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Lenders' blind trust and borrowers' blind spots: A descriptive investigation of personal loans

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ABSTRACT

We surveyed 971 individuals about their experiences with personal loans. Beyond the objective characteristics of the loans (e.g., whether interest was charged), and the purpose of the loan, we tested – and found support for – two main predictions: (1) at recall and evaluation of loans would be subject to a self-serving bias such that borrowers would, for example, recall having paid back a larger proportion of the loan, and (2) that loans, and particularly those not paid off by the agreed upon date, would have pernicious effects on the personal relationship between lender and borrower. Furthermore, we found that borrowers have a blind spot when it comes to recognizing the negative feelings and perceptions evoked in lenders by delinquent loan repayment.

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Creditors have better memories than debtors.
Benjamin Franklin

1. Introduction

With the advent of the so-called 'microfinance revolution' in developing countries, the topic of loans has received new scrutiny (e.g., Khandker, 2005). Research on microfinance has explored two main issues (Hermes & Lensink, 2007): The first focuses on the tradeoff between financial sustainability and outreach (e.g., Cull, Demirgüc-Kunt, & Morduch, 2007) with a vigorous debate centering on the question of whether or not to subsidize interest (so as to increase outreach) or offer loans at market rates that are more likely to bring numerous lenders into the market (e.g., Cull et al., 2007). The second, which is more closely relevant to personal loans, deals with the social, economic and psychological mechanisms that increase the likelihood of repayment, including social sanctions, peer monitoring and the mutual interdependence created by joint liabil-

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ity (e.g., Armendáriz de Aghion, 1999; Armendáriz de Aghion & Gollier, 2000; Besley & Coate, 1995; Chowdhury, 2005). Loans have also received new interest in the aftermath of the mortgage crisis, with research addressing such diverse topics as foreclosure (Whinston, 1990), prepayment (Stanton, 1995), predatory lending practices (e.g., Azmy, 2005; Willis, 2006), risk-ratings (Treacy & Carey, 2000), and misaligned incentives by both borrowers and lenders (e.g., Kupman, 2009; Tarr, 2010).

In contrast to the plethora of research dealing with microfinance, and with different facets of commercial loans, there is a category of loans that, although dating back throughout recorded human history and continuing to play a prominent role in contemporary human affairs, has received far less attention from academics: personal loans between individuals. Although the term 'reciprocal lending' has been coined for lending and borrowing between individuals (see, e.g., Morduch, 1998; Sharma & Dréze, 1996; Sinha & Matin, 1998), the characteristics, purposes and consequences of personal loans have not been widely and systematically investigated.

We present results from a detailed survey of personal loans. Beyond providing a broad description of personal loans, the characteristics of borrowers and lenders, and the relationships between them, we focus on two psychological issues: (1) whether the two parties to a loan are subject to self-serving bias when it comes to encoding and/or recalling different aspects of the loan, and (2) when and how loans affect the relationship and subsequent interactions between borrower and lender.

Beyond the obvious differences in the parties involved in personal (as compared with commercial and microfinance) loans, personal loans also differ on a number of other dimensions. With personal loans, in contrast to commercial loans, there is typically no written contract, interest is rarely paid or expected (although see Brandt & Hosios, 2010), and they are almost never collateralized. Given the absence of a formal contract, and the lack of collateral and intermediation, personal loans can be considered a kind of 'relational contract' (Baker, Gibbons, & Murphy, 2002; Brown, Falk, & Fehr, 2004; Brown and Serra-Garcia, 2010; Goetz & Scott, 1981; Gundlach, Achrol, & Mentzer, 1995; Sirdeshmukh, Singh, & Sabol, 2002; Tax, Brown, & Chandrashekaran, 1998; Williamson, 1975); they rely heavily on good will – trust – between the borrower and lender. This reliance on trust has both up-side and down-side potential.

In the best of circumstances – e.g., when the lender's sacrifice is duly appreciated by the borrower, and the loan is repaid in a timely fashion – loans can strengthen the relationship between lender and borrower. Prior research on group lending has found that the mutual interdependence of group members can improve relations between them (Feigenberg, Field, & Pande, 2010). Analogously, personal loans can have positive effects on the relationship between borrower and lender, both because (in the absence of coercion) it is clear that the lender is displaying generosity, and because, exactly due to the absence of a formal contract, it is equally obvious that a borrower who repays a loan could have, in most cases, defaulted without incurring negative material consequences.

The informality of personal loans, however, also introduces potential pitfalls. The fact that a loan has been made probably indicates the presence of trust between lender and borrower. But trust, by its very nature has the potential to be violated, potentially threatening the relationship that made the loan possible in the first place. This possibility is especially likely, we hypothesize, due to the operation of self-serving bias. In our survey, we test for self-serving bias in a variety of ways, looking for systematic differences between borrowers' and lenders' perceptions about, for example, whether loans have been repaid, and whether the loan really was a 'loan' or was perhaps really more of a 'gift'. Such divergences of perceptions and feelings could, potentially, plant the seeds of distrust and mutual hostility between lenders and borrowers, and damage the relationship between them. Beyond testing for self-serving bias, we also include items in the survey designed to test whether, if bias is present, people are aware of it. Prior research on the bias 'blindspot' (Pronin, Lin, & Ross, 2002) has found that people tend to not be aware of their own self-serving biases, and that such unawareness can further exacerbate misunderstandings.

For purposes of analysis and exposition, we classify loans into two broad categories: (1) 'asymmetric' loans between people, such as parents and children, who stand in different relation to one-another and (2) 'symmetric' loans between peers, including friends, coworkers, siblings and cousins. Pilot studies led us to the conclusion that asymmetric and symmetric loans are fundamentally different. Since a central focus of our research is on the impact of loans on relationships, and since parent–child, grandparent–grandchild relationships tend, at least ideally, to have solidity that other types of relationships may lack, we made the decision to limit our main analyses to symmetric loans.

This decision also reduces the dependence of the results on the characteristics of our non-representative sample. For example, since parents are much more likely to loan money to children, if we happened to sample a large number of older people who were parents, we would inevitably pick up a large number of people who recalled lending but not borrowing money, but this would not reflect any bias in recall but simply the demographics of our sample. This problem is reduced, although not eliminated, by focusing on symmetric loans. Given the size and relative diversity of the sample, however, we hope that the results reported provide, at minimum, an indication of the breadth of lending experiences, and the range of the consequences of loans for both lenders and borrowers.

2. Background literature

2.1. Prior literature on loans

The academic research most closely related to personal loans deals with P2P social lending in online communities such as *prosper.com* or *zopa.co.uk*. On these online platforms, borrowers advertise their projects, and lenders can choose borrowers to whom they wish to lend. Loans made online are not collateralized, and there is an inherent informational asymmetry between lenders and borrowers (Berger & Gleisner, 2009). Research on P2P online lending shows that lenders draw valid infer-

ences about borrowers' creditworthiness from factors such as credit grades, verified bank accounts, home ownership, debt to-income ratio and employment (Iyer, Khwaja, Luttmer, & Shue, 2009). However, nondiagnostic factors suggestive of bias, such as race, beauty, age and military involvement also influence lenders' decisions. Ravina (2008) found that, after controlling for information dealing directly with credit-worthiness, personal characteristics such as beauty, race and military involvement significantly affected the interest rates obtained by borrowers. Whites, and the more beautiful, received lower interest rates, despite the fact that, in Ravina's sample, they were not less likely to default than nonwhite and non-beautiful people. Pope and Sydnor (2011) also found that military involvement led to better loans, found that older age led to inferior loans, and, contrary to Ravina (2008) found that blacks were more likely to default than nonblack borrowers, that blacks received less favorable loan terms, but that the worse terms they received did not fully compensate for their greater risk of default.

