

I will risk a stranger's money, but not my own or my friend's money: Effect of proximity of the money source to the self on financial risk-taking

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Published online: 21 February 2014
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Abstract This research examines the effect of perceived closeness to a source of money on people's likelihood to take financial risks. Across two experiments using gambling decision scenarios, we find that people make riskier choices when the monetary cost of the decision is high (vs. low) and when they perceive the source of the money as distant from (vs. close to) the self. Study 1 demonstrates that people make riskier decisions when someone else is paying than when they are paying, but only when the monetary cost of the gamble is relatively high (vs. low). Study 2 demonstrates that people make riskier decisions with a distant (vs. close) other's money, presumably because they perceive a close (distant) other's resources as similar to (different from) their own resources. The findings support the notion that the source of money affects how people mentally account for it, with proximity to the self as a determining factor.

Keywords Mental accounting · Income accounting · Risk · House money effect · Interpersonal closeness

This research was supported in part by a Summer Research Grant from the Sellinger School of Business and Management at Loyola University Maryland.

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1 Conceptual framework

People tend to use mental accounting to organize their financial activities, which often includes allocating money to be spent on particular categories (e.g., transportation, housing, and entertainment) (for a detailed review, see Thaler 1999). A classic example of the effect of mental accounting on consumer expenditure decisions is Kahneman and Tversky's (1984) theater ticket case. They found that people were less willing to (re)purchase a theater ticket after losing a previously purchased ticket than after losing an equivalent amount of money. The explanation for this finding is that the people had already spent the money designated to the theater outing on the lost ticket. Thus, they found it more difficult to justify re-purchase than to justify purchasing an original ticket after losing money they had not already mentally allocated to the theater outing.

Building on the notion of mental accounting, the concept of income accounting suggests that the source of money may also determine how money is earmarked to be spent (e.g., Arkes et al. 1994; Levav and McGraw 2009; McGraw et al. 2003; O'Curry 1997; Thaler 1999; Thaler and Johnson 1990). For example, O'Curry (1997) found that people prefer spending money from a serious source (e.g., overtime pay) on serious things (e.g., paying bills) but prefer spending money from a frivolous source (e.g., raffle winnings) on frivolous things (e.g., entertainment). Relatedly, Levav and McGraw (2009) showed that the "affective tag" associated with how a windfall is gained affects how it is spent, with money gained under negative circumstances (e.g., inheritance from a dying loved one) being spent on utilitarian, rather than hedonic, goods, or experiences. More generally, Arkes et al. (1994) found evidence that windfalls tend to be more readily spent than other sources of income because they are often unanticipated, rather than expected, gains.

The house money effect is a well-known outcome of income accounting processes, in which people make riskier financial decisions when "playing with house money" (Thaler and Johnson 1990), an expression borrowed from gamblers. For example, imagine that you just won \$100 gambling in Las Vegas. Will this win affect your next gambling decision (e.g., whether to bet, how much to bet)? Research indicates that it will. In the presence of a prior gain (the \$100 won), people tend to be more risk seeking than without a prior win. In this case, choosing to make another gamble is viewed as playing with the house's money (i.e., the casino's \$100 you just won) instead of your own money, presumably because the house money and your own money reside in separate mental accounts (Kahneman and Tversky 1984; Thaler and Johnson 1990). These separate mental accounts make it easier for you to spend the house money more readily and riskily than your own money.

The current research suggests that an important determinant of the mental account into which people place money, and therefore, how risk seeking they are with that money, is how close the source of the money is to the self. In particular, we propose that the distance between the money source and the self is positively related to the level of financial risk people are willing to take with that money, which helps explain the house money effect. We test this prediction by examining the degree to which people are risk seeking with their own money versus another person's money. Thus, we extend the house money effect to more common interpersonal situations, such as when a friend offers a gift or picks up a tab. In particular, we hypothesize that people make riskier financial choices when someone else is paying (vs. paying themselves) (H1).

