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Two Sides of the Same Coin:

Money can Promote and Hinder Interpersonal Processes

Nicole L. Mead

Anika Stuppy

Erasmus University

Address correspondence to:
Nicole L. Mead
Rotterdam School of Management
Erasmus University
Burgemeester Oudlaan 50
3062PA Rotterdam
mead@rsm.nl

Abstract

Money is a complex phenomenon: it has the potential to unite people from opposite corners of the globe but it can also be the source of strife and suffering. Understanding when, why, and how money changes interpersonal processes is thus an important endeavor for many academic disciplines. To shed light on these questions, the current chapter reviews a growing body of research that has investigated the linkages between interpersonal outcomes and money in its varied forms, such as loving money, having money, and merely thinking about money. To date, the majority of the psychological literature points to money hindering interpersonal harmony and inner processes that facilitate interpersonal outcomes. Yet emerging evidence indicates that money has the potential to foster interpersonal harmony, particularly in exchange contexts or when the dominant exchange function of money is overridden by communal motives. Although money and power have elicited similar outcomes, power cannot explain all the cognitive, motivational, and behavioral consequences of money. Future research should therefore continue to disentangle how money and power similarly and differentially alter interpersonal processes. Additionally, research should continue to uncover the interpersonally beneficial consequences of money, so that future generations can fully utilize the remarkable strengths of money for the benefit of many.

When considered on an evolutionary timescale, money is a relatively modern human invention. Nevertheless, it has dramatically revolutionized the face of human society. Perhaps more so than any other non-biological incentive, it is a potent motivator of human behavior, making it a powerful engine of growth. Its effectiveness as an exchange tool has the potential to bind people together, facilitating mutually beneficial transactions both within communities and across opposite corners of the world.

Positives aside, money is often argued to have a dark underbelly. Scholars from diverse disciplines long have criticized money, blaming it for increased selfishness and the dissolution of social bonds and community values (e.g., Marx, 1844/1964; Schwartz, 1994). Thus, money seems to engender opposite interpersonal outcomes: the ability to pull people together and the ability to split them apart. Are these opposite interpersonal outcomes two sides of the same coin?

Mapping out when, why, and how money can promote or hinder interpersonal processes is a lofty goal, but charting the territory is greatly facilitated by a tremendous growth in empirical research on the topic. Until recently, the psychological has been primarily dominated by the view that money hinders interpersonal processes. However, emerging research suggests that money can also facilitate harmonious social outcomes. This research is still in its early stages, but the results are encouraging, and they are increasing the field's ability to paint a more textured portrait of how money influences social harmony.

Given that the psychological study of money and interpersonal processes has grown by leaps and bounds in the recent decades, the primary purpose of the current chapter is to take stock of this rapidly growing body of literature. From the outset it is

important to note that many different paradigms for studying money have emerged in the recent decades. For example, some researchers expose participants to symbolic reminders of money, in order to “prime” the concept of money. Other researchers incentivize participants with the reward of money, while still others examine loving, wanting, and having money. For the sake of clarity, we use the term money rather broadly, to include these different instantiations. However, we use specific terminology when covering the different paradigms for studying money. As it will become apparent throughout this chapter, the different methods of measuring and manipulating money often furnish surprisingly similar outcomes.

We begin the chapter by reviewing research that has examined the effects of money on interpersonal preferences and outcomes. Then we move to examining the consequences of money for inner psychological processes that help serve interpersonal outcomes, such as prosocial motivations and socio-cognitive processes. To tie together the diverse findings covered throughout the chapter, we then summarize the different meanings of money and evaluate their explanatory power for the interpersonal outcomes covered in the chapter. By way of preview, we propose that both the beneficial and harmful effects of money may be best captured through the theoretical lens that money elicits a market-pricing (Fiske, 1991, 1992) to social relationships. In this way, the beneficial and harmful effects of money for interpersonal outcomes are proposed to be two sides of the same coin. We close by discussing limitations of existing work and sketching out some potentially fruitful avenues for future research.

Interpersonal Outcomes

Given that this chapter concerns interpersonal processes, we begin at the most obvious place, whether money has the potential to alter interpersonal outcomes. To facilitate comprehension of the vast number of findings that have emerged, sub-sections are divided by the conceptualization of money and the type of outcome.

Money and Marriage: Financial Disagreements

In romantic relationships, especially marriages, discussions about money are inevitable. There is a general sentiment among lay people and academics, however, that money is not a very easy topic to discuss. Instead, money is viewed as having the potential to elicit heated disagreements among relationship partners, so much so that partners may actively try to avoid discussing the topic with one another. These lay beliefs hold a grain of truth. Marriage partners were asked about their marital problems in 1980, and these were used to predict divorce over the next twelve years (1980 to 1992). Disagreements over finances was among the top predictors of divorce, along with infidelity, alcoholism, and drug use, even while controlling for demographic variables such as age, education, income, and remarriage, d (Amato & Rogers, 1997). Hence, displeasure with how one's partner spends money may contribute to relationship dissolution.

A more nuanced perspective about the link between financial disagreements and relational conflict is possible by considering individual differences in spending styles, known as a person's "pain of paying". "Spendthrifts" are those who generally spend more than they would like to spend, whereas "tightwads" are those who generally spend less than they would like to spend (Rick, Cryder, & Loewenstein, 2008). It turns out that people tend to marry those with an opposite spending style from their own --

spendthrifts tend to marry tightwads and vice versa – and it is the discrepancy between spending styles that breeds conflict over finances, which in turn leads to marital dissatisfaction (Rick, Small, & Finkel, 2011). In other words, the more disparate the spending styles of the relationship partners, the more that they bickered over finances, and the more unhappy they were with their marriage. Notably, the link between discrepant spending types and relationship strain was statistically accounted for specifically by disagreement over finances, not by other differences that could have emerged as a function of different spending styles. These findings deepen the field's understanding of why money can strain marital relations, because they indicate that money is not unequivocally the source of dispute in marriages. When partners have similar spending styles, money is not a primary source of dispute and relational conflict. However, when people partner up with those who possess a different approach to spending money than their own, relational trouble can begin. These results also hint that, when it comes to money, people may not be willing to consider other people's perspective, which can disrupt relational harmony and make coordination between two individuals difficult. This possibility is covered more in detail in the section on empathy.