As is also true of group lending, social ties have a beneficial effect in P2P lending. Some online borrowing communities offer borrowers the opportunity to join groups, similar to those on social network sites such as Facebook. Research examining this feature consistently finds that borrowers who join such groups receive lower interest loans (Berger & Gleisner, 2009; Ryan, Reuk, & Wang, 2007). Group membership may signal borrower's creditworthiness, given that group membership is often conditional on a good track record, and may improve borrowers' skills when it comes to getting a good loan; group members often provide advice to one-another. The existence and impact of group membership indicates that, as with personal loans, personal relationships and signals of trustworthiness play important role in online borrowing communities as well.

Research on microfinance is a second line of literature relevant to personal loans. As already noted, such research can be crudely categorized into two strands, one dealing with the tradeoff between financial sustainability and outreach, and the other dealing with social, economic, and psychological mechanisms that increase the likelihood of repayment.

Empirical studies in the second vein of research have identified factors and mechanisms that contribute to the creation or deterioration of social capital through joint liability. Wenner (1995) highlights the positive effect of having a formal written contract, Zeller (1998) finds that stronger social ties predict higher repayment and Wydick (1999) finds that dissemination of information about group members' income enhances repayment, while personal closeness of group members generally decreases the likelihood that the loan will be repaid.

While prior closeness between group members may decrease the probability of loan repayment, participation in lending groups generally tends to increase the strength of group bonds. Feigenberg et al. (2010), for instance, find that group lending facilitates social capital formation, not only through joint liability, but also through the increased frequency of interaction between parties. These social ties in turn facilitate cooperative behavior and decrease default risk. On the negative side, however, and reversing the causality, relationships may also deteriorate as a result of default (Karlan, 2007). Similar to the findings for P2P lending, trust plays a key role in the formation and success of lending groups. Field experiments have found that greater trust between group members leads to higher repayment rates (e.g., Abbink, Irlenbusch, & Renner, 2006; Cassar, Crowley, & Wydick, 2007; Giné, Jakiela, Karlan, & Morduch, 2010; Karlan, 2005). As will become apparent, trust also plays a prominent role in personal loans.

2.2. Psychological mechanisms

Although psychology certainly plays a role in commercial loans, its influence is deliberately muted by objective criteria, such as credit scores, and formal record-keeping, including contracts and, ideally, careful accounting. With personal loans, in contrast, there are a wide range of psychological mechanisms that can impact repayment and, in turn, the quality of subsequent quality of relationship between partners. These mechanisms involve subjective construction and representation of the lending situation, biased perception and attribution of one's own and the other's behavior and intentions, and feelings and perceptions (e.g., indebtedness, trust, anger, and anxiety) that arise from interactions between the two partners to the loan.

2.2.1. Self-serving (re) construction of the present and past

The term 'Egocentric bias' encompasses a variety of judgmental biases that include the tendency to believe (or at least report) that we are better than average on desirable behaviors and traits, less likely than others to experience negative life events such as bad mental and physical health or being a victim of a crime (e.g., Colvin, Block, & Funder, 1995; Perloff & Fetzer, 1986; Weinstein, 1982), and that what is beneficial for us is also what is objectively fair (Babcock & Loewenstein, 1997). Research in psychology has found that self-serving biases result from both 'motivational' mechanisms, such as the desire to see oneself in a positive light (e.g., Aronson, 1969; Collins, 1996; Greenwald, 1980; Taylor & Brown, 1988), and cognitive mechanisms such as the perfectly reasonable tendency to believe that good things that happen to us are the results of our own efforts (e.g., Nisbett & Ross, 1980; Ross & Sicoly, 1979).

For a survey of the type we ran here, in which people are asked to report on current and past personal experiences, egocentric biases pertaining to the encoding and recall of such personal experiences are particularly relevant. Diverse research in psychology shows that memory is highly reconstructive (e.g., Bartlett, 1932; Schacter, 2001). This reconstructive nature of memory has been demonstrated in a wide range of contexts: in autobiographical memory (e.g., Conway & Pleydell-Pearce, 2000), in eyewitness testimonies (e.g., Neisser, 1981), and in traumatic memories (e.g., Loftus & Davis, 2006; McNally, 2003).

The ample 'degrees of freedom' that the brain enjoys when it comes to the encoding and retrieval of memories provides fertile ground for the same types of self-serving biases that influence other types of judgments. Rather than retrieving exact copies of stored memory traces, reconstruction of the past is powerfully guided by current beliefs and desires, including the desire to perceive oneself in a positive light. People accomplish this goal in part by selectively recalling episodes from the past that cast them in a favorable light (e.g., Mischel, Ebbesen, & Zeiss, 1976; Pieters, Baumgartner, & Bagozzi, 2006; Ross & Sicoly, 1979; Sedikides & Green, 2004, 2009). Based on this flexibility of human memory, we expected borrowers and lenders to have incongruent recollection of who initiated the loan. Specifically, we predicted, and tested, whether borrowers would to be more likely than lenders to report that the lender initiated the loan.

2.2.2. Self-serving notions of fairness, ethics and moral behavior

People are prone to self-servingly believe that what is beneficial to them is also what is fair (e.g., Konow, 2000; Messick & Sentis, 1979), a bias that can impede settlement in negotiation, causing all parties to lose out (e.g., Babcock, Loewenstein, Issacharoff, & Camerer, 1995; Thompson & Loewenstein, 1992). Similarly, people tend to believe that they behave more fairly, or ethically, than others do (Banaji, Bazerman, & Chugh, 2003; Baumhart, 1968; Chugh, Bazerman, & Banaji, 2005; Messick, Bloom, Boldizar, & Samuelson, 1985). This 'bounded ethicality', as Bazerman and coauthors label it, affects not only recall and interpretation of the past (Shu, Gino, & Bazerman, 2011), but predictions of the future (Messick et al., 1985; Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2010).

To measure self-serving perceptions of loans in our survey, we included items that asked whether the agreed-upon payment date had passed, and, inspired by Shu et al. (2011), whether parties to an unpaid-off loan anticipated that it would be paid off in the future. Based on prior findings, we anticipated that lenders would be more likely to believe that the agreed upon repayment date had passed, and that borrowers would be more optimistic about their own future likelihood of repaying the loan. We also included a wide range of other items designed to test for the operation of egocentric-biases, including a question about whether the loan had really been more of a 'gift', with the expectation that delinquent borrowers will be the most motivated to reframe the loan as having really been a gift, to maintain their positive self-image.

2.2.3. Self-serving behavior in exchanges of favors

Webster's defines a favor as "something done or granted out of goodwill, rather than from justice or of payment; a kind act." By this definition, a personal loan qualifies as a type of favor. The rich academic research on favors overlaps, in part, with the research on the self-serving reconstruction of memory. Research on favors has found that, immediately after providing a favor, favor-givers tend to denigrate their own generosity, while receivers of favors tend to be highly grateful (e.g., Flynn, 2003; McGuire, 2003). Over time, however, the favor recipient's appreciation tends to depreciate, while the favor-provider's estimation of his or her own generosity increases (Flynn, 2003), suggestive of a self-serving shift in perception. Burger, Horita, Kinoshita, Roberts, and Vera (1997) found that the norm of reciprocating a favor is time-sensitive: people feel less obliged to reciprocate as time passes. To examine each loan's evaluation and its change over time we included questions about the helpfulness of receiving or the sacrifice of making the loan. Additionally, by examining the connection between these two variables and the time when the loan was made, we were able to see whether a similar temporal pattern applies to borrowers' appreciation of and lenders' magnanimity toward loans.

