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Money Priming Can Change People's Thoughts, Feelings, Motivations, and Behaviors: An Update on 10 Years of Experiments

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Caruso, Vohs, Baxter, and Waytz (2013) posited that because money is used in free market exchanges, cues of money would lead people to justify and support the systems that allow those exchanges to take place. Hence, the authors predicted that money primes would boost system justification, social dominance, belief in a just world, and free market ideology, and found supportive evidence. Rohrer, Pashler, and Harris (2015) failed to replicate those effects. This article discusses the factors that predict priming effects, and particularly those pertinent to differences between Caruso et al. and Rohrer et al. Variations in a prime's meaning, the ease with which primed content comes to mind, the prime's motivational importance, and the ambiguity of the outcome situation influence the impact of the prime. Money priming experiments (totaling 165 to date, from 18 countries) point to at least 2 major effects. First, compared to neutral primes, people reminded of money are less interpersonally attuned. They are not prosocial, caring, or warm. They eschew interdependence. Second, people reminded of money shift into professional, business, and work mentality. They exert effort on challenging tasks, demonstrate good performance, and feel efficacious. Money priming is not the same as priming another popular means of exchange, credit cards, and can have bigger effects when there is an implied connection between the self and having money. The practical benefits of money have been studied by other disciplines for decades, and the time is now for psychologists to study the effects of merely being reminded of money.

Keywords: money, priming, competence, prosocial, business

Money is a key representation of the American free market system. That observation led Caruso, Vohs, Baxter, and Waytz (2013) to hypothesize that reminding people of money would lead to a bolstering of the systems that allow those exchanges to take place. That effect was presumed to occur because money makes accessible notions of open and free market exchanges, which is how money is most often gained and used. Thus began our investigation of whether money priming could alter responses related to system justification, social dominance, belief in a just world, and free market ideology.

Extant findings support the idea that money primes lead to a focus on trade, economics, or business ideals. The earliest empirical investigation of money priming showed that consumers who viewed a website showing background images of money, compared to other images, later listed price as a top consideration when evaluating products (Mandel & Johnson, 2002). Subsequent experiments in that article showed that money priming leads people to prefer low-cost goods and spend more time searching for price-relevant information, indicating a focus on costs (also Chatterjee & Rose, 2012; Chatterjee, Rose, & Sinha, 2013). Money priming brings to mind an exchange mentality, in which people consider what they are giving up for what they will get in return (Jiang, Chen, & Wyer, 2014). Money primes lead people to prefer practical means and to adopt business-like attitudes (Kouchaki, Smith-Crowe, Brief, & Sousa, 2013; Molinsky, Grant, & Margolis, 2012; Tong, Zheng, & Zhao, 2013; van Laer, de Ruyter, & Cox, 2013). Moreover, concern with professionalism, embracing business attitudes, and awareness of potential costs have been shown to play an explanatory role, statistically, in money priming outcomes (Chatterjee, Rose, & Sinha, 2013; Jiang et al., 2014; Kouchaki et al., 2013; Molinsky et al., 2012; Pfeffer & Devoe, 2009; Tong et al., 2013). Hence, money priming makes salient many of the dimensions of a marketplace. Therefore the prediction that reminding people of money, compared to neutral concepts, would result in greater support for the socioeconomic systems that underlie the open market has support.

Why, then, did other authors (Klein et al., 2014; Rohrer et al., 2015) fail to replicate Caruso et al. (2013)? Two ideas are worth considering. One focuses on the outcomes that have been studied. There seem to be two routes by which a situational manipulation could lead to support for existing socioeconomic systems. A second idea focuses on the stimulus, money. The meaning of money could differ among participants tested by Caruso et al. and other participants.

I already outlined one route by which money cues could lead to a bolstering of existing systems. Money is a symbol of the establishment that upholds existing socioeconomic systems. Because of that, money cues could elicit cognitive representations of those systems and hence lead to system affirmation.