Research on the pain of paying suggests that people's particular relationship with money has important implications for their social relationships more generally. In the next section, we build on this perspective, covering research that has examined how people's desire for financial affluence may alter their interpersonal relationships. Specifically, we move to the widely investigated topic of materialism.

Materialism and Interpersonal Well-Being

People vary in the degree to which they want, value, and aspire to money and material goods. When having money and material goods takes front and center in people's value system, they are referred to as highly materialistic. The materialism literature is vast and has set the stage for much of the empirical research that has taken place in the recent decades. The thrust of this work has been that loving money comes at the cost of harmonious and healthy interpersonal relationships (for a review see Kasser, 2002).

For example, in one study, a group of 200 students were asked about their materialistic goals as well as the quality of their relationships, both friendships and romantic relationships. Results revealed a negative relationship between materialistic aspirations and interpersonal relationship quality: the more that students valued wealth and material goods, the more their relationships suffered, both in terms of length (the relationships were shorter) and quality (the relationships had more negative qualities, such as jealousy, and fewer positive qualities such as trust) (Kasser & Ryan, 1993, 2001). In a different investigation, by a different group of researchers, those who valued being "rich" were more likely to suffer from personality disorders that are characterized by a difficulty with forming social relationships, relative to those who did not strongly value being rich (Cohen & Cohen, 1995). People with strong financial aspirations were over two times more likely to be diagnosed as schizotypal and approximately one and half times more likely to be narcissistic or avoidant.

The findings from the materialism research are most often taken to mean that wanting money and material goods changes people in a way that is detrimental for their social relationships. However, the vast majority of the materialism literature consists of

correlational findings (cf. Bauer, Wilkie, Kim, & Bodenbuasen, 2012; Pieters, 2013; covered below) so results should be interpreted with caution. Additionally, to understand why materialism and poor social relations often go hand-in-hand, the different possible chains of causality should be examined.

On the one hand, it could be that people who are poor at navigating social relationships seek money as an alternative path to social success. In other words, social deficiencies cause people to seek money in the hope that money will make them likable and popular (e.g., Banerjee & Dittmar, 2008; Mead, Baumeister, Stillman, Rawn, & Vohs, 2011). On the other hand, a strong emphasis on wealth and material goods may crowd out collectivistic goals and values, thereby hampering social relationships (Burroughs & Rindfleisch, 2002). Each possibility will now be covered in more detail.

The first line of thought – money is sought to compensate for social deficiencies – is based on theoretical and empirical work suggesting that people use money to improve their interpersonal appeal (Banerjee & Dittmar, 2008; Lea & Webley, 2005; Mead et al., 2011). Direct support for this conjecture comes from a series of experiments which demonstrated that social rejection (vs. acceptance) caused people to trade off money for material goods and consumption experiences that would help them forge new social bonds, even if those material goods or experiences were opposite from their own preferences (Mead et al., 2011). For example, socially excluded participants were willing to trade off more money than others to eat chicken feet with a partner who expressed an liking for chicken feet, but only when doing so could help them gain acceptance (i.e., they would meet the person face-to-face).

Other supportive evidence comes from a study with elementary school children in the United Kingdom which found a positive relationship between ostracism and scores on materialism measures (Banerjee & Dittma, 2008). In direct support of the argument that material goods are desired to enhance interpersonal appeal, the relationship between perceived exclusion and materialism was statistically accounted for by the belief that material goods would lead to social acceptance. Still further evidence comes from an experiment which found that people who were induced to feel socially included felt less attachment to their belongings than those who were induced to feel socially excluded (Clark, Greenberg, Hill, Lemay, Clark-Polner, & Roosth, 2011). When taken together, these studies suggest that, because money is a tool that enables people to access goods and resources that can enhance one's social appeal, social deficiencies cause people to seek money and material goods as a path towards acceptance.

The second possible causal chain is that valuing money changes people in a way that strains interpersonal harmony. To test this possibility empirically, a series of experiments experimentally elicited materialistic desires (i.e., valuing material goods) among some participants but not others and examined subsequent changes in socio-cognitive variables that are pertinent for the formation and maintenance of social relationships (Bauer et al., 2012). In one study, viewing pictures of luxury goods (vs. pictures of neutral objects) reduced participants' desire to engage in social activities, arguably because it activated the desire for material goods. In a different study, participants completed a task that was either framed as a "consumer reaction study" or a "citizen reaction study". Participants who were "cued with consumerism" showed a stronger bias toward self-enhancement values, which are problematic for social well-

being because they conflict and perhaps even suppress communal values (e.g., Burroughs & Rindfleisch, 2002; Maio, Pakizeh, Cheung, & Rees, 2009; Schwartz, 1992). These results suggest that even transient materialistic desires can increase selfishness, competitiveness, and mistrust. The findings are noteworthy because they go beyond the notion that materialism and poor social relationships is primarily at the individual level. Instead, the findings suggest that modern human life, which bombards people with monetary and material cues, can create a self-centered mindset that hinders harmonious social relationships.

Two possible causal chains for the positive correlation between materialism and social deficiencies have received empirical support. People who experienced social deficiencies sought and used money for their quest of social acceptance. However, desiring material goods increased self-enhancement values and decreased social engagement. These two chains may not be separate at all; they may be linked in reciprocal relationships, as was suggested by the findings of a recent longitudinal study. Pieters (2013) tracked 2,500 people over 6 years and found bidirectional relationships between materialism and loneliness over time. Pursuing material goods to gain status or to increase one's happiness resulted in a self-perpetuating cycle of materialism and loneliness. However, pursuing material goods for the their own enjoyment decreased loneliness and was unaffected by loneliness also. This last result does not conclude, however, that wanting material goods for material mirth bolsters interpersonal outcomes. Loneliness is a subjective perception of whether one's social needs are being met. Thus, it could be that people who are personally gratified by material objects do not desire social relationships, which is why pursuing material goods did not

contribute to loneliness. Nevertheless, this longitudinal study is important because it provides the first demonstration that materialism and loneliness can reinforce one another over time.

Income and Socio-Economic Status

Beyond wanting and valuing money, how does having money, particularly an abundance of money, change interpersonal processes? Here again, two plausible but opposite possibilities are possible: having ample monetary resources can make one more or less interpersonally appealing in the social arena.

