6.20;  $p < .01$ )). In addition, whereas respondents in the SAME condition *without* a filler task felt significantly more obligated to complete the profile in exchange for non-contingent benefits than were those in BF conditions, intentions for those in the SAME condition with a filler task versus those in the BF conditions did not vary significantly (Ms = 3.01 versus 3.27; (F (1, 835) = 1.25; *ns*)).

In support of H3, perceived obligation to complete the profile was significantly correlated with intentions to complete the profile ( $r = .61$ ;  $p < .0001$ ). In order to test whether perceived obligation mediated the offer type by filler task interaction, we added this factor as a covariate to the ANCOVA described above. Consistent with the requirements for mediation (Baron and Kenny 1986), perceived obligation was a significant covariate (F (1, 1835) = 201.39;  $p < .0001$ ), whereas the formerly significant exchange order by filler task interaction became non-significant (F (1, 835) = .90;  $p < .4$ ). We found further support for H3 using the criterion established by Sobel (1982) for testing mediation (Goodman I test statistic = 2.90;  $p < .005$ ).

## DISCUSSION

Our findings offer new and important insights into the exchange dynamics of consumer-seller relationships. In contrast to existing perspectives, which have implicitly assumed objective

(i.e., unbiased) assessment of exchange costs and benefits (e.g., Olivero and Hunt 2004, Roloff 1985, Sheehan and Hoy 2000, White 2004), the results of two studies demonstrate conditions under which consumers may devalue benefits received from marketers relative to their own exchange costs – i.e., exhibit an egocentric accounting bias. Specifically, our research suggests that consumers keep “loose mental accounts” of exchange inputs and outputs that are generally balanced when resource exchanges are either contingent (versus non-contingent) or temporally integrated (i.e., exchanged in the same transaction). However, when *non-contingent* resource exchange is temporally separated (specifically when exchange benefit precede exchange costs), or when bias correction is impeded in the same transaction, we argue that consumers essentially keep two mental accounts, potentially assigning differential value to marketers’ versus their own resources. As a result, consumers egocentrically devalue-and therefore feel less obligated to reciprocate-firms’ inputs.

The research contributes to the social and economic exchange literature by conceptually distinguishing non-contingent from contingent marketer benefit offers. We argue that, when receipt of a given marketer benefit explicitly *requires* a specified level of reciprocation on consumers’ parts, consumers will tend to determine the net value of the exchange by mentally integrating the benefits as well as the costs, and more are therefore more likely to give simultaneous and equal consideration to both inputs. As a result, rather than facilitate egocentric accounting, we argue that such mental integration facilitates bias correction – and reduces consumers’ tendencies to differentially access their own contributions to a given exchange.

Our findings also augment existing research on mental accounting, which has demonstrated differential accounting of temporally separated versus integrated losses and gains (e.g., Johnson and Thaler 1990, Linville and Fischer 1991, Prelec and Loewenstein 1998).

Specifically, Prelec and Lowenstein (1998) have argued that consumers prefer pre-payment (i.e., temporal separation in which exchange costs precede benefits) because the temporal separation of benefits and costs makes costs less salient (see also Gourville and Soman 1998). In addition to temporal separation, our results suggest that mental accounting is also influenced by the *order* in which losses and gains occur. In fact, our findings suggest that, under conditions of non-contingent *post-payment*, that is, when benefits precede costs, the temporal separation of benefits and costs makes *benefits* less salient, and therefore leads to significantly different exchange outcomes.

Our research highlights conditions under which consumers respond less (rather than more) favorably to “free” gifts than to those for which they must “pay.” Importantly, our findings qualify the notion that non-contingent (i.e., “free”) goods are valued less by consumers (Raghubir 2004). Our research suggests that, depending upon exchange order, these non-contingent offers are also *less salient*. In fact, to the extent that the salience of non-contingent benefits is heightened, either in simultaneous transactions or those in which costs precede benefits, our results suggest that value discounting is less likely to occur.