There is another route that leads people to endorse existing systems. Justification of the status quo often is seen when people feel threatened, dependent on or inextricably linked to the system, or low in personal control. For instance, hearing a criticism of

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one's country by an outsider raises people's system justification scores. Making people feel that they require the system to get by likewise boosts system justification scores. When people feel they cannot effectively bring about desired outcomes (a state of low control), they endorse social systems as a way to compensate (as reviewed by Kay & Friesen, 2011). Investigations of changes in people's belief in social dominance show some similar effects (Morrison, Plaut, & Ybarra, 2010; Morrison & Ybarra, 2008, 2009).

Priming people with money does not elicit similar states as those known causes of system bolstering. People reminded of money feel personally strong, behave agentically, and prefer solitude (Boucher & Kofos, 2012; Mogilner, 2010; Mukherjee, Manjaly, & Nargundkar, 2013; Vohs, Mead, & Goode, 2006; Zhou, Vohs, & Baumeister, 2009). This line of thinking might suggest, in contrast to the prediction advanced by Caruso et al. (2013).

Integrating the two lines of reasoning suggests that there might be countervailing forces when people are primed with money and asked to contemplate the righteousness of existing social systems. One force moves people's minds from money to free marketplaces to viewing the systems that support those markets as just and good. Another force moves people's minds from money to a strengthened a sense of personal agency and a belief that one can make it on one's own. This stance could weaken people's need to endorse existing systems.

Could the idea of money produce different, even qualitatively different, effects when people contemplate support for the status quo? The idea has traction. Wheeler and Berger (2007) showed that the same prime can evince different effects when it brings different processes to the fore. One experiment showed that after being instructed to think about clothes shopping, women later preferred exploratory options when making choices unrelated to shopping, whereas men preferred expediency. Both effects resulted because the same prime elicited different goals.

The results of several papers suggest that money primes can produce different outcomes depending on the way that money is viewed. Thinking of money as fresh and new seems to bring about the good in people. Compared to used money or neutral primes, people reminded of new money make more moral decisions, think of themselves as prosocial and act accordingly, seek to be fair, and think about honesty and fair dealings. Dirty or used money can result in behaviors indicative of greed, mean-spiritedness, and exploitation (Mok & DeCremer, 2015, in press-a; Yang et al., 2013).

Thus, contained in the idea of money are at least two sets of associations that produce different effects. Could the participants tested in Caruso et al. (2013) have possessed different meanings to money than do others? It is possible. Consider that three of the experiments tested University of Chicago students. One of that university's most notable characteristics is its achievements in economics. There is an entire school of thought named after the university (the Chicago School of Economics), and it claims the most Nobel prizes in economics (Wile, 2013). Hence it is possible that the majority of the studies in Caruso et al. tested a sample of people or a setting in which money is favorably linked to the free and open marketplace, along with the systems that support it. One sample from Caruso et al. tested Mechanical Turk participants, which have—or at least had when we tested them (in 2011)—been known to have more positive views on money than their peers (Goodman, Cryder, & Cheema, 2013). This sample has changed in recent years (Chandler, Mueller, & Paolacci, 2014), which might make the who, what, where, and why of Mechanical Turk participants different than when we tested them.

In summary, there are two theoretically derived reasons why Rohrer et al.'s (2015) results were inconsistent with Caruso et al.'s (2013). One, endorsing existing socioeconomic systems could follow from two competing routes. One route involves money being a representation of the systems that allow commerce to prosper, which suggests that money primes, compared to other primes, would result in greater endorsement of those systems. The other route suggests the converse. People often bolster existing systems when they feel that the system has been threatened, when they feel entrenched in the system, or when they lack control (e.g., Kay & Friesen, 2011; Morrison et al., 2010), states that are unlike those engendered by money priming. Money primes stimulate a sense that one can survive and thrive on one's own, which might quell a defensive need to bolster the existing systems.

Two, Rohrer et al.'s (2015) results may have differed from Caruso et al.'s (2013) because of differences in the meaning attached to money. Caruso et al.'s participants, more than others, might have possessed a tighter, and possibly more favorable, association between money and the systems that undergird free exchange. Given that even tiny changes in sampling and measurement error can nullify known effects (Stanley & Spence, 2014), variations in the meaning of a stimulus or pathways by which an outcome can occur could produce dramatically different outcomes.