One of the most beneficial consequences of having money is that it enables people to have control over their own outcomes (Johnson & Krueger, 2006). For all manner of unexpected events – breaking one's leg on the top of a mountain, a relative who lives across the world becomes ill, or one's car breaks down in the middle of nowhere – having money greatly facilitates one's ability to tackle or at least mollify the problem in a swift manner. This ability to take things as they come, to have control and mastery over one's environment, may instill a sense of self-efficacy in individuals who have money. Indeed, the link between income and psychological adjustment has been accounted for by performance self-esteem (Gebauer, Nehrlich, Sedikides, & Neberich, 2013). And the inverse of having money – lacking money – can hinder well-being (Price, Choi, & Vinokur, 2002). If money fosters feelings of self-efficacy, which has been linked with interpersonal success across social and achievement domains (Sashkin & Rosenbach, 1996; Sherer et al., 1982; Wheeler & Ladd, 1982), it is theoretically possible that having money could promote positive interpersonal harmony.

On the other hand, money is a social tool that can substitute for other resources (Lea & Webley, 2006) including social relationships (Zhou et al., 2009). Hence, having money may enable people to focus on their own desires and wishes, thereby detracting from the amount of time, attention, and energy that people devote to others. This line of thought suggests, then, that having money may diminish social connectedness.

Research budgets (not to mention institutional review boards) often limit researchers from endowing some people (but not others) with large sums of money based on random assignment. Thus, the small amount of evidence that exists for the relationship between monetary affluence and social outcomes is primarily correlational. Despite the limitations of correlational research, it warrants mention because of its external validity.

Research documenting the relationship between wealth and interpersonal processes supports the hypothesis that having money can reduce social sensitivity. In one study, women who were employed, and therefore possessed personal income, reported increased thoughts of divorce (Booth, Johnson, White, & Edwards, 1984) and increased likelihood of divorce (Spitze & South, 1985). These results could be taken as a sign that financial stability leads women to become cold and insensitive to their romantic relationship partners. However, it is possible that possession of personal financial resources increased the women’s possibility to exit a problematic relationship.

Other evidence in support of the theory that monetary affluence can undermine social connectedness comes from a study that assessed monetary affluence and the amount of meaning that parents gained from taking care of their children (Kushlev, Dunn, & Ashton-James, 2012). In this study, parents were asked to report the previous

day's activities, episode-by-episode using the Day Reconstruction Method (DRM; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). Results indicated that SES was negatively related with how meaningful it was to spend time with the children, even when controlling for general meaning in life, which was not significantly related to SES (Kushlev et al., 2012; Study 1). (SES is comprised of income but also education so it is not possible to equate SES purely with having money.) Put differently, the higher the SES, the less parents reported feeling fulfilled by caring for their children.

Yet another finding in support of the hypothesis that more money leads to more social disengagement comes from a study which assessed whether people are able to assess correctly the SES of strangers based on nonverbal cues that signal social engagement (or disengagement) (Kraus & Keltner, 2010). In this study, participants of varying SES were asked to engage in an interaction with a stranger. Small fractions of these clips (60 seconds) were coded for social engagement (e.g., laughing) and disengagement (e.g., not looking at the other interaction partner and doodling). The clips were then shown to a naïve group of observers who guessed (quite accurately) the SES of the target in the video. Results revealed that upper-SES individuals engaged in more social disengagement cues and fewer engagement cues than lower-SES individuals, and that these cues predicted the observers' estimations of participants' SES.

Although it is theoretically possible that having money could promote people's social appeal and the capacity to navigate social interactions, the majority of the published literature (so far) suggests that wealth is associated with disconnection from others. This irony of possessing money and wealth, a signal of social status and which

can be used to promote positive social events, but being disconnected from others dovetails with the bidirectional relationships between materialism and loneliness that were covered in a previous section. The negative relationship between money and social harmony despite people's intentions to use money in pursuit of social success suggests that there may be something about money per se that changes people's approach to social relationships. We turn to this possibility next.

Experimental Manipulations of Money

Despite the aforementioned limited research budgets, researchers have devised creative methods to activate temporarily the perception of monetary abundance in participants' minds. For example, participants can be induced to perceive themselves as relatively high in social rank (e.g., Kraus, Côté, & Keltner, 2010) by asking them to compare themselves with people who have the least amount of money, least amount of education, and the worst jobs. (Note that this manipulation again confounds money with status and education so the effects cannot be attributed only to money.) Other methods involve having participants count a large stack of money (vs. a large stack of papers; Zhou et al., 2009; Yang et al., 2013). Yet another set of manipulations involves exposing people to symbolic cues connoting wealth, such as pictures or screensavers that display large sums of monetary currency (vs. control pictures, such as flowers, fish, or green lettuce; Vohs et al., 2006). These latter manipulations are conjectured to activate the construct of monetary abundance, evidenced by the finding that the effects of high money manipulations converge with money primes, whereas the effects of low money manipulations diverge from both high money manipulations and money primes (Vohs et al., 2006; 2008).

Research experimentally manipulating the presence of monetary cues suggests that even small reminders of money can hinder people's social sensitivity. For example, the previously mentioned negative correlation between monetary affluence and parents' meaning derived from childcare was conceptually replicated using an experimental procedure that utilized monetary (vs. neutral) primes (Kushlev et al., 2012). In this experiment, parents at a children's festival were asked to complete a questionnaire that had a photograph of either money (Canadian bills) or flowers. After viewing the picture of monetary bills, parents reported experiencing less meaning while being at the children's festival (with their child or children), relative to parents who had seen a picture of flowers. In other words, merely seeing a symbolic representation of money actually caused parents to feel as though spending time with their children at the festival was not an experience that was personally fulfilling or meaningful.

Why might merely seeing a picture of money reduce parents' sense of fulfillment when interacting with their children? Reminders of money have been argued to activate a state of self-sufficiency, wherein people desire to pursue agentic goals independently of others (Vohs et al., 2006). Said differently, money may activate self-enhancement goals, which may automatically suppress other-oriented goals (cf. Maio et al., 2009). In support of the self-sufficiency hypothesis, participants primed with money worked longer on tasks before asking for help from others and they preferred to work and play alone (Vohs et al., 2006). In this way, exposure to a monetary cue at the children's festival may have activated self-enhancement goals among the parents. When asked about their experience at the children's festival, then, the overarching communal context of the children's festival may have clashed with the activated achievement goal, thereby

diminishing the amount of meaning that parents derived from being at the children's festival.

