

Misaligned mindsets between borrowers and lenders of small interpersonal loans[☆]

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ABSTRACT

In a series of six experiments, conducted in both field and laboratory settings, we demonstrate in the context of small interpersonal loans between friends, that individuals operate under different mindsets depending on their role in the loan (lender vs. borrower), which consequently leads to misaligned repayment expectations. Lenders, operating under a communal mindset, do not expect borrowers to repay small amounts that borrowers, operating under an exchange mindset, intend to repay. We show that the two-mindset hypothesis is both state- and trait-dependent and discuss how the observed repayment expectation gap may explain why many small interpersonal debts remain unpaid. We also discuss the contribution to social and economics literature, implications for interpersonal relationships, and directions for future research.

1. Introduction

Interpersonal lending of small amounts between individuals, such as family members and friends, has been around since the dawn of recorded human civilization. Today's emerging technologies offer ever-increasing means to facilitate payment transactions, such as peer-to-peer mobile apps that simplify money transfers between individuals and create an abundance of opportunities to give and assume small loans. Anecdotal evidence suggests, however, that unlike larger formal loans, small interpersonal loans are less likely to be repaid. One global study published by PayPal revealed that adults are owed more than \$51 billion by friends and family. The study also found that one half of Americans say that the small loans they give are not always repaid because they don't want to make a big deal out of it (PayPal, 2015). However, are these lenders correct to believe that borrowers would consider such a request for repayment "a big deal" and moreover, do lenders even expect borrowers to repay? After all, caring for others close to us is arguably of utmost importance in communal relationships (Clark & Mills, 2011; Fiske, 1992), and offering small levels of financial assistance provides opportunities for altruistic behavior at a relatively minor cost.

From a purely economic perspective, lenders are better off taking action to increase the probability of repayments. Yet we argue that

lenders of small amounts of money, or interpersonal microlenders, often shy from asking for their money back when repayment is not offered (arguably to avoid breaching relationship norms) because doing so would suggest that the social relationship is less important than the money owed. Given that breaching relational norms by asking for repayment may be considered costlier than relinquishing small amounts of money, interpersonal microlenders might be motivated to derive social (as opposed to monetary) value from lending situations, which helps them to make sense of their potential small financial loss, and consequently decreases their expectations of repayment. As a result, small loans may remain unpaid. Interpersonal microborrowers, on the other hand, focus on the economic exchange of the transaction, as borrowing money from a friend might offer them little social value, or even generate negative value by creating a sense of obligation (owing a friend money). Thus, interpersonal microborrowers expect to repay the loan more than interpersonal microlenders expect to receive repayment. This *repayment expectation gap* between borrowers and lenders, which is explained by norm-conformity differences, is less likely to manifest in large-loan situations where the more significant financial consequences of unpaid loans motivate lenders to behave in congruence with economic rules and to take action to increase the probability of repayment.

Note that in the economic literature, the term microloan (also known as microfinancing or microcredit) may also refer to loans of a several

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thousands of dollars (De Aghion, Armendáriz, & Morduch, 2007). In the context of the current investigation, we define *interpersonal microloans* as informal and subjectively very small loans between friends and acquaintances (for brevity, we use the terms microlenders and micro-borrowers hereafter), with no formal written agreement, interest rate, or fee. Importantly, we use the term interpersonal microloan to loosely describe any small financial help occurring between friends, as many social interactions do not explicitly define such transactions as loans. As we argue below, there is a systematic difference in how lenders and borrowers perceive these transactions (i.e., loan vs. small help). Understanding interpersonal microloan behaviors is important because it may impact social relationships in various ways. On the one hand, providing small financial help to close others may effectively signal that the social relationship is of high importance to the microlender. On the other hand, the age-old proverb “Don’t mix money and friendship” suggests that mixing social norms with market norms may be detrimental to relationships (Fiske & Tetlock, 1997; Heyman & Ariely, 2004; Lee & Persson, 2016; McGraw & Tetlock, 2005; Webley & Wilson, 1989; Webley, Lea, & Portalska, 1983). Surprisingly, however, the ubiquitous informal market for very small loans between friends and acquaintances has received little attention from social researchers, perhaps because it is difficult to measure the scope of these informal markets as opposed to the formal markets that are more easily measured. As a result, research investigating whether and why small interpersonal loans are unpaid is scarce. The current investigation aims to fill this gap in the literature.

2. Theoretical development and hypotheses

2.1. The market for (unpaid) interpersonal microloans

We work hard to return loans taken for our homes, cars, education, and vacations. Failure to repay these formal and usually large loans has serious legal repercussions. During our daily affairs, many of us also borrow or lend (or both) small amounts of money from/to our friends. Clearly, in the absence of interest rates and other transactional fees, interpersonal lending of any loan-size offers no economic gain for lenders. Therefore, a sensible individual should not be motivated to risk parting with some of their money today for a chance to receive the same amount in the future, especially in view of the credit risk involved. Moreover, although at a transactional level, failure to repay a small debt may have insignificant negative financial consequences for the lender, unpaid amounts across many social interchanges over a lifespan can accumulate to a substantial sum. Similarly, absence of a financial-based enforcement mechanism might decrease repayments by economy-oriented borrowers. The prevalence of interpersonal microlending however, is evidence that interpersonal microloaning is driven by motivations other than financial gain maximization. It stands to reason that these transactions are likely to involve psychological factors that are absent in larger and formal loans. This is mainly because formal loans mostly involve interactions with strangers and institutions, while interpersonal microlending involves interactions with those who matter to us most—family and friends. We suggest that communal rather than economic motivations drive interpersonal microlending behavior, and consequently, microlenders are likely to attribute significance to the social rather than the economic value of their actions. Due to microlenders’ reluctance to violate relationship norms by signaling that the social relationship is less valued than the financial exchange, they are less motivated to ask for repayment when such a repayment is not offered. Instead, when evaluating the loaning situation, microlenders give more weight to the social benefit gained from helping a friend than to the financial risk of not being repaid. As we argue later, this results in a perceptual gap between lenders and borrowers.

Several alternative motivations may explain why individuals who offer small financial assistance to close others would be less likely to request repayment. *First*, microlenders may not be interested in repayment but rather in the borrowers’ implicit commitment to reciprocate in

the future by extending equally valued monetary or other assistance or by making a valued gesture when needed. However, Study A1 (Appendix A) demonstrates that individuals who loaned small amounts have low repayment expectations even when no future interactions with the borrower are anticipated, and thus no reciprocal act is expected. *Second*, given that the loan amounts are very small, microlenders may simply forget about small, unpaid loans. A pre-test survey conducted among 74 undergraduate students, however, showed that this is less likely: Participants recalled more incidents of lending small amounts of money to their friends during the past year ($M = 5.04$) than incidents of borrowing small amounts of money from their friends ($M = 3.89$, $t(73) = 6.27$, $p < .001$). Interestingly, participants also recalled more incidents of friends failing to repay them small amounts of money ($M = 4.09$) than incidents of their own failure to repay small amounts of money borrowed from their friends ($M = 2.50$, $t(73) = 7.57$, $p < .001$). These results are in line with those reported by Dezső and Loewenstein (2012), who found that borrowers of delinquent interpersonal loans are more likely to forget having received the loan than lenders are likely to forget having given it, and moreover, borrowers who remember receiving the loan are more likely to believe that they repaid it. Thus, not only do individuals *not forget* about small amounts they loan others, but they also disproportionately recall these incidents and in greater detail. *Third*, people may refrain from requesting repayment because they believe that interpersonal microloans eventually balance out over time as individuals both give and take small amounts. The above pretest results rule out this alternative because if people hold biased recollections of lending and borrowing incidents (i.e., they recall more lending than borrowing incidents even when this is not the case), then they should not expect these loans to ultimately balance out. *Fourth*, lenders are driven by purely altruistic motives and expect nothing in return for their small financial help, the same way anonymous organ donors expect no return at all for their act of kindness. While this may be true for some lenders, we note that across many lending decisions in our studies, on average, lenders do not completely concede receiving a repayment as the above alternative would predict. Instead, lenders who attribute more significance to the social value of their actions (Sherry, 1983), are less likely to expect receiving equal monetary benefits, while still monitoring their partner’s level of investment in the relationship by anticipating other signals that the relationship is important to them (e.g., a counter gesture).

2.2. Exchange vs. communal mindsets

Past research indicates that people sometimes consider social interchanges as exchange or economic market transactions, and sometimes as a communal or social market transactions (Clark & Aragón, 2013; Clark & Mills, 1979; Gneezy & Rustichini, 2000; Goffman, 1961; Heyman & Ariely, 2004; Netzer, Lemaire, & Herzenstein, 2019), and that they actively monitor their gains and losses based on the mental market according to which they operate. Unlike an exchange market interactions, in which givers expect to receive something of equivalent material value in return (e.g., employer-employee or tenant-landlord relationships), in a communal market, where efforts and payments (e.g., interpersonal interaction with friends) are vaguely defined, interchanges are characterized by informal and unenforceable contracts governed by social norms (Belk & Coon, 1983; Fiske, 1992; Flynn & Adams, 2009; McGraw & Tetlock, 2005). Whether one adopts a communal or an exchange mindset may also be state dependent, where incidental cues may influence the extent to which these mindsets play a role in certain social interchanges. For example, the mere presence of money within a social situation increases the likelihood that people will adopt an exchange mindset (Ariely, Bracha, & Meier, 2009; Heyman & Ariely, 2004) and orientation toward self-sufficiency (Vohs, Mead, & Goode, 2008). In contrast, introducing relationship norms into business interactions may lead to higher brand evaluations (Aggarwal & Law, 2005; Aggarwal, 2004; Chernev & Blair, 2015), offers of better loan rates (Chemin & De Laat, 2013; Riggins & Weber, 2011), and overall better

business outcomes (Baker, Gibbons, & Murphy, 2002; Brown, Falk, & Fehr, 2004). We note that the degree to which people conform to different norms may vary, and we use the terms communal norms and exchange norms as labels for the opposite ends of this spectrum.