Other research dealing with favors finds that providers and receivers of favors perceive different elements of the situation as salient, which also leads to differential evaluation of favors by their providers and receivers. Givers' assessments of a favor depend critically on how much aid was provided, while receivers' evaluations are more closely connected to how the favor was conferred (Flynn & Brockner, 2003). Receivers are especially appreciative if they perceive that the provider took steps intended to reduce the recipient's embarrassment (Flynn, 2003). Drawing on these findings, we asked respondents to recall the circumstances of the loan situation, with a special focus on the issue of who initiated the loan. Consistent, again, with a self-serving bias, we anticipated that borrowers would be more likely than lenders to recall that the loan had been initiated by the lender.

Finally, research on the receipt of help (i.e., favors) has found that the gratitude experienced by aid recipients improves psychological well-being (e.g., McCullough, Emmons, & Tsang, 2002), facilitates their own subsequent prosocial behavior (Bartlett & DeSteno, 2006; McCullough, Kilpatrick, Emmons, & Larson, 2001; Schaumberg & Flynn, 2009; Tsang, 2006), and generally improves the relationship between the giver and receiver (McCullogh et al., 2002). Based on these findings, we hypothesized that borrowers' gratitude would both signal and potentially increase the likelihood of their trustworthiness. Therefore, we hypothesized that the more helpful a borrower perceived the loan to be, the more likely he/she would be to pay it back according to the agreed-upon time line.

2.2.4. Blind spot in perceiving other's feelings and consequences of own behavior on other

'Blind spot' is a term used by social psychologists to describe people's tendency to judge themselves and their own behavior more positively than they judge others' behavior (e.g., Pronin, 2008). Specifically, people recognize and point out biases in others' behavior but fail to be similarly critical toward their own behavior (Pronin et al., 2002). People, for instance, believe that their motivations are more selfless than others' (e.g., Epley & Dunning, 2000; Miller & Ratner, 1998). Failing to recognize when their own behavior is unethical, people lack the information that would be required to make adjustments to that behavior (e.g., Bazerman & Tenbrunsel, 2011; Chugh & Bazerman, 2007).

One psychological mechanism that contributes to blind spots is 'naïve realism', the belief that we see the world objectively (e.g., Griffin & Ross, 1991) and that others see the world similarly to us (Ross, Greene, & House, 1977). Upon having this latter view disconfirmed – when we discover that another's view differs from ours – instead of reconsidering our own views, we assume that the other's view is unreasonable and biased (e.g., Kennedy & Pronin, 2008).

To examine the blind spot bias as it applies to personal loans, we included pairs of questions in which partners provided their own perspectives on different issues (e.g., about the change in closeness that had resulted from the loan) and also asked each party to guess how the other party would respond to the question (e.g. to judge the other party's change in closeness). These paired items enable us to go beyond simply examining self-serving encoding and reconstruction of memory, to examine whether borrowers and lenders are aware of the gap between their own and the other party's feelings and attitudes. Our prediction, based upon the blind-spot literature, was that both borrowers and lenders would not only display bias in judging their own behavior, but would also assume that their biased perspective was shared by the other party to the loan.

2.2.5. Trust

Trust is a key factor in economic prosperity (e.g., Arrow, 1972; Fukuyama, 1995) and as noted earlier, trust plays a key role in social capital formation and successful borrowing. Unquestionably, lenders' trust and borrowers' trustworthiness is crucial when there are no means of enforcing payback. Identifying factors that predict trust and trustworthiness are a focus of considerable research in psychology (e.g., Mayer, Davis, & Schoorman, 1995; Rotter, 1967, 1980) and in economics (e.g., Alesina & La Ferrara, 2002; Ben-Ner & Halldorsson, 2010; Glaeser, Laibson, Scheinkman, & Soutter, 2000; Kugler, Bornstein, Kocher, & Sutter, 2007; Rousseau, Sitkin, Burt, & Camerer, 1998). Glaeser et al. (2000), for example, combined survey and experimental methods to measure trust and trustworthiness and to identify their predictors. They find that an individual's own trustworthiness is predicted by how much the individual generally trusts others. Additionally, greater social connectedness predicted higher levels of trustworthiness, but did not predict trust.

To investigate how the outcome of the lending interaction impacts lenders' trust and willingness to lend to borrowers again, we included a question about the change in the lender's trust as a result of the loan (self-report for lenders and an assessment of lenders, for borrowers), and a question about the willingness to engage in a subsequent lending interaction with the focal partner. Unsurprisingly, we anticipated that loan delinquency would result in a decrease of lenders' trust in borrowers, and a decrease in self-assessed likelihood of making another loan to the same borrower in the future.

3. Methods

The survey, which was fielded in 2011, recruited respondents from the Amazon.com service MTurk. Amazon MTurk is a marketplace on which people register to complete diverse types of computer-based tasks, including completing surveys, in exchange for remuneration. If the task is completed and the requester accepts the completion, the worker gets paid. Requests for work on MTurk describe the nature of the task, the time it should take to complete, and the remuneration (see https://www.mturk.com/mturk/help?helpPage=overview). Respondents, screened to be American citizens currently living in the US, received $0.50 for completing the survey. A total of 1036 individuals began the survey; however 52 (5.02%) were excluded because the loan they reported on was from a bank or other financial institution (i.e., was not a personal loan) or for having made the loan before the stipulated 5 year time limit, and 13 (1.25%) were excluded because they discontinued the survey prior to providing demographic information. Thus, the final survey included 971 valid respondents. Detailed demographics can be found in Table A1 of the on-line appendix available at (http://dx.doi.org/10.1016/j.joep.2012.06.002) Table A1 reveals that symmetric loans were made between borrowers and lenders who were similar in demographic characteristics, including age in years (lenders' mean = 32.0, SD = 11.1 and borrowers' mean = 31.4, SD = 10.8), gender (both groups approximately 61% female), racial composition and education. There were slightly more borrowers than lenders in the lowest income strata (11.9% lenders versus 17.7% borrowers) and slightly more part-time employed people than full employed among borrowers than lenders.

The survey, which was administered on Qualtrics and included informed consent, took an average of about 20 min to complete. LINK TO SURVEY OMITTED FROM REVIEW COPY DUE TO IDENTIFIABILITY Respondents were randomly assigned to one of two surveys that varied only in whether it asked first about a situation in which the respondent had loaned money then a situation in which they had borrowed money, or vice versa. Participants in the lending-first condition who reported no lending episodes were then directed to the questions about borrowing, and vice versa. Individuals who reported neither a lending nor a borrowing episode were directed to the demographic questions.

In each case, participants were asked about *the most recent loan they had been involved within the past 5 years*. The lending and borrowing sections of the survey contained equivalent questions. For example, in the lending survey, respondents were asked "To whom did you lend the money?" whereas in the borrowing phase, respondents were asked "Who gave you the loan?"