This prediction is consistent with the house money effect, in which people are more likely to risk money when they do not perceive (i.e., account for) it as their own. However, we propose two boundary conditions to this main effect. First, we predict that the effect will not hold when the stakes are small. In such instances, people are generally risk seeking (e.g., Weber and Chapman 2005) and thus should make equally risky choices regardless of whether the money being spent is their own or another person's. In particular, we hypothesize that the monetary cost of the gamble moderates the effect of who is paying on financial risk-taking, with people making riskier choices when someone else is paying (vs. paying themselves) only when the cost is relatively high (vs. low) (H2).

Second, we predict that the decision maker's interpersonal closeness to the person paying will affect the extent to which he or she is willing to take financial risks with the money. Aron et al. (1991) propose that in close interpersonal relationships, people perceive some or all aspects of the partner as partially their own, including the other's monetary resources. Thus, we propose that when a close other is the source of the money, people will mentally account for that money in the same way as their own money. However, when a more distant other is the source of money, people will place these funds into a separate mental account, similar to the house's money. In turn, they will be more willing to risk a distant, versus close, other's money. This prediction demonstrates the importance of the money source's proximity to the self in financial risk-taking. In particular, we hypothesize that people make riskier financial choices when a distant (vs. a close) other is paying (H3).

2 The current research

We present two experiments. Study 1 examines H1 and H2 by demonstrating that people take more risks with someone else's money than with their own when the monetary value at stake is relatively high. Study 2 examines H3 by exploring the role of interpersonal closeness in determining whether people take risks with other people's money. The findings show that consumers make riskier decisions when a distant (vs. close) other is paying. Taken together, these studies provide evidence that an important factor in determining how money will be spent is the source's proximity to the self—that is, people are more likely to take financial risks the farther the money source is from the self.

3 Study 1

This study aims to determine whether people are more risk seeking when someone else is paying (vs. paying themselves) and whether the monetary cost of the decision moderates the effect. To do so, we employed a hypothetical gambling decision paradigm in which we controlled for the expected value of two available gambles but manipulated their level of risk, with the riskier decision being characterized by low odds/high reward (Duclos et al. 2013). The study employed a 2 (payer: self/other) \times 2 (cost of gamble: higher [\$5]/lower [\$0.50]) between-subjects design.

3.1 Participants and procedure

We used Amazon's Mechanical Turk website (Buhrmester et al. 2011) to recruit 199 participants, who completed a brief online study in exchange for payment. Data from all participants were included in our analyses.

Participants read a hypothetical scenario in which they were asked to imagine that they were at a convenience store with someone else and were to choose between buying one of two scratch-off lottery tickets. Participants were randomly assigned to a scenario that described their lottery ticket as being purchased by someone else or to a scenario in which they personally purchased the lottery ticket (see the [Appendix](#)). They were also randomly assigned to conditions in which the lottery ticket cost \$5 or \$0.50 (the monetary cost of the gamble manipulation). The dependent variable was whether participants chose the high-risk gamble (ticket with a 5 % chance of winning) or the low-risk gamble (ticket with a 50 % chance of winning). In the \$5 (\$0.50) condition, participants chose between a ticket with a 5 % chance of winning \$100 (\$10) and a ticket with a 50 % chance of winning \$10 (\$1).

3.2 Results

We conducted a binary logistic regression to test H1 and H2. The dependent variable was whether participants chose the high-risk or low-risk gamble. The independent variables were payer (self/other), monetary cost of gamble (\$5/\$0.50), and their interaction. The results indicated a main effect of payer ($\beta=2.34$, Wald $\chi^2=4.11$, $p<.05$), in that participants were more likely to choose the high-risk (vs. low-risk) option if someone else was paying (vs. paying themselves), in support of H1. The results also revealed a main effect of monetary cost of gamble ($\beta=2.77$, Wald $\chi^2=5.96$, $p<.05$), in that participants were more likely to choose the high-risk (vs. low-risk) option when spending \$0.50 (vs. \$5). These main effects were qualified by a marginally significant two-way interaction ($\beta=1.24$, Wald $\chi^2=3.32$, $p<.07$), in support of H2. Fig. 1 displays the percentage of participants choosing the risky option.