We propose that the degree to which interpersonal microlenders and microborrowers conform to exchange vs. communal norms influences their respective microloan repayment expectations. Particularly, repayment expectations should increase as people adopt a more exchange (vs. communal) mindset. Understanding these expectations is important because misaligned expectations around repayment of small debts may be detrimental for relationships. Evidently, almost one half of generation Z and Millennials report having felt friendship-relationship strain over money (Paypal, 2017), and 35% of Americans report that relationships with significant others have been negatively impacted by small debts that were never repaid (Paypal, 2015). Low repayment expectations may increase the probability of unpaid loans due to either microborrowers not paying back, or to microlenders not asking for repayment. Indeed, one out of four Americans repeatedly forget to repay small debts, and over half find it awkward to ask their friends or family for repayment or even avoid making requests for repayment because of the fear that such requests may harm the relationship (Paypal, 2015), suggesting there exists a large market of unpaid interpersonal microloans (despite intentions to repay).

The case of interpersonal microlenders: Communal motivation, or care for the welfare of others, is a crucial component of satisfying interpersonal relationships and personal well-being (Le, Impett, Lemay, Muise, & Tskhay, 2018). Indeed, past research has shown that people in communal relationships are more likely to track their relationship partners' needs and help them out of concern for their welfare. Additionally, they feel worse when their offer of assistance is rejected and are less likely to expect comparable favor repayment (Clark & Mills, 1979, 1993; Clark, Oullette, Powell, & Millberg, 1987; Mills & Clark, 1982, Williamson & Clark, 1989). As such, an offer of small financial assistance may generate significant social capital whose value will far exceed the negligible economic cost of the actual microloan. We therefore suggest that communal rather than economic motivations drive interpersonal microlending behavior, and as such, microlenders are likely to highlight the social rather than the financial value of their actions. For them, the offer of minor financial assistance to significant others is a social token (e.g., a friendly gesture) that represents their investment in the conceptual social-credit system rather than a merely financial transaction. Earning social credits can help individuals build and maintain satisfying relationships. Moreover, projecting their own communal motivation onto their relationship partners (the loan recipients) increases the level of satisfaction they gain from the relationship (Lemay & Clark, 2008; Lemay, Clark, & Feeney, 2007). Due to their hesitation to violate relationship norms by signaling that the social relationship is less valued than the financial exchange, microlenders should thus be less likely to request repayment. With larger loans however, the increased opportunity cost of the outstanding loan may overshadow altruistic benefits, and therefore, lenders should expect repayment and be more motivated to request repayment. Indeed, individuals rely more frequently on exchange norms as the cost of providing benefits to their relationship partner increases. As Clark and Mills (2011) illustrated, a person who acts in a communal way by giving their friend a ride may act in an exchange way in selling their car to their friend. Formally, we hypothesize that:

H1a: Compared to larger loans, repayments of interpersonal microloans are less likely to be requested.

H1b: H1a occurs partly because, compared to the lenders of larger loans who are more likely to conform to exchange norms, micro-lenders are more likely to conform to communal norms, and therefore, they avoid violating relationship norms by making repayment reminders.

The case of interpersonal microborrowers: For borrowers, accepting money from close others is less likely to signal caring for the lender, and as such, communal motivations are less likely to be involved. For example, individuals prefer borrowing riskier loans from institutions (e.g., banks) over interpersonal loans even though loans from friends or family typically have very favorable terms (Lee & Persson, 2016). Additionally, past work suggests that individuals strive to maintain a positive balance in their mental accounts and thus exhibit psychological debt aversion (Brown, Taylor, & Price, 2005; Greenberg & Hershfield, 2019; Greenberg, 1980; Prelec & Loewenstein, 1998). Therefore, when considering the loan situation outcome, borrowers are likely to be motivated by economic rules that require loans to be repaid. Therefore, we predict a discrepancy in the repayment expectations of micro-borrowers and microlenders, and refer to this discrepancy as a *repayment expectation gap*. Given the informal context of interpersonal microlending and the lack of formal repayment enforcement means, micro-borrowers may default for various reasons. For example, borrowers (vs. lenders) of delinquent interpersonal loans are more likely to believe that they repaid it (Dezsó & Loewenstein, 2012). Microlenders' reluctance to request repayment of outstanding loans contributes to the outcome that many interpersonal microloans remain unpaid. We hypothesize that:

H2a: Unlike lenders and independent of loan size, borrowers tend conform to exchange norms and to perceive loans as financial transactions, and therefore, they expect to repay them.

H2b: Microborrowers, who are motivated by exchange norms, expect to repay the loan more than microlenders expect repayment—resulting in the *repayment expectation gap*. This gap will decrease as loan amount increases and as microlender and micro-borrower mindsets converge.

3. Overview of the studies

We report six experiments conducted in both field and laboratory settings that test our hypotheses. Using real-world social interactions with close friends, Study 1 demonstrates that lenders of small (vs. large) interpersonal loans are less likely to request monetary repayment (H1a). Study 2 supports H2b by showing that microborrowers think they should pay back loans that microlenders do not expect them to repay. Study 3 replicates the previous results by manipulating, instead of measuring, the loan amount and further demonstrates that the repayment expectation gap diminishes as loan amount increases. The next three studies replicate the repayment expectation gap (H2b) and explore its underlying mechanism (H1b and H2a). Study 4 provides initial evidence for the proposed mechanism by showing the role of measured communal vs. exchange mindsets in mediating the repayment expectation gap. In Study 5, we directly manipulate participants' mindsets and demonstrate that the above gap can be remarkably reduced when borrowers' and lenders' mindsets converge. Finally, Study 6 provides further evidence for the moderating role of norm-conformity by showing that the effect is also qualified by individuals' personality traits (e.g., communal and exchange orientations). These experiments were approved by the institutional review boards (IRB Protocols #CB100220 & #0001073-2). Data and study materials are available at <https://osf.io/x2mz8>. Non-English materials and raw survey files are available on request from the corresponding author.

4. Study 1: The 92 confederates field study

We designed Study 1 to test the basic assumption that lenders of smaller (vs. larger) interpersonal loans are less likely to request repayment (or an equivalent counter gesture), potentially leaving more such loans unpaid. We tested this assumption by observing the real-world behaviors of interpersonal microlenders. The study outline, data collection, and analysis plans were pre-registered (see <https://aspred.icted.org/pu5f3.pdf>).

4.1. Method

4.1.1. Participants

We invited people to participate in a study on “social interactions among friends” by posting calls on several social network groups and university distribution lists. Candidates were invited to first attend a 20-minute “Zoom meeting” (administrated in several groups) where we explained their role in the study without revealing the study hypotheses. Since the study demanded participants to be heavily involved in the several stages of the data collection, we aimed to have as many participants as possible. Those who consented to participate in the study completed a short enrollment questionnaire (questionnaire 1). A total of 142 individuals enrolled, of whom 92 ($M_{age} = 26$, 67.4% women) completed all parts of the study, as explained below.

4.1.2. Materials and procedure

The study consisted of three main parts and lasted five weeks. Participants were offered NIS 40 (~\$12) for completing all parts of the study as well as a 10% chance to win an additional bonus of NIS 150 (~\$44) via a lottery. Participants were in fact confederates who were asked to borrow money from their friends under natural circumstances. Our main interest was the likelihood of their friends requesting repayment. Each participant was given up to two weeks to borrow money from two friends, a small amount from one friend and a larger amount from another. Although we defined a small amount to be in the range of NIS 10–20 (~\$3–\$6) and a large amount to be about NIS 80–NIS 100 (~\$23–\$29), we told participants that they were free to borrow other amounts as the social situation allowed (for example, they could ask their friend for money to buy a treat or cigarettes, or to pay for their coffee, bartender tip, movie ticket, or restaurant meal). Participants were asked not to pay back the money voluntarily until the study ended, unless their friend requested the money, in which case they were free to return it. All the study data were collected via online questionnaires that were sent as links to participants. In the first part of the study, participants received a link to an online questionnaire on which they indicated the names, genders, and ages of the two friends from whom they were planning to borrow money (Questionnaire 1). This was done to increase participants’ commitment to the tasks. In the second part of the study, participants who completed the first part were sent two additional survey links to be completed immediately after they borrowed the money from each friend (Questionnaires 2 and 3). They were given up to two weeks to complete this part of the study. In each questionnaire, participants provided information about the borrowing situation, including date, amount, a short description of the situation, as well as information about the friend they borrowed money from (name, gender, and age) and whether it was the same friend they indicated on Questionnaire 1. Participants also rated the extent to which they feel (psychologically) close to that friend, using a scale adopted from Gächter, Starmer, and Tufano (2015), that showed pairs of circles, with the words “You” and “X,” Ratings ranged from 1 (no overlap) to 7 (almost complete overlap).¹ In the third part of the study, we contacted each participant exactly three weeks after each borrowing situation and asked them to complete an additional questionnaire for each situation (Questionnaires 4 & 5). On this questionnaire, after providing information about the friend they borrowed money from again (used as a validation check), we asked participants to indicate whether that friend asked for their money back (yes or no). Importantly, we also noted that participants should not only indicate direct requests but also any mention of the money, such as “When do you think you will pay back?” “Do you remember the money I gave you?” or mention of the borrowing situation or any comment about it. We considered these situations to indicate a payback request because we believe that this is a stricter test of our hypothesis as we assumed that

people are less likely to directly request repayment when the borrowed amount is significantly small. Besides the main DV, participants provided additional information about the request, including a description of the request situation, the request date, whether the money was requested more than once, how they repaid the money (e.g., cash, mobile app), and to what extent they were surprised by the request, on a scale from 1 (*not at all surprised*) to 7 (*extremely surprised*).