Money Priming Effects Following Vohs et al., 2006

Rohrer et al. (2015) went beyond Caruso et al. (2013) to discuss Vohs et al.'s (2006) work. The work in that article and subsequent experiments can be summarized as thus: Compared to nonmoney primes, money priming leads people to plan to work more and relax less—which they do. People reminded of money put in more time and effort when they have a job to do or goal to achieve. They eschew help. They perform better on objective outcomes. People reminded of money report feeling efficacious and strong (see Table 1).

Money priming's desirable performance-related outcomes can be contrasted with its undesirable effects on interpersonal warmth. People reminded of money, compared to other concepts, are unhelpful, stingy, and disinterested in social contact. They fail to put themselves in others' shoes. They are not compassionate or empathetic (see Table 2).

People in a diverse range of locations, including North America, Europe, and Asia, show similar effects. College students, working adults, children as young as 4 years old, and business managers show similar effects (Tables 1 and 2; for a fuller review of the experiments to date [165 and counting], see Baumeister & Vohs, 2015). Different methods of priming money seem to produce similar effects (with the exception of the clean or new money primes, as discussed earlier). Viewing images of money, touching money, and even seeing or holding play money can produce similar effects (Tables 1 and 2; also Mok & DeCremer, in press; Zaleskiewicz, Gasiorowska, Kesebir, Luszczynska & Pyszczynski, 2013).

Just as money primes can affect a wide range of outcomes, there are likely to be a range of mediators to explain the effects. When

Table 1
Effects of Money Priming on Performance Measures Following Vohs et al. (2006)

Experiment	Country	Sample characteristics	Manipulation	Dependent measure	*N*	$d_{\text{money vs. neutral}}$
Aarts, Chartrand, Custers, Danner, Dik, Jefferis, & Cheng (2005) Exp. 2	Netherlands	Undergraduates	Phrase descramble	Speediness to complete task (under time pressure)	40	0.85
Boucher & Kofos (2012) Exp. 1	United States	Undergraduates	Phrase descramble	Performance (under depletion)	27	0.67
Boucher & Kofos (2012) Exp. 2	United States	Undergraduates	Phrase descramble	Performance (under depletion)	21	1.13
Gasiorowska, Zaleskiewicz, Wygrab, Chaplin, & Vohs (2015) Exp. 1	**Poland**	**Children**	**Handling money**	**Task persistence**	**68**	**0.96**
Gasiorowska, Zaleskiewicz, Wygrab, Chaplin, & Vohs (2015) Exp. 1	Poland	Children	Handling money	Performance	68	1.14
Gasiorowska, Zaleskiewicz, Wygrab, Chaplin, & Vohs (2015) Exp. 2	**Poland**	**Children**	**Handling money**	**Task persistence**	**90**	**0.64**
Mogilner (2010) Exp. 1a	United States	National sample of adults	Phrase descramble	Intention to work	212	0.31
Mogilner (2010) Exp. 2	**United States**	**Undergraduates (Field)**	**Phrase descramble**	**Time spent working**	**59**	**0.75**
Mukherjee, Manjaly, & Nargundkar (2013) Exp. 2	India	Undergraduates	Images	Self-efficacy	88	0.46
Mukherjee, Shah, Kumar, & Manjaly (2015) Exp. 1	India	Undergraduate and graduate students	Images	Speediness to complete task	54	0.67
Mukherjee, Shah, Kumar, & Manjaly (2015) Exp. 2	India	Undergraduate and graduate students	Images	Speediness to complete task	36	0.63
Park, Gasiorowska, & Vohs (2015) Exp. 3	**United States**	**Undergraduates**	**Images**	**Task persistence**	**74**	**0.58**
Sarial-Abi & Vohs (2015) Exp. 1	**Turkey**	**Undergraduates**	**Images**	**Task persistence (under goal instructions)**	**54**	**1.24**
Sarial-Abi & Vohs (2015) Exp. 1	**Turkey**	**Undergraduates**	**Images**	**Effort (under goal instructions)**	**54**	**0.89**
Sarial-Abi & Vohs (2015) Exp. 1	**Turkey**	**Undergraduates**	**Images**	**Performance (under goal instructions)**	**54**	**0.94**
Sarial-Abi, Hamilton, & Vohs (2015) Exp. 2	**Italy**	**Undergraduates**	**Phrase descramble**	**Task persistence (under goal instructions)**	**49**	**0.61**
Sarial-Abi, Hamilton, & Vohs (2015) Exp. 2	**Italy**	**Undergraduates**	**Phrase descramble**	**Performance (under goal instructions)**	**49**	**0.63**
Sarial-Abi, Hamilton, & Vohs (2015) Exp. 3	**Turkey**	**Undergraduates**	**Images**	**Task persistence (under goal instructions)**	**48**	**0.84**
Sarial-Abi, Hamilton, & Vohs (2015) Exp. 3	**Turkey**	**Undergraduates**	**Images**	**Performance (under goal instructions)**	**48**	**0.65**
Sarial-Abi, Hamilton, & Vohs (2015) Exp. 5	**Italy**	**Graduate students**	**Images**	**Task persistence (under goal instructions)**	**32**	**1.14**
Sarial-Abi, Hamilton, & Vohs (2015) Exp. 5	**Italy**	**Graduate students**	**Images**	**Effort (under goal instructions)**	**32**	**1.72**
Sarial-Abi, Hamilton, & Vohs (2015) Exp. 5	**Italy**	**Graduate students**	**Images**	**Performance (under goal instructions)**	**32**	**2.08**
Teng, Zhang, Jiang, & Poon (2015) Exp. 2	Hong Kong	Undergraduates	Images	Importance of instrumental attributes in work partner	36	0.74
Teng, Zhang, Jiang, & Poon (2015) Exp. 3	Hong Kong	Undergraduates	Phrase descramble	Intention to cooperate with instrumental partner	53	0.71
Teng, Zhang, Jiang, & Poon (2015) Exp. 3	Hong Kong	Undergraduates	Phrase descramble	Usefulness of instrumental partner	53	0.59
Zhou, Vohs, & Baumeister (2009) Exp. 3	China	Undergraduates	Handling money	Feeling strong	84	1.12
Zhou, Vohs, & Baumeister (2009) Exp. 4	China	Undergraduates	Handling money	Feeling strong	96	0.57