Within each phase (lending and borrowing), survey items included two categories of questions that were spread throughout the survey and administered. The first elicited information about the characteristics of the loan, such as its size, how much had been paid back, when the loan was made, the presence of interest, the existence of a formal contract (e.g., 'IOU'), the purpose of the loan, and a brief description of the lending situation, as well as subjective questions about the degree to which the loan was helpful to the borrower (asked of both borrow and lender), and the degree of sacrifice it entailed to the lender (also elicited from both parties). Additionally, for unpaid loans respondents were asked whether they believe

that the loan would ever be paid back. Finally, the survey asked about specific affective states associated with the loan such as feeling happy, angry, guilty, relieved, upset, anxious, and losing sleep.

The second category included questions about the relationship between the borrower and lender and the history of interactions between them. Survey items included the other person's age, the duration of the relationship, and details of past borrowing and lending activity between the parties, questions about their feelings of closeness towards the partner both at present and prior to the loan, and respondents' perceptions of their loan-partner's current and prior feelings of closeness to them. We also asked both parties whether they avoided encounters with the other party and whether they believed the other party avoided encounters with them, whether they would be willing to be involved in borrowing or lending to the other party again, and, for unpaid loans, how often the lender reminded the borrower of the need to pay back the loan. Finally, we asked lenders whether their trust in their borrowers had changed as a consequence of the loan, and asked borrowers about whether the lender's trust in them had changed.

4. Results

4.1. Characteristics of the loans

Across both orders (borrowing then lending and lending then borrowing), 21.6% ($n = 210$) of respondents reported an episode of lending but not borrowing in the last 5 years, 24.6% ($n = 239$) reported borrowing but not lending, 22% ($n = 214$) reported both borrowing and lending, and 31.7% reported having neither borrowed nor lent.

Table 1 provides a breakdown of the relationship between borrowers and lenders, both for all loans (left columns) and for symmetric loans only (right columns). In this and most subsequent tables, results are presented by lending episode rather than by respondent, so that respondents who both borrow and lend appear twice, and those who neither borrowed nor lent do not appear at all.

The n's in the headings of Table 1 show that all loans are more likely to be reported by borrowers than lenders (28.3% of asymmetric loans are reported to be lending, probably because most asymmetric loans are from parents to children and MTurk respondents are on average young, and thus mostly borrowers), whereas symmetric loans are more likely to be episodes of lending (55.2% of symmetric loans are reported to be lending). *All subsequent analyses in the paper are restricted to the symmetric loans that are shown in the right two columns.*

Perhaps the simplest test of the self-serving bias is whether there is a difference in memory for lending versus borrowing. To the degree that lending is seen as more socially desirable than borrowing, due to self-serving bias we would predict that people should have a more accurate memory of loans they gave than those they received. Consistent with this prediction, once we restrict the set of loans in a fashion as detailed above (that is, excluding asymmetric loans), the ratio of borrowing and lending is skewed; 55.2% of recalled loans are episodes of lending, whereas only 44.8% of recalled loans are episodes of borrowing, a significant difference ($\chi^2(1) = 7.46$, $p \leqslant .001$). Table 2 not only documents this asymmetry, but also hints an explanation for it. When we look at individuals who were asked about borrowing first, there is a perfect equivalence to the incidence of reported borrowing and lending. When people reported an episode of borrowing, it seems, they were motivated to recall and report an episode of lending. However, when people first reported an episode of lending, they seem to have been far less motivated to recall and/or report an episode of borrowing. Perhaps they rationalized to themselves that they had already put enough time or effort into answering the prior questions on the survey.

Table 1
With whom was the loan made?.

	All loans		Symmetric loans	
	Lend ($n = 424$) (%)	Borrow ($n = 453$) (%)	Lend ($n = 361$) (%)	Borrow ($n = 293$) (%)
Parent	7.1	29.6		
Child	6.8	2.2		
Grandchild	.0	.4		
Relative (including spouses, in laws)	4.5	6.6		
Sibling	19.6	11.1	23.0	20.5
Friend	43.2	29.1	50.7	45.1
Significant other (boyfriend/girlfriend not a spouse)	6.8	9.1	8.0	14.0
Co-worker	6.4	4.2	7.5	6.5
Fellow student	.7	.9	.8	1.4
Neighbor	1.2	.7	1.4	1.0
Acquaintance	2.1	2.2	2.5	3.4
Relative (not mother/father in laws, not stepchildren or stepparents)	0.0	0.0	4.2	5.8
Other	1.7	1.8	1.9	2.4
Total	100	100	100	100

Table 2
Frequencies of recalled lending and borrowing episodes within the two orders.

	Lend (n = 361) (%)	Borrow (n = 293) (%)	Total (n = 654)
Lend first	61.10	38.90	100% (n = 293)
Borrow first	50.40	49.60	100% (n = 361)
Total	55.2	44.8	100%

Table A2, further, provides a breakdown of different loan purposes reported by lenders and borrowers. As evident from this table lenders and borrowers report similar frequencies of loan purposes. The only exception is that borrowers are more likely to report borrowing for educational purposes ($\chi^2(27) = 39.12$, $p \leqslant .01$).

Table 3 summarizes a number of features of the loans recalled by borrowers and lenders. As is evident from the first rows of the table, lenders recall loans from earlier periods than borrowers. One possible account of this discrepancy is that lenders, in effect, have longer memories for loans than borrowers; or, stated differently, that borrowers are more likely to forget the loans they received than lenders are to forget the loans they gave. This account receives some support from Fig. 1, which shows that lenders and borrowers recall similar loans from the past month (when it seems unlikely that loans would be forgotten), but that people are less likely to recall borrowing than they are to recall lending as the temporal distance from the loan increases. In fact, 56% of all loans reported by lenders – but only 44% of loans reported by borrowers – were made more than a month ago ($Z = 2.85$, $p \leqslant .05$). Also consistent with the self-serving forgetting of loans that one has received is the second cluster of rows, which show that borrowers report larger loan sizes than lenders. This would be consistent with self-serving forgetting if a loan has to be larger for a borrower to recall it than for a lender to recall it.

The second cluster of rows indicates that lenders and borrowers have concordant memories about whether there was an IOU, an expectation that interest would be paid, and agreement upon the fashion of repayment. However, again consistent with self-serving encoding and/or recall, borrowers are less likely to report that the repayment date was agreed upon.

The fourth, fifth and the sixth cluster of rows include responses to questions dealing with the lending situation. Consistent with a self-serving bias, borrowers are more likely than lenders to report that the loan was initiated by the lender (cluster 4). Less interestingly (and not obviously related to the issue of self-serving bias), the results reported in cluster 5 indicate that lenders and borrowers have concordant memories about borrowers' behavior and feelings at the origination of the loan: both

Table 3
Simple characteristics of the loans, the lender-borrower relationship and the loan situation.

