Smile-Seeking Givers and Value-Seeking Recipients:
Why Gift Choices and Recipient Preferences Diverge

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ABSTRACT

Prior research on gift giving has often treated “making recipients happy” as interchangeable with “improving recipients’ welfare.” We propose givers’ motive to make recipients happy is better understood as a desire to induce positive affective reactions, such as a smile from recipients. This “smile-seeking” motive yields a mismatch between gift choices and recipients’ preferences, because attributes that promote recipient happiness upon gift reception are often not the same attributes that augment recipients’ overall welfare. We find a considerable givers-recipients preference discrepancy that cannot be explained by extant theories of perspective taking (Studies 1 & 2), is mitigated when the affective reactions are not immediately obtainable (Studies 3 & 4), and is mediated by the anticipation of these affective reactions (Studies 4 & 5). Moreover, in a longitudinal field survey (Study 6), givers derive more enjoyment from their observation of the recipients’ initial affective reactions than from their observation of recipients’ long-term satisfaction. Our findings challenge extant assumptions about gift-giving motives, and attest to the importance of affective reactions in interpersonal decision-making.

KEYWORDS: gift giving, affective reactions, visceral vs. cerebral attributes, interpersonal decisions, hedonic choice, intertemporal choice
Gift givers want to make their recipients happy, yet achieving this goal appears perplexingly difficult. While gift expenses amount to 10% of the retail market in the United States, nearly $50 billion worth of gifts end up returned or exchanged (CNBC 2013). The discrepancy between gift choices and recipient preferences represents a striking inefficiency in social exchange, and has attracted the attention of researchers from various fields.

Why do gifts often mismatch recipient preferences? We introduce a novel approach to understanding gift-giving behaviors. We propose that givers’ motives to make their recipients happy can be understood as a desire to induce recipients’ positive affective reactions, such as a smile. As a result of this “smile-seeking” motive, givers will prefer gifts that they believe can induce more positive affective reactions, instead of gifts that can better match recipients’ preferences. In contrast to this “smile-seeking” motive, prior research has primarily focused on givers’ difficulty in predicting recipients’ preferences (e.g., Waldfogel 1993, Baskin et al. 2014), emphasizing a motive of givers to match recipients’ preference and maximize recipients’ utility.

This novel smile-seeking motive of gift giving can account for a wide range of discrepancies between givers’ and recipients’ gift preferences, because of a fundamental distinction between two types of product attributes, visceral and cerebral. While visceral attributes elicit immediate and transient affective reactions, cerebral attributes tend to yield long-term and stable cognitive evaluations. Thus, we predict the smile-seeking givers will choose to give gifts that are superior on visceral attributes, such as a dozen blooming roses or a gift card redeemable immediately. By contrast, the value-seeking recipients will prefer to receive gifts with more balanced visceral and cerebral attributes.
that bring higher overall benefits, such as two dozen rose buds that can be enjoyed for longer, or a delayed gift card with higher value.

Next, we introduce a theoretical framework to explicate the “smile-seeking” motive of gift giving, linking differences in product attributes to different reactive outcomes, and to differences between gift givers’ and recipients’ motives. Based on this framework, we develop three main hypotheses regarding gift choices, key moderators, and the consequences of gift giving. Then we present six studies that test these hypotheses and their proposed underlying processes, and distinguish our framework from prior accounts of gift-giving.

THEORETICAL DEVELOPMENT

Good intentions don’t always fare well. Over a third of Americans expect to return at least one gift every year (NRF 2013), and even the gifts that recipients keep are not necessarily what they most value (Sherry, McGrath, and Levy 1992). Waldfogel (1993) famously termed the “deadweight loss of Christmas” to refer to the estimated welfare loss due to gift giving—the utility that could have been produced by giving an equivalent amount of cash compared with the gifts that givers selected. Likewise, researchers in psychology, economics, sociology, and marketing have deemed the suboptimal outcomes of gift giving primarily as a loss of recipients’ welfare (e.g., Sherry et al. 1992, Gino and Flynn 2011, Zhang and Epley 2012).

Existing Accounts of Gift-Giving Motives
One obvious cause of sub-optimal gifts is that people may have ulterior motives (Wolfinbarger 1990), such as to satisfy minimal obligations or social norms (Schwartz 1967). Nonetheless, when givers are genuinely interested in making recipients happy, lack of information (Belk 1976), misaligned evaluations of the relationship (Otnes, Zolner and Lowrey 1994, Caplow 1982), and prevalent self-other differences (Kurt and Inman 2013) can all contribute to misprediction of recipient preferences. Even when the giver is sufficiently familiar with the recipient, construal differences (Baskin et al. 2014) and asymmetric perceptions of costs and benefits (Flynn and Adams 2009, Zhang and Epley 2009) between givers and recipient can still produce failures of perspective taking and result in unappreciated gift choices.

These accounts commonly emphasize givers’ failures to predict recipients’ actual preferences. While this approach has proven useful in explaining many suboptimal gift choices, it risks providing an incomplete view of givers’ motives, by assuming that givers generally try to align their motives with those of recipients. This view would be challenged, for example, by the frequent occurrence (Oh et al. 2013) of off-registry gifts that go against explicitly stated recipient preferences. If one is to believe such off-registry purchases are not simply obtuse, a more complete understanding of gift givers’ motives is in order—one that formalizes the potential conflict between givers’ and recipients’ motives.

*Smile Seeking: Givers’ Motive to Induce Affective Reactions*

The extant literature on gift giving has treated recipients’ affective reactions as a consequence of gift giving, signaling gratitude to the giver (Sherry 1983). We propose that the anticipated affective reactions from the recipients, epitomized by the recipient’s
smile when receiving the gift, are a fundamental and unrecognized motivation that drives givers’ choices.

Affective reactions are pivotal to social interactions. People’s observable affective reactions trigger secondary affective reactions in their interaction partners (Hatfield, Cacioppo, and Rapson 1994). Mutually reinforcing positive affective interactions, in turn, foster social bonding (Tickle-Degnen and Rosenthal 1990, Lakin and Chartrand 2003) and produce a wide range of physiological and psychological benefits (Uvnas-Moberg 1998, Cohen 2004). Developmental psychology and animal behavior provide converging evidence, as parents’ affective expressions effectively regulate infants’ behaviors (Sorce et al. 1985) and the visibility of affective reactions affects primates’ pro-social behaviors (de Waal et al. 2008). However, little is known about how affective reactions motivate interpersonal behaviors, apart from social inferences (Van Kleef 2010).

We propose a novel smile-seeking account, in which the givers’ motive to obtain positive affective reactions from recipients is at the crux of givers’ goal to make recipients happy. Observing affective reactions from the recipient, beyond informing the giver of the recipient’s immediate appreciation, is psychologically rewarding for the giver, and the ensuing affective interactions can facilitate social bonding between the giver and the recipient. The smile-seeking account is thus rooted in the giver’s fundamental human need to build affective connections with the recipient (Maslow 1943, Cacioppo and Patrick 2008).

The Proposed Framework

The smile-seeking account suggests givers will favor gift options that they believe will elicit the most positive affective reactions in recipients. Recipients’ affective
reactions, including facial and bodily expressions, can signal their instant positive emotions (Ekman 1993, Andrade and Ho 2009) and immediate welfare improvement (Boissy et al., 2007). However, we contend the instant emotions and immediate welfare improvement often systematically differ from long-term emotions and welfare improvement. Some gifts elicit immediate affective reactions from the recipient, yet produce little utility in the future (e.g., a dozen blooming roses), while others elicit weak initial affective reactions yet produce utility longer into the future (e.g., two dozen rose buds). Therefore, when givers focus on the recipients’ immediate affective reactions, givers’ and recipients’ preferences between the gifts would often mismatch.

Such discrepancy between givers’ and recipients’ gift preferences will arise when the choice involves a tradeoff between two distinct types of product attributes, visceral and cerebral. We base this distinction on an immense literature that distinguishes between affect and cognition (Zajonc 1980, Forgas 2008), with distinct consequences for judgment and decision making (Zajonc and Markus 1982, Hoch and Loewenstein 1990). Building on this literature, we posit that visceral and cerebral attributes tend to be processed differently, and produce different evaluative outcomes.

Visceral attributes, such as temporal proximity, beauty, and temperature, are more apt to be processed immediately and viscerally via the affective system (Zajonc 1980, Damasio 2008), and tend to yield more transient and affective reactions. By contrast, cerebral attributes, such as monetary magnitude, functionality, and test score, are more apt to be evaluated via the cognitive system, and yield more deliberate, longer-lasting, yet less affective evaluative outcomes. Simply put, people tend to react to a visceral attribute immediately, producing transient and affective visceral reactions, but often need
comparison or deliberation to evaluate a cerebral attribute, producing longer-lasting yet less affective cerebral evaluation (Figure 1).

This distinction is deeply rooted in classical behavioral research on conditioning and on social learning (Skinner 1938, Bandura 1986, Damasio 2008). A visceral attribute may often be an unconditioned stimulus or repeatedly conditioned stimulus (Damasio 2008), whereas a cerebral attribute may often be a stimulus that has become evaluable via vicarious learning (Bandura 1986). Moreover, the novel links our framework identifies from attribute type to evaluative outcomes and to their different social consequences significantly extends research on the social functions of somatic vs. semantic language (e.g., Johnson-Laird and Oatley 1989).

An outstanding example is an intertemporal choice between a smaller immediate reward and a larger reward in the future (Urminsky and Zauberman 2015). An intertemporal choice involves a tradeoff between immediacy, a visceral attribute (Hoch and Loewenstein 1990), and magnitude, a cerebral attribute (Wertenbroch, Soman, and Chattopadhyay 2007). This tradeoff concerns people’s evaluation over time and money, two most fundamental resources, and is widely studied in consumer research using gift cards or other common choices (Soman 2004, Shu and Gneezy 2010). Furthermore, intertemporal choices are considered to underlie commonly studied consumer choice paradigms (Khan, Dhar, and Wertenbroch 2005) and many everyday decisions (Soman et al. 2005), Thus, we will first test our propositions with intertemporal types of choices in our empirical studies, and then extend our findings to other common visceral-cerebral tradeoffs.
Figure 1. Theoretical Framework. Giver’s and Recipient’s Motives Determine Their Valuations between Visceral and Cerebral Attributes, Which Lead to Different Observable Evaluative Outcomes.