4.2. Results

Participants in Study 1 reported 179 episodes of borrowing money from a friend,² 49 of which also involved a repayment request. We excluded from the analysis 15 episodes, either because a repayment request was not expected within the study timeframe (e.g., “I told my roommate to pay my rent this month and I will pay his rent the next month”), or participants were not consistent with the borrowing episodes they described in parts 2 and 3, or participants claimed they could not recall the name of the friend from whom they borrowed money. In some cases, upon the completion of the study and before excluding observations, we contacted the participant in question to reconcile information discrepancies, or to assess whether the participant provided authentic information. Valid situations included descriptions such as: “We parked together in the parking lot and it cost 20 shekels, I asked her to pay my share too, and I [said that I] would pay her back,” “We stopped to fill out a lottery and there was a problem with the magnetic stripe on my card, so I asked Naomi for a loan of the price of the lottery card I filled out,” and “We wanted to order pillow covers from AliExpress; I asked if she could order for both of us and I would pay her back.” Our final sample consists of 163 observations involving 91 participants. The study conclusions remain the same when only one outlier was excluded from the data (see Appendix B).

The average borrowed amount was NIS 59.2 (~\$17.4) ($SD = 57.9$) ranging between NIS 4 and 483 (~\$1.2–\$142). We ran a mixed-effect logistic model with borrowed amount entered as a predictor of lender’s repayment request. The model also included participant random effects to account for non-independence among individuals. As predicted in H1a, borrowed amount was positively associated with the likelihood of a repayment request ($B = 0.01$, $z = 2.31$, $p = .021$). The results remain virtually the same when the above model also controls for participants’ (self-rated) closeness to the lender, participants’ age, their gender, their friend’s gender, and the interaction between the two genders ($B = 0.01$, $z = 2.38$, $p = .017$).³ Interestingly, there was also a negative gender effect ($B = -1.79$, $z = 2.49$, $p = .013$) and a marginally insignificant positive interaction ($B = 1.95$, $z = 1.72$, $p = .085$), suggesting that males are more likely to request repayment from male (vs. female) friends, and females are more likely to request repayment from female friends, than from male friends. The full regression results are reported in Appendix B. Of all repayment requests, only three episodes involved more than one repayment request, and all three cases involved a relatively high amount (NIS 483, NIS 126, and NIS 92). Among 42 participants who paid the money back to their friends, 43% repaid in cash, 36% transferred money via mobile apps, 5% used a wire transfer,

² Eighty-seven participants reported two borrowing episodes and five participants reported only a single episode.

³ Our conclusion remains unchanged when we follow the preregistered analysis by comparing the rates of repayment request between small (14 out of 83) and large (29 out of 80) loans, $\chi^2[1] = 7.88$, $p < .01$. We note that here the participants themselves categorized their loans as small or large. However, this analysis is less informative because participants perceived small and large amounts differently (e.g., while one participant reported a small loan of NIS 60, many participants considered similar amounts to be large loans). Given that we are interested in the lender’s behavior following the loaning situation, the actual loan amount is more relevant in predicting lenders’ behavior than whether the borrower perceived this amount as small or large. See Appendix B for a complete discussion about deviations from the preregistered procedure.

¹ The original version of the scale was first published by Aron, Aron, and Smollan (1992) to measure interpersonal closeness.

and the rest reported other methods (e.g., “I paid for her on another occasion”). Finally, borrowed amount did not predict the extent to which participants were surprised by a repayment request ($p = .47$).

5. Study 2: The repayment expectation gap

The results of Study 1 confirm H1a using data from real monetary transactions between close friends. In Study 2 we turn to the lab to test whether lenders and borrowers differ in the way they expect small-loan transactions between friends to be completed (H2b). If lenders and borrowers do not differ in their repayment expectations, then the minimum loan amount that they expect to be repaid should be similar. However, an observation that lenders’ threshold for repayment represents a larger loan amount, compared to the threshold of borrowers, will provide support for the repayment expectation gap hypothesis.

5.1. Method

5.1.1. Participants

We recruited 361 online participants (43.6% females; $M_{age} = 31.44$, $SD = 11.19$) from Prolific Academic to complete a short survey about decision making for pay.

5.1.2. Design and Procedure

Participants were randomly assigned to one of three experimental conditions. In the *borrower* and *lender* conditions, participants read the following scenarios: “Imagine you are going to lunch with a friend at a restaurant and you [your friend] suddenly realize that you [they] forgot your [their] wallet at home. Your friend [You] kindly offers to pay for the meal and picks up the check for both for you.” In the third *observer* (control) condition, participants read the following: “Imagine two friends are going to lunch at a restaurant and one friend suddenly realizes they forgot their wallet at home. The other friend kindly offers to pay for the meal and picks up the check for both of them.” Therefore, Study 2 employed three between-subjects conditions (*borrower* vs. *lender* vs. *observer*).

Next, all participants completed three items on the minimum loan amount in respect of which repayment is expected. Those in the borrower condition indicated the smallest amount of money that they felt they *must pay* the money back to their friend (i.e., injunctive norm), the smallest amount of money they would be *certain to pay back* their friend, and the smallest amount of money they thought that it would be okay for the friend to *ask them to pay back* the money. Those in the lender and observer conditions completed the same items with wording adjusted to each condition (see Appendix C). In all items, participants indicated the amounts using a sliding scale from \$0 to \$100. Finally, participants completed basic demographic questions.

5.2. Results

Must pay back: The smallest loan amount that participants felt borrowers must repay differed across conditions ($F(2, 358) = 4.99$, $p < .01$, $\eta_p^2 = 0.027$). Importantly, a follow-up Tukey’s HSD post-hoc paired comparison showed that borrowers indicated a smaller amount than lenders ($M_{borrow} = 17.20$, $SE = 1.95$, $M_{lend} = 26.60$, $SE = 2.30$, $p < .01$). Also, observers indicated an intermediate amount ($M_{observe} = 20.71$, $SE = 2.12$), which did not differ significantly from that of either borrowers or lenders.

Certainly will repay: Similarly, participants in all conditions indicated marginally different smallest loan amounts that they were *certain* borrowers would repay ($F(2, 358) = 2.79$, $p = .062$, $\eta_p^2 = 0.015$). Borrowers indicated a marginally smaller amount compared to the amount indicated by lenders ($M_{borrow} = 19.62$, $SE = 2.15$, $M_{lend} = 26.93$, $SE = 2.43$, $p = .055$). As before, observers indicated an intermediate amount ($M_{observe} = 22.02$, $SE = 2.10$), which did not differ significantly from that of either borrowers or lenders.

Ask for repayment: Finally, the smallest loan amount that participants thought *would be OK* for the lender to request repayment also differed across conditions ($F(2, 358) = 5.09$, $p < .01$, $\eta_p^2 = 0.023$). Similar to the other measures, borrowers indicated a smaller amount compared to the amount indicated by lenders ($M_{borrow} = 14.69$, $SE = 1.87$, $M_{lend} = 23.37$, $SE = 2.14$), and observers indicated an intermediate amount ($M_{observe} = 17.62$, $SE = 1.85$), which did not differ significantly from that of either borrowers or lenders.⁴

5.3. Discussion

Study 2 provided initial evidence of the repayment expectation gap, according to which borrowers and lenders of small loans do not share the same repayment concerns when the exchange occurs between friends. Whereas borrowers feel they should return even very small amounts, especially if the lender requests repayment, lenders do not think that such small amounts must be repaid, nor would they request their repayment. This result cannot be explained by participants’ presumption that the lender was more wealthy and would therefore pay for the participants’ meal. Note that the design of Study 2 also measured the repayment expectations of a neutral observer. The results of this condition suggest that both lenders and borrowers deviate from a neutral perspective, albeit in opposite directions.

6. Study 3: Who drives the repayment expectation gap?

Study 3 is designed to show that the repayment expectation gap between borrowers and lenders is particularly applicable to smaller loans, where the cost of giving a small loan is insignificant relative to the potential social capital gained by signaling one’s willingness to extend assistance to a friend. However, when the cost of such a social token increases (e.g., a larger loan), lenders should be likely to rely more heavily on the economic value of the transaction, and consequently decrease the threshold amount of their loan-repayment expectation. Borrowers, on the other hand, are less likely to gain social value from receiving financial assistance, and therefore the loan amount should have a smaller effect on their loan-repayment expectation (H2a). We thus predict that as the loan amount increases, the expectation gap between borrowers and lenders will attenuate (H2b). Put differently, the gap is largely driven by changes in the lender’s perception of the loan situation, rather than by changes in the borrower’s perceptions. To test the above predictions, Study 3 employed a restaurant scenario similar to that of Study 2, but experimentally manipulated the loan amount. Finally, because repayment depends on the borrower’s behavior, lenders have some uncertainty regarding whether the loan will eventually be repaid, which might also explain the repayment expectation gap. To explore this alternative, we also requested participants to complete items about the expected behavior of other people in the same situation.

6.1. Method

6.1.1. Participants

Five hundred online participants (68.8% females⁵, $M_{age} = 35.53$, $SD = 11.55$) from Prolific Academic completed a five-minute survey for pay.