From a practical standpoint, it appears that, when courting consumers, firms would benefit from understanding circumstances under which consumers are more willing to give (i.e., when non-contingent costs precede non-contingent benefits) than to reciprocate favors. Indeed, our results suggest that merely manipulating the order in which exchange occurs can influence consumers’ willingness to reveal personal information in reciprocation for non-contingent offers. Interestingly, our results also suggest that firms can heighten the salience of their benefits offerings – and therefore perceived obligation (and willingness) to reciprocate these offerings – by explicitly mentioning, indeed *requiring*, exchange costs.

We have discussed egocentric accounting biases generally, assuming that our framework and results will generalize to the exchange of various types of resources. However, a noted limitation of this research is that we have empirically examined only one type of resource – namely consumers’ personal information. Future research examining the exchange of other types of marketer offerings (e.g., information, products, etc.) as well as consumer inputs (e.g., money, time and/or effort) warrants consideration.

**APPENDIX**  
**SCHEMATIC REPRESENTATION OF DESIGN USED IN EXPERIMENT 2**

<b>EXPERIMENT 2</b>															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>BF</b>				<b>SAME</b>				<b>CF</b>				<b>SAME</b>			
<b>NC</b>	<b>C</b>	<b>NC</b>	<b>C</b>	<b>NC</b>	<b>C</b>	<b>NC</b>	<b>C</b>	<b>NC</b>	<b>C</b>	<b>NC</b>	<b>C</b>	<b>NC</b>	<b>C</b>	<b>NC</b>	<b>C</b>
<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>	<b>COUNT</b>
<b>= 1</b>	<b>= 2</b>	<b>= 1</b>	<b>= 2</b>	<b>= 1</b>	<b>= 2</b>	<b>= 1</b>	<b>= 2</b>	<b>= 1</b>	<b>= 2</b>	<b>= 1</b>	<b>= 2</b>	<b>= 1</b>	<b>= 2</b>	<b>= 1</b>	<b>= 2</b>
Cover story															
Brochure															
Brochure Questionnaire Items															
CJ email <i>BF/NC</i> Version	CJ email <i>BF/C</i> Version	CJ email <i>BF/NC</i> Version	CJ email <i>BF/C</i> Version	CJ email <i>SAME/NC</i> Version	CJ email <i>SAME/C</i> Version	CJ email <i>SAME/NC</i> Version	CJ email <i>SAME/C</i> Version	CJ email <i>CF/NC</i> Version	CJ email <i>CF/C</i> Version	CJ email <i>CF/NC</i> Version	CJ email <i>CF/C</i> Version	CJ email <i>SAME/NC</i> Version	CJ email <i>SAME/C</i> Version	CJ email <i>SAME/NC</i> Version	CJ email <i>SAME/C</i> Version
Filler Task				No Filler Task				Filler Task				Filler Task			
FedEx Kinko's Ad								FedEx Kinko's Ad				FedEx Kinko's Ad			
Filler Questions								Filler Questions				Filler Questions			
CJ email #2 <i>BF/NC</i> Version	CJ email #2 <i>BF/C</i> Version	CJ email #2 <i>BF/NC</i> Version	CJ email #2 <i>BF/C</i> Version	Coupon Items	Profile Items	Coupon Items	Profile Items	Coupon Items	Profile Items	Coupon Items	Profile Items	CJ email #2 <i>CF/NC</i> Version	CJ email #2 <i>CF/C</i> Version	CJ email #2 <i>CF/NC</i> Version	CJ email #2 <i>CF/C</i> Version
Coupon Items	Profile Items	Coupon Items	Profile Items	Profile Items	Coupon Items	Profile Items	Coupon Items	Profile Items	Coupon Items	Profile Items	Coupon Items	Coupon Items	Profile Items	Coupon Items	Profile Items
Profile Items	Coupon Items	Profile Items	Coupon Items	Manipulation Check				Manipulation Check				Profile Items	Coupon Items	Profile Items	Coupon Items
Manipulation Check				Covariate Items				Covariate Items				Manipulation Check			
Covariate Items				Conclusion				Conclusion				Covariate Items			
Conclusion												Conclusion			