To interpret this further, we examined whether significant differences appeared across the payer conditions in the high and low monetary cost conditions. As H1 predicted, when the monetary cost of the gamble was high (\$5), participants were significantly more likely to choose the high-risk option when someone else was paying ($\chi^2(1, N=100)=4.18$, $p<.05$); only 12 % of the self-payers selected the high-risk option, compared with 29 % when someone else was paying. However, as H2 predicted, this effect did not hold when the monetary cost of the gamble was low (\$0.50). In this case, there was no significant difference in choosing the high-risk option

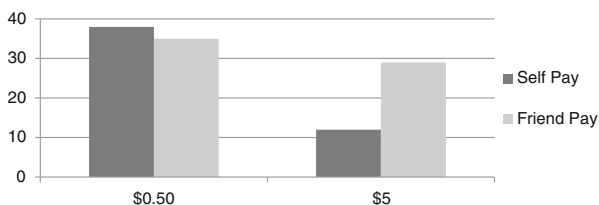


Fig. 1 Study 1 percentage choosing risky option

between payer conditions ($p > .5$); 38 % of self-payers selected the high-risk option, compared with 35 % when someone else was paying. Complementing these findings, we also see that when another person was paying, there was no significant difference in choosing the high-risk option based on the monetary cost of the gamble ($p > .50$), whereas participants were significantly less likely to choose the high-risk option when spending their own \$5 (vs. \$0.50) ($\chi^2(1, N=101)=9.69, p < .05$).

3.3 Discussion

Consistent with prior research (e.g., Weber and Chapman 2005), we find that participants are relatively risk seeking when the stakes are small (\$0.50). However, when the stakes are higher (\$5), participants are significantly more likely to take risks when spending someone else's money than when spending their own. This finding provides initial evidence that people are more likely to take risks when spending someone else's money. Put otherwise, consumers appear to spend someone else's (but not their own) \$5 as if it is spare change (i.e., \$0.50).

We propose that when the stakes are relatively high, people are more willing to take risks when someone else is paying because the distance of the source of the money from the self causes them to place the money in a separate mental account from their own funds (Kahneman and Tversky 1984; Thaler and Johnson 1990). An alternative explanation is that people take more risks in these situations because they consider other people's money an unanticipated gain, and such gains are more readily risked than their own earned money (Arkes et al. 1994). In Study 2, we rule out this alternative explanation by comparing two situations in which another person is paying (both involving unanticipated gains) and examining how the degree of interpersonal closeness with that person affects financial risk-taking. The unexpected nature of being offered money should not differ based on the closeness with the person, and thus, the findings of Arkes et al. (1994) would not predict a difference in financial risk-taking based on this factor. However, we hypothesize that risk taking will differ because of the relative proximity of the close versus distant other to the self.

Study 1 used a scenario in which the other was a hypothetical friend, and thus, it is unclear whether participants imagined that person as a close friend or merely an acquaintance. This distinction is important because previous research suggests that people often view close others as extensions of themselves (Aron et al. 1991; Aron et al. 1992). Therefore, if participants were prompted to imagine a person particularly close to them, we predict that risk-seeking tendencies when someone else is paying would be attenuated. In other words, the closer the source of the money (e.g., close vs. distant friend) is to the self, the less likely people will be to engage in financial risk-taking. Thus, Study 2 explores the role of interpersonal closeness in determining whether people take risks with other people's money. In particular, we argue that the likelihood of making a risky choice increases the more distant the money source is from the self.