6.1.2. Design and Procedure

Participants in Study 3 were randomly assigned to borrower or lender conditions and read the same lunch-with-a-friend scenarios as

⁴ The results of all analyses remain virtually the same when controlling for age, gender, and income level. For example, p -values of post-hoc paired comparisons between lenders and borrowers are 0.007, 0.052, and 0.005, for the three expectation measures, respectively.

⁵ Two participants did not indicate their gender.

before. However, in this study, we manipulated the cost of the meal, which randomly varied across participants at values of \$10, \$20, \$50, or \$100. We used four items to measure loan-repayment expectations. Participants in the borrower conditions used a 7-point scale from 1 (*definitely not*) to 7 (*definitely yes*) to indicate the extent to which they (1) felt they should pay back the money, (2) thought their friend asking them to pay back the money was okay, (3) would pay back the money, and (4) thought most other people would pay back the money in the same situation. In the lender conditions, participants used the same scale to indicate the extent to which they (1) felt their friend should pay back the money, (2) thought asking their friend to pay back the money was okay, (3) thought their friend would pay back the money, and (4) thought most other people in the same situation would pay back the money (the same questions were applied in both borrower and lender conditions). Next, participants in all conditions rated perceived closeness to their friend using the same procedure from Study 1. Participants also completed the Tightwad-Spendthrift Scale (Scott, Cryder, & Loewenstein, 2008), which measures the extent to which people find the prospect of spending money painful. Finally, participants reported demographics as before.

6.2. Results

Across all loan amounts, borrowers felt they should pay back the money more than lenders felt they should be paid back ($M_{\text{borrow}} = 6.80$, $SE_{\text{borrow}} = 0.04$, $M_{\text{lender}} = 5.39$, $SE_{\text{lender}} = 0.11$, $t[498] = 12.47$, $p < .001$); borrowers believed that their friend asking them to pay back the money would be okay more than lenders believed they should ask their friend to pay them back ($M_{\text{borrow}} = 6.56$, $SE_{\text{borrow}} = 0.06$, $M_{\text{lender}} = 5.39$, $SE_{\text{lender}} = 0.10$, $t[498] = 9.54$, $p < .001$); borrowers thought they were more likely to pay back the money than lenders believed they would eventually be paid back ($M_{\text{borrow}} = 6.84$, $SE_{\text{borrow}} = 0.03$, $M_{\text{lender}} = 5.79$, $SE_{\text{lender}} = 0.07$, $t[498] = 13.06$, $p < .001$); Finally, borrowers, more than lenders, thought that other people would pay back the money in the same situation ($M_{\text{borrow}} = 5.50$, $SE_{\text{borrow}} = 0.07$, $M_{\text{lender}} = 4.89$, $SE_{\text{lender}} = 0.09$, $t[498] = 5.50$, $p < .001$). We obtained the same pattern of results when we analyzed each loan amount separately (See Table 1).

Considering responses for the first three items measuring own expectations were consistent ($\alpha = 0.77$), we averaged them to create an (own) expectation score. The fourth item is presented separately because it measured expectations of most people's behavior in the same situation (i.e., descriptive norm), which may not directly represent respondents' expectations of their own behavior as borrowers or lenders.⁶ To test our hypothesis that loan amount influences the repayment expectation gap between borrowers and lenders such that the gap decreases for larger loans amounts, we ran a two-way ANOVA with expectation score entered as the dependent variable, and condition, loan amount, and their interaction as independent variables. The model also controlled for the closeness rating, and participants' Tightwad-Spendthrift score, gender, and age. As expected, the results revealed a significant main effect of condition, such that lenders held lower repayment expectations compared to borrowers ($F(1, 490) = 221.04$, $p < .001$, $\eta_p^2 = 0.30$). Loan amount also affected expectation scores such that participants reported higher scores for larger loan amounts ($F(1, 490) = 11.01$, $p < .001$, $\eta_p^2 = 0.02$). Importantly, we found a marginally

⁶ In fact, a principal component analysis with varimax rotation revealed three main components, with the first two items loading highest on a single component and the last two items each loading highest on a separate component. However, when analyzing all three self-perception items together, the internal validity remains fairly high compared to using only the first two items ($\alpha = 0.77$ versus 0.79), and the results are virtually the same (i.e., significant main effects and a significant interaction). Therefore, for the sake of brevity, we only present the results of the analysis using all three self-perception items together.

significant interaction between loan amount and role (lender vs. borrower) ($F(1, 490) = 3.64$, $p = .057$, $\eta_p^2 = 0.01$), suggesting that the effect of loan amount on expectation was significantly stronger for lenders than for borrowers. This interaction becomes significant when also controlling for the closeness rating, participants' Tightwad-Spendthrift score, gender, and age ($p = .039$). In other words, as loan amount increases, lenders' loan-repayment expectations increase much faster than borrowers' loan-repayment expectations, meaning the expectation gap between borrowers and lenders diminishes with loan amount. Finally, in the above model, closer friendships increased repayment expectations ($F(1, 490) = 4.82$, $p = .03$, $\eta_p^2 = 0.01$), and older participants also reported higher repayment expectation scores ($F(1, 490) = 11.21$, $p < .001$, $\eta_p^2 = 0.02$). Interestingly, we observed a similar pattern of results when we entered the expected behavior of most people as the dependent variable in the above model. Participants in the role of borrower were more likely than participants in the role of lender to think that most other people would pay back the money, ($F(1, 490) = 30.36$, $p < .001$, $\eta_p^2 = 0.30$). Once again, this gap in expectations interacted with loan amount; borrowers' and lenders' expectations that others would repay the loan were attenuated for larger loan amounts ($F(1, 490) = 3.74$, $p = .05$, $\eta_p^2 = 0.01$). Here, the main effect of loan amount was directional but insignificant ($F(1, 490) = 1.01$, $p = .31$, $\eta_p^2 = 0.02$).

6.3. Discussion

Study 3 results show that the repayment expectation gap between borrowers and lenders found in Study 2 is larger when loan amounts are smaller. As Fig. 1 shows, the gap stems mostly from a decline in lenders' repayment expectations with respect to smaller loan amounts, whereas borrowers' ratings remain relatively constant across loan amounts. This finding suggests the effect is mainly driven by lenders' lower repayment expectations for smaller loans, presumably because small unpaid loans constitute a social token at a minimal cost. That is, for lenders, lending small amounts is regarded as "a favor among friends" and is consistent with a "social mindset," as opposed to larger loan amounts that are costlier to waive and thus crowd out social gains and emphasize economics concerns. Borrowers seem to be less attentive to the loan amount and conform to economic norms where loans should always be repaid. In the next three studies, we test this proposed mechanism more directly.

7. Study 4: The role of mindset: Communal vs. exchange orientation

Study 4 was designed to explore our theorizing according to which the previously observed gap in loan-repayment expectations is the result of the distinct mindsets of borrowers and lenders of small, but not large loans. Specifically, we suggest that contrary to lenders of large loans who expect a repayment, lenders of small loans are more likely to perceive their action as a social transaction whose social value exceeds the credit risk involved (H1b), whereas borrowers are more likely to perceive even the smallest loan as an economic exchange (H2a), similarly to their perceptions of loans of larger amounts. Therefore, we expect people's conformity to communal (vs. exchange) rules to mediate the effect of role (borrower vs. lender) on repayment expectations.

7.1. Method

7.1.1. Participants

We invited 800 subjects from Prolific Academic to participate in a "short decision-making study" for pay (61.5% females, $M_{\text{age}} = 33.33$, $SD = 13.71$).

7.1.2. Design and procedure

Participants were randomly assigned to one of four loan conditions. Participants in the borrower conditions imagined they borrowed money

Table 1
Means (SEs) and effect sizes for the differences between borrower and lender conditions, by loan amount.

Amount	Condition	N	Should Pay back	OK to ask	Would pay back	Others pay back	Overall
\$10.00	borrow	59	6.78 (0.08)	6.49 (0.11)	6.96 (0.05)	5.44 (0.93)	6.39 (0.21)
	lend	66	5.18 (0.22)	5.24 (0.19)	6.02 (0.15)	5.22 (1.45)	5.38 (0.19)
	Cohen's d		1.15	0.96	1.11	0.16	1.22
\$20.00	borrow	61	6.79 (0.06)	6.41 (0.14)	6.79 (0.07)	5.29 (1.19)	6.32 (0.14)
	lend	68	5.09 (0.21)	5.12 (0.20)	5.59 (0.15)	4.61 (1.23)	5.11 (0.18)
	Cohen's d		1.31	0.91	1.25	0.56	1.43
\$50.00	borrow	63	6.84 (0.10)	6.56 (0.14)	6.84 (0.10)	5.51 (1.17)	6.43 (0.14)
	lend	59	5.42 (0.21)	5.42 (0.19)	5.86 (0.14)	4.92 (1.3)	5.39 (0.18)
	Cohen's d		1.13	0.88	1.02	0.49	1.11
\$100.00	borrow	61	6.80 (0.08)	6.79 (0.09)	6.86 (0.37)	5.8 (0.05)	6.57 (0.11)
	lend	63	5.90 (0.19)	5.84 (0.78)	5.85 (1.11)	4.88 (0.14)	5.62 (0.18)
	Cohen's d		0.77	0.85	1.21	0.77	1.21