The self-sufficiency theory of money has begun to receive considerable support from studies conducted by different research groups, using different types of manipulations, and located in different places around the world (e.g., Gasiorowska, Zaleskiewicz, & Wygrab, 2012; Mogliner, 2010; Molinsky, Grant, & Margolis, 2012; Pfeffer & DeVoe, 2009; Roberts & Roberts, 2012). For example, participants whose attention was subtly directed toward money (vs. time) subsequently wanted to devote less time to social activities and more time to work (Mogilner, 2010). Additional studies conceptually replicating the findings of Vohs et al. (2006) will be covered in the subsequent section on prosocial motivations.

Research experimentally manipulating the presence or absence of monetary cues indicates that the psychological construct of money has the potential to change people's interpersonal relationships. To date, findings from the literature suggest that activating the concept of money in people's mind has the potential to intensify personal goal pursuit at the expense of interpersonal insensitivity. It may be that monetary cues activate achievement goals, which in turn suppress social goals. However, direct evidence for this mechanism (or others) is still wanting.

Positive Interpersonal Outcomes

As mentioned at the opening of this chapter, the majority of the published literature on money suggests that money can have detrimental consequences for interpersonal processes. However, there is emerging evidence that money has the potential to enhance interpersonal harmony.

By facilitating exchange between two individuals, money can increase people's overall welfare and promote trust. By way of example, one of the authors of this chapter recently wished to go on a holiday in the mountains of a foreign country. To secure an apartment in advance, she found an apartment online, emailed the owner, agreed on a set of dates with the owner, and then wired "assurance" money to this stranger, in complete trust that she would stay in the apartment when she arrived in the little mountain village. It may be then, that when people think about money in the context of markets, trust instead of selfishness ensues. Indeed, priming people with markets and trade increased people's perceptions that other agents will act in a trustworthy manner, which in turn increased people's trusting behavior (Al-Ubaydli, Houser, Nye, Paganelli, & Pan, 2013). This research highlights an important benefit of money: it can build trust among complete strangers.

Spending money on others can boost a socially desirable outcome – happiness (Dunn, Aknin, & Norton, 2008). Participants were given a small amount of money ($5 or $20) and were told to spend it on themselves or others. Participants who spent the money on others reported a burst of happiness in comparison to those who spent it on themselves. Perhaps more impressive is the finding that the amount of money did not matter for happiness among those who spent the money on others. In other words, it may be that money can promote positive outcomes when communal norms trump the seemingly dominant tendency for money to evoke concerns about maximizing self-interest.

Other supportive evidence that money can boost happiness when it is spent from others comes from a study showing that spending money on interpersonal experiences

is key to deriving happiness from discretionary spending (Caprariello & Reis, 2013). As far as we know, it remains unclear whether social interactions actually benefit from the money spent, but happiness must certainly help rather than hinder social interactions.

Empirical evidence for the positive interpersonal benefits of money pales in comparison to the number of studies that have documented the harmful effects of money. Nevertheless, the research covered above suggests that money can have beneficial consequences for interpersonal harmony when the social context calls for market-related norms and thus money matches the social context. Additionally, although people may think that spending money on themselves can promote happiness (Dunn et al., 2008) spending money on others and interpersonal experiences may promote personal happiness in part because it connects people to others.

Summary of the Effects of Money for Interpersonal Outcomes

The chapter opened with the statement that money can help and hinder social interactions. As should be clear at this point, the majority of the literature currently points toward money being associated with social difficulties. Financial disagreements is one of the top predictor of divorce, and marriage partners with a dissimilar spending style tend to argue about money, which in turn contributes to marital dissatisfaction. Desiring money because it is a status signal or because it is often associated (perhaps erroneously) with happiness tends to increase rather than decrease loneliness. Having money reduces the meaning that parents feel while interacting with their children. Merely being reminded of the concept of money decreases people’s willingness to engage in social activities, which can undermine happiness and social well-being.

On the other hand, there is emerging evidence that money promotes positive interpersonal outcomes. Money has been shown to promote trust between complete strangers, thereby betting each person's personal circumstnaces (i.e., one person is better off financially and the other gets what he or she wants or needs). Additionally, spending money on interpersonal experiences can potentially strengthen interpersonal bonds and increase personal well-being.

As mentioned, it may be that money is deeply associated with personal goals, which can be diametrically opposed to social ones. As such, when money is being used, or when money is on the mind, money may focus people on personal goals, needs, and desires, thereby reducing people's sensitivity to the needs of others. However, when the context promotes monetary norms (e.g., market or exchange context in which it is expected that each person will try to maximize their personal outcome), or when communal motivations trump the utilitatrian function of money (e.g., spending money on others), money may facilitate interpersonal harmony..

Inner Processes that Facilitate Interpersonal Harmony

The previous section covered how interpersonal and relational outcomes can be influenced by money. To dig deeper into the inner psychological mechanisms through which money may exert its effects on interpersonal outcomes, the current section of this chapter delves into research that has investigated the influence of money on socio-moral and socio-cognitive outcomes that arguably facilitate interpersonal harmony.

Socio-moral Motivations and Behaviors

Throughout evolutionary history, humans relied heavily on their group for survival and safety. For groups to survive and thrive, it was necessary for its members to band

together and cooperate. Effective functioning of modern day society and interpersonal relationships still relies on people following a great many prosocial rules and norms, many of which advocate curbing selfish, antisocial, and otherwise socially undesirable behavior. However, if money causes people to focus on their own needs, thereby becoming insensitive to the needs of others, it is possible that money may undermine prosocial behaviors that promote positive interpersonal outcomes.

Economic environments seem to be particularly fertile ground for fostering self-interested behaviors that reflect reduced concern for the needs of others. For example, when given money that could be put into either a private account, which would be given back in full at the end of the experiment, or a public account, which would be pooled, multiplied by a factor greater than one, and then distributed equally among all participants, graduate students who studied economics put less of their money in the public endowment compared to other students who did not study economics (Marwell & Ames, 1981). In a different study, economists playing the prisoner’s dilemma game defected more than others, and they also donated less to charity (Frank, Gilovich, & Regan, 1993).

Elevated levels of self-interested behaviors have been found in other contexts that place a similarly strong focus on money – namely, among business students and managers. When dividing money, business students kept the largest part for themselves, thereby displaying reduced concern for fairness (Wang, Malhotra, & Murnighan, 2011). Among a group of managers, financial pay was positively associated with concern about one’s own salaries and negatively related to concern about the well-being of employees (Jordan, 2010). These results suggest that people who are

chronically exposed to money, or chronically think about money, act in ways that promote and protect their own outcomes at the expense of others.