		Lend (n = 361)	Borrow (n = 293)	Total (n = 654)	Tests of significance of differences between lend and borrow
(1) Timing and size of loan					
Time passed (months) since the loan was made	Mean (SD)	14.14 (14.70)	11.94 (13.18)	13.16 (14.07)	W(1,652) = 3.98**
	Median	9.00	6.00	8.00	χ^2 (1) = 3.69*
Size of the loan (USD)	Mean (SD)	1089.31 (3420.18)	1743.67 (5771.72)	1382.37 (4635.64)	W(1,652) = 3.24*
	Median	250.00	250.00	250.00	χ^2 (1) = .40
(2) Features of the agreement					
IOU		8.6%	7.2%	8.0%	χ^2 (1) = .47
Interest		3.0%	3.8%	3.4%	χ^2 (1) = 2.50
Agreement on when to repay		43.3%	37.1%	39.9%	χ^2 (1) = 2.61*
Agreement on how to repay		41.0%	40.4%	40.7%	χ^2 (1) = .02
(4) Who initiated the loan...					
Not mentioned		46.3%	37.5%	42.4%	χ^2 (2) = 15.54***
Lender initiated		14.7%	27.0%	20.2%	
Borrower initiated		39.1%	35.5%	37.5%	
(5) Borrowers' behavior and feelings at the origination of the loan (Lender's assessment, Borrower's self-report)					
Relaxed and comfortable		39.9%	35.2%	37.8%	MWU = 50868.00
Somewhat embarrassed and uncomfortable		33.2%	37.2%	35.0%	
Moderately embarrassed and uncomfortable		17.2%	18.1%	12.8%	
Extremely embarrassed and uncomfortable		9.7%	9.6%	9.6%	
(6) Pressure on lender to make the loan (Lender's self-report, Borrower's assessment)					
Not at all		60.4%	73.7%	66.4%	MWU = 42250.00***
Somewhat pressured		28.8%	21.8%	25.7%	
Quite pressured		7.8%	3.4%	5.8%	
Extremely pressured		3.0%	1.0%	1.5%	

* $p \leqslant .1$.
** $p \leqslant .05$.
*** $p \leqslant .001$.

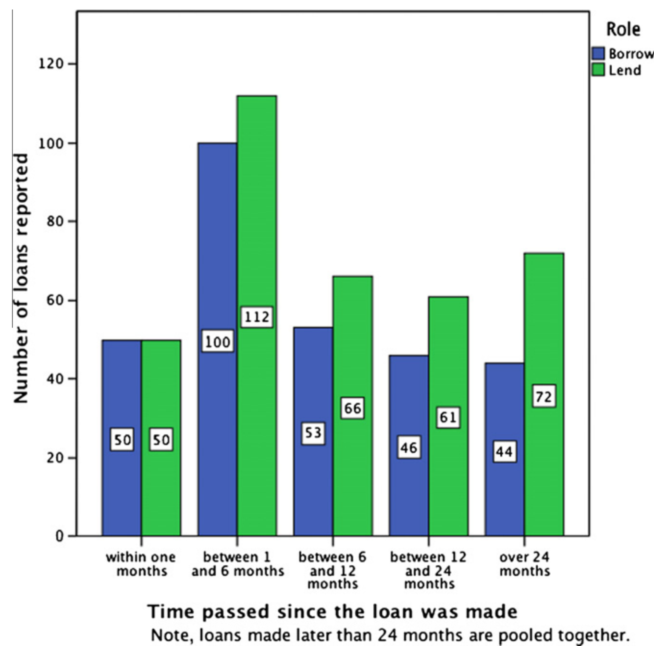

Fig. 1. The number of reported loans by lenders and borrowers as a function of time.

agree that borrowers were not particularly embarrassed about accepting the loan. However, in contrast, responses to the question of how pressured lenders felt to make the loan, summarized in cluster 6, indicate that borrowers fail to correctly perceive how much lenders report having felt pressured into making the loan. This discrepancy between the self-reported feelings of lenders, and the perception of those feelings on the part of borrowers, is the first indication of the borrower's 'blind spot' referred to in the title.

In sum, the results presented in this section suggest that lenders and borrowers have roughly concordant memories of factual terms of the loan – such as presence of IOU, interest, and agreement upon the expected terms of repayment. However, there is suggestive evidence that borrowers display self-serving behavior by not recalling loans made earlier in time and by being less likely to recall the presence of an agreed repayment date. Additionally, borrowers seem to have a biased memory of the lending situation, reporting that the lenders more often initiated the loans, and under-appreciating the pressure that lenders report having felt to make the loan. Lenders, in contrast, display a correct appreciation of the borrowers' feelings and emotions when making the loan.

4.1.1. Loan status

Table 4 presents a breakdown of loans according to whether the repayment date was reported to have passed and the loan paid off. In what follows, we refer to paid loans with passed repayment date as 'completed loans'. Unfortunately, we neglected to ask whether or not these loans were paid on time. Paid loans with an unpassed repayment date are labeled as 'diligent loans'. Unpaid loans with unpassed repayment date are labeled as 'in process loans'. Finally, unpaid loans with passed repayment date are labeled as 'delinquent loans'. Further investigation of self-serving behaviors, feelings associated

Table 4
Frequencies of different loan statuses for lenders and borrowers.

	Lend ($n = 361$) (%)	Borrow ($n = 293$) (%)	Tests of significance of differences between lend and borrow
Repayment date passed	48.8	41.0	χ^2 (1) = 3.97**
Unpaid	36.6	27.6	χ^2 (1) = 5.86**
Completed loans	33.0	35.8	χ^2 (1) = .59
Diligent loans	30.5	36.5	χ^2 (1) = 2.67
In process loans	20.8	22.5	χ^2 (1) = .29
Delinquent loans	15.8	5.1	χ^2 (1) = 18.79***
Total	100.0	100.0	

* $p \leqslant .1$.
** $p \leqslant .05$.
*** $p \leqslant .001$.

with the loans, and subsequent interactions and changes in lender-borrower relationships (next section) will take account of these four loan statuses.

From the first row of Table 4, we can see that borrowers are less likely to report that the repayment date is passed. The second row shows that regardless of whether or not the payment date has passed, borrowers are also less likely to report that the loan is unpaid. The third, fourth and fifth rows show that the two parties have concordant memories for the occurrence of completed, diligent and in process loans. The sixth row shows, however, that borrowers report far fewer delinquent loans than lenders do. Given the parties' concordance on other loan statuses, this pattern suggests that either lenders exaggerate the frequency of delinquent loans, or borrowers underestimate this frequency. Intuitively, we believe that the latter is more likely.

Table 5 presents the reported paid-back ratios of loans, both as reported by borrowers and lenders using a slider scale that went from 0% to 100% (left side of table) and computationally, by dividing the paid-back amount by the total loan amount (right side of table). The first row of the table shows that, for all loans, borrowers report a higher computed pay back ratio (that is, the proportion paid back of the total loan) than lenders report. The second row shows that, for unpassed-date loans, lenders and borrowers report and recall the same proportion paid back. However, for loans for which the repayment date has passed, borrowers report and recall having paid back a greater proportion of the loan than lenders report having received. Note, that this comparison, which is consistent with a self-serving bias, is conservative, since borrowers are already less likely to believe that the repayment date has passed.

Table 6 provides evidence of two further self-serving behaviors on the part of borrowers. First, they are more likely than lenders to reframe delinquent loans as 'gift' rather than a loan. Again, note that the comparison is conservative in the sense that many such 'gifts' probably were not caught by the survey if borrowers did not treat them as loans at the outset of the survey. Second, for in process and delinquent loans, borrowers are more likely to report that the loan *will* be paid back at some point than lenders are. Again, note that these differences are not only significant, but also come on the top of the difference between lenders and borrowers about whether the loan is repaid and in whether the loan is delinquent.

4.2. Feelings about the loan

In this section we review lenders' and borrowers' feelings associated with the loans. Our main prediction was that lenders, in general, would have more negative feelings about loans than borrowers. However, analysis of the data suggests more specifically that the greatest discrepancies between borrowers and lenders occur for delinquent loans.