4 Study 2

Study 1 finds that the house money effect extends to the interpersonal situation of someone else paying. However, we expect that just who the person doing the paying is

will affect the extent to which consumers opt for the riskier choice. The degree of interpersonal closeness (Aron et al. 1991; Aron et al. 1992) between the decision maker and the person paying should determine whether a risky choice is made because this closeness affects the mental account into which the money is placed. If a close, versus distant, other is paying, we propose that consumers are less likely to make risky decisions because people treat the close other's money as their own. This is consistent with the notion that in close relationships "other's resources are self's resources" (Aron et al. 1991, p. 243).

Prior research suggests that interpersonal closeness can be experimentally induced. That is, relationship status (close vs. distant) is a malleable construct that can be manipulated by using different social comparison standards (Fishbach et al. 2010; Strack et al. 1990). For example, consider a young adult's relationship with a long-time friend compared with a relationship her mother has with a long-time friend. The young adult might notice that even though she has known her friend for 10 years, relatively, her mother's relationship of 30 years would be much closer. The young adult might therefore perceive her relationship as relatively distant (see Fishbach et al. 2010).

Study 2 examines whether people make riskier financial choices when a distant (vs. close) other is paying. We again employed a hypothetical gambling decision paradigm, in which we controlled for the expected value of two available gambles but manipulated their risk level. We manipulated payer (close vs. distant other) between-subjects.

4.1 Participants and procedure

We again used Amazon's Mechanical Turk website to recruit participants. One hundred twenty-one participants completed an online study in exchange for payment. Data from all participants were included in the analyses.

Because the focus of this research is on how the source of money affects financial risk-taking, we wanted to ensure that impression management concerns would have no impact on the riskiness of participants' financial choices. That is, consumers are influenced by how their choices make them look to others (e.g., Ratner and Kahn 2002). To avoid confounding how the source of money (close vs. distant other) affects risk taking with concerns about impression management (which may vary depending on whether one is spending a close, versus distant, other's money), we primed all participants with low self-presentation concerns (Vohs et al. 2005).

Next, participants were randomly assigned to one of the two payer conditions. We manipulated relationship closeness (close vs. distant) by asking participants to think about a friend and answer a series of relationship questions. First, they indicated how long they had known their friend on a scale ranging from less than 2 years to more than 5 years (close) or less than 20 years to more than 25 years (distant). They also indicated how often they talk to and see their friend each week on a scale ranging from less than once a week to more than twice a week (close) or less than five times a week to every day (distant) (Fishbach et al. 2010). It was relatively likely for participants in the close relationship condition to indicate that they had known their friend for more than 5 years and that they talk to or see their friend twice a week. In contrast, it was relatively unlikely for participants in the distant relationship condition to indicate that they had known their friends for more than 25 years or that they talk to or see their friend every day. Thus, participants in the close (distant) relationship condition would likely respond

on the high (low) end of the provided scale, causing them to feel closer to (more distant from) their friend than those in the distant (close) relationship condition. In support of this manipulation, Fishbach et al. (2010) conducted a pretest in which participants in the close relationship condition reported feeling closer to their friends than participants in the distant relationship condition.

Similar to Study 1, we presented participants with a hypothetical scenario in which they were asked to imagine that they were at a convenience store and the friend they previously described was treating them to one of two scratch-off lottery tickets. The dependent variable was whether they selected the high-risk (20 % chance of winning \$25) or low-risk (25 % chance of winning \$20) lottery ticket.

4.2 Results

Only 9 % of participants selected the high-risk option when a close friend was paying compared with 27 % when a distant friend was paying. In support of H3, this difference was statistically significant; participants were more likely to choose the high-risk option when a distant friend was paying than when a close friend was paying ($\chi^2(1, N=121)=5.89, p<.05$).

4.3 Discussion

The results demonstrate that whether consumers make riskier choices when someone else is paying depends on how close they are to the funding source. We predicted that consumers would treat a close other's money the same as their own (Aron et al. 1991) and therefore, would not spend it as frivolously as a more-distant other's money. Such a pattern would be consistent with the explanation that people place the distant other's money into a separate mental account from their own funds (Kahneman and Tversky 1984; Thaler and Johnson 1990). We find support for this prediction, thus adding to our understanding of the house money effect. Building on prior research that finds that people are more risk seeking when “playing with house money” (e.g., Thaler and Johnson 1990), we find that this tendency extends to when a distant, but not close, other is paying. That is, people are likely to choose a less risky option when paying themselves or when a close friend is paying but will choose a riskier option when the money belongs to a more distant other. This finding suggests that the money source's proximity to the self is a key factor in how readily or riskily that money will be spent.