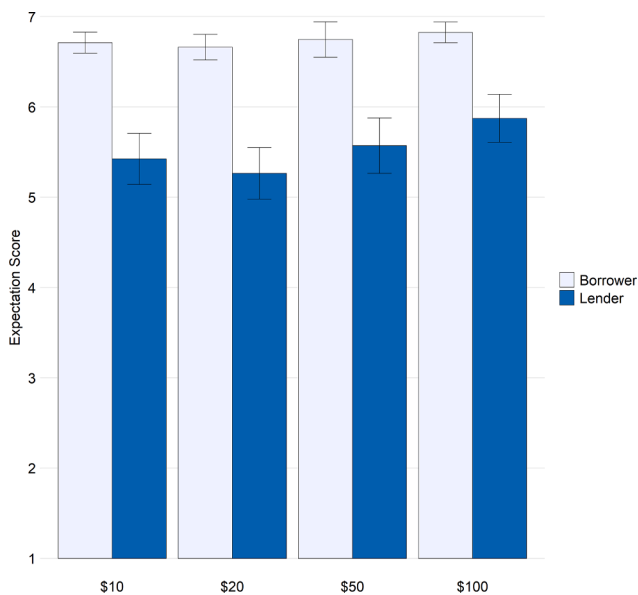


Fig. 1. Study 3: Expectation score of borrowers and lenders by loan amount.

from a friend, whereas those in the lender conditions imagined they lent money to a friend. To test whether lenders' repayment expectations and mindset aligned with those of borrowers when the loan was sufficiently large, we manipulated the size of the loan such that half of the participants borrowed/loaned £10 (small loan), and the other half borrowed/loaned £1,500 (large loan). Therefore, the design of Study 4 employed a 2(role: borrower vs. lender) × 2(amount: small vs. large) between-subjects factorial design. To avoid potential inferences about the effort required to loan the large amount (i.e., withdraw the money from an ATM), all conditions indicated that the money was "transferred via a mobile transfer app." After imagining the situation, all participants reported the extent to which they would expect to pay the money back to their friend (their friend to pay back the money) using the same 7-point scale as before. To measure mindsets, participants used an analog scale to report the extent to which they considered the previous situation with their friend "a loan or a friendly gesture," on a scale from 0 (*loan*) to 10 (*friendly gesture*). Therefore, larger numbers indicated a stronger communal mindset and weaker exchange mindset. We also measured relationship closeness using the same procedure as before. To verify our loan-amount manipulation, participants reported how small/large they thought the amount of money was, on a 7-point scale from 1 (*extremely small*) to 7 (*extremely large*). The study concluded with basic demographic items. We pre-registered the study design, hypotheses, and analyses (<https://aspredicted.org/8dq8t.pdf>).

7.2. Results

We excluded from the analyses nine participants who did not pass an attention check question or reported that English was not their first language, leaving a final sample of 791.⁷

7.2.1. Manipulation check

As expected, participants in the £1,500 loan condition ($M = 5.98$, $SE = 0.05$) perceived the amount of money to be significantly larger than did participants in the £10 loan condition ($M = 2.50$, $SE = 0.06$), $t(789) = 47.16$, $p < .001$, $d = 3.35$.

7.2.2. Expectation gap

A two-way ANOVA with role (borrower vs. lender) and loan amount (£10 vs. £1,500) entered as factors, and loan-repayment expectation as the dependent variable revealed significant main effects. On average, borrowers ($M = 6.88$, $SE = 0.02$) expected to return the loan more than lenders expected to receive repayment ($M = 6.29$, $SE = 0.06$) ($F(2, 787) = 97.96$, $p < .001$, $\eta^2_p = .11$), replicating the previous results. As expected, participants who borrowed/loaned £1,500 ($M = 6.80$, $SE = 0.06$) ($F(2, 787) = 47.48$, $p < .001$, $\eta^2_p = .06$). Importantly, we found a significant interaction ($F(2, 787) = 38.15$, $p < .001$, $\eta^2_p = .05$), suggesting that the repayment expectation gap between borrowers and lenders is negatively correlated with loan amount, such that borrowers' and lenders' repayment expectations become more closely aligned as the loan amount increases. As Fig. 2 Panel A demonstrates, the effect of loan amount on repayment expectation is mainly a result of changes in lenders' expectations, as borrowers expect to repay money they borrowed from friends regardless of whether the amount is £10 or £1,500 ($t(397) = -1.20$, $p = .23$), whereas lenders showed significantly decreased repayment expectations for £10, compared to £1,500 ($t(390) = -6.87$, $p < .001$). These results support our hypothesis that the expectation gap between borrowers and lenders is most likely to occur when small rather than large loans are given. The results remained virtually the same when we ran the model with relationship closeness, age, gender, and income as control variables (see Appendix D for robustness check results).

7.2.3. Mechanism

Simple effect analyses of mindset suggest that communal mindset level is negatively correlated with expectations in small, but not in large loans (Fig. 2 Panel B). When the borrowed amount was small (£10), lenders ($M = 5.30$, $SE = 0.24$) perceived the interaction with their friend as significantly more communal than did borrowers ($M = 3.89$, $SE = 0.25$; $t(393) = 4.06$, $p < .001$). However, when the borrowed amount was fairly large (£1,500), the mindset difference between lenders and

⁷ The study's conclusions remain the same when including all participants.

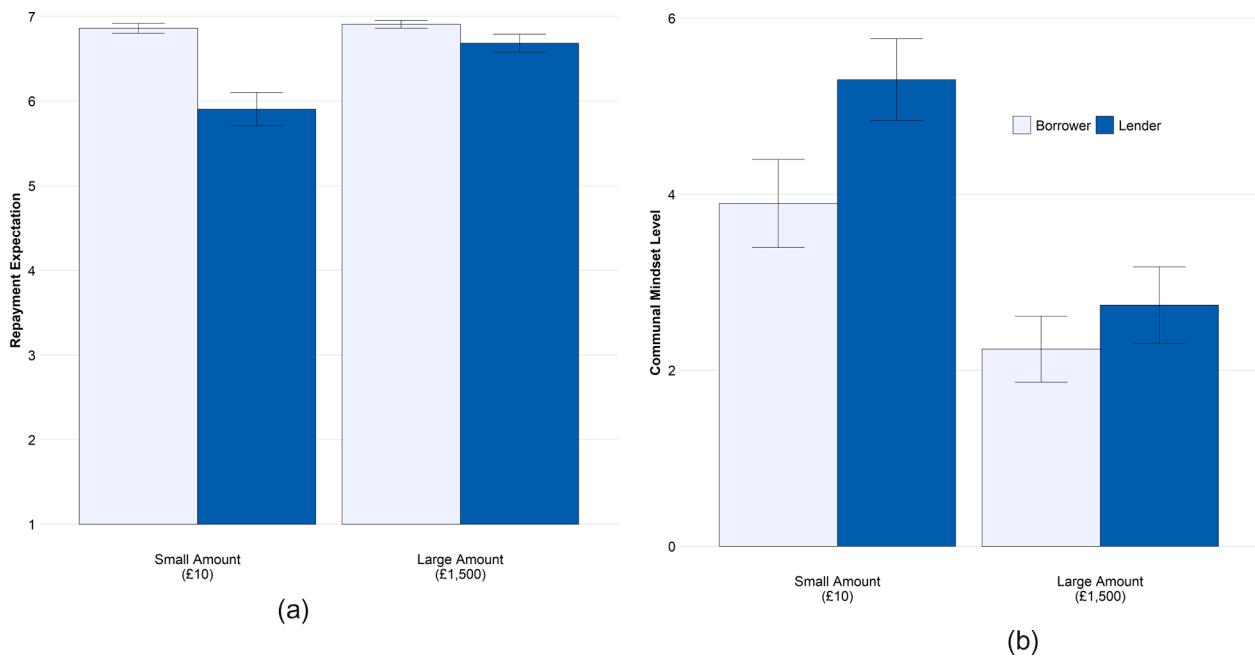


Fig. 2. Study 4 Repayment Expectation and Mindset Measures Results.

borrowers was marginally insignificant as participants in both roles perceived the situation as less of a social interaction and more of an economic exchange ($M_{Lend} = 2.74, SE = 0.22, M_{Borrow} = 2.24, SE = 0.19; t(394) = 1.72, p = .086$). Next, we ran a two-way ANOVA with role (borrower vs. lender), loan amount (£10 vs. £1,500), and their interaction entered as factors, and mindset as the dependent variable. As expected, we found a significant main effect of loan amount, such that participants considered situations involving larger loans to be less of a social interaction and more of an economic exchange ($F(2, 787) = 86.58, p < .001, \eta^2_p = .01$). Importantly, the model also revealed a significant main effect of role: On average, participants in the role of lender perceived the loan situation as *more* social compared to perceptions of participants in the role of borrower ($F(2, 787) = 17.86, p < .001, \eta^2_p = .02$). Finally, the interaction effect was also significant ($F(2, 787) = 4.02, p = .045, \eta^2_p = .01$) suggesting that the mindset difference between lenders and borrowers is more likely in small but not large transaction amounts.

7.2.4. Mediation analysis

To further assess the mechanism, we ran several mediation models. First, we ran a standard mediation model using bootstrapping with bias-corrected confidence estimates and 5,000 resamples (PROCESS Macro for SPSS, Model 4, Hayes, 2018). Role was entered as the independent variable, mindset as the mediator, and loan-repayment expectation as the dependent variable. As expected, this model revealed a significant indirect effect of mindset, $\beta = -0.08, 95\% \text{ CI} [-0.12, -0.03]$. To test whether the above mediation occurs in small loans, but not in large loans in which lenders' and borrowers' mindset are aligned, we ran a moderated mediation model using bootstrapping with bias-corrected confidence estimates and 5,000 resamples (PROCESS Macro for SPSS, Model 7, Hayes, 2015). We entered role (lender vs. borrower) as the independent variable, social-mindset level as the mediator, loan amount manipulation condition (small vs. large) as a moderator of the relation between role and social mindset, and loan-repayment expectation as the dependent variable. As expected, the model revealed a significant indirect effect of social mindset in the small loan condition, ($\beta = -0.11, 95\% \text{ CI} [-0.18, -0.05]$), but this effect disappeared in the large loan condition (95% CI contained zero). That is, when the loan amount was relatively large (vs. small), mindset could no longer explain the

expectation gap (if any) between lenders and borrowers. Finally, the confidence interval of the moderated mediation index (Hayes, 2015) confirmed that our manipulation significantly moderated the indirect effect of social mindset on expectation, $index = 0.07, 95\% \text{ CI} [0.004, 0.16]$.