Table 5
Mean (SD) Computed and Reported paid back percentages across lenders and borrowers for different loan statuses.

	Reported paid back percentage			Computed paid back percentage		
	Lend	Borrow	Tests of significance of differences between lend and borrow	Lend	Borrow	Tests of significance of differences between lend and borrow
All (n = 654)	67.13% (43.08)	72.39% (40.20)	$F(1{,}652) = 2.57$	66.94% (43.90)	73.38% (54.16)	$F(1{,}652) = 2.82^{*}$
Unpassed repayment date, (n = 358)	58.08% (43.86)	57.82% (43.16)	$F(1{,}356) = .00$	57.88% (44.98)	56.72% (44.35)	$F(1{,}356) = .06$
Passed repayment date, (n = 296)	76.62% (40.22)	93.41% (22.77)	$F(1{,}294) = 17.14^{***}$	76.48% (40.74)	97.41% (58.04)	$F(1{,}294) = 13.31^{***}$

* $p \leqslant .1$.
**$p \leqslant .05$.
*** $p \leqslant .001$.

Table 6
Self-serving reframing (the loan was a gift) and self-serving reassurance (loan will be eventually paid off) for different loan statuses.

The loan...	Loan status	Lend	Borrow	Tests of significance of differences between lend and borrow
Was a gift	In process loans (n = 141)	28.0%	25.8%	χ^2 (1) = .09
	Delinquent loans (n = 72)	5.3%	20.0%	χ^2 (1) = 3.38*
Will eventually be paid off	In process loans (n = 141)	52.0%	84.4%	χ^2 (1) = 17.23***
	Delinquent loans (n = 72)	35.1%	86.7%	χ^2 (1) = 12.73***

* $p \leqslant .1$.
**$p \leqslant .05$.
*** $p \leqslant .001$.

Table 7
Regressions explaining perceived helpfulness of, and sacrifice entailed by, loan.

	Helpfulness for borrower		Sacrifice for lender	
	I.	II.	I.	II.
Lend (Lender = 1)	−.24** (.08)	−.24 (.18)	.32*** (.07)	.13 (.17)
Size	.22*** (.05)	.22*** (.05)	.23*** (.05)	.23*** (.05)
Time passed	−.02 (.03)	−.02 (.05)	−.00 (.03)	−.04 (.04)
Lend × Time passed		−.00 (.06)		−.07 (.06)
Constant	3.85*** (.14)	3.85*** (.14)	1.25 (.13)	1.36*** (.15)
F statistics	$F(3,650) = 9.53$***	$F(4,649) = 7.14$**	$F(3,650) = 14.82$***	$F(4,649) = 11.52$***
R^2	.04	.02	.06	.07

* $p \leqslant .1$.
** $p \leqslant .05$.
*** $p \leqslant .001$.

Table 8
Lenders and borrowers mean (SD) feelings associated with different loan statuses.

	N	Happy	Angry	Guilty	Relieved	Upset	Anxious	Losing sleep
All lenders	361	3.18 (1.21)	2.14 (1.30)	1.65 (1.04)	2.48 (1.28)	2.04 (1.24)	1.94 (1.23)	1.47 (.95)
All borrowers	293	3.18 (1.10)	1.86 (1.06)	2.55 (1.58)	3.33 (1.28)	1.98 (1.07)	2.13 (1.28)	1.06 (.06)
Test of significance of differences between groups	$F(1,652) =$	0.01	8.86	76.25***	71.93***	0.33	4.05	4.50
Diligent lenders	110	3.68 (1.06)	1.72 (1.01)	1.40 (0.74)	2.64 (1.30)	1.55 (0.84)	1.53 (0.94)	1.32 (0.83)
Diligent borrowers	107	3.30 (1.07)	1.79 (1.09)	2.32 (1.52)	3.72 (1.09)	1.88 (1.04)	2.09 (1.27)	1.66 (1.07)
Test of significance of differences between groups	$F(1,215) =$	6.93***	0.29	32.14***	44.28***	6.36	14.13***	7.03
Completed lenders	119	3.61 (0.93)	1.66 (0.90)	1.59 (0.92)	2.80 (1.25)	1.61 (0.90)	1.66 (0.99)	1.29 (0.69)
Completed borrowers	105	3.44 (0.99)	1.68 (0.89)	2.16 (1.47)	3.21 (1.38)	1.73 (0.93)	1.77 (1.14)	1.41 (0.93)
Test of significance of differences between groups	$F(1,222) =$	1.87	0.01	12.46***	5.47	1.1	0.66	1.13
In process lenders	75	2.84 (1.05)	2.33 (1.26)	1.92 (1.25)	2.31 (1.20)	2.29 (1.27)	2.15 (1.26)	1.56 (0.96)
In process borrowers	66	2.65 (1.11)	2.21 (1.21)	3.30 (1.55)	2.92 (1.24)	2.44 (1.10)	2.65 (1.31)	1.73 (1.05)
Test of significance of differences between groups	$F(1,139) =$	1.06	0.34	34.38***	9.01	0.53	5.45	0.98
Delinquent lenders	57	1.8 (1.81)	3.7 (1.32)	1.91 (1.30)	1.75 (1.11)	3.53 (1.23)	3.07 (1.41)	2.02 (1.32)
Delinquent borrowers	15	2.8 (1.01)	2.06 (1.03)	3.6 (1.35)	3.27 (1.28)	2.47 (1.36)	2.8 (1.26)	2.67 (1.45)
Test of significance of differences between groups	$F(1,70) =$	11.50**	16.96***	19.71***	20.78***	8.49	0.45	2.77
Nondelinquent lenders	304	3.45 (1.07)	1.85 (1.07)	1.6 (.98)	2.62 (1.26)	1.76 (1.03)	1.73 (1.07)	1.36 (.82)
Nondelinquent borrowers	278	3.2 (1.09)	1.85 (1.07)	2.49 (1.57)	3.39 (1.28)	1.96 (1.05)	2.01 (1.26)	1.58 (1.01)
Test of significance of differences between groups	$F(1,580)=$	7.74	0.00	68.60***	46.51***	5.38	14.84***	7.86

Bonferroni-corrected *p*-value.
Feelings were measured on a five level Likert scale: 1 – strongly disagree, 2 – disagree, 3 – neither disagree, not agree, 4 – agree, 5 – strongly agree.
*** $p \leqslant .001$.

We begin with an examination of lenders' and borrowers' perceptions of the burdensomeness of making the loan for the lender, and the helpfulness of the loan for the borrower. We predicted a self-serving bias on both of these dimensions – i.e., that lenders would perceive the loan as more burdensome for them to make than borrowers would estimate it to have been, and also that lenders would perceive the loan to have been more helpful to the borrower than borrowers did.

The first of these predictions was borne out; lenders perceive the loan as more burdensome (Mean = 2.12, SD = .99) than borrowers (Mean = 1.79, SD = .87), $F(1,652) = 18.41$, $p \leqslant .001$. This is true, as can be seen from Table 7, even after controlling for loan size and time passed. However, the second prediction was not supported; indeed the opposite was true; borrowers perceive the loan as more helpful (Mean = 4.32, SD = .91) than lenders (Mean = 4.07, SD = 1.07), $F(1,652) = 10.08$, $p \leqslant .05$.