It is possible that people who pursue careers in economics or business are naturally competitive and self-interested, not that chronic contact with money engenders an increasing focus on the self. However, experimental research suggests that merely exposing people to business concepts reduced cooperation levels (Kay, Wheeler, Bargh, & Ross, 2004; Liberman, Samuels, & Ross, 2004). Indeed, money is so strongly associated with economic and business concepts that money on its own is sufficient to activate a “business mindset”, which is characterized by a prioritization of self-interests over the interests of others, particularly employees (Kouchaki, Smith-Crowe, Brief, & Sousa, 2013). Kouchaki and colleagues found that reminders of money, such as unscrambling phrases containing money-related words promoted engagement in unethical behaviors such as lying on a task to earn more money. These findings converge with the previously mentioned field study which found that business managers put the interests of the company and their own salary before the well-being of their employees (Jordan, 2010).

One could argue that selfishness is driven by a desire for money and to get ahead, but that once individuals have money they will curb their selfish ways. However, as mentioned, the self-sufficiency theory of money suggests that having an abundance of money frees people from being dependent on others, which may reduce people’s willingness to trade off their time and resources to respect the needs of others. Indeed, a recent study found that upper-class individuals engaged in more unethical behaviors that lower-class individuals (Piff, Stancato, Côté, Mendoza-Denton, & Keltner, 2012).

For example, upper-class individuals were more likely than lower-class individuals to break the law and cut off a pedestrian when driving, and they also reported higher intentions to engage in unethical behaviors.

Fascinating research conducted with young children in Poland suggests that the symbolic meaning of money may become ingrained in children's minds very early in life (Gasiorowska et al., 2012). One study with 7 and 8 year olds found that children who saw a money poster (vs. flower poster) chose the relatively more selfish option – keeping 2 stickers for themselves and giving no sticker to a peer – over the more social option – keeping 1 sticker for the self and giving 1 sticker to the other. This reduced prosocial behavior was found in a different context, helping an adult, which is an important replication because young children are more dependent on adults than their peers. In that study, 5 and 6 year olds who were shown a picture of money carried fewer crayons to the experimenter than children not shown a picture of money (Gasiorowska et al., 2012). The fact that young children in Poland and adults in North America responded the same way to monetary reminders suggests that the linkage between money and the pursuit of self-interest may be very deep and potentially universal.

Perhaps money reminders make people stingy about donating a limited resource such as time but not resources that can be replenished such as money. To test this, a group of researchers manipulated whether people were first asked about intentions to volunteer or were first asked about intentions to donate money (Liu & Aaker, 2008). When people were asked first how much money they wanted to donate, charitable contributions decreased. The authors argued that asking about intentions to donate

money caused people to adopt a mindset that is geared toward maximizing economic utility, whereas asking first about time caused people to adopt a mindset that is geared toward maximizing emotional happiness, which could be increased by devoting to a good cause. When time is monetized, however, a reduction in willingness to help occurs as well. Simply asking people to think about their time in terms of money subsequently reduced their willingness to volunteer their time without remuneration (Pfeffer & DeVoe, 2009)

Additional evidence that reminders of money diminish donations comes from a study that primed participants with money or neutral concepts and then gave all participants the opportunity to donate money to a student fund on the campus where the study took place (Vohs et al., 2006). Notably, in this study, all participants were given $2 in quarters, so the donation would not come out of students' own pocket. Nevertheless, participants primed with money donated less money than those not primed with money. In a different investigation, 13 and 14 year olds who saw a $100 bill on the bottom of their questionnaire reported less favorable attitudes toward charitable giving and were willing to donate less money to a food bank, relative to participants who saw a Thanksgiving cornucopia on the bottom of their questionnaire (Roberts & Roberts, 2012).

To summarize, a substantial amount of research suggests that money causes people to prioritize themselves over others, thereby reducing prosocial behaviors such as cooperation, donation, and helping, and paving the way for antisocial behavior such as unethicality. These findings were robust across many different types of samples:

economics students, economists, business students, business managers, university students, and young children in Poland.

These results could be interpreted with the previously mentioned theories of self-sufficiency or activation of self-enhancement goals. However, the results in this section also highlight another possibility: money shifts people into a money-market mindset (Fiske 1991, 1992), in which they are primarily concerned with maximizing their ratio between inputs and outputs. This possibility will be discussed further in the mechanism section of this chapter.

Socio-Cognitive Process

Empathy is a socio-cognitive process that involves moving beyond one's own feelings to consider the feelings and needs of others. Because it involves recognizing and attending the needs of others, it is an essential building block of prosocial behavior (Eisenberg & Miller, 1987). Given that money reduces people's dependency on others and cause people to prioritize the self over others, money may interfere with empathy.

Indirect evidence comes from the research on financial disagreements among marriage partners. As mentioned, the more that relationship partners differed in their spending styles, the more they argued (Rick et al., 2011). This result suggests that, when it comes to money, people may have a difficult time appreciating others' differences. More direct evidence for the notion that money reduces empathy comes from a study which found that lower-class individuals outperformed higher-class individuals on a test of empathic accuracy (Kraus et al., 2010). In other words, people high in SES were less accurate than people low in SES when trying to intuit the feelings of others. Attempting to understand the feelings of others and being accurate about the

feelings of others are not perfectly correlated, so it is possible that having money reduces empathic accuracy but not empathic motivation.

In a different study, however, participants who were reminded of economic concepts (vs. neutral concepts) displayed less compassion towards others (Molinsky, Grant, & Margolis, 2012). The drop in compassion only occurred when people primed with economic concepts were delivering economic-related news, because they perceived compassion and emotions as being unprofessional in that context. This study suggests, then, that economic mindsets do not cause people to become robots or unfeeling monsters. Rather, an economic mindset may lead people to use a specific set of norms that dictate when it is appropriate to interact with others with emotions.

The previously described research investigated how having money or thinking about money altered empathic processes. Other research incentivized empathic accuracy with monetary rewards. On the one hand, because monetary rewards motivate people to engage in effortful processes, monetary rewards could improve empathic accuracy. On the other hand, monetary rewards may activate a mindset and norms that emphasize the self as separate from others, which would suggest that monetary incentives should decrease accuracy. Results supported the latter prediction: participants offered monetary rewards for empathic accuracy performed worse than those who were not offered monetary rewards (Ma-Kellams & Blascovich, 2013).