We further propose that the different evaluative outcomes of visceral and cerebral attributes differentially correspond to givers’ smile-seeking motive and recipients’ value-seeking motive discussed earlier (Figure 1, left side). If givers focus on recipients’ affective reactions, they will favor gifts with visceral attributes that are more conducive to initial positive affective reactions. By contrast, if recipients focus on the overall benefits of gifts, they will favor gifts with not only visceral but also cerebral benefits, which are more conducive to yielding positive utility.

Overall, this framework predicts three key hypotheses. First, we predict a systematic discrepancy between givers and recipients, with givers more likely to choose gifts with strong visceral attributes and recipients preferring gifts that are more balanced between visceral and cerebral attributes. For example, consider Kevin, who is giving his friend Stuart a dinner voucher today. Kevin is deciding between a Michelin one-star restaurant this weekend and a Michelin two-star restaurant in three months. Kevin would probably anticipate a bigger smile from Stuart if he were to give him the voucher for the
sooner one-star restaurant reservation. However, since Stuart will eventually benefit more from the voucher for the later two-star restaurant reservation, he may prefer the later gift. Even if Kevin could guess Stuart’s preference, he may still give the sooner voucher, for the anticipated smile.

Second, the giver-recipient preference discrepancy, driven by the givers’ smile-seeking motive, will be mitigated when affective reactions are not obtainable. If Kevin knows that he will only hear back from Stuart about the gift much later, Kevin will be less motivated by his anticipation of Stuart’s reaction, and will be more likely to choose the two-star dinner voucher.

Third, we predict that even when givers can observe both the recipients’ initial affective reactions and their long-term satisfaction, givers will derive more enjoyment from the former. Thus, Kevin will derive more enjoyment from Stuart’s smile when opening the voucher, than from what Stuart says about his experience at the restaurant. These last two hypotheses, in particular, distinguish our smile-seeking account from prior accounts of gift-giving.

We test these propositions in six studies. In Studies 1 and 2, we test the predicted preference discrepancy between givers and recipients, across different contexts and different choice options, in order to confirm the generalizability of the effect and rule out primary alternative accounts of our findings, including the prediction-error account. Then, in Studies 3 and 4, we manipulate the obtainability of affective reactions and examine givers’ choices. These studies provide further evidence for the proposed smile-seeking account and rule out alternative accounts. Next, we directly measure the proposed processes. In Study 5, we investigate how differences between givers and
recipients in the considerations of visceral and cerebral values underlie Valentine’s Day gift preferences. Last, in Study 6, we investigate the consequences of real gift choices in a longitudinal field survey at Christmas, and test how the observable recipient outcomes influence gift givers’ actual enjoyment of giving.

**STUDY 1: GIVER-RECIPIENT CHOICE DISCREPANCIES WITH GIFT CARDS**

Gift cards are now the most popular holiday gift choice in the United States, with over $100 billion in annual sales (Towergroup 2014). In Study 1, we first use a real gift-card choice to test the differences between givers’ and receivers’ preferences during Thanksgiving. We randomly assigned participants to be givers or receivers, and asked them to choose between two gift cards—one lower valued and immediately redeemable, the other redeemable later but more valuable. Thus, the former card was viscerally superior and the latter card was cerebrally superior, which we confirmed in a pre-test. We test the first hypothesis: givers will prefer to give the viscerally superior gift card, because of their focus on recipients’ immediate affective reactions, whereas recipients will prefer to receive the cerebrally superior gift card, because of their focus on the gifts’ potential benefits.

*Pretest*

*Scales.* We created two scales to measure the perception of visceral and cerebral values in an intuitive way that highlights the distinction (Figure 2). The visceral scale asks people “*How positively would one react to the gift upon receiving it?*” on a 7-point
scale consisting of seven smiley faces, in ascending order of positive facial reaction, reflecting increasing degrees of visceral value. The faces were created to capture a Duchenne smile (Ekman, Davidson, and Friesen 1990), with a genuinely happier reaction represented by more muscle movement around the mouth and eyes (Figure 2). The cerebral scale asks people “How positively would one evaluate the gift upon receiving it?” on a 7-point scale of seven icons standing for functional value, with ascending sizes reflecting increasing degrees of cerebral value.

Figure 2. The Visceral Scale and the Cerebral Scale

*Gift cards.* The two cards had a similar “thank-you” theme design, pretested to be equally preferred (see Appendix for detailed materials, procedures, and results of all pretests). The two cards were described as:

- **Option A** - $5.00 Starbucks Gift Card - Regular promotional gift card. Immediately valid, and can be redeemed anytime. No expiration date.
- **Option B** - $6.00 Starbucks Gift Card, Valid from December 9, 2014 - Seasonal promotional gift card. Valid two weeks from now. Effective date printed on the sticker in the back. Peel off the sticker to activate. No expiration date.

*Pretest results.* We have theorized that the immediately redeemable gift card would be superior on temporal proximity, a visceral attribute, whereas the larger gift card would be superior on monetary magnitude, a cerebral attribute. We recruited 104
participants (M = 34, 56% Male) from an online subject pool, showed them both gift cards, and asked them to rate each card on the visceral and cerebral scales. The results validated that the two cards represented a visceral-cerebral tradeoff, as predicted (F (1,103) = 73.6, p < .001). For simplicity, we will refer to the two cards as the visceral option and the cerebral option.

Method

Two days before Thanksgiving 2014, we approached 157 MBA students at a large Midwestern university during class breaks to fill out a “Thanksgiving Survey.” Participants (N= 155, M age = 29, 61% Male, M = 7.0 on a 1-10 scale for social closeness with listed gift recipients) were randomly assigned to giver or recipient conditions, and each completed a three-page survey booklet, chose between two real Starbucks gift cards, and received the chosen card and candies as a reward for participation. To minimize participant awareness of the difference between conditions, the survey booklets were identical except for the focal choice on the second page, where participants chose a card to either give or receive.

The first page of the survey asked participants to think of a friend they would meet in person before the coming weekend, that is, within three days of the survey, to whom they would like to express thanks. Then participants wrote down the first name of the friend and a short thank-you message to the person.

The second page of the survey thanked participants for taking the survey and offered a choice between two thank-you gift cards. In the giving condition, participants first chose which card to give to the friend when they met, and then indicated which of the two gift cards they would have chosen for themselves. In the receiving condition,
participants first chose a card for themselves, and then indicated which of the cards they would have chosen as a gift for the friend. On the third page, participants completed individual measures of mood, self-reported patience, and interpersonal closeness, similarity, and liking regarding the friend, as well as gender and age.

Results

All participants listed a friend and wrote a thank-you message to him or her. Messages generally expressed common motives for gift giving, such as “To Joe: Thanks for keeping me sane through our early fatherhood experience” and “To Tanmay: Thank you for dragging me to the gym.”

Half the participants chose the visceral option ($5 immediately redeemable) to give to the friend, whereas far fewer participants chose to receive the same card (50.6% vs. 27.6%, $^2 (1) = 8.59, p < .01; Figure 3). A similar giver-recipient preference discrepancy emerged within-subjects in both conditions. Participants in the giving condition were more apt to choose the visceral option when giving than when imagining receiving (50.6% vs. 34.2%). By contrast, participants in the receiving condition were less apt to choose the visceral option when receiving than when imagining giving (27.6% vs. 64.5%, $^2 s > 14.2, ps < .001). These results suggest a conflict of motives between giving and receiving, because the same person facing the same options favored the visceral attribute more as a giver, but favored the cerebral attribute more as a recipient.
If participants in the receiving condition were in a better mood than those assigned to the giving condition, then mood might have contributed to the differences in choices. However, mood did not vary between conditions, and did not correlate with or moderate the results. The findings were also robust to differences in self-reported patience, gender, and age. Ratings of the friend on interpersonal closeness, similarity, or liking in the giving condition did not predict choices.

**Replications**

In four additional studies, we tested the robustness of the giver-recipient preference discrepancy across different populations, different recipient relationships, and different contexts.

In Study 1B, we replicated the preference discrepancy with real pairs of friends in a laboratory with undergrad students (N = 116, M_{age} = 19, 47% Male, M_{close} = 6.3). We recruited participants for a group-performance task and randomly assigned them to be the giver or the recipient in a gift-giving interaction after the task. When choosing between
gift cards identical to those in Study 1, givers chose to give the visceral option more than recipients preferred to receive it (41.4% vs. 19.0%, $\chi^2 = 6.9, p < .05$; Figure 3).

In Study 1C, we replicated the preference discrepancy with pairs of new acquaintances ($N = 88$, $M_{age} = 26$, 48% Male, $M_{close} = 4.5$). We recruited community-member participants in a Midwestern city for a group-performance task. Upon participants’ arrival, we randomly paired them for the group task, familiarized them with each other using a brief Q&A interaction (Sedikides et al. 1999), and randomly assigned each participant to be the giver or recipient in a gift-giving interaction after the group task. Participants chose between a visceral option ($4$ Amazon E-Gift Card immediately received) and a cerebral option ($5$ Amazon E-Gift Card received 10 days after the experiment; tradeoff validated in a pretest $F(1,103) = 39.6, p < .001$). Givers chose to give recipients the visceral option more than recipients preferred to receive it (61.4% vs. 34.1%, $\chi^2 = 6.6, p < .05$; Figure 3). That the findings persist both for new acquaintances (1C) and close friends (1B) suggests that pre-existing obligation or expectations of future reciprocation does not contribute to the preference discrepancy.

In Study 1D, we replicated the preference discrepancy with an online subject pool ($N = 94$, $M_{age} = 32$, 55% Male), using a wide range of common gift options in a 2 (giving vs. receiving) x 9 (nine pairs of choices) mixed-design vignette study. We tested pairs of gift options involving a similar visceral versus cerebral tradeoff, from a single scoop of ice cream now versus a voucher for a double scoop of ice cream in a week, to $50$ cash today versus $60$ cash in a month. Givers preferred to give the visceral option more than recipients preferred to receive it (62.1% vs. 40.5% overall, MANOVA $F(1,92) = 14.0, p$
< .001; Figure 3). These results further reflect the broad generalizability of the giver-recipient preference discrepancy, beyond gift cards.