In addition to asking borrowers and lenders about perceived burdensomeness of making, and helpfulness of receiving the loan, we also asked them to report on the feelings they experienced in connection with the loan (asking specifically about the degree to which the loan made them feel happy, angry, guilty, relieved, upset and anxious) and whether the loan had caused them to lose sleep. Table 8 provides a detailed breakdown of these feelings, by both loan status and role (borrower/lender).

As is evident from Table 8, regardless of loan status borrowers feel guiltier and more relieved than lenders. Diligent lenders feel happier than diligent borrowers; and diligent borrowers feel more relieved, guiltier, and more anxious than diligent lenders. Thus, it seems that even loans paid back in a diligent fashion can engender negative feelings such as guilt and anxiety for borrowers, beyond positive feelings of relief. For completed and in process loans the only difference between the parties is that borrowers report feeling guiltier than lenders.

The main differences in feelings between borrowers and lenders occur in connection with delinquent loans. As can be seen in Table 8 and depicted in Fig. A1, delinquent borrowers are much more likely to report feeling guilty, and also, strangely, relieved and happy. Lenders associated with delinquent loans, in contrast, are much more likely to report feeling angry. In sum, and consistent with Shakespeare's warning, getting involved in an loan, but especially one that is not paid off as agreed, engenders diverse negative feelings in both parties.

Why should lenders and borrowers react so differently to delinquency? Table 6 provides a potential clue. That table showed that for delinquent loans, borrowers and lenders have radically different perceptions of whether the loan will ultimately be paid off – 87% of borrowers think it will be, but only 35% of lenders. Perhaps partly as a result of this difference in expectations, loan delinquency engenders far more negative feelings in lenders. As we show in the next section, these negative feelings also have negative consequences for the relationship between the parties.

4.3. Consequences for relationship between lenders and borrowers

This section examines the impact of loans on relationships between borrowers and lenders, in the process examining how well each of the parties is able to appreciate the other person's feelings and behavior.

Table 9 summarizes a range of relationship variables. The top set of rows shows that, regardless of loan status, lenders report less closeness, greater decrease in closeness and greater decrease in their trust than borrowers. However, sub-anal-

Table 9
Mean (SD) current closeness, change in own and in other's closeness and lender's trust.

	N	Current closeness	Change in own closeness	Change in other's closeness	Lender's trust
All lenders	361	3.40 (1.38)	2.98 (0.87)	3.11 (0.91)	0.09 (0.66)
All borrowers	293	3.77 (1.22)	3.33 (0.74)	3.27 (0.73)	0.33 (0.53)
Test of significance of differences between groups	$F(1,652)$ =	12.38***	29.44***	5.75	25.81***
In process lenders	75	3.52 (1.49)	2.91 (0.68)	2.95 (0.80)	−0.15 (0.54)
In process borrowers	66	3.68 (1.25)	3.18 (0.76)	3.06 (0.86)	0.15 (0.47)
Test of significance of differences between groups	$F(1,139)$ =	0.48	5.12	0.66	12.09***
Delinquent lenders	57	1.98 (1.22)	1.96 (0.91)	2.32 (1.04)	−0.58 (0.60)
Delinquent borrowers	15	3.4 (1.29)	3.13 (0.99)	3.07 (0.80)	0.00 (0.65)
Test of significance of differences between groups	$F(1,70)$ =	15.67***	19.02***	6.77	10.76***

Bonferroni corrected p-values.
Scale of Current closeness: 1 – not at all, 3 – neither, 5 – very close; Change in closeness: 1 – much less, 3 – no change, 5 – much closer and Lender's trust: −1 – decreased, 0 – no change, 1 – increased.
*** $p \leqslant .002$.

yses comparing different loan statuses show that almost the entire effect is driven, again, by the feelings of delinquent lenders. Lenders in situations other than delinquency, and borrowers in all situations, have stable attitudes toward, and views of, the relationship. Lenders on loans that become delinquent report lower levels of current closeness and a greater decline in closeness. This table also shows that in process lenders report a greater decrease in trust than borrowers assume their lenders have experienced. Furthermore, delinquent lenders report feeling less close, as well as a greater decrease in closeness and trust, than delinquent borrowers do.

Table 9 also presents lenders' decrease in feeling of closeness, both as self-reported by lenders, and as assessed by borrowers. For delinquent loans, borrowers under-appreciate the decrease in lenders' closeness ($F(1,70) = 183.9$, $p \leqslant .001$). At the same time however for delinquent loans lenders' overestimate decrease in borrowers' closeness, $F(1,70) = 7.50$, $p \leqslant .05$). Perhaps lenders are incorrectly projecting their reduced closeness on borrowers. This pattern is depicted in Figs. A2 and A3 showing the discrepancy between self-report and assessment for delinquent lenders and borrowers.

The last column of Table 9 compares borrowers' perceptions of change in lenders' trust in them to lenders' self-reported change in trust toward the borrower. As evident from this table, and depicted graphically in Fig. A4, borrowers are able to correctly appreciate change in lenders' trust for all loan statuses except in process and delinquent loans. It seems that in these two cases borrowers under-appreciate how much lender's trust decreased as a result of the loan.

Table 10 compares lenders' and borrowers' perceptions of how the loan affected a variety of specific aspects of the relationship: (1) how often the lender reminded the borrower of the need to repay, (2) whether the borrower avoids encounters with the lender, and (3) whether each party would be willing to enter into a loan with the other in the future.

Responses to the question about lenders' reminders of borrowers' need to pay back loans are the most surprising and subtle of the three items. On the one hand, one might think that such reminders would be especially bothersome to borrowers, and hence that borrowers would be more likely to recall them. On the other hand, lenders might frequently contemplate delivering such reminders, but find it uncomfortable to do so. Each time they do surmount their trepidation, however, they may try to deliver the message with great subtlety in order to be tactful. As a result, these episodes could be highly salient to lenders, who must overcome their discomfort, but not particularly uncomfortable to borrowers, who receive a diluted form of the message that lenders would really like to deliver. As it turns out the data strongly support the latter account. Lenders of both in process and (especially) delinquent loans, as evident from Table 10, are more likely to report reminding the borrower of the need for repayment than borrowers recall having been reminded.

When it comes to perceptions of the borrower's attempt to avoid encounters with the lender, perhaps not surprisingly, both parties report a greater likelihood of avoidance for in process and delinquent loans. Parties are fairly consistent in the former case. However, for delinquent loans lenders are far more likely to believe that borrowers are avoiding them than borrowers self-report themselves as doing so. Additionally, lenders report an increase of borrowers' avoidance from in process to delinquent loans (20% versus 63.2%). Again, there is a huge gulf in perceptions between borrowers and lenders for delinquent loans.

Finally, a very similar pattern emerges for whether the parties report willingness to engage in a loan with the other party again in the future. Borrowers are most ready to borrow again from lenders of completed and diligent loans, and are somewhat less likely to be ready to borrow again when loans are in process or delinquent. Lenders are very ready to lend again to

Table 10
Consequential interactions between lenders and borrowers for different loan statuses.