Multiple findings suggest that money disrupts engagement in empathy, which is a socio-cognitive process that is a key element of prosocial behavior. Thus, empathy may be one potential mechanism that can help account for why money reduces prosocial behavior.

Diverging Effects of Money on Prosocial Outcomes

Aside from the research on materialism, most of the experimental research covered in this chapter is based on the implicit assumption that people hold a similar idea of money in their mind (and thus priming the idea of money has similar effects across different types of individuals). However, a recent investigation found that people may hold two very different meanings of money in their mind, and that money can differential effects depending on which one is activated: money as means of fair exchange and money as a means for selfishness (Yang et al., 2013).

On the one hand, people know that money can be a facilitator of economic exchange and it can also help one enjoy the good things in life, such as take care of loved ones and enjoy time with family and friends. On the other hand, people also know that money is used to engage in dirty practices, laden with selfishness and greed. These two meanings of money, and their attendant behaviors, were elicited by having participants handle either clean or dirty money. (To create the “dirty money”, new bills were put into a sack with wet dirt for 2 weeks.) For example, farmers at a farmer’s market cheated a confederate when they had previously handled dirty money. However, when they handled clean money, the farmers gave fair value to the confederate. In laboratory studies with economic games, participants who handled clean money tended toward fair and honest behavior whereas those who handled dirty money tended toward selfish practices.

Two Sides of the same Coin?

Throughout this chapter, diverse theories of the psychological meaning of money have been covered: money as a tool (Lea & Webley, 2006), money as a resource (Zhou

et al. 2009), and money as means of self-sufficiency (Vohs et al., 2006; 2008). Other theories suggest that money activates a particular mindset, replete with norms and scripts for how to treat the self in relation to others. For example, money has been proposed to elicit a business mindset (Kouchaki et al., 2013) or an economic mindset (Liu & Aaker, 2008; Molinsky et al., 2012; Pfeffer & Devoe, 2009).

When confronted with this dizzying array of divergent effects and explanations, one inevitably attempts to seek order and determine whether one is more accurate than another. Much more empirical work needs to be conducted in order to pinpoint the precise mechanism(s). However, when reviewing the possible theories and the current body of literature, the market-pricing theory of social relations (Fiske 1991, 1992) emerges as a powerful explanatory mechanism for the positive and negative effects of money on interpersonal processes.

Fiske’s (1991, 1992) marketing-pricing mode is one of the four relational modes that have been argued to form the basis of social life. (Relational modes are scripts that guide motivations, cognitions, and behaviors in social interactions.) A market-pricing mode, which may have emerged with the advent of money, and which is the only mode found exclusively among humans, involves maximizing the ratio between their inputs and outputs of a transaction. Thus, despite the diverse terminology used above, an economic mindset, materialistic mindset, and business mindset can all be encapsulated by a market-pricing orientation, because they all posit that people are predominately concerned with maximizing their own outcomes.

To illustrate, imagine you are offered $15 to help a friend move. When given such an offer, you would evaluate this offer on the basis of wehther the tradeoff

between time and money is to your benefit. Relational or social factors would take a back seat. Imagine instead that you were offered pizza and beer. Despite the fact that the pizza and beer may be equivalent to the $15 in value (depending on your appetite and drinking inclinations), you would nevertheless evaluate the “social” offer very differently. Instead of using money-market norms, you would make your decision based on social rules and norms, such as how much you like the person, how much you value the friendship, and/or whether that person has helped you in the poast. Research supports this example, demonstrating that the type of reward shifts people into a money or socail market and thereby determines the amount of effort that people devote to helping others (Heyman & Ariely, 2004). In a social market, people helped in a way that reflected an inensitivity toward the magnitude of the reward, but in a money market people’s effort was directly proportional to the magnitude of the reward.

A market-pricing mode (Fiske, 1992) captures money's diverse and divergent effects in the social sphere. For example, a market-pricing mode emphasizes rational and fair trade and does not make allowances for intimacy and emotional connectedness. Indeed, those are undesirable. This characteristic of market-pricing mode can help explain a whole host of results covered in this chapter, such as reduced helping (e.g., Pfeffer & DeVoe, 2009; Vohs et al., 2006), increased physical distance placed between the self and a stranger (Vohs et al., 2006), lack of sensitivity to the motivations and needs of others (Ma-Kellams & Blascovich, 2013; Rick et al., 2011), and believing that displaying emotions while delivering bad news in an economic environment is not professional (Molinsky et al., 2012). In these cases, it may be that money shifts people into a market-pricing mode which conflicts with the broader

communal context. A market-pricing orientation can also help understand how money can facilitate positive interpersonal outcomes, such as the increased trust that people displayed toward a stranger when they were primed with a money market (Al-Ubaydli et al., 2011) or clean money (Yang et al., 2013). Thus, a market-pricing mode may be theoretical framework that can help account for the helpful and harmful effects of money on interpersonal relations.

Before closing, it is important to mention a mechanims that has been neglected thus far but may seem intuitively obvious: social power. Defined as having control over the rewards and punishments of others (Keltner, Gruenfeld, & Anderson, 2003), social power often involves having control over money, making power and money incredibly intertwined concepts. Furthermore, money and power have furnished very similar outcomes, such as selfishness and egocentrism.

Despite the potential link in everyday life and despite the similar outcomes produced by money and power, research has not found a link between money primes and enhanced feelings of power (e.g., Kouchaki et al., 2013; Vohs et al., 2008). Perhaps it is the case that money and power shift people into two very different relational modes – namely, a market-pricing mode and authority-ranking mode, respectively (Fiske, 1991). As mentioned, a market-pricing mode emphasizes computation of rational cost-benefit analyses as well as independence from others. In contrast, social authority-ranking mode emphasizes dominance over others through control of resources. Thus, by definition social power involves hierarchial relations and interdependence with others, both of which are relativlely less prominent in the market-pricing mode. Possibly these theoretical distinctions can help understand when and why

money and power should overlap and when and why they should be distinct. Indeed, further consideration of the two distinct relational modes in which money and power lie may help researchers develop testable hypotheses that can deepen the field's understanding of money and power.

Limitations and Future Directions

The market-pricing mode and self-sufficiency hypothesis of money are somewhat rivaling theories as they often generate similar predictions (less prosociality and ethicality) but suggest different underlying mechanisms. Future research should therefore examine mediating variables to determine whether both explanations are feasible or one is more powerful than the other. Researchers could also pinpoint competing outcomes that stem from each theory to determine if one theory is more valid than the other.