5 General discussion

This research identifies a novel factor that affects financial risk-taking—namely, the money source's proximity to the self. Study 1 finds that when the monetary cost of a gamble is relatively high, people make riskier decisions when someone else is paying than when paying themselves. Study 2 finds that people make riskier decisions with a distant (vs. close) other's money, presumably

because they perceive a close (distant) other's resources as similar to (different from) their own resources. We conclude from these findings that people are more likely to take financial risks when the source of the money is distant from the self. This helps to explain the well-documented house money effect (Thaler and Johnson 1990), which demonstrates that people make riskier financial decisions when "playing with house money" than when gambling their own money. Specifically, the studies here suggest that a key factor driving the house money effect is the distance between the source of the money (i.e., the house) and the self.

Our findings extend research that identifies various factors affecting risk-seeking tendencies, including individual differences such as regulatory focus (e.g., Lin et al. 2006; Zhou and Pham 2004), cross-cultural factors (Mandel 2003; Weber and Hsee 1998), and situational sensory features such as proximity to a stimulus (e.g., Ditto et al. 2006). Although we find that increased closeness between the money source and the decision maker leads to less risk in financial decision-making, further research might reveal even more boundary conditions to risk-seeking tendencies. One potential extension is the area of gift giving. For example, Janis et al. (1965) found that gifts of food caused people to be more open to persuasive arguments. We attribute this effect to the source of the gift being distant from the self (i.e., an experimenter delivered the gift) and persuasive arguments being risky insofar as they are incongruent with one's beliefs. Thus, it is possible that the decision maker's perception of the nature of the gift had an influence on risk taking. In the financial domain, if people perceive the funds given to them as a gift rather than a windfall, they might view these funds more as their own, which could lead to a reduction in risk tendencies.

Notably, Study 2's findings seem to contrast the "cushion hypothesis," which suggests that people are more willing to take financial risks when they have close others to fall back on if the gamble does not pay off (Hsee and Weber 1999; Weber and Hsee 1998). This indicates that people might be more willing to take risks with a close than a distant other's money. However, we find the opposite to be true, perhaps because the foundation for the cushion hypothesis is in cross-cultural differences, such that those in interdependent cultures feel more protected from ill effects of financial losses and therefore, are more willing to take risks. In our studies, we examined US participants' reactions to the situational variable of another person financing a gamble. Because our pool of participants was from an independent culture, it is unlikely that ingrained cultural expectations of being cushioned if the gamble did not pay off were present in either experimental condition. Further research could determine how interpersonal closeness intersects with a cultural mindset on taking financial risks.

Theoretically, we add to research examining the impact of social factors on consumer risk-taking (Duclos et al. 2013; Mandel 2003; Ratner and Kahn 2002), while also extending our understanding of the house money effect. Our findings are consistent with the house money effect (Thaler and Johnson 1990), in that consumers' risk preferences were not static across situations. One explanation may be that consumers do not value all money equally (Weatherly et al. 2011); that is, they may account for their own money differently than another's money, with even the value of another's money depending on their interpersonal closeness with that other. Taken together, our findings indicate that the proximity of the money source to the self drives the house money effect.

To further explore the psychological mechanism underlying people's propensity to take risks with other peoples' money, we empirically examined two potential explanations. First, we presumed that consumers experience less pain of paying (Rick et al. 2008) the farther the source of the money is from the self. In other words, because tightwads tend to experience greater pain of paying than spendthrifts (e.g., Thomas et al. 2011), we predicted that they would experience less pain when paying with someone else's money rather than their own and thus, would be more willing to take risks when another was paying. However, we found no support for this in our investigation. Second, we posited that the more distant the payer, the less people anticipate experiencing regret if the risky choice does not pay off (e.g., Taylor 1997) and thus, the more willing they are to take risks the farther the source of the money is from the self. We also did not find support for this proposition. Therefore, further research examining the specific processes driving the house money effect and the role of the money source's closeness to the self is warranted.