Discussion

In Study 1, we found highly robust evidence for the giver-recipient preference discrepancy, across different types of relationships and different types of gifts. When giving a gift, participants chose gifts with superior visceral attributes, whereas when receiving a gift, the same person’s preferences to receive revealed a relatively higher evaluation of cerebral attributes. These divergent choices suggest a discrepancy of motives between givers and recipients, consistent with the smile-seeking account and our proposed framework. In the next study, we will directly test between predictions of the smile-seeking account and of the prediction-error account, by providing givers with detailed information about recipient preferences.

STUDY 2: DISSOCIATING GIVERS’ CHOICES FROM PREFERENCE UNCERTAINTY

Our smile-seeking account predicts that givers will be more likely to choose visceral options as gifts, even when they have information indicating that recipients’ do not share their preference. By contrast, the prediction-error accounts predict that givers’ choices will better align with recipients’ preference when givers have relevant information. In Study 2, we make use of a common gift context—a gift registry—to compare what givers prefer to give with what recipients prefer to receive when uncertainty about recipients’ preferences is eliminated.
The study included two between-subjects conditions (giving vs. receiving). The key dependent variable was the relative preference between two key gift items, again, one viscerally superior and the other cerebrally superior.

Choice Pair and Pretest

We selected two baby garment items—a jumpsuit and a pajama set—as our key items for the study. The jumpsuit was described as suiting “12-24 months old babies, could be worn now immediately, for a year until the baby outgrows it,” whereas the pajama set was described as suiting “2-4 years old kids, could be worn starting a year from now, for about two years until the kid outgrows it.” The tradeoff between immediacy and durability is fairly realistic for parents, because kids grow faster when younger.

In the context of the experimental scenario, we first validated that participants (N = 34, M_\text{age} = 34, 50% Male) equally preferred to receive the two items in a pretest (5.2 vs 5.5, SD = 1.7 vs. 1.5, t (33) = -1.1, n.s.). Moreover, in another pretest, using the visceral and cerebral scales, we validated the visceral and cerebral tradeoff between the gift items (F (1,103) = 86.4, p <.001).

Method

We recruited 139 online participants (M_\text{age} = 35, 44% Male) for $2 each. Participants read a scenario about a birthday party for a baby named Jessie, who was turning 12 months old.

In the receiving condition, we asked participants to imagine a few friends were organizing the birthday party and had set up a gift registry for the party, and were consulting the participant for his or her preferences about receiving the gifts. In the
giving condition, we asked participants to imagine they had been invited to the birthday party and the gift registry, and that all gift options on the registry would be given and would be equally appreciated by the recipient. Then everyone read that the birthday party would be held in a month, the guests would bring their gifts to the party, and the recipient would open all the gifts at the party.

Next, we asked participants to evaluate six gift items for baby Jessie, each with a vignette description and an image. Among these gift items were the jumpsuit and pajama set, pretested to be preferred equally by the recipients. We measured the key dependent variable—givers’ and recipients’ preferences—in three different ways. First, participants indicated how much they would like to give (giving condition) or to receive (receiving condition) each of the six items, on a 7-point scale (1 = Just a little, 7 = Very much). Second, participants made a binary choice between the two key items, the jumpsuit and pajamas, indicating the one they would prefer to give or to receive. Third, participants rated their strength of relative preference between the two key items on a 9-point bipolar scale (1 = the jumpsuit, 9 = the pajama set).

Results

We replicated the giver-recipient preference discrepancy in all three dependent measures. When evaluating all six gift options jointly, recipients liked both of the focal gifts equally (5.28 vs. 5.33, SD = 1.6 vs. 1.5, t(63) = -.2, n.s.), but givers expressed stronger preferences for the viscerally superior jumpsuit than the pajama set (5.11 vs. 4.33, SD = 1.5 vs 1.9, t (74) =3.6, p = .001; interaction F(1, 137) = 6.9, p = .01), despite being told that recipients had equal preferences. Likewise, givers were more likely to choose the jumpsuit over the pajama set (72.0%), whereas recipients chose both equally
(48.4%, $\chi^2 = 8.1, p = .005$). Last, in a direct comparison between the gifts, recipients’ ratings were near the middle point on the bipolar scale indicating no preference ($M = 5.0$, SD = 2.6), while givers expressed a stronger preference for the more visceral jumpsuit ($M = 3.7$, SD = 2.8, $F(1, 137) = 7.3, p < .01$).

Therefore, givers’ choices deviating from recipients’ preferences are not due to givers’ mistake in guessing recipient preferences. Instead, it reflects a separate motive of the givers that leads to their more favorable valuation of visceral attributes.

Discussion

In Study 2, our design of the gift registry eliminated givers’ potential uncertainty about recipients’ preferences, and dissociated giver’s specific choices from the recipient’s overall welfare. Thus, we ruled out the prediction-error accounts as an alternative account for our preference discrepancy findings. The design also ruled out evaluation-mode asymmetry as a potential alternative explanation. Evaluation-mode asymmetry can contribute to preference reversals, because people often purchase products jointly but consume them separately (Hsee et al. 1999, Yang et al., 2012). For example, if gift givers typically select gifts jointly but expect recipients to evaluate gifts separately, their preferences may differ. However, if givers expect recipients to also evaluate the gifts jointly, the discrepancy would not be attributed to evaluation-mode asymmetry. Because we emphasized to the givers that all gifts would be opened and evaluated jointly, only the smile-seeking account would account for the giver-recipient preference discrepancy.
In Studies 1 and 2, we found systematic and substantial divergence between givers’ choices that favored visceral attributes, and recipients’ preferences that favored cerebral attributes relatively more. We have proposed that gift givers’ preference for viscerally superior gifts is attributable to their consideration of recipients’ affective reactions. In our earlier example, Kevin chose between giving his friend Stuart a voucher for a sooner restaurant dinner or a voucher for a later dinner at a better restaurant. Our findings suggest that Kevin will favor giving the voucher for the sooner dinner, even when Stuart prefers receiving the voucher for the later dinner.

Our proposed smile-seeking account of gift givers’ motive yields two key testable predictions. First, if Stuart is not very communicative, Kevin will be less likely to anticipate a smile or other affective reaction from him. Our account predicts that Kevin will then be less likely to give the voucher for the sooner dinner, instead preferring to give the voucher for the later dinner at the better restaurant.

Furthermore, even if Stuart is expressive, circumstances may prevent Kevin from getting feedback from Stuart until later—perhaps after Stuart would have gone to either dinner. In that case, Kevin will switch his focus to the observable affective reactions at the later time of interaction, anticipating more positive feedback from the later dinner at the better restaurant, because the initial reaction to the earlier dinner would have already faded by then but the later dinner would still be salient. As a result, Kevin will be more likely to give Stuart the voucher of the later dinner when the feedback is delayed.
Thus, our account uniquely predicts that the obtainability and timing of recipients’ affective reactions influences gift choices. When the recipient’s affective reactions are less likely to be expressed or are delayed to a later time, we predict that the givers’ preference for viscerally superior gifts will be mitigated. To test this, we first examine how obtainability of affective reactions affects givers’ choices in a hypothetical vignette scenario in Study 3. Then, using a more realistic and common gift-giving scenario in Study 4, we test how the timing of affective reactions influences givers’ choices relative to recipients’ preferences.

**STUDY 3: OBTAINABILITY OF REACTIONS INFLUENCES GIFT CHOICES**

The study included two between-subjects conditions (affective reactions: obtainable vs. unobtainable). Consistent with the smile-seeking account, we predict givers would be less apt to choose the viscerally superior gift if they could not observe the positive affective reactions. Importantly, manipulating the obtainability of affective reactions should not affect givers’ perceptions of the recipient’s own preferences. In typical gift situations, the lack of an affective reaction to a gift is generally interpreted as a negative reaction from the recipient. Thus, to test the theory, we use a vignette involving a well-known fictional character, Ironman, which allows us to manipulate the observability of a reaction from the recipient independently from the recipients’ presumed liking of the gift.

*Method*
We recruited 135 participants (M_{age} = 36, 45\% Male) from an online subject pool for a survey that paid $1.50. In the survey, we asked participants to imagine living in a hypothetical world, Hollyville, where many famous fictional characters live among normal people. Specifically, we asked them to imagine the following scenario, illustrated with the image in Figure 4a:

“One of your next-door neighbors is Mr. Ironman, a middle-aged ingenious engineer who enjoys working on his side projects at home. He always wears a suit of armor with a mask. You get along very well with Mr. Ironman, who is a good neighbor... Next week, Mr. Ironman is moving to a new house a few blocks away. You'd like to send Mr. Ironman a gift card from Home Depot as a housewarming gift.”

We showed participants pictures of “what Mr. Ironman usually looks like in his daily life,” displaying six pictures of Mr. Ironman as portrayed by Robert Downey Jr., the actor in the movie series. The pictures represented six primary emotional states (calm, happy, sad, angry, surprised, and disapproving) with matching labels, backgrounds, and postures. In the obtainable-reaction condition, the six pictures showed expressive emotions on the actor’s face (Figure 4b), prompting the giver to anticipate affective reactions from the recipient. In the unobtainable-reaction condition, by contrast, we showed six pictures showing the same actor’s emotionless iron-mask (Figure 4c), highlighting to the giver the lack of affective reactions from the recipient.
Then, participants chose between two gift-cards as the gift for Mr. Ironman: a $50 immediately redeemable gift card, and a $60 gift card (on sale $50), but only redeemable in two weeks. In the scenario, both gift cards would be delivered the next day and had no expiration date. We then also asked participants which of the equally-priced cards they thought Mr. Ironman would choose for himself. We predicted that manipulating the obtainability of affective reactions would not influence participants’ perceptions of Mr. Ironman’s own preference.

The obtainability manipulation was intended to affect the imagined affective reaction (e.g., smile) as the giver would experience it, but to not affect either Ironman’s perceived ability to experience affect himself or his idiosyncratic traits that might lead to different perceptions of his preferences. As a manipulation-check, we measured how easily they could imagine Mr. Ironman smiling at them, as well as control measures, such as ease of imagining Mr. Ironman having “warm fuzzy feelings”, and his perceived intelligence, wealth, power, and patience.