Additionally, although researchers have now documented a large array of the effects of money, underlying cognitive and socio-cognitive mechanisms are relatively understudied. Feelings of strength (Zhou et al., 2009), empathy (Molinsky et al., 2012) and a business mindset (Kouchaki et al., 2013) have been identified as potential mediators. Identifying more socio-cognitive mechanism would help shed light on whether money primarily operates by evoking a market-pricing mode or be engendering feelings of self-sufficiency. For example, the former suggests that other's needs are deliberately ignored, while the latter would suggest they are merely overlooked.

In addition to devoting more time and resources to the “black box”, future research should strive to identify whether money interacts with individual differences (e.g., achievement motivation or gender) and situational circumstances (e.g., communal

versus exchange contexts). Indeed, when money was used in the service of communal outcomes rather than personal outcomes, positive benefits ensued. Gaining a deeper understanding how individual differences and situational contexts interact with money would greatly enhance the field's understanding of the impact of money on social cognition and behavior.

Concluding Remarks

Until a few decades ago, the domain of money and interpersonal harmony was primarily the domain of speculation. Not so anymore. An increasingly rich body of research details the consequences of money for interpersonal harmony. Increasingly, it is becoming clear that money has deeply ingrained psychological links with self-interest and self-enhancement, and that these are instilled at a very early age in life and across many different cultures. As such, money can have powerful and detrimental consequences for social harmony. People should therefore be cognizant about their motives for money as well as the presence of money in their daily life. Indeed, money is a resource that, when used correctly, can bring people together and facilitate memorable experiences. The key may lie in overcoming the money-market mindset that is intimately and perhaps automatically linked with money.

References

Al-Ubaydli, O., Houser, D., Nye, J., Paganelli, M. P., & Pan, X. (2011). The causal effect of market participation on trust: An experimental investigation using randomized control. George Mason University Working Paper in Economics No. 11–38.

Amato, P. R., & Rogers, S. J. (1997). A longitudinal study of marital problems and subsequent divorce. *Journal of Marriage & the Family, 59*, 612-624.

Banerjee, R., & Dittmar, H. (2008). Individual differences in children's materialism: The role of peer relations. *Personality and Social Psychology Bulletin, 34*, 17-31.

Bauer, M. A., Wilkie, J. E. B., Kim, J. K., & Bodenhausen, G. V. (2012). Cuing consumerism: Situational materialism undermines personal and social well-being. *Psychological Science, 23,* 517-523.

Booth, A., Johnson, D. R. White, L., & Edwards, J. N. (1984). Women, outside employment, and marital instability. *The American Journal of Sociology, 90,* 567-583.

Burroughs, J. E., & Rindfleisch, A. (2002). Materialism and well-being: A conflicting values perspective. *Journal of Consumer Research, 29*, 348-370.

Caprariello, P. A., & Reis, H. T. (2013). To do, to have, or to share? Valuing experiences over material possessions depends on the involvement of others. *Journal of Personality and Social Psychology, 104*, 199-215.

Clark, M. S., Greenberg, A., Hill, E., Lemay, E. P., Clark-Polner, E., & Roosth, D. (2011). Heightened interpersonal security diminishes the monetary value of possessions. *Journal of Experimental Social Psychology*, *47*, 359-364.

Cohen, P., & Cohen, J. (1995). *Life values and adolescent mental health*. Mahwah, NJ: Erlbaum.

Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes happiness. *Science*, *319*, 1687-1688.

Eisenberg, N., & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. *Psychological bulletin*, *101*, 91.

Epley, N., Keysar, B., Van Boven, L., & Gilovich, T. (2004). Perspective taking as egocentric anchoring and adjustment. *Journal of Personality and Social Psychology, 87,* 327-339.

Fiske, A. P. (1991). *Structures of social life: The four elementary forms of human relations: Communal sharing, authority ranking, equality matching, market pricing*. New York, NY, US: Free Press.

Frank, R. H., Gilovich, T., & Regan, D. T. (1993). Does studying economics inhibit cooperation? *The Journal of Economic Perspectives, 7,* 159-171.

Gasiorowska, A., Zaleskiewicz, T., & Wygrab, S. (2012). Would you do something for me? The effects of money activation on social preferences and social behavior in young children. *Journal of Economic Psychology, 33*, 603-608.

Gebauer, J. E., Nehrlich, A. D., Sedikides, C., & Neberich, W., (2013). The Psychological Benefits of Income are Contingent on Individual-Level and Culture-Level Religiosity. *Social Psychological and Personality Science,* 4, 569-578.

Heyman, J., & Ariely, D. (2004). Effort for payment a tale of two markets. *Psychological Science*, *15*, 787-793.

Johnson, W. & Krueger, R. F. (2006). How money buys happiness: Genetic and environmental processes linking finances and life satisfaction. *Journal of Personality and Social Psychology, 90*, 680-691.

Jordan, J. M. (2010). Salary and decision making: Relationship between pay and focus on financial profitability and prosociality in an organizational context. *Journal of Applied Social Psychology, 40*, 402-420.

Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience: The Day Reconstruction Method. Science, 306, 1776–1780.

Kasser, T. (2002). *The high price of materialism.* Cambridge: MIT Press.

Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology, 65*, 410-422.

Kasser, T., & Ryan, R. M. (2001). Be careful what you wish for: Optimal functioning and the relative attainment of intrinsic and extrinsic goals. In P. Schmuck, & K. M. Sheldon (Eds.), *Life goals and well-being: Towards a positive psychology of human striving.* (pp. 116-131). Ashland, OH, US: Hogrefe & Huber Publishers.

Kay, A. C., Wheeler, S. C., Bargh, J. A., & Ross, L. (2004). Material priming: The influence of mundane physical objects on situational construal and competitive behavioral choice. *Organizational Behavior and Human Decision Processes, 95*, 83–96.

Keltner, D., & Gruenfeld, D. H, & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review, 110*, 265-284.

Konrath, S. H., O'Brien, E. H., & Hsing, C. (2011). Changes in dispositional empathy in American college students over time: A meta-analysis. *Personality and Social Psychology Review, 15*, 180-198.