(1) Remind the borrower of the need of paying back[a]	Lend	Borrow	Test of significance of differences between lend and borrow
In process loans ($n = 141$)	48.0%	28.8%	χ^2 (1) = 5.47**
Delinquent loans ($n = 72$)	71.9%	20.0%	χ^2 (1) = 13.48***
(2) Borrower avoiding encounters with lender (lender's assessment, borrower's self-report)[b]			
Complete loans, ($n = 224$)	7.6%	2.9%	χ^2 (1) = 2.44
Diligent loans ($n = 217$)	2.7%	1.9%	χ^2 (1) = .18
In process loans ($n = 141$)	20.0%	22.7%	χ^2 (1) = .16
Delinquent loans ($n = 72$)	63.2%	26.7%	χ^2 (1) = 6.40**
(3) Make a loan with the person again?[c]			
Completed loans ($n = 224$)	89.9%	93.3%	χ^2 (1) = .84
Diligent loans ($n = 217$)	93.6%	87.9%	χ^2 (1) = 2.17
In process loans ($n = 141$)	66.7%	81.8%	χ^2 (1) = 4.16*
Delinquent loans ($n = 72$)	26.3%	73.3%	χ^2 (1) = 11.38**

* $p \leqslant .1$.
** $p \leqslant .05$.
*** $p \leqslant .001$.
[a] The four-level response scale (1 – never, 2 – occasionally, 3 – frequently, 4 – to the point of harassment) was collapsed to two levels (Yes or No). Yes included occasionally, frequently and to the point of harassment and No included never.
[b] The four-level response scale (1 – s/he is not avoiding encounters or contact with me at all, 2 – s/he somewhat avoids encounters or contact with me, 3 – s/he very much avoids encounters or contact with me, 4 – s/he no longer as any contact with me) was collapsed to two levels (Yes or No). Yes included some avoidance, very much avoidance and no longer contact and No included no avoidance.
[c] Here a Yes or No response scale was applied.

borrowers for completed or diligent loans, are somewhat less likely to lend again when loans are in process (perhaps one loan at a time is enough!), and are much less likely to be ready to lend again to a borrower associated with a delinquent loan.

5. Conclusions

This study represents, to the best of our knowledge, the first academic investigation of personal loans. Our primary purpose was not to describe the distribution of characteristics of personal loans, which would have necessitated some kind of random sample of loans. Our sample, however, with its disproportion of lower income and higher part-time employment status borrowers, provided a sufficient number of borrowers and lenders for us to gain an understanding of the range of loan characteristics: the purposes of these loans, the amounts involved, whether there is a formal written contract (or IOU), expectations of interest, collateral, etc. Beyond this descriptive information, we were predominantly interested in the role of the self-serving bias in conditioning borrowers' and lenders' encoding and recall of loan experiences, the impact of loans on feelings, and the effects of loans on the relationship between parties.

We do, indeed, find strong evidence of pervasive, self-serving bias for borrowers and lenders. Borrowers were equally likely to recall loans they received in the last month, but less likely to recall loans made earlier in time than were lenders. Borrowers were also less likely to report that the repayment date had passed, and reported higher paid-back ratios than lenders for all loans (and specifically for loans whose agreed upon repayment date had passed). Borrowers less often recalled the existence of an agreed repayment date, more often reported that loans were initiated by the lenders, and believed that lenders had felt less pressured into making the loans than lenders reported themselves as having been. When delinquent in paying off loans, borrowers were prone to rationalization, they were more likely to reframe delinquent loans as gifts, and – regardless of passed or unpassed payment date – were more likely to believe that they would ultimately pay off the loan. These different perceptions of loan status, and more generally diverse self-serving judgments by borrowers, may lead to feelings that alienate the parties of a loan from each other.

Beyond diverse evidence for a self-serving bias, we also found evidence of another, unexpected, regularity: the strikingly divergent consequences of loan delinquency on the perceptions of borrowers and lenders, including the perception of the relationship between them. This divergence can be seen in the emotions the two parties experience in connection with the loan. Borrowers' emotions are most closely associated with whether the loan has been repaid or not, rather than delinquency. Delinquency does not make a big difference, perhaps because the vast majority of delinquent borrowers are convinced that they will eventually repay the loan. For lenders, on the other hand, the repayment date seems to play a key role in assessing the borrowers' intention to pay back the loan. The borrower missing the repayment date seems to lead lenders to conclude that the loan will never be paid. Even more dramatic than the impact of delinquency on lenders' feelings about the loan is its impact on lenders' feelings about the relationship. Lenders are profoundly alienated from borrowers when borrowers are delinquent. Borrowers, in contrast, are only slightly nonplussed by their own delinquency. Friction between the parties is then exacerbated by the tendency of both to project their own feelings on their counterpart. Lenders project their alienation on borrowers, while borrowers seem to have a blind spot about how their behavior affects lenders.

6. Limitations

Inevitably, for a study of this type, there are things we would do differently if we could begin from scratch. Perhaps most obviously, a more representative sample of loans would have been desirable. Unfortunately, by their very nature, no record is usually kept of personal loans, so there is really no way to sample over loans, and instead it is necessary to sample people and ask them about loans they have made. It is unclear whether such a sample would produce a larger or smaller sample of loans, per capita. We also have no idea whether it would produce a more-even or less-even distribution of borrowing and lending. If lending is widespread in the population, but borrowing is concentrated in a more disadvantaged population stratum, then it is quite possible that a representative sample would produce a more uneven mix of borrowing and lending than occurred in our sample, and might also produce a greater discrepancy in the demographics of borrowers and lenders. Although a representative sample would certainly be an improvement, we are doubtful that it would make a great difference in our two main findings: the prevalence of self-serving bias, and the pernicious qualities of delinquent personal loans.

There are other changes we would make as well. For loans that have been paid off, it would have been helpful to ask whether they were paid off on time. Given our failure to ask, we cannot distinguish between completed loans that were or were not paid off diligently. We also regret not asking lenders about how much they reminded borrowers about payback in the case of paid off loans. Therefore, we cannot investigate whether the inconsistent perception of reminding is prevalent among paid off loans or only restricted to delinquency. In addition, we regret not having asked partners' income status, which prevents us from testing whether feeling magnanimous and feeling beholden may depend on the relative incomes of the parties. Finally, we regret not having asked respondents to report their credit score, to gain a more detailed picture about lender borrower differences in income status.

7. Final comments

An American proverb recommends that "before borrowing money from a friend decide which you need most." Our results seem to support the wisdom of the advice, although perhaps not quite as strongly as might have been the case. Certainly,

there are big differences in perceptions between borrowers and lenders. Borrowers are more likely to forget having taken the loan than lenders, are more likely to view it as having been paid off – or if not paid off to have been *more* paid off – and more likely to have reframed unpaid loans as having really been gifts disguised as loans. All of these patterns pose hazards for lenders, especially if they hope that their magnanimity will be rewarded with ongoing appreciation. However, the really big pitfalls for personal loans arise for delinquent loans – loans that are not paid off by the appointed time. Delinquency leads to enormous discrepancies in the perceptions of borrowers and lenders, and to a negative, albeit different, constellation of emotions as a function of role. Some of the problems arising from delinquency could perhaps have been avoided if partners had a contract (e.g., IOU). Such a relational contract could have included the date and the mode repayment and the possible consequences of delinquency. Unquestionably, a contract like this increases the resemblance of personal loans to commercials loans as it depersonalizes the transaction. At the same time, however, these could also protect partners from their own and their partners' self-serving behavior and viewed as a commitment device. Such contracts could eventually decrease lenders' hazards and limit borrowers' self-serving behavior by explicitly stating the conditions of the loan and the repayment.

Fortunately, however, at least in our sample, a minority of loans seem to end in delinquency. A more accurate, if less pithy, proverb might have elaborated: "Before borrowing money from a friend, *if there is any chance you won't be able to pay it back in a timely fashion*, decide which you need most."

Appendix A. Supplementary material

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.joep.2012.06.002.

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