Results

Pretest. As before, we validated the relative visceral and cerebral values of the gift cards \(F (1,103) = 36.0, p < .001\) using the visceral and cerebral scales (Figure 2).
Manipulation check. Participants in the obtainable-reaction condition felt they could more easily imagine Ironman smiling (M = 5.3, SD = 1.3), compared with those in the unobtainable-reaction condition (M = 3.9, SD = 1.9; F(1, 133) = 9.5, p < .005). By contrast, participants felt they could equally easily imagine Ironman having warm fuzzy feelings (M = 3.5 vs. 3.3, SD = 1.5 vs. 1.5; F(1, 133) = .23, n.s.). In addition, participants’ perceptions of Ironman’s other human traits were also similar between conditions. Therefore, our mask manipulation in the unobtainable-reaction condition successfully reduced the perceived obtainability of affective reactions from Ironman, without affecting the perception of Ironman’s ability to experience affect or other traits that might affect his own preferences.

Choice. More participants chose the viscerally superior gift card as the housewarming gift in the obtainable-reaction condition than in the unobtainable-reaction condition (56.7% vs. 38.2%, F(1, 133) = 4.7, p < .05). Givers were more apt to give the visceral gift which would be more likely to elicit positive affective reactions when the recipient’s affective reaction were obtainable, than when the reaction were not obtainable.

These findings cannot be explained by the givers’ beliefs about recipient preferences, because givers predicted the same preferences for recipients in both conditions (29.4% vs. 32.8%, F (1, 133) = .18, n.s.). In fact, the effect of obtainability on givers’ choices remains significant when controlling for their predictions of what the recipient would have preferred (F(1, 132) = 5.57, p < .05). As in Study 2, these result further support our claim that the effect of givers’ smile-seeking motives on gift choices
is distinct from and cannot be explained by the potential biases in forming beliefs about recipient preferences explored in the prior literature.

Discussion

Using a highly stylized vignette scenario, we found givers’ choices for the viscerally superior gift were reduced when they would not view the affective reaction of their recipient, consistent with the smile-seeking account. Study 3 not only provides direct process evidence for the proposed smile-seeking account, but also helps ruled out alternative accounts, including temporal construal differences between givers and recipients (Baskin et al. 2014). Given that temporal distance was held constant in the scenario, the construal-level account would not predict different choices between the obtainable-reaction and unobtainable-reaction conditions.

STUDY 4: TIMING OF REACTIONS MODERATES GIVER-RECIPIENT DISCREPANCY

This study employs a 2 (role: giving vs. receiving) x 2 (timing of reactions: sooner vs. delayed) between-subjects factorial design. We manipulate the timing of anticipated affective reactions to be either soon after the gift is given or delayed until after either gift would have been experienced. We predict that, when feedback is available soon, as in the prior studies, givers will anticipate that the viscerally superior gift will elicit more positive affective reactions than the cerebrally superior gift, and will therefore give the viscerally superior gift. When the feedback is delayed, however, the initial affective reactions will have faded over time, whereas the more stable non-
affective evaluation will be both more recent in memory and more persistent over time. Thus, the benefits of the cerebrally superior gift will have become relatively more salient, and the anticipated affective reactions at the delayed time of interaction will reverse between gift options. Therefore, we predict the delay of recipient feedback will mitigate givers’ preference for the viscerally superior gift, but not affect recipients’ preferences, thereby moderating the giver-recipient preference discrepancy.

Method

We collected 332 online surveys from adult participants ($M_{age} = 34$, 49% Male, $M_{close} = 7.9$) from the same online subject pool for $2.

In the giving conditions, we asked participants to imagine a good friend, Alex, was leaving that day for a three-month trip abroad. Alex was going to “a warm and sunny beach in the first month” and then “into the cold mountains in the second two months.”

Then, we introduced two farewell gift options: a pair of UV sunglasses that the recipient could use in the first month of the trip (the viscerally superior gift) and a pair of Hi-Tech warm gloves that the recipient could use in the second two months of the trip (the cerebrally superior gift). The two gifts were priced similarly, and Alex did not own either. In a pretest, we validated the visceral-cerebral tradeoff of these gifts in the context of the scenario ($F (1,103) = 19.9$, $p < .001$).

Next, we assigned givers to either the sooner-reaction or delayed-reaction condition. In the sooner-reaction condition, givers read that Alex would be in contact one day in the middle of the first month (i.e. after he could use the first gift, but before he could use the second gift). In the delayed-reaction condition, givers read that Alex would only be in contact after he returned. Last, we asked participants to choose a farewell gift
for Alex—the sunglasses or gloves—and rated how much they would enjoy giving each option.

The procedures in the receiving conditions were similar to those in the giving conditions, except that participants imagined themselves going on the trip for three months and their friend Alex choosing a farewell gift for them before the trip. Participants chose which gift they would prefer to receive from Alex and rated how much they would enjoy receiving each option.

**Results**

*Choice.* In the sooner-reaction conditions, more givers than recipients chose the viscerally superior sunglasses (61.9% vs. 30.9%, F(1,163) = 17.5, p < .001; Figure 5a), as in the prior studies. However, in the delayed-reaction conditions, fewer givers chose the viscerally superior sunglasses, and the discrepancy between givers and recipients’ choices was no longer significant (48.2% vs. 38.4%, F(1, 165) = 1.62, n.s.). Thus, the timing of the reaction moderated the giver-recipient choice discrepancy (interaction F(1, 328) = 4.0, p < .05).

**Figure 5a. Choices**

**Figure 5b. Enjoyment of Giving and Receiving**

*Ratings.* The enjoyment from giving and receiving accounted for the differences in choices between givers and recipients. Givers predicted they would enjoy giving the
viscerally superior sunglasses more than giving the cerebrally superior gloves in the sooner-reaction condition (8.2 vs. 7.5 SD =1.8, 2.4), and predicted the reverse in the delayed-reaction condition (7.3 vs. 8.0, SD =2.3 vs. 1.8; interaction F(1, 163) = 10.3, p < .005, Figure 5b). By contrast, recipients in both conditions predicted they would enjoy receiving the cerebrally superior gloves more (sooner-reaction condition: 7.9 vs. 8.6, SD= 2.5 vs. 1.8; delayed-reaction condition: 7.7 vs. 8.5, SD= 2.4 vs. 2.1; F (1, 165) = .02, n.s.).

Thus, in the immediate-reaction conditions, being a giver (vs. recipient) leads to higher anticipated enjoyment from the more visceral gift option, which explained the givers’ higher likelihood of choosing the visceral option, yielding a significant indirect mediation effect (β = -3.61, p < .05, Preacher and Hayes 2004). In the delayed-reaction conditions, by contrast, although anticipating higher enjoyment from the visceral option predicted more choices of the visceral option, givers and recipients had similar anticipated enjoyment and therefore made similar choices.

Discussion

In Study 4, we found the timing of affective reactions moderated the giver-recipient preference discrepancy. Givers’ anticipated enjoyment from giving different gifts hinged on the anticipated timing of the reactions they could obtain from recipients, but recipients’ enjoyment from receiving different gifts did not depend on the timing of their reactions. These results suggest delaying feedback can make givers less “impatient,” and better align givers’ choices with recipients’ preferences. Studies 3 and 4 provide direct support for our smile-seeking account, demonstrating that givers’ consideration of immediately obtainable affective reactions drives their choices of viscerally superior gifts.
THE ROLES OF VISCERAL AND CEREBRAL ATTRIBUTES

In Studies 3 and 4, we established that givers’ anticipation of recipients’ affective reactions motivates their choices of viscerally superior options, using hypothetical experimental scenarios. Next, we directly examine how visceral and cerebral attributes underlying givers’ and recipients’ choices in common gift-giving occasions. We will test our proposed framework in the context of two major American holidays: Valentine’s Day (Study 5) and Christmas (Study 6).

In these two studies, we also broaden the scope of our investigation. In Study 5, we extend our findings to a variety of different commonly studied choice paradigms. In Study 6, we examine of the full range of real and spontaneously chosen gifts, investigate the observed outcomes of giving over time, and compare how different observed outcomes contribute to gift givers’ enjoyment of giving.

STUDY 5: WHY DO MEN GIVE FLOWERS ON VALENTINE’S DAY?

Valentine’s Day is a primary time for gift giving between romantic relationship partners. In particular, more fresh flowers are sold for Valentine’s Day than any other time of year. Statistics show that 61.4% of men choose flowers as Valentine’s Day gifts, for a total of over $2 billion (US News 2015). However, flowers are not a uniformly popular gift (Lee 2015). One common complaint concerns the poor long-term utility flowers bring—they look and smell nice for a few days, but die soon after.
Then why do givers so frequently give flowers? A popular explanation assumes givers’ choices are due to gender-specific beliefs about recipients’ preferences. That is, men choose flowers only to match women’s preferences. Our account, however, suggests that, independent of gender differences, the prevalent choice of flowers may instead lie in givers’ preferences, motivated by their ardent anticipation of affective reactions from the recipients. Although flowers have little cerebral value and long-term utility, they are viscerally superb—for example, people smile spontaneously after receiving freshly bloomed flowers (Haviland-Jones et al. 2005). Thus, we propose givers may choose flowers to elicit intense affective reactions from their relationship partners, even though their partners might better appreciate other gifts that bring higher utility in the long run.

To test this proposed account, we conducted a study with participants in real relationships making hypothetical choices on a real gift-giving occasion. The study used a mixed design, with 2 (giving vs. receiving) between-subjects conditions, and 3 (three pairs of binary choices) repeated measures. We asked participants to make choices between gifts, as givers or as recipients, for the upcoming Valentine’s Day. We also directly measured perceived visceral and cerebral value of the gifts, and tested how these values factored into givers’ and recipients’ preferences.

Choice Pairs

We designed three pairs of gift choices, using six real Valentine’s Day gift items sold by online retailers, all in the same price range: a dozen rose blossoms versus two dozen rose buds, a cookie basket versus a fruit basket, and a pink bouquet of fresh-cut flowers versus a bonsai of a flower tree. A pretest confirmed that all options were considered appropriate gifts on Valentine’s Day.
To broaden the scope of our findings, we selected the three pairs to represent different types of commonly studied binary choices in consumer research. The dozen rose blossoms versus two dozen rose buds represents a typical intertemporal benefit tradeoff (Urminsky and Zauberman 2015). The cookie basket versus fruit basket represents a typical vice versus virtue choices (Wertenbroch 1998, Read et al. 1999), and the bouquet versus bonsai represent typical hedonic versus utilitarian choices (Dhar and Wertenbroch 2000).