Kouchaki, M., Smith-Crowe, K., Brief, A. P & Sousa, C. (2013). Seeing green: Mere exposure to money triggers a business decision frame and unethical outcomes. *Organizational Behavior and Human Decision Processes*, No Pagination Specified. doi:10.1016/j.obhdp.2012.12.002

Kushlev, K., Dunn, E. W., & Ashton-James, C. E. (2012). Does affluence impoverish the experience of parenting? *Journal of Experimental Social Psychology, 48*, 1381-1384.

Kraus, M. W., Côté, S., & Keltner, D. (2010). Social class, contextualism, and emphatic accuracy. *Psychological Science, 21,* 1716-1723.

Lea, S. E. G., & Webley, P. (2006). Money as tool, money as drug: The biological psychology of a strong incentive. *Behavioral and Brain Sciences, 29,* 161-209.

Lastovicka, J. L., & Sirianni, N. J. (2011). Truly, madly, deeply: Consumers in the throes of material possession love. *Journal of Consumer Research*, *38*, 323-342.

Liberman, V., Samuels, S.M., and Ross, L. (2004). The name of the game: Predictive power of reputations versus situational labels in determining Prisoner’s Dilemma game moves. *Personality and Social Psychology Bulletin, 30*, 1175-1185.

Liu, W., & Aaker, J. (2008). The happiness of giving: The time-ask effect. *Journal of Consumer Research, 35*, 543-557

Maio, G. R., Pakizeh, A., Cheung, W. and Rees, K. J. (2009). Changing, priming, and acting on values: Effects via motivational relations in a circular model. *Journal of Personality and Social Psychology, 97*, 699-715.

Ma-Kellams, C., & Blascovich, J. (2013). The ironic effect of financial incentive on empathic accuracy. *Journal of Experimental Social Psychology, 49*, 65-71.

Marwell, G., & Ames, R. (1981). Economists free ride, does anyone else? Experiments on the provision of public goods IV. *Journal of Public Economics, 15,* 295-310.

Marx, K. (1964). *The economic and philosophic manuscripts of 1844* (M. Milligan, Trans.). New York: International Publishers.

Mead, N. L., Baumeister, R. F., Stillman, T. F., Rawn, C. D., & Vohs, K. D. (2011). Social exclusion causes people to spend and consume in the service of affiliation. *Journal of Consumer Research, 37,* 902–919.

Mogilner, C. (2010). The pursuit of happiness: Time, money, and social connection. *Psychological Science, 21*, 1348-1354.

Molinsky, A. L., Grant, A. M., & Margolis, J. D. (2012). The bedside manner of homo economicus: How and why priming an economic schema reduces compassion. *Organizational Behavior and Human Decision Processes*, *119*, 27-37.

Norton, M. I., Sommers, S. R., Apfelbaum, E. P., Pura, N., & Ariely, D. (2006). Color Blindness and Interracial Interaction: Playing the Political Correctness Game. *Psychological Science, 17,* 949-953.

Piff, P. K., Stancato, D. M., Côté, S., Mendoza-Denton, R., & Keltner, D. (2012). Higher social class predicts increased unethical behavior. *Proceedings of the National Academy of Sciences of the United States of America, 109*, 4086–4091.

Pfeffer, J., & DeVoe, S. E. (2009). Economic evaluation: The effect of money and economics on attitudes about volunteering. *Journal of Economic Psychology, 30,* 500–508.

Price, R.H., Choi, J.N., & Vinokur, D.A. (2002). Links in the chain of diversity following job loss: How financial strain and loss of personal control lead to depression, impaired functioning, and poor health. *Journal of Occupational Health Psychology, 7*, 302–312.

Rick, S. I., Cryder, C. E., & Loewenstein, G. (2008). Tightwads and spendthrifts. *Journal of Consumer Research, 34*, 767-782.

Rick, S., Small, D. A., & Finkel, E. (2011), "Fatal (Fiscal) Attraction: Spendthrifts and Tightwads in Marriage," *Journal of Marketing Research, 48*, 228-237.

Roberts, J. A., & Roberts, C. R. (2012). Money matters: does the symbolic presence of money affect charitable giving and attitudes among adolescents? *Young Consumers: Insight and Ideas for Responsible Marketers, 13*, 329 - 336

Sashkin, M. & Rosenbach, W. E. (1996). *The leadership profile*. Seabrook, MD: Ducochon Press.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology, 25,* 1– 65.

Schwartz, B. (1994). *The costs of living: How market freedom erodes the best things in life.* New York, NY: W. W. Norton & Co.

Sedikides, C., Campbell, W. K., Reeder, G. D., & Elliot, A. J. (1999). The relationship closeness induction task. *Representative Research in Social Psychology, 23*, 1-4.

Shelton, J. N., Richeson, J. A., Salvatore, J., & Trawalter, S. (2005). Ironic effects of racial bias during interracial interactions. *Psychological Science, 16*, 397-402.

Sherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982). The Self-Efficacy Scale: Construction and validation*. Psychological Reports, 51,* 663-671.

Simmel, G. (1900/1978). *The philosophy of money (*T. Bottomore & D. Frisby, Trans.). London: Routledge & Kegan Paul.

Spitze, S. J., & South, G. (1985). Determinants of divorce over marital life course. American *Sociological Review, 51,* 583-590.

Wang, L., Malhotra, D., & Murnighan, J. K. (2011). Economics education and greed*. Academy of Management Learning & Education, 10*, 4, 643-660.

Wheeler, V. A., & Ladd, G. W. (1982). Assessment of children's self-efficacy for social interactions with peers. *Development Psychology, 18,* 795-805.

Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science, 314,* 1154-1156.

Vohs, K. D., Mead, N. L., & Goode, M. R. (2008). Merely activating the concept of money changes personal and interpersonal behavior. *Current Directions in Psychological Science, 17,* 208-212.

Vorauer, J. D., & Turpie, C. (2004). Disruptive effects of vigilance on dominant group members' treatment of outgroup members: Choking versus shining under pressure. Journal of Personality and Social Psychology, 87, 384–399.

Yang, Q., Wu, X., Zhou, X., Mead, N. L., Vohs, K. D., & Baumeister, R. F. (2013). Diverging effects of clean versus dirty money on attitudes, values, and interpersonal behavior. *Journal of Personality and Social Psychology, 104*, 473-489.

Zhou, X., Vohs, K. D., & Baumeister, R. F. (2009). The symbolic power of money: Reminders of money alter social distress and physical pain. *Psychological Science, 20*, 700-706.

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