7.3. Discussion

Study 4 provides a conceptual replication of the previous results showing that the repayment expectation gap is more salient in small than in large loans. Importantly, Study 4 also provides initial support for the argument that the expectation gap is driven, at least in part, by different mindsets. Lenders are more likely than borrowers to interpret the situation as a social affair (i.e., "friendly gesture"), one that earns them "social credit" in their relationships with friends. Borrowers, on the other hand, are more concerned with the monetary values inherent in the situation, and therefore are more likely to operate in an exchange mindset.

8. Study 5: Moderating the repayment expectation gap

As mentioned earlier, individuals may maintain both communal and exchange relationships with the same person in different situations. In that respect, we expect the repayment expectation gap observed in small intrapersonal loans to be mitigated when lenders and borrowers conform to similar norms. As Study 4 demonstrated, the expectation gap diminishes as lenders and borrowers' mindsets become more closely aligned. In Study 5, we explore a boundary condition for the observed effect by manipulating norm-conformity (i.e., mindset) while holding loaned amount constant. Specifically, we manipulate the income-class difference between lenders and borrowers and expect those who borrow from a wealthier friend to lower repayment expectation because small amounts should be less important for their wealthy (vs. not wealthy) lender. This prediction is also in line with past literature showing that feeling of indebtedness increases in larger debts (Greenberg, 1980). Similarly, we expect those who loan money to a wealthier friend to increase repayment expectation because for the wealthy borrower, there is virtually no cost to returning the money. We thus anticipate the income-class manipulation to mitigate the repayment

expectation gap because when engaging in a loaning situation with wealthier friends, exchange norms become less salient for otherwise exchange-oriented borrowers and more salient for otherwise communal-oriented lenders. In addition to demonstrating a condition in which the repayment expectation gap is less likely to occur, Study 5 demonstrates the important role that mindset and norm-conformity play in generating the gap.

8.1. Method

8.1.1. Participants

Eight hundred and two (802) MTurk workers participated in a study named "Short Decision-Making Study" (48.1% females, $M_{age} = 40.41$, $SD = 12.34$).

8.1.2. Design and procedure

The design of Study 5 followed that of the previous study where participants imagined they either borrowed or loaned money from/to a friend. In this study, we held the loaned amount constant at \$5 across conditions. In addition to the standard role manipulation (borrower vs. lender), we manipulated the income-class difference between lenders and borrowers by asking half of the participants to assume that they loaned or borrowed to/from a very wealthy friend. Particularly, those in the wealthy friend treatment condition read: "Assume that you have a very wealthy friend. Your friend owns several homes, travels extensively, and drives luxury cars." As in the previous studies, the other half did not receive any information on their friend's wealth. Provided that on average MTurk participants' income is relatively low, we expected this manipulation to make exchange norms less salient for borrowers and more salient for lenders. After reading the loaning scenario, all participants indicated the extent to which they expected a repayment as before.

How did we assess the effectiveness of the mindset manipulation? Past research has shown that compared to a communal-based interchange, in an exchange-based interchange a return of an equally valued benefit is not only highly anticipated, but such an interchange is associated with willingness (or expectation of others) to incur a higher cost in reciprocating a benefit (Miller et al., 2014; Miller, Akiyama, & Kapadia, 2017). Additionally, exchange norms are more sensitive to the reciprocating timeframe as they are characterized by expectations of return sooner after receipt of benefits (Clark, 1984). As such, a longer delay in reciprocation is associated with feelings of more personal discomfort or unease (Miller et al., 2014). Based on the above findings and following the expectation measure, we used two items to assess the mindset manipulation effectiveness. In one item, participants reported how much discomfort or unease they would feel if they had not yet paid (received) back the money after three months, on a scale from 1 (*no discomfort or unease*) to 5 (*considerable discomfort or unease*), adjusted from Miller et al. (2014). We anticipated that those in the wealthy friend conditions (less exchange oriented) would feel less unease or discomfort with a delayed repayment than those in the control. In a second item, we asked participants in the borrower conditions to assume that they needed to drive 10 miles to repay the money on the same day, 9 miles to repay on the next day, and so on, such that every additional day they delayed repayment required them to drive one mile less than the previous day. We also noted that they would only need to drive one mile if they repaid after 9 days, or avoid driving altogether if they delayed the payment by 10 days or more. We adjusted the language for lenders (e.g., "your friend needs to drive..."; see Appendix E). Participants then indicated how many miles they would be willing (expect their friend) to drive to repay their friend (them). Note that this item simultaneously captures participants' accepted repayment delay and willingness (expectation of others) to incur a cost to make a timelier repayment. We

anticipated those in the wealthy friend conditions who were less exchange oriented, to be willing to accept a longer, and less costly delay. The study design, data collection, and analysis plans were pre-registered (<https://aspredicted.org/rx3cf.pdf>).⁸

8.2. Results

We excluded from the analyses 47 participants who did not pass an attention check question or reported that English was not their first language, leaving a final sample of 755 participants.⁹

8.2.1. Manipulation check

We ran a two-way ANOVA with feelings of discomfort or unease entered as the dependent variable, and role (borrower vs. lender) and mindset (control vs. wealthy friend) as factors. Confirming our mindset difference hypothesis, borrowers anticipated significantly more feelings of discomfort or unease if repayment would have been delayed than lenders ($F(1, 751) = 281.08$, $p < .001$, $\eta^2_p = .27$). Importantly, a significant interaction ($F(1, 751) = 27.97$, $p < .001$, $\eta^2_p = .04$) suggests that our manipulation was successful at reducing the above difference, presumably making lenders' and borrowers' mindsets more closely aligned. A similar analysis with the measure of driving distance needed to make earlier repayment as the dependent variable, instead of anticipated feelings, led to the same conclusion. Consistent with the mindset difference hypothesis, borrowers were willing to exert significantly more effort to make an earlier repayment than lenders expected them to exert ($F(1, 751) = 133.33$, $p < .001$, $\eta^2_p = .15$). That is, on average, borrowers were willing to drive 5.75 miles ($SE = 0.22$) to repay the money sooner while lenders only expected them to drive 2.47 miles ($SE = 0.18$), a distance that was also associated with a longer repayment delay, $t(751) = 11.52$, $p < .01$. Critically, a significant interaction ($F(1, 751) = 7.04$, $p < .01$, $\eta^2_p = .01$) revealed that the above difference between lenders and borrowers was moderated by the mindset manipulation, confirming that the manipulation worked as intended.

8.2.2. Moderating the expectation gap

We ran a two-way ANOVA with role (borrower vs. lender) and mindset (control vs. wealthy friend) entered as factors, and repayment expectation as the dependent variable. As before, borrowers ($M = 6.29$, $SE = 0.08$) expected to repay the loan significantly more than lenders expected to receive repayment ($M = 5.02$, $SE = 0.10$) ($F(1, 751) = 102.43$, $p < .001$, $\eta^2_p = .12$). On average, expectations did not differ between those in the control and those in the mindset manipulation conditions ($p = .44$). Importantly, however, the model revealed a significant interaction between the two manipulated factors, ($F(1, 751) = 59.08$, $p < .001$, $\eta^2_p = .07$), suggesting the exchange mindset manipulation significantly decreased the expectation gap. As Fig. 3 shows, while the repayment expectation gap was fairly large and significant in the control conditions ($M_{lender} = 4.48$, $SE_{lender} = 0.15$, $M_{borrower} = 6.73$, $SE_{borrower} = 0.06$, $t(367) = 14.20$, $p < .001$, $d = 1.48$), the effect became marginally insignificant when participants' mindset changed as a result of the wealthy friend manipulation ($p = .09$).

8.3. Discussion

The results of Study 5 demonstrate a boundary condition for the expectation gap between borrowers and lenders and offer support for the argument that the gap is at least in part qualified by the extent to which individuals conform to exchange and communal norms. The results also demonstrate the dynamics of norm conformity by showing that such

⁸ Planned closeness and income questions were absent from the questionnaire due to a survey misconfiguration.

⁹ The results remained virtually the same when we included all participants in the analysis.

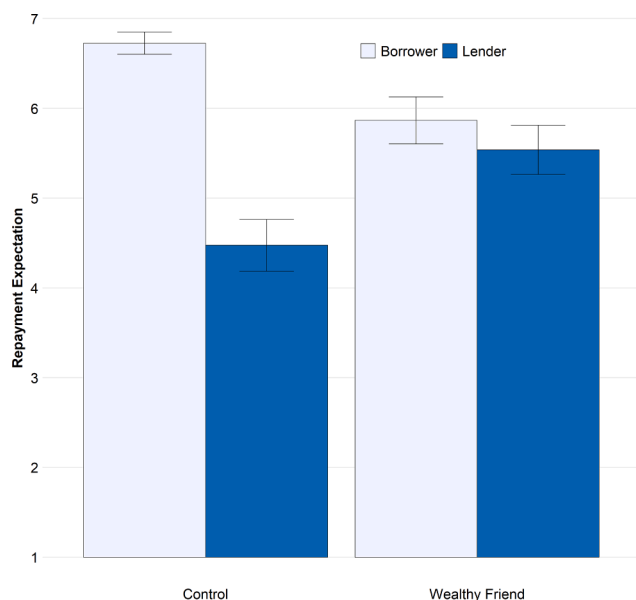


Fig. 3. Study 5 Mindset Manipulation as a Moderator of the Repayment Expectation Gap.

conformity can be state dependent. However, people also have dispositional tendencies to follow certain social rules. Thus, in the next study we explore the extent to which such personality traits influence the observed effect.