Moreover, all three pairs reflect different kinds of tradeoffs between visceral and cerebral attributes. Specifically, both options in each binary choice would be received and provide a tangible benefit to the recipient at the same time, without a delay. However, the benefits naturally occur at different times (sooner vs. later) and provide different attributes (visceral and cerebral). For example, the cookie basket arouses more appetite than the fruit basket, which is an initial visceral reaction, whereas the fruit basket is considered better for its future health benefits, which is a deliberate cerebral evaluation.

Method

We launched the study online on Feb 13, 2015, the day before Valentine’s Day, and paid participants $2 each. We first asked all potential participants if they were currently in a relationship or dating. Those who were in a relationship (77%, N= 295, M_{age} = 35, 51% Male) took the Valentine’s Day survey, and the other participants were directed to a different survey that paid the same amount. Participants taking the Valentine’s Day survey were asked to think of their relationship partner and write down their partner’s first name.
We assigned male participants to the giving condition and female participants to the receiving condition, consistent with Valentine’s Day traditions in the United States. Each participant saw the three pairs of choices and was asked which gift they would prefer to either give their partner (giving condition) or receive from their partner (receiving condition). After the choices, we also measured participants’ visceral and cerebral evaluations of each item. In each pair, the participant first rated the option they had chosen on the visceral and cerebral scales, and then rated the unchosen option.

We also measured individual traits relating to temporal preference, including how patient, future oriented, and utilitarian participants considered themselves. Men and women did not differ in their preferences either as givers or as recipients. Nevertheless, we collected these measures as an additional test of whether gender-based differences in general temporal and value attitudes could contribute to differences between givers and recipients in the study. Last, we asked participants their relationship status, closeness, years knowing each other, and age.

Results

Most of our participants (80.0%) were in long-term relationships, more than half of whom were married. On average, participants had known their partners for about a decade (M = 9.6 years, SD = 8.8), and rated their relationships as being extremely close (M_{close} = 8.7, SD = 1.5). These factors did not have any direct or moderating effects on choices.

Choices. We replicated the giver-recipient choice discrepancy across all three choice pairs (Figure 6). Givers were more likely to choose the viscerally superior options, compared with recipients, for all three choice pairs (44.4% vs. 31.9%, \chi^2 = 4.79, p < .05;
72.8% vs. 61.1%, $\chi^2 = 4.82$, $p < .05$; 39.7% vs. 27.8%, $\chi^2 = 4.60$, $p < .05$). By contrast, recipients were more apt to choose the cerebrally superior options. A MANOVA revealed givers’ choices systematically differed from recipients’ preferences ($F(1, 293) = 10.7$, $p = .001$).

Figure 6. Study 5 Valentine’s Day Study Choices

Moreover, participants’ ratings confirmed that the rose blossoms, cookie basket, and bouquet were viscerally more appealing (5.54 vs. 5.36, SD = 1.1 vs. 1.0, $t(294) = 2.5$, $p < .05$), whereas the rosebuds, fruit basket, and bonsai were cerebrally more valuable (3.05 vs. 4.06, SD = 1.6 vs. 1.3, $t(294) = -14.3$, $p < .001$).

*Moderated Mediation.* Our framework (Figure 1) predicts givers’ and recipients’ different motives will affect their evaluations of the visceral and cerebral attributes of gifts, leading to different choices between the gift items. Because givers are anticipating affective reactions, they will rate the visceral attributes higher than recipients but rate the cerebral attributes lower than recipients. Givers are also more likely to consider the visceral value of gifts in making their choices, whereas recipients will have a more
balanced consideration of immediate and long-term benefits of the gift, incorporating both visceral value and cerebral value.

Figure 7. Study 5 Valentine’s Day Moderated Mediation

The framework was supported by a moderated-mediation analysis (Figure 7). Givers viewed the visceral option as having relatively more visceral value than did recipients ($\beta = .35, p < .05$), while recipients viewed the cerebral option as having relatively more cerebral value than did givers ($\beta = .33, p < .05$). However, while both perceived visceral and cerebral value influenced recipients’ preferences ($\beta = .18, p < .001; \beta = .04, p < .01$), givers’ choices were only driven by perceptions of visceral value ($\beta = .19, p < .001; \beta = .01, n.s.$). Thus, we find an indirect effect of role on choice via visceral favorability ($\beta = .067, p < .05$), but no indirect effect of role on choice via cerebral favorability ($\beta = .004, n.s.$).

Covariates. We found that of the three individual trait measures, only future-orientation differed between men and women (7.11 vs. 7.72, SD = 2.56 vs. 2.11, $t(293) = -2.24, p < .05$). However, none of the measures mediated the effect, and the giver-recipient discrepancy persisted when controlling for the individual-difference measures. Thus,
these results further support our proposition that the giver-recipient preference discrepancy was due to different motives between givers and recipients rather than gender-based individual differences.

Discussion

In Study 5, we examined gift choices in a common gift-giving occasion, Valentine’s Day. Contrary to a popular gendered explanation (e.g., Guéguen 2011), blooming fresh-cut flowers may have become the most popular gifts due to their smile-inducing power: givers believe they will elicit more intense affective reactions from recipients.

We found that the giver-recipient preference discrepancy extends to other commonly studied choice paradigms involving visceral and cerebral attributes, in which both options would be received and useable at the same time, without any delay. Furthermore, differences between givers’ and recipients’ motives determined how givers and recipients perceived visceral and cerebral values, and how they incorporated these values into their choices explained the discrepancy. Strikingly, we replicated the giver-recipient preference discrepancy even among long-term romantic relationship partners, who presumably have had the opportunity to learn their partners’ preferences and care about their partners’ long-term welfare.

STUDY 6: A CHRISTMAS FIELD SURVEY: GIVERS’ ENJOYMENT OF GIVING

In Study 6, we test our theory in a field survey with a wide variety of real and spontaneously chosen gift choices made during another major gift-giving holiday,
Christmas. We will use a longitudinal design to measure the consequences of gift giving over time. We will also investigate how visceral and cerebral values differently influence the recipients’ actual consequences, immediate reactions and long-term satisfaction. The study design will allow us to investigate the third hypothesis predicted by our framework, that givers will derive more enjoyment from recipients’ initial affective reactions than from observing the recipients’ long-term satisfaction.

Method

We conducted the longitudinal field survey on Mturk during Christmas 2014. We recruited participants to the first survey on December 15, 10 days before Christmas, and re-contacted them with the second survey 30 days later, on January 20, after all the gifts they listed in the first survey had presumably been delivered and experienced.

In the first survey, we asked potential participants if they had prepared at least three gifts to give during Christmas, screening out four who had not. Then, we asked the remaining 111 participants (M_{age} = 36, 60% Male) to list three gifts they had prepared, the three different recipients’ first names, their relationship and closeness with these recipients, and when they would deliver the gifts to the recipients.

We re-contacted the participants 30 days later, yielding 87 participants (M_{age} = 37, 58% Male) who completed the second survey within 10 days. In the follow-up survey, we first reminded participants of the three gifts they had listed in the first survey and the recipient for each gift, and then asked the following key questions:

“Did you see the recipient open the gift?”

“How happy was your recipient initially upon receiving each gift?”

“How happy has your recipient been with each gift nowadays?”
“How much did you enjoy giving each gift?” (all ratings on slider scales from 1-100)

Coding

We asked two research assistants, who were blind to the purpose of the study, to independently code the 261 listed gift items on both visceral and cerebral scales. The coders rated each item on two scales. We gave each coder brief instructions, denoting the scales as representing the typical range of visceral reactions and cerebral evaluation outcomes. For the visceral scale, we asked the coders to consider, “How positively would one react to the gift upon receiving it?” and rate their answers on a 5-point scale reflecting vocal affective reactions (1 = “Aw”, 5 = “Awwwww”). For the cerebral scale, we asked the coders to consider, “How positively would one evaluate the gift upon receiving it?” and rate their answers on a 5-point scale reflecting monetary value (1 = “$,”, 5 = “$$$$$”).

We used the “Aww” and “$$” units to facilitate comparable coding across the varied set of gift items and to emphasize the differences between the scales and minimize halo effects. Examples included a gardening toolkit box rated high on cerebral value and low on visceral value, a Gap sweater rated medium for both values, and model toys rated high on visceral value and low on cerebral value. The two coders’ scores were positively correlated for both visceral value ($r = .72, p < .001$) and cerebral value ($r = .59, p < .001$), so we used the averages for analysis.

Results

Our participants mostly gave to family members (79.7%) and rated the recipients as extremely close others ($M_{close} = 9.0$).
We tested three key predictions from our framework (Figure 1), using fixed-effects repeated measures regression analyses. First, the visceral value of a gift should predict recipients’ immediate affective reactions, and the cerebral value of the gift should contribute to recipients’ long-term satisfaction. Second, the coded visceral value of the gifts predicted ratings of recipients’ immediate affective reactions ($\beta = 3.89$, $p < .001$), but not ratings of recipients’ long-term satisfaction ($\beta = -.49$, n.s.). By contrast, the coded cerebral value of the gifts predicted ratings of the recipients’ long-term satisfaction ($\beta = 5.90$, $p < .001$), but not ratings of their immediate affective reactions ($\beta = 1.18$, n.s.; left side of Figure 8). These results confirm that visceral and cerebral attributes differentially impact recipients’ observable evaluative outcomes.

Figure 8. Study 6 Christmas Study Correlations and Mediation

Third, our framework predicts that givers’ enjoyment will primarily stem from their observation of recipients’ initial affective reaction, rather than from their observation of recipients’ long-term satisfaction. We found that givers’ enjoyment of giving was primarily driven by the initial affective reactions they observed from the recipients ($\beta = .76$, $p < .001$), but not the long-term satisfaction they observed from the
recipients (β = -.07, n.s.; right side of figure 8). As a result, we find a significant indirect of visceral value on giver’s enjoyment of giving, via observed affective reactions (β = 2.93, p < .001), but no indirect effect of cerebral value on givers’ enjoyment. These results strongly support our framework, and are striking given that participants in the present study gave to extremely close others, and therefore could have a vested interest in recipients’ long-term satisfaction.

These results also suggest givers feel primarily accountable for the impact of the gift at the time of giving. Thus, we posit that the advancement of affective connections between the giver and the recipient primarily depends on the affective interactions when the gift is given and the recipient reacts. Afterwards, the gift becomes the recipient’s asset, and the benefits the recipient derives from the gift are seen by the giver as primarily the recipient’s own business, for which the giver is only minimally accountable. Further, these results distinguishes gift giving from other types of giving, such as mere asset endowment or resource allocation, which may be better explained by direct welfare improvement motives, instead of the motive to advance social bonding.