Notes: 1) CJ = Café Java; 2) COUNT = counterbalance condition

## REFERENCES

- Babcock, Linda and G. Loewenstein. (1997). Explaining Bargaining Impasse: The Role of Self-Serving Biases. *Journal of Economic Perspectives*, 11(1), 109-126.
- Bagozzi, Richard P. (1985). Marketing as exchange: Is it indistinguishable from social psychology? *Research in Marketing*, 2, 257-262.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Clark, M.S. (1984). Record Keeping in Two Types of Relationships. *Journal of Personality and Social Psychology*, 65(4), 801-811.
- Clark, Mills, J. and Corcoran, D.M. (1989). Keeping Track of Needs and Inputs of Friends and Strangers. *Personality and Social Psychology Bulletin*, 15(4), 533-542.
- Deighton, John. (1996, November- December). The Future of Interactive Marketing. *Harvard Business Review*, 4-16.
- Fellner, G, Guth, W. & Maciejovsky, B. (2004,November). Illusion of expertise in portfolio decisions – an experimental approach. *Journal of Economic Behavior & Organization*, [55\(3\)](#), 355-376.

Flynn, Francis. (2003, May). What have you done for me lately? Temporal adjustments to favor evaluations. *Organizational Behavior & Human Decision Processes*, Vol 91(1), 38-50.

Flynn, F., & Brockner, J. (2003). It's different to give than to receive: Predictors of givers' and receivers' reactions to favor exchange. *Journal of Applied Psychology*, 88, 1034-1045.

Greenwald, Anthony G. (1980). The totalitarian ego: Fabrication and revision of personal history. *American Psychologist*, 35, 605-618.

Hoffman, Donna & Novak, Thomas P. (1997). A New Marketing Paradigm for Electronic Commerce. *Information Society*, 13(1), 43-54.

Hoffman, D. L., Novak, T. & Peralta, M. (1999). Building consumer trust online. *Communications of the ACM*, 42(4), 80-5.

Johnson, Michael D. and Fred Selnes. (2004). Customer Portfolio Management: Toward a Dynamic Theory of Exchange Relationships. *Journal of Marketing*, 68 (2), 1-17.

Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1990). Experimental tests of the endowment effect and the Coase theorem. *Journal of Political Economy*, 98, 1325-1348.

Kahneman, D., Knetch, J., Thaler, R. (1991). Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic Perspectives*, 5, 193-206.

- Kahneman, Daniel and Amos Tversky. (1982). *Judgment under Uncertainty: Heuristics and Biases*, New York: Cambridge University Press.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47, 263-291.
- Kirmani, Amna and Akshay R. Rao. (2000, April). No Pain, No Gain: A Critical Review of the Literature on Signaling Unobservable Product Quality. *Journal of Marketing*, 64, 66–79.
- Kivetz, Ran. (1999). Advances in Research on Mental Accounting and Reason-Based Choice. *Marketing Letters*, 10 (3), 249-266.
- Lerner, M., Somers, D. G., Chiriboga, D. & Tierney, M. (1991). Adult Children as caregivers: Egocentric biases in judgments of sibling contributions. *The Gerontologist*, 31, 746-755.
- Linville, Patricia, Fischer, Gregory. (1991). Preferences for Separating or Combining Events. *Journal of Personality and Social Psychology*, 60 (1), 5-23.
- Moon, Youngme. (2000). Intimate exchanges: Using computers to elicit self-disclosure from consumers. *Journal of Consumer Research*, 26(4), 323-339.

Moorman, C., R. Deshpande, and G. Zaltman. (1993). *Relationship Between Providers and Users of Marketing Research: The Role of Personal Trust*. Cambridge, MA: Marketing Science Institute.

Nowak, G, & Phelps, J. (1997). Direct marketing and the use of individual-level consumer information determining how and when 'privacy' matters. *Journal of Direct Marketing*, 11(4), 94-108.