9. Study 6: Personality traits – Interpersonal relationship orientation

While the degree to which people conform to communal or exchange relationships norms may be state dependent, as Study 5 shows, past work has shown that individuals may also respond to communal and exchange norms that are embedded in their personality, and act on them in their relationships with others (Clark et al., 1987; Clark, Mills, & Corcoran, 1989; Mills & Clark, 1994; Mills, Clark, Ford, & Johnson, 2004). Therefore, compared to communal-oriented microlenders, exchange-oriented microlenders should be more likely to expect (and potentially request) repayment, thus diminishing the gap between their repayment expectations and borrowers' repayment expectations. In Study 6 we explore this prediction by measuring participants' communal and exchange orientations.

9.1. Method

9.1.1. Participants

Three hundred and three (303) undergraduate students at a major university in Israel participated in a series of unrelated studies in exchange for course credit (75.4% females, $M_{age} = 24.5$, $SD = 1.50$). We collect as many responses as possible within the six-day duration of the lab study.

9.1.2. Design and procedure

Participants were first asked to write the name of another student in their class with whom they feel comfortable, and then completed our standard psychological closeness measure with respect to this person. Next, we attempted to activate participants' mindset as either economic or neutral by asking them to read a short article and answer several related questions. Given that our priming procedure failed to influence their subsequent choices (results were directional but insignificant), we will not discuss this procedure further. Next, one half of the participants read that on a certain school day, their friend (indicated by the name they previously provided) forgot their wallet and therefore they paid NIS

25 (~ \$7.8) for their friend's lunch (lender condition). The other half read that they forgot their own wallet and their friend paid NIS 25 for their lunch (borrower condition). Participants then indicated the extent to which they would expect to receive (repay) NIS 25 from (to) their friend without specifically requesting (being requested) repayment (on a 7-point scale). Two items measured communal vs. exchange mindset. The first item was identical to that used in Study 4 (loan vs. friendly gesture). In the second item, participants indicated the extent to which they perceived the payment situation as social vs. economic, on an analogue scale from 0 (*economic situation*) to 10 (*social situation*). We collapsed these items into a composite index ($\alpha = 0.71$). Next, we told participants to assume that the money was repaid and asked them to indicate the extent to which repayment would harm the relationship or make it stronger, on an analogue scale from 0 (*harmful*) to 10 (*makes stronger*). Participants also indicated the extent to which they considered NIS 25 to be a small or a large amount, on a scale of 1 (*very small*) to 7 (*very large*). Finally, all participants read several unrelated studies (~20 min) that also served as a filler, before they completed a Hebrew versions of the 14-item communal orientation scale (Clark et al., 1987) and a 10-item exchange orientation scale (Mills & Clark, 1994).

9.2. Results

Six participants were excluded from the analysis because they failed a manipulation check question, leaving a final sample of 297.¹⁰

9.2.1. Expectation & mindset

Confirming our previous results, borrowers ($M = 6.16$, $SE = 0.11$) expected to repay the NIS 25 significantly more than lenders expected to receive repayment ($M = 3.55$, $SE = 0.16$, $t(295) = 13.51$, $p < .001$, $d = 1.57$). In addition, our composite mindset index suggests that lenders (vs. borrowers) perceived the situation to be more social than transactional, but the effect in this study was marginal ($M_{lender} = 7.43$, $SE = 0.18$ vs. $M_{borrower} = 6.95$, $SE = 0.19$, $t(295) = 1.80$, $p = .073$). Interestingly however, while both lenders and borrowers indicated that paying the money back would be beneficial for their relationship with their classmate ($M = 5.94$, $SE = 0.09$, $p < .001$, compared to the middle of the scale), lenders believed more strongly than did borrowers that repayment would be more harmful to the relation ($M_{lender} = 5.68$, $SE_{lender} = 0.12$; $M_{borrower} = 6.19$, $SE_{borrower} = 0.13$, $t(295) = 2.84$, $p < .01$). We interpret this result as confirmation that lenders (relative to borrowers) are more sensitive to social rule violations, reflecting their stronger conformity to communal norms. Finally, we observed no difference between lenders and borrowers in their perceptions of the loan amount ($p = .90$), suggesting that the observed repayment expectation gap cannot be attributed to borrowers perceiving loan amounts to be larger than lenders perceive them.

9.2.2. Personality traits

Participants' orientation ratings were averaged to create a communal orientation score ($\alpha = 0.68$) and an exchange orientation score ($\alpha = 0.72$), with the appropriate items reverse-scored. We then created an orientation index for each participant by subtracting the exchange orientation score from their communal orientation score, such that higher indices represent participants whose relationships are more strongly motivated by social rather than transactional considerations. We constructed the above orientation index from both orientation scales based on recent findings, which showed that these two constructs may not be mutually exclusive but may, in some contexts, even be positively correlated (Johnson & Grimm, 2010). Therefore, we expect individuals' repayment expectations to be influenced mostly by the difference between these two orientations rather than by one construct or another. To

¹⁰ The results remain virtually the same when including all participants in the analysis.

test the effect of interpersonal relationship orientation, we ran a two-way ANOVA with role (borrower vs. lender), orientation index, and their interaction entered as predictors, and repayment expectation as the dependent variable. As predicted, borrowers expected to repay their friend the cost of the lunch significantly more than lenders expected to receive it ($F(1, 293) = 190.16, p < .001$). In addition, a higher orientation score was associated with a smaller repayment expectation ($F(1, 293) = 10.83, p < .01$). Importantly, we also observed a marginal insignificant interaction ($F(1, 293) = 3.50, p = .062, \eta^2_p = .01$), suggesting that relationship orientation has a stronger effect on lenders than it has on borrowers, such that a higher orientation index (i.e., more socially oriented) was associated with a larger repayment expectation gap between lenders and borrowers (See Fig. 4). Controlling for relationship closeness, gender, and age yielded similar results ($F(1, 290) = 3.18, p = .075, \eta^2_p = .01$).

9.3. Discussion

Study 6 provides further evidence that interpersonal relationship motivations (communal vs. exchange) largely explain the observed gap between repayment expectations of lenders and borrowers. While relationship orientation has almost no effect on borrowers who typically conform to exchange norms, exchange-oriented (vs. communal-oriented) lenders reported higher expectations of repayment, which results in a smaller repayment expectation gap between exchange-oriented borrowers and lenders. Note that in Study 6 participants were asked to choose a friend and to report how close they feel to that friend *before* undergoing our manipulation. Therefore, it is unlikely that participants assessed the strength of their relationship with their friend from their assigned role (lender or borrower), and subsequently adjusted their repayment expectation to this relationship strength. Finally, Study 6 rules out social desirability bias as an alternative explanation (i.e., in which people may answer what they believe they are expected to say). If such bias explains our results, we would not expect personality traits to moderate the observed effect.

10. General discussion

Anecdotal evidence points to the existence of an immense market of unpaid small debts between friends and acquaintances. These

transactions are likely to involve psychological factors that are absent in large loans governed by formal agreements and rules. Surprisingly, however, social scientists have made little attempt to explore this ubiquitous phenomenon. Across individuals from three different countries, using lab and field data, and observations of nearly 3,000 hypothetical and consequential decisions, this paper provides converging evidence for a gap between borrowers and lenders' perceptions of small interpersonal financial assistance. Borrowers, governed by an exchange mindset, expect to repay monies that lenders, governed by a communal mindset, don't expect them to repay. These differences in mindsets may not only explain why individuals are willing to loan small amounts despite the credit risk involved, but also why microlenders are unwilling to request repayment when recipients fail to repay, which consequently increases the probability of the loan remaining unpaid. This result has important implications for interpersonal relationships.

Study 1 collected field data of real microlending episodes involving friends and showed that indeed, unpaid debts are more likely in smaller (vs. larger) amounts because lenders are less likely to request a repayment. While the results of Study 2 suggested that microborrowers believe they should pay back money that microlenders do not expect them to pay back, Study 3 demonstrated that this repayment expectation gap is more likely in smaller rather than larger loans. The final three studies explored the idea that the repayment expectation gap is a result of the communal and exchange mindsets of lenders and borrowers, respectively, leading them to conform to different set of norms. While Study 4 measured these mindsets and demonstrated their role in mediating the repayment expectation gap, Study 5 directly manipulated participants' mindsets and showed that the gap diminished notably when borrowers' and lenders' mindsets converged. Finally, Study 6 tapped into individual differences in communal vs. and exchange orientations and showed that the effect was also qualified by these personality traits.

The current investigation makes several important contributions to both the social science and economics literature. From an economic perspective, to the best of our knowledge this work is the first to establish, based on real-world behavior, a link between the magnitude of informal financial assistance to close others and the likelihood, that lenders will request repayment. From a psychological perspective, this work is also the first exploration of the underlying theoretical mechanism that explains why many interpersonal small debts remain unpaid.