As a further test of the framework, we compared givers’ enjoyment of giving when seeing the recipients’ initial reactions (79.9% of gifts), to their enjoyment when they did not see the reaction. We found substantially higher enjoyment of giving when the givers did see recipients’ reactions (M = 87.1, SD = 17.9), compared with when they did not see the recipients’ affective reactions (M = 46.3, SD = 36.8; F (1, 259) = 79.1, p < .001). Controlling for social closeness, a potential confound, the effect remained highly significant (F(1, 258) = 116, p<.001).
Discussion

We investigated a sample of real Christmas gifts given to close family members and friends in a longitudinal survey, and found strong support for our framework’s predictions. The results reveal that the distinction between visceral and cerebral attributes is a pervasive component of gift giving, and the difference between givers’ and recipients’ motives extends to givers’ subsequent enjoyment from giving. While givers reported that the cerebrally superior gifts induced more positive long-term satisfaction for recipients, the givers’ own long-term enjoyment was instead driven by their observation of the recipients’ immediate affective reactions. Moreover, not being able to see the recipients’ affective reactions dampened givers’ enjoyment from giving.

GENERAL DISCUSSION

We proposed a “smile-seeking” motive in gift giving, and developed a framework that links givers’ and recipients’ different motives to their discrepant preferences among gifts, based on different evaluative outcomes of product attributes. In a series of six studies, we demonstrated that the smile-seeking motive leads to a prevalent giver-recipient preference discrepancy. The smile-seeking givers prefer to give viscerally superior gifts, which yield stronger affective reactions from the recipients, compared with cerebrally superior gifts, which provide better longer-term satisfaction. By contrast, the value-seeking recipients value both visceral and cerebral attributes in gifts, and therefore are more apt to favor cerebrally superior gifts. We provided evidence for the smile-seeking motive, and ruled out alternative explanations for our findings, including
prediction-error, evaluation-mode asymmetry, and temporal construal. Our results were highly robust across a variety of research methods (vignette scenarios, real lab experiments, quasi-real online study, and a longitudinal field survey), gift-recipient relationships (friends, the newly acquainted, romantic partners, and family members), and a wide range of gift-giving occasions and cultural contexts (Thanksgiving, thank-you gifts, gift registry, housewarming and farewell gifts, Valentine’s Day, Christmas), as well as different populations and gift items. In a meta-analysis of all data collected, including one study we did not have space for in the paper (see web appendix for stimuli and results), the predicted giver-recipient preference discrepancy is highly robust ($F(1, 1193) = 86.7, p < .001$) with considerable effect size ($\eta^2 = .068$).

**Implications for Consumer Behavior**

What makes a “good gift”? Why do we give fancy wine to our spouse and artisan chocolates to our friend, instead of frying pans and socks? Our research suggests, contrary to the conventional notion that it is the match with recipients’ preferences that determines givers’ criterion for a good gift, the criterion may lie in givers’ own motives instead.

A visceral gift is generally considered a good gift, from the givers’ smile-seeking perspective, but not as good from the recipients’ value-seeking perspective. Nevertheless, a visceral gift may in fact benefit recipients more, particularly if recipients typically overexert self-control and under-indulge in hedonic choices (Keinan and Kivetz 2006, Khan, Dhar and Schmidt 2010). In a similar vein, Thaler (1985) has advised givers to use the opportunity of gift giving to purchase luxury products (versus a larger quantity of ordinary products) for recipients, in order to allow recipients to enjoy the luxury products
without having the guilt of buying the products themselves. Our findings suggest that many givers have already been doing so, but motivated by the immediate affective reactions from recipients, independent of any considerations regarding recipients’ feelings of guilt.

Importantly, the givers’ smile-seeking motive should not be confused with selfishness. While some accounts have characterized the gift-giving motive as either primarily self-interested or primarily altruistic (Sherry 1983, Wolfinbarger 1990), dyadic social behaviors generally cannot be defined as one or the other (Emerson 1976). From an operant conditioning perspective (Skinner 1938), each pro-social act simultaneously rewards both the recipient and, via the recipient’s positive reactions, the giver; and the roles alternate in turn as the relationship evolves. Thus, the smile-seeking motive in dyadic social relationships is compatible with both self-interest and altruistic interpretations.

Our findings shed light on many interesting gift-giving phenomena in the market, besides the popularity of flowers on Valentine’s Day. Off-registry gifts, for example, may seem puzzling because gift registries reduce uncertainty about recipients’ preferences and presumably make gift selection and purchase easier for givers. Our results suggest givers may often feel they cannot derive as much satisfaction from giving the items on the registry, since recipients may tend to select more cerebrally valuable options.

Our account may also help explain the popularity of gift wrapping (Howard 1992). Our findings suggest givers may be willing to pay for such services because nicely designed gift boxes and wrapping paper may instantly boost the visceral value of gifts and enhance recipients’ initial affective reactions, even though they do not add any
tangible benefit to the recipient. Last, our account is also relevant to the long-standing question of why people rarely give cash. Economists have long recommended giving cash as gifts for recipients’ utility maximization and economic efficiency (Waldfogal 1993). While recipients appreciate receiving cash, givers are reluctant to give cash (Gino and Flynn 2011). Our findings suggest that givers have a good reason not to do so - cash has too little visceral value compared with gifts in kind.

Our research also suggests practical implications for marketers during gift-giving season. In contrast to improving the cerebral attributes of gift items, such as the monetary value and the functionality of a product, improving the visceral attributes, such as immediacy of delivery, visual presentation, and other sensory appeal, can be a more effective and potentially more economical way to enhance the popularity of gift items among gift shoppers. Future research could further identify additional visceral attributes, which could be used to enhance consumer experiences.

*The Value of Affective Reactions in Interpersonal Relationships*

We have demonstrated that others’ affective reactions are not only cues that help us understand them, but are often directly anticipated and enjoyed, and can motivate and shape our social behaviors. More broadly, recognizing the importance of anticipated interpersonal consequences can be pivotal to understanding different types of interpersonal decisions, which vary in their social meaning and consequences. In related research, we have found that temporal preferences when choosing for others systematically varied across different types of inter-personal decisions, based on the anticipated future interpersonal accountability (Yang and Urminsky 2015).
In particular, our findings may provide an important insight into pro-social behaviors. Prior research has posited a “warm glow” motive of pro-social giving—that givers might feel good about giving due to moral satisfaction (Andreoni 1990). Our findings suggest a potential parallel “warm fuzzies” motive of giving, based on recipients’ affective reactions being inherently motivating to obtain. This “warm fuzzies” motive would suggest that the observability, imaginability, and immediacy of recipients’ affective reactions may moderate pro-social behavior. A number of research findings are consistent with this interpretation, with people providing greater aid when recipients’ images are more concrete (Small and Loewenstein 2003) and when the anticipated social interaction with the immediate recipients is closer (Andreoni, Rao and Trachtman 2011). Thus, the “warm fuzzies” motive of giving suggests new possibilities to improve fundraising, such as providing potential donors with immediate access to, or facilitating their mental simulation of, affective reactions from recipients. A smile may indeed be worth a thousand words of appreciation.

The framework we provide in this paper for understanding how visceral reactions and cerebral evaluation shape consumer choices and experiences also sheds light on a wide range of consumer questions. It can contribute to our understanding of inherent preferences (Simonson 2008, Dhar and Novemsky 2008), which would tend to be based on visceral attributes, as opposed to constructed preferences (Bettman, Luce and Payne 1998), which would be more closely related to cerebral attributes. Our framework is also informative for understanding how different attributes contribute to aggregate consumer happiness and satisfaction (Yang et al. 2012), with accumulated experiences and social comparisons likely to affect consumer satisfaction from cerebral attributes more so than
from visceral attributes. More broadly, our framework and findings may have broad implications for other consumer behaviors that occur in an interpersonal context, including joint purchase decisions, face-to-face sales, and how consumers communicate satisfaction.

Research on consumer behavior has become increasingly aware that affective processes can influence consumer behaviors in complex ways and are a fundamental component of decision-making (Loewenstein and Lerner 2003, Rottenstreich and Shu 2004, Shu and Peck 2011). Nonetheless, affective interactions, a prominent aspect of human life, have remained largely overlooked in research on decision-making (Andrade and Ho 2009, Van Kleef et al. 2010). Our research reveals a pivotal role of affective interactions in consumer decisions - what motivates people’s choices for each other could be as simple wanting to see the other person smile.
References


Andreoni, James, Justin M. Rao, and Hannah Trachtman (2011). “Avoiding the ask: a field experiment on altruism, empathy, and charitable giving.” No. w17648. NBER, 2011.


Boissy, Alain, Gerhard Manteuffel, Margit Bak Jensen, Randi Oppermann Moe, Berry Spruijt, Linda J. Keeling, Christoph Winckler et al. (2007)."Assessment of positive emotions in animals to improve their welfare." *Physiology & Behavior* 92, no. 3, 375-397.


Zajonc, Robert B. "Feeling and thinking: Closing the debate over the independence of affect." (2000).


Appendix

I. Study Stimuli
   1. Study 1 stimuli
   2. Study 2 stimuli
   3. Study 3 stimuli
   4. Study 4 stimuli
   5. Study 5 stimuli
   6. Study 6 stimuli

II. Pretests
   1. Visceral vs. Cerebral Pretests of Stimuli
   2. Pretest for Gift Appropriateness in Study 5

III. Additional results
   1. Study 4 output tables
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   3. Covariate effects of individual traits of temporal preferences in Study 5
   4. Gender does not explain the discrepancy in any of the studies

IV. Mediation details
   1. Study 4
   2. Study 5
   3. Study 6

V. Additional replication study
I. Stimuli
   1. Study 1 stimuli
      1) Study 1 Starbucks Thank-you Gift Cards:

         “$5.00 Starbucks Gift Card -
         Regular promotional gift card. They
         are immediately valid, and can be
         redeemed anytime. No expiration
         date.”