Phelps, J., Nowak, G, & Ferrell, E. (2000). Privacy concerns and consumer willingness to provide personal information. *Journal of Public Policy and Marketing*, 19(1), 11-AX.

Raghubir, Priya. (2004). Free Gift with Purchase: Promoting or Discounting the Brand? *Journal of Consumer Psychology*, 14(1/2), 181-188.

Rao, Akshay R. & Kent B. Monroe. (1989). The Effect of Price, Brand Name, and Store Name on Buyers' Perceptions of Product Quality: An Integrative Review. *Journal of Marketing Research*, 26, 351-357.

Robinson, Sandra L; Kraatz, Matthew S; Rousseau, Denise M. (1994). Changing obligations and the psychological contract: A longitudinal study. *Academy of Management Journal*, 37(1), 137-152.

Roloff, Michael E. (1985). *Interpersonal Communication: The Social Exchange Approach*. Beverly Hills, CA:Sage.

Ross, M. and F. Sicoly. (1979). Egocentric biases in availability and attribution. *Journal of Personality and Social Psychology*, 37(3), 322-336.

Sayre, S, & Horne, D. (2000). Trading secrets for savings: how concerned are consumers about club cards as a privacy threat? *Advances in Consumer Research: Proceedings of the Thirtieth Annual Conference of the Association for Consumer Research*, 27, 151-5.

Schlosser, A., White, T., Lloyd, S. (2006). Converting Website Visitors into Buyers: How Website Investment Increases Consumer Trusting Beliefs and Online Purchase Intentions. [\*Journal of Marketing\*](#), 70, 133-148.

Shiv, Baba and Alexander Fedorikhin. (1999). Heart and Mind in Conflict: The Interplay of Affect and Cognition in Consumer Decision Making. *Journal of Consumer Research*, 26, 278-292.

Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. *Sociological methodology*, 290-312.

Thaler, Richard. (1985). Mental accounting and consumer choice. *Marketing Science*, 4, 199-214.

Thaler, R. and E. Johnson. (1990). Gambling with the house money and trying to break even: the effects of prior outcomes on risky choice. *Management Science*, 36, 643-660.

Van Dijk, E. and D. Van Knippenberg. (1996). Buying and selling exchange goods: Loss aversion and the endowment effect. *Journal of Economic Psychology*, 17, 517-524.

Ward, S., Bridges, K. and Chitty, B. (2005). Do Incentives Matter? An Examination of On-Line Privacy Concerns and Willingness to Provide Personal and Private Information. *Journal of Marketing Communications*, 11(1), 21-40.

White, Tiffany Barnett. (2004). Consumer Disclosure and Disclosure Avoidance: A Motivational Framework. *Journal of Consumer Psychology*, 14 (1-2), 41-51.

TABLE 1

## STUDY TWO MEANS FOR INTENTIONS TO COMPLETE PROFILE

	BF	Same- No Distraction	Same-Distraction	CF
Contingent	6.75 <sup>a</sup>	6.42 <sup>a</sup>	6.67 <sup>a</sup>	6.55 <sup>a</sup>
Non-Contingent	6.31 <sup>b</sup>	6.79 <sup>a</sup>	6.47 <sup>b</sup>	6.83 <sup>a</sup>
<b>Study Two Means for Perceived Obligation to Complete Profile</b>				
	BF	SAME- NO DISTRACTION	SAME- DISTRACTION	CF
Contingent	3.57 <sup>a</sup>	3.31 <sup>a</sup>	3.83 <sup>a</sup>	3.20 <sup>a</sup>
Non-Contingent	3.01 <sup>b</sup>	3.58 <sup>a</sup>	3.64 <sup>a</sup>	3.27 <sup>b</sup>

Note: Because the neither the main nor interactive effects of counterbalance condition are significant, we collapse across counter conditions in this table.

Note: Means with different subscripts are significantly different at  $p < .05$