The above evidence also broadens our understanding of when and why people might lend money to others without expecting repayment. As our investigation suggests, these expectations are both state and trait dependent. In this respect, the current research also adds to recent findings that introduce the notorious consequences of monetary interactions between close friends and family members. These situations reflect times at which social and economic perspectives collide (e.g., Heyman & Ariely, 2004). The preliminary evidence that giving small amounts are recalled more frequently than episodes involving borrowing of small amounts (see also Dezsó & Loewenstein, 2012) may suggest that individuals should use even greater caution when evaluating their relationships with significant others considering small ongoing monetary interactions in which they are involved. This potentially biased recall receives indirect support from recent findings showing that participants playing the ultimatum game remembered friends' play as more competitive and less generous than strangers' play, even when friends' actual play was more generous (Danziger, Disatnik, & Shani, 2017). These authors suggested that the lofty norms, rules, and expectations to which people hold for friends underlie this negative effect. Given that people seem to have stronger memories of lending (vs. borrowing) episodes, it is important to understand the conditions that may alleviate the negative effects of mixing money and friendship, illuminated by the current research. While the current research suggests that communally motivated individuals may not always expect direct reciprocation, they may nonetheless mentally monitor the giving and receiving of social utility.

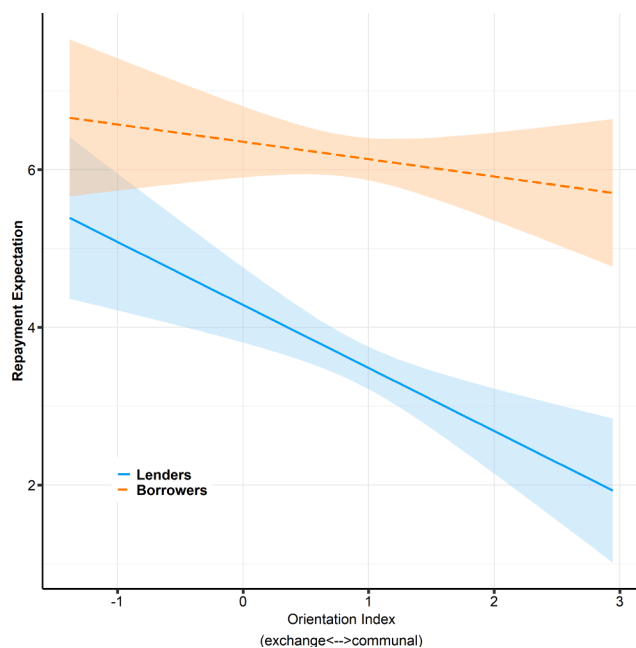


Fig. 4. Study 6: Effect of Personality Traits on Repayment Expectations.

One may wonder how the repayment expectation gap would relate to other work showing perceptual gaps. For example, research on the hot–cold empathy gap has shown that people have difficulty predicting their preferences and behaviors in affective states that are different from their current state (e.g., [Loewenstein, 2005](#)). Provided that lending is more emotionally arousing (communal interaction) than borrowing (exchange interaction), empathy gap theory would also predict that individuals may perceive lending and borrowing experiences differently, as we find here. Consistent with this interpretation, the results of Study 6 suggest that borrowers (vs. lenders) believe less strongly that a repayment of the loan would be harmful to the relation. In this respect, borrowers underestimate the value of the social signal associated with loaning behavior for their lenders. Seemingly, the repayment expectation gap contradicts research into the endowment effect, which represents a classic situation where sellers have higher price expectations compared to potential buyers ([Kahneman, Knetsch, & Thaler, 1990](#); [Thaler, 1980](#)). According to the endowment effect, loss aversion associated with ownership of an object increases its perceived value, which results in a valuation gap between sellers and buyers. One may expect that, compared to borrowers who “gain” money, lenders “loss” of money would lead them to exhibit higher rather than lower repayment expectations. However, this prediction fails to consider the value associated with the social benefit gained from helping a friend, given the relatively small cost involved with microlending behavior. Moreover, recent research has demonstrated that the endowment effect does not exist for exchange goods such as money ([Svirsky, 2014](#)).

One way in which interpersonal microlenders can increase repayment likelihood ex-ante is by making exchange rules more salient, not only for their borrowers, but also for themselves. For example, one of the authors of this article has an absentminded colleague who keeps borrowing small amounts to buy lunch but rarely remembers to repay. The author, who was reluctant to remind him, one day realized that instead of handing out small bills, it would be better to give his colleague a hundred-dollar bill. A hundred dollars is an amount that his colleague would be more likely to repay, and in case he forgets, reminding him would be much less embarrassing.

As this anecdote suggests, under an exchange mindset, microlenders should feel more at ease to employ tactics to ensure that the loan is repaid, and microborrowers should be less likely to perceive these requests as norm transgressions. Microlenders may use other means to highlight exchange rules. For example, they may use advanced technologies such as peer-to-peer mobile apps instead of handing out and requesting cash. These technologies facilitate the adoption of an exchange mindset by formally making the loan balance sheet available to both parties. As a result, borrowers will be less likely to forget to repay small debts, and lenders will be less likely to succumb to the biased perception that they lend more than they borrow. In addition, peer-to-peer applications may offer additional features that alleviate the unpleasantness of requesting repayments, thereby facilitating convergence of lenders’ and borrowers’ mindsets. For example, such apps might make balance sheets of *aggregated* small debts between friends available to the entire circle of friends, or include a automatic repayment reminder as a default option.

Finally, our findings may also have important implications for lending institutions and crowdfunding platforms. For example, a recent study analyzed textual information of many loan applications submitted to a large crowdfunding platform ([Netzer et al., 2019](#)). The study found that loan requests written by defaulting (vs. paying) borrowers often use simpler but wordier language, and include words related to their family, God, the borrower’s financial and general hardship, and supplications for assistance. This writing style incorporates more social elements. By inserting loan application texts into traditional models that predict loan default on the basis of financial and demographic information, the authors of the above study were able to significantly and substantially increase default prediction accuracy. Although the authors concluded that defaulting borrowers’ loan requests are written in a manner

consistent with the writing styles of extroverts and liars, our findings suggest that identifying a communal orientation in loan requests may also increase loan default predictive power. Put differently, borrowers of formal loans with a more communal (vs. exchange) mindset may have lower repayment intentions and eventually may be more likely to default. Understanding and potentially influencing borrowers’ mindset, therefore, should also be of an interest to formal institutional lenders.

11. Limitations and future research

People underestimate the likelihood that others will agree to a direct request for help ([Flynn & Lake, 2008](#)). Indeed, recent findings have shown that people are less willing to ask their friends for small financial help than to offer their friends financial support for everyday purchases ([Straeter & Exton, 2018](#)). In addition, over one half of Americans report feeling embarrassing to have friends pay for them when they are in need ([Paypal, 2015](#)). These findings suggest that many interpersonal microloans between friends are initiated by lenders offering their help rather than by borrowers asking for financial assistance. In Study 1 we explored lenders’ behavior following a loan request from borrowers, whereas in Studies 2 and 3, lenders’ initiate the loan. In all other studies (Studies 4–6) participants were not informed whether the lender offered the loan or the borrower requested it. However, the extent to which lenders are influenced by a communal (vs. exchange) mindset may vary depending on whether they spontaneously offered help or were asked to provide assistance ([Grace, Bell, & Sugar, 1988](#)). On the one hand, a request for money may trigger exchange norms for lenders, which should decrease the observed gap. On the other hand, to the extent that a request for assistance produces more empathy toward the requester and therefore prompts communal norms, the gap seems likely to grow. We leave this investigation for future research.

Although we observed similar results with participants from three different countries (USA, UK, and Israel), these western cultures share similar values. Future research might explore how individual self-construal (i.e., independent vs. interdependent) or culture differences might influence microlending perceptions and behaviors. For example, recent research has shown that communal norms that are associated with collectivistic cultures influence consumers’ perceived fairness of pricing asymmetrically to cost changes (i.e., when firms increase prices when costs increase but maintain prices when costs decrease; [Chen, Bolton, Ng, Lee, & Wang, 2017](#)). Therefore, cultural differences may even influence individuals’ willingness to participate in interpersonal microloans altogether.

Finally, as our investigation suggests, the probability of interpersonal microloan repayment may depend on the extent to which individuals conform to exchange and communal norms. While some relationships might be inherently associated with a communal or exchange mindset (e.g., parent–child and landlord–tenant, respectively), in some interpersonal relationships, conformity with communal and exchange norms may be influenced by incidental or personal factors. Identifying these factors is important to our understanding of microlending behaviors. For instance, in Study 1 we observed that males were more likely to request a repayment from a male than female friend whereas females were more likely to request a repayment from a female rather than male friend. It would be interesting to explore whether such male–female dynamics are explained at least in part, by communal vs. exchange mindset differences. Possibly, interacting with the opposite (vs. same) gender may be driven by stronger social forces, emphasizing communal norms. A recent study found that perceived relationships with significant others may shift weight from communal to transactional when one partner engages in petty behavior, such as paying back small debts down to the last cent (vs. rounding amounts) because it may signal that the borrower is treating the relationship as transactional ([Kim, Zhang, & Norton, 2019](#)). Similarly, the length of the interval between giving and receiving of benefits may also influence relationship norm-conformity because a delayed (vs. immediate) return may be less perceived as being connected to the

original request, and hence be in keeping with the communal relationship norms (Aggarwal, 2004). Future research might further explore factors affecting the probability of microloan repayment through regulation of lenders' and borrowers' communal and exchange mindsets.

CRedit authorship contribution statement

Coby Morvinski: Conceptualization, Methodology, Formal analysis, Investigation, Data curation, Writing – review & editing. **Yaniv Shani:** Conceptualization, Methodology, Formal analysis, Investigation, Data curation, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.obhdp.2022.104117>.

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