      2) Study 1B Starbucks Gift Cards

      3) Study 1C Amazon E-Gift Cards

         “$6.00 Starbucks Gift Card, valid in
         two weeks - Seasonal promotional
         gift card. Effective date printed on
         the sticker in the back. Peel off the
         sticker to activate. No expiration
         date.”
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Diaper cake" /></td>
<td>Diaper &quot;cake&quot; (1-month supply of diapers wrapped up like a cake)</td>
</tr>
<tr>
<td><img src="image" alt="Baby jumpsuit" /></td>
<td>Baby jumpsuit (for 12-24 Months, could be worn now immediately, for a year until the baby outgrows it)</td>
</tr>
<tr>
<td><img src="image" alt="Blank photo frame" /></td>
<td>Blank photo frame</td>
</tr>
<tr>
<td><img src="image" alt="Plush baby blanket" /></td>
<td>Plush baby blanket (30&quot;x40&quot;)</td>
</tr>
<tr>
<td><img src="image" alt="Pajama set" /></td>
<td>Pajama set (for 2-4 Years, could be worn starting a year from now, for about another two years until the kid outgrows it)</td>
</tr>
<tr>
<td><img src="image" alt="Non-irritant baby shampoo set" /></td>
<td>Non-irritant baby shampoo set</td>
</tr>
</tbody>
</table>
The Two Key items:

Baby jumpsuit (for 12-24 Months, could be worn now immediately, for a year until the baby outgrows it)

Pajama set (for 2-4 Years, could be worn starting a year from now, for about another two years until the kid outgrows it)

3. Study 3 Stimuli: Home Depot Gift Cards
(We counterbalanced the two card designs with the card descriptions.)

Option A: Gift Card worth $50, which will be delivered to the recipient's address tomorrow morning and will be immediately redeemable.

Option B: Gift Card worth $60, which is on sale for $50 as a special promotion, and will be sent to the recipient's address tomorrow morning, but will become redeemable in two weeks.

4. Study 4 Stimuli: Farewell Gifts

A pair of UV sunglasses (could be used in the first month for the recipient)

A pair of Hi-Tech warm gloves (could be used in the second and third months for the recipient)
5. Study 5 stimuli: Six Gift Items

- One dozen rose blossoms vs. two dozen rose buds
- Fruit basket vs. cookie basket
- A pink bouquet vs. a flower tree bonsai
II. Pretests
1. Visceral vs. Cerebral Pretests of Stimuli

We tested the perceived visceral and cerebral values of the dependent choice options in each study with 104 participants ($M_{age} = 34$, 56% Male), using the visceral and cerebral scales (Figure 2 in manuscript). The scores below reflect the differences between the rated visceral and cerebral values for each option. A positive score reflects a relatively higher visceral value, and a negative score reflects a relatively higher cerebral value. These scores confirm the visceral and cerebral tradeoff in each pair, which are validated in within-subjects $t$-tests.

<table>
<thead>
<tr>
<th>Study</th>
<th>Visceral Option</th>
<th>Cerebral Option</th>
<th>$t$-test</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1 (&amp; 1B): Starbucks Gift Cards</td>
<td>0.48 (.93)</td>
<td>-0.70 (1.25)</td>
<td>$t(103) = 8.6$</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Study 1C: Amazon E-Gift Cards</td>
<td>0.38 (.93)</td>
<td>-0.28 (.98)</td>
<td>$t(103) = 6.3$</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Study 2: Baby Apparel Items</td>
<td>0.75 (1.06)</td>
<td>-0.96 (1.31)</td>
<td>$t(103) = 9.3$</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Study 3: Home Depot Gift Cards</td>
<td>0.23 (.79)</td>
<td>-0.52 (.03)</td>
<td>$t(103) = 6.0$</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Study 4: Farewell Gifts</td>
<td>0.37 (.91)</td>
<td>-0.26 (1.14)</td>
<td>$t(103) = 4.5$</td>
<td>$p &lt; .001$</td>
</tr>
</tbody>
</table>
2. Pretest for Gift Appropriateness in Study 5

We tested the perceived appropriateness of the six gift items in Study 5 with another four randomly selected Valentine’s Day gift items below. We asked participants to rate “how appropriate is each gift for Valentine’s Day?” on a 7-point scale from “Not Appropriate” (1), to “Very Appropriate” (7). We compared the ratings with the midpoint of the scale (4) in one-sample t-tests. All experimental items were considered appropriate gifts, and significantly more appropriate in comparison to the control items.

<table>
<thead>
<tr>
<th>Gift Items</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>One-sample t-tests</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cookie Basket</td>
<td>6.18</td>
<td>0.94</td>
<td>23.6</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>A Dozen Rose Blossoms</td>
<td>6.15</td>
<td>1.00</td>
<td>21.7</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Two Dozen Rose Buds</td>
<td>6.08</td>
<td>1.00</td>
<td>21.1</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Flower Bouquet</td>
<td>6.08</td>
<td>0.96</td>
<td>22.2</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Flower Tree Bonsai</td>
<td>5.85</td>
<td>1.07</td>
<td>17.6</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Fruit Basket</td>
<td>5.26</td>
<td>1.28</td>
<td>10.1</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Running Shoes</td>
<td>4.00</td>
<td>1.40</td>
<td>0.04</td>
<td>= 0.972</td>
</tr>
<tr>
<td>Water Bottle</td>
<td>3.06</td>
<td>1.12</td>
<td>-8.62</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Book</td>
<td>2.55</td>
<td>1.19</td>
<td>-12.4</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>A Dozen Coke</td>
<td>2.07</td>
<td>1.12</td>
<td>-17.6</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Experimental Items - All Considered Appropriate

Control Items - Considered Less Appropriate
III. Additional Analyses

1. Table 1. ANOVA for the interaction in Study 4

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>798.9</td>
<td>307.5</td>
<td>0.141</td>
</tr>
<tr>
<td>Timing of Reaction</td>
<td>0.081</td>
<td>0.086</td>
<td>0.818</td>
</tr>
<tr>
<td>Condition (Giver vs. Recipient)</td>
<td>3.455</td>
<td>3.684</td>
<td>0.306</td>
</tr>
<tr>
<td>Condition X Reaction</td>
<td>0.938</td>
<td>3.961</td>
<td>0.047</td>
</tr>
<tr>
<td>Error</td>
<td>77.65</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

2. Table 2. MANOVA for the interaction in Study 5

**Tests of Between-Subjects Effects**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2090</td>
<td>6990</td>
<td>0</td>
</tr>
<tr>
<td>Condition (Giver vs. Recipient)</td>
<td>3.21</td>
<td>10.72</td>
<td>0.001</td>
</tr>
<tr>
<td>Error</td>
<td>87.6</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Tests of Within-Subjects Contrasts**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice Pair (3 Pairs)</td>
<td>16.27</td>
<td>85.56</td>
<td>0</td>
</tr>
<tr>
<td>Condition X Choice Pair</td>
<td>0</td>
<td>0.001</td>
<td>0.976</td>
</tr>
<tr>
<td>Error</td>
<td>55.72</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

3. Table 3. MANOVA with individual traits of temporal preferences as covariates

<table>
<thead>
<tr>
<th>Variable Type</th>
<th>Variables</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manipulation</td>
<td>Condition (Giver vs. Recipient)</td>
<td>15.0</td>
<td>0.000</td>
</tr>
<tr>
<td>Individual traits of temporal preferences</td>
<td>Patient</td>
<td>3.52</td>
<td>0.062</td>
</tr>
<tr>
<td></td>
<td>Future-oriented</td>
<td>2.93</td>
<td>0.088</td>
</tr>
<tr>
<td></td>
<td>Utilitarian</td>
<td>8.06</td>
<td>0.005</td>
</tr>
</tbody>
</table>
4. Table 4. No gender effects in ANCOVA

<table>
<thead>
<tr>
<th>Study</th>
<th>Variables</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>Condition (Giver vs. Recipient)</td>
<td>9.993</td>
<td>&lt; .005</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>0.131</td>
<td>0.718</td>
</tr>
<tr>
<td>Study 1B</td>
<td>Condition (Giver vs. Recipient)</td>
<td>7.321</td>
<td>&lt; .01</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>0.229</td>
<td>0.633</td>
</tr>
<tr>
<td>Study 1C</td>
<td>Condition (Giver vs. Recipient)</td>
<td>6.263</td>
<td>&lt; .05</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>2.293</td>
<td>0.134</td>
</tr>
<tr>
<td>Study 1D</td>
<td>Condition (Giver vs. Recipient)</td>
<td>29.63</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>1.085</td>
<td>0.299</td>
</tr>
<tr>
<td>Study 2</td>
<td>Condition (Giver vs. Recipient)</td>
<td>8.806</td>
<td>&lt; .005</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>1.282</td>
<td>0.259</td>
</tr>
<tr>
<td>Study 4</td>
<td>Condition (Giver vs. Recipient)</td>
<td>16.95</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>0.238</td>
<td>0.626</td>
</tr>
</tbody>
</table>
IV. Mediation details

Table 1: Effect of Role on Choices: Immediate Condition (Study 4)

<table>
<thead>
<tr>
<th>Source</th>
<th>$\beta$</th>
<th>SE</th>
<th>Wald</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-1.777</td>
<td>.510</td>
<td>12.16</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Role (1=giver, 2=recipient)</td>
<td>1.292</td>
<td>.329</td>
<td>15.41</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

$DV =$ Choice of the later-larger option (logistic regression)

Table 2: Effect of Role on $\Delta$Anticipated Enjoyment: Immediate Condition (Study 4)

<table>
<thead>
<tr>
<th>Source</th>
<th>$\beta$</th>
<th>SE</th>
<th>$t$</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2.145</td>
<td>.693</td>
<td>3.10</td>
<td>.002</td>
</tr>
<tr>
<td>Role (1=giver, 2=recipient)</td>
<td>-1.430</td>
<td>.440</td>
<td>3.25</td>
<td>.001</td>
</tr>
</tbody>
</table>

$DV =$ Enjoyment from giving the later-larger – Enjoyment from giving the sooner-smaller

Table 3: Effect of Role and Anticipated Enjoyment on Choices: Immediate Condition (Study 4)

<table>
<thead>
<tr>
<th>Source</th>
<th>$\beta$</th>
<th>SE</th>
<th>Wald</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-1.122</td>
<td>.781</td>
<td>2.06</td>
<td>.326</td>
</tr>
<tr>
<td>$\Delta$ Anticipated Enjoyment</td>
<td>-2.524</td>
<td>.668</td>
<td>14.27</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Role (1=giver, 2=recipient)</td>
<td>.955</td>
<td>.506</td>
<td>3.55</td>
<td>.059</td>
</tr>
</tbody>
</table>