An important limitation is that our studies relied on scenarios in which participants imagined spending money on lottery tickets. Thus, we use caution when extrapolating our findings to real-world purchase decisions because people may be more risk averse using real than hypothetical money (Weatherly and Meier 2007). However, we have no reason to believe that the tendency for greater risk aversion when making consequential consumption decisions would mitigate our findings. Rather, it might exacerbate the effect of spending money frivolously from sources distant from the self, because risk aversion may increase only when people are spending their own or a close other's money.

Practically, the finding that consumers' propensity to take risks varies depending on who is financially backing the risk has day-to-day implications. People commonly treat others to a meal, a coffee, a movie, and so on. Our results suggest that people might be willing to take risks (e.g., seeing a quirky movie or ordering an unusual dish) when the person treating is not close (e.g., a salesperson or a supervisor). Our findings may also extend to situations in which consumers make decisions on behalf of others. Research indicates that people are less risk averse when making decisions that affect others (vs. themselves) (Chakravarty et al. 2011), though this might depend on the identity of the others. For example, people may be less risk averse when making decisions that will affect a stranger and more risk averse when making a decision that will affect a close other (e.g., a family member).

On a more macro level, this research has important implications for the contexts of financial services and political expenditures. Financial advisers "gamble" with other people's life savings and politicians "gamble" with other people's tax dollars. In these cases, it is feasible that the decision makers perceive the money source as quite distant, which has troubling implications for how readily and riskily they may spend that money. For example, there are several well-publicized cases of the government spending money on high-risk ventures, particularly in the public utilities domain (e.g., Krvaric 2010). State and local governments frequently invest in high-risk, low-reward water supply reservoirs when other lower risk options are available (e.g., Emanuel and Hoffner 2012). Our research suggests that one way to remedy excessive or unwanted risk-taking in these domains would be to emphasize the decision maker's proximity to the money source. For example, politicians could take the perspective of their constituents, which prior research suggests activates feelings of interpersonal closeness (Galinsky et al. 2005).

Appendix: Study 1 scenarios

Condition: Friend Pay/\$5

Imagine the following scenario:

You're at a local convenience store with your friend and he gets \$5 back from his purchase. He hands it to you and says "buy something". You decide to buy a scratch-off lottery ticket with the money. There are two \$5 tickets to choose from:

- The first has a 5 % chance of winning \$100
- The second has a 50 % chance of winning \$10

Which would you purchase?

Condition: Friend Pay/\$0.50

Imagine the following scenario:

You're at a local convenience store with your friend and he gets 50 cents back from his purchase. He hands it to you and says "buy something". You decide to buy a scratch-off lottery ticket with the money. There are two 50 cent tickets to choose from:

- The first has a 5 % chance of winning \$10
- The second has a 50 % chance of winning \$1

Which would you purchase?

Condition: Self Pay/\$5

Imagine the following scenario:

You're at a local convenience store with your friend and you get \$5 back from your purchase. You think that instead of holding onto it you'll buy something. You decide to buy a scratch-off lottery ticket with the money. There are two \$5 tickets to choose from:

- The first has a 5 % chance of winning \$100
- The second has a 50 % chance of winning \$10

Which would you purchase?

Condition: Self Pay/\$0.50

Imagine the following scenario:

You're at a local convenience store with your friend and you get 50 cents back from your purchase. You think that instead of holding onto it you'll buy something. You decide to buy a scratch-off lottery ticket with the money. There are two 50 cent tickets to choose from:

- The first has a 5 % chance of winning \$10
- The second has a 50 % chance of winning \$1

Which would you purchase?

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