$DV =$ Choice of the later-larger option (logistic regression)

Table 4: Effect of Role on Choices: Delayed Condition (Study 4)

<table>
<thead>
<tr>
<th>Source</th>
<th>$\beta$</th>
<th>SE</th>
<th>Wald</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-.326</td>
<td>.497</td>
<td>.429</td>
<td>.512</td>
</tr>
<tr>
<td>Role (1=giver, 2=recipient)</td>
<td>.400</td>
<td>.314</td>
<td>1.620</td>
<td>.203</td>
</tr>
</tbody>
</table>

$DV =$ Choice of the later-larger option (logistic regression)
Table 5: Effect of Role on ∆Anticipated Enjoyment: Delayed Condition (Study 4)

<table>
<thead>
<tr>
<th>Source</th>
<th>β</th>
<th>SE</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>.240</td>
<td>.720</td>
<td>.33</td>
<td>.739</td>
</tr>
<tr>
<td>Role (1=giver, 2=recipient)</td>
<td>-.475</td>
<td>.451</td>
<td>1.05</td>
<td>.294</td>
</tr>
</tbody>
</table>

DV = Enjoyment from giving the later-larger – Enjoyment from giving the sooner-smaller

Table 6: Effect of Role and Anticipated Enjoyment on Choices: Delayed Condition (Study 4)

<table>
<thead>
<tr>
<th>Source</th>
<th>β</th>
<th>SE</th>
<th>Wald</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-.147</td>
<td>.750</td>
<td>.038</td>
<td>.845</td>
</tr>
<tr>
<td>∆ Anticipated Enjoyment</td>
<td>-1.764</td>
<td>.362</td>
<td>23.75</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Role (1=giver, 2=recipient)</td>
<td>.214</td>
<td>.473</td>
<td>.20</td>
<td>.652</td>
</tr>
</tbody>
</table>

DV = Choice of the later-larger option (logistic regression)

Table 7: Effect of Role on Choices (Study 5)

<table>
<thead>
<tr>
<th>Source</th>
<th>β</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.371</td>
<td>.060</td>
<td>23.01</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Role (1=giver, 2=recipient)</td>
<td>.108</td>
<td>.037</td>
<td>2.92</td>
<td>.004</td>
</tr>
</tbody>
</table>

DV = Average Choice
(1=chose all visceral, 1.33=chose 1 cerebral, 1.67=chose 2 cerebral, 2=all cerebral)

Table 8: Effect of Role on Difference in Visceral Value (Study 5)

<table>
<thead>
<tr>
<th>Source</th>
<th>β</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-.707</td>
<td>.222</td>
<td>3.18</td>
<td>.002</td>
</tr>
<tr>
<td>Role (1=giver, 2=recipient)</td>
<td>.347</td>
<td>.138</td>
<td>2.52</td>
<td>.012</td>
</tr>
</tbody>
</table>

DV = ∆ Visceral
(Mean visceral rating for 3 cerebral options – Mean visceral rating for 3 visceral options)
Table 9: Effect of Role on Difference in Cerebral Value (*Study 5*)

<table>
<thead>
<tr>
<th>Source</th>
<th>$\beta$</th>
<th>SE</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>.501</td>
<td>.226</td>
<td>2.22</td>
<td>.028</td>
</tr>
<tr>
<td>Role (1=giver, 2=recipient)</td>
<td>.332</td>
<td>.140</td>
<td>2.37</td>
<td>.019</td>
</tr>
</tbody>
</table>

$DV = \Delta$ Cerebral  
(Mean cerebral rating for 3 cerebral options – Mean cerebral rating for 3 visceral options)

Table 10: Effect of Mediators on Choices (*Study 5*)

<table>
<thead>
<tr>
<th>Source</th>
<th>$\beta$</th>
<th>SE</th>
<th>$t$</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.488</td>
<td>.042</td>
<td>35.58</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Role (1=giver, 2=recipient)</td>
<td>.034</td>
<td>.025</td>
<td>1.36</td>
<td>.174</td>
</tr>
<tr>
<td>$\Delta$ Visceral</td>
<td>.185</td>
<td>.012</td>
<td>15.88</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>$\Delta$ Cerebral</td>
<td>.027</td>
<td>.011</td>
<td>2.37</td>
<td>.019</td>
</tr>
</tbody>
</table>

$DV = \text{Average Choice}$  
(1=chose all visceral, 1.33=chose 1 cerebral, 1.67=chose 2 cerebral, 2=all cerebral)

Table 11: Effect of Mediators on Choices for Givers (*Study 5*)

<table>
<thead>
<tr>
<th>Source</th>
<th>$\beta$</th>
<th>SE</th>
<th>$t$</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.538</td>
<td>.027</td>
<td>57.80</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>$\Delta$ Visceral</td>
<td>.192</td>
<td>.018</td>
<td>10.56</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>$\Delta$ Cerebral</td>
<td>.011</td>
<td>.018</td>
<td>.63</td>
<td>.532</td>
</tr>
</tbody>
</table>

$DV = \text{Average Choice}$  
(1=chose all visceral, 1.33=chose 1 cerebral, 1.67=chose 2 cerebral, 2=all cerebral)

Table 12: Effect of Mediators on Choices for Recipients (*Study 5*)

<table>
<thead>
<tr>
<th>Source</th>
<th>$\beta$</th>
<th>SE</th>
<th>$t$</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.540</td>
<td>.024</td>
<td>63.19</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>$\Delta$ Visceral</td>
<td>.182</td>
<td>.015</td>
<td>11.94</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>$\Delta$ Cerebral</td>
<td>.041</td>
<td>.015</td>
<td>2.69</td>
<td>.008</td>
</tr>
</tbody>
</table>
Table 13: Effect of Value Type on Affective Reactions (*Study 6*)

<table>
<thead>
<tr>
<th>Source</th>
<th>( \beta )</th>
<th>SE</th>
<th>( t )</th>
<th>( P )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>72.284</td>
<td>8.934</td>
<td>8.09</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Coded Visceral Value (1-6)</td>
<td>3.887</td>
<td>1.187</td>
<td>3.27</td>
<td>.001</td>
</tr>
<tr>
<td>Coded Cerebral Value (1-6)</td>
<td>1.184</td>
<td>1.331</td>
<td>.89</td>
<td>.375</td>
</tr>
</tbody>
</table>

DV = Affective Reaction Rating (0-100)   *Note: Respondent-level fixed effects not shown*

Table 14: Effect of Value Type on Long-Term Satisfaction (*Study 6*)

<table>
<thead>
<tr>
<th>Source</th>
<th>( \beta )</th>
<th>SE</th>
<th>( t )</th>
<th>( P )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>68.180</td>
<td>11.615</td>
<td>5.87</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Coded Visceral Value (1-6)</td>
<td>.490</td>
<td>1.544</td>
<td>.32</td>
<td>.751</td>
</tr>
<tr>
<td>Coded Cerebral Value (1-6)</td>
<td>5.903</td>
<td>1.731</td>
<td>3.41</td>
<td>.001</td>
</tr>
</tbody>
</table>

DV = Long-Term Satisfaction Rating (0-100)  *Note: Respondent-level fixed effects not shown*

Table 15: Effect of Mediators on Givers’ Enjoyment (*Study 6*)

<table>
<thead>
<tr>
<th>Source</th>
<th>( \beta )</th>
<th>SE</th>
<th>( t )</th>
<th>( P )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>30.965</td>
<td>14.029</td>
<td>2.21</td>
<td>.029</td>
</tr>
<tr>
<td>Affective Reaction (0-100)</td>
<td>.756</td>
<td>.135</td>
<td>5.62</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Long-Term Satisfaction (0-100)</td>
<td>.069</td>
<td>.104</td>
<td>.66</td>
<td>.508</td>
</tr>
</tbody>
</table>

DV = Giver Enjoyment Rating (0-100)  *Note: Respondent-level fixed effects not shown*

Table 16: Effect of Mediators on Givers’ Enjoyment (*Study 6*)

<table>
<thead>
<tr>
<th>Source</th>
<th>( \beta )</th>
<th>SE</th>
<th>( t )</th>
<th>( P )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>33.035</td>
<td>14.566</td>
<td>2.27</td>
<td>.025</td>
</tr>
<tr>
<td>Coded Visceral Value (1-6)</td>
<td>1.230</td>
<td>1.726</td>
<td>.71</td>
<td>.477</td>
</tr>
<tr>
<td>Coded Cerebral Value (1-6)</td>
<td>-1.742</td>
<td>1.925</td>
<td>.91</td>
<td>.367</td>
</tr>
<tr>
<td>Affective Reaction (0-100)</td>
<td>.714</td>
<td>.142</td>
<td>5.02</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Long-Term Satisfaction (0-100)</td>
<td>.106</td>
<td>.109</td>
<td>.97</td>
<td>.335</td>
</tr>
</tbody>
</table>

DV = Giver Enjoyment Rating (0-100)  *Note: Respondent-level fixed effects not shown*
V. Additional study: Replication in a hypothetical study with MBA students

Methods.
We recruited MBA students (N = 150, M_\text{age} = 29.6, 61% Male, M_\text{close} = 6.3) from a mid-western university in the winter quarter during class breaks. The study has 2 (Role: Giver vs. Recipient) between-subjects conditions. Each participant received a two-page questionnaire about a scenario. In the scenario, participants were asked to imagine that Person A is a member of a student organization in the MBA program. At the end of each quarter, the student organization honors a best volunteer for on-campus student initiatives during the quarter. As the secretary of the organization this year, Person B is in charge of choosing a gift from the campus bookstore today for the award winner Person A. We randomly assigned participants to the two conditions, asking them to either imagine they were Person A (Giver Condition), or Person B (Recipient Condition).

Results.
The two gift options involved a similar visceral-cerebral tradeoff as in Study 4: a $36.98 fuzzy wool hat and scarf set with the school’s MBA program logo that can be worn in the cold weather at the time of the study (the visceral option), and a $49.98 sleek sports T-shirt with the school’s MBA program logo that can be worn in warmer weather, later (the cerebral option).

We replicated the preference discrepancy with MBA students. Those who imagined themselves as givers were more apt to choose to give the visceral option more than recipients preferred to receive it (53.9% vs. 13.6%, $\chi^2 = 24.7, p < .001$).