Note. Effects in bold are replications of Vohs et al. (2006).

my coauthors and I began to study the psychology of money, there was only one existing paper (Mandel & Johnson, 2002) and so we were in full discovery mode. Being curious scientists, we wanted to know what might account for the effects we were predicting.

We predicted that feeling more powerful than otherwise was a likely candidate to explain money priming effects. In contrast to our hypotheses—and power researchers' attempts to frame money priming as power (Magee & Smith, 2013)—we did not find any supportive evidence that money primes changed feelings of power. We measured feelings of power multiple times using a published scale (Schmidt & Frieze, 1997) as well as items we created but did not see changes in power as a result of money priming. Another hypothesis was that, tracking the behavioral outcomes we were observing, money primes would shift scores on a scale measuring independence (seeing the self as unique and separate from others) and interdependence (seeing the self as similar to others and socially connected; Singelis, 1994). Scores were in the predicted direction, but only weakly.

I mentioned that some mediation patterns have been found (e.g., Chatterjee, Rose, & Sinha, 2013; Kouchaki et al., 2013; Molinsky

Table 2
Effects of Money Priming on Interpersonal Measures Following Vohs et al. (2006)

Experiment	Country	Sample characteristics	Manipulation	Dependent measure	*N*	$d_{\text{money vs. neutral}}$
Chatterjee, Rose, & Sinha (2013) Exp. 1	**United States**	**Undergraduates**	**Phrase descramble**	**Generosity**	**41**	**−0.67**
Chatterjee, Rose, & Sinha (2013) Exp. 2	**United States**	**Undergraduates**	**Phrase descramble**	**Willingness to volunteer**	**103**	**−1.62**
Gasiorowska & Hełka (2012) Exp. 1	**Poland**	**Adults**	**Images**	**Generosity**	**67**	**−0.49**
Gasiorowska, Zaleskiewicz, & Wygrab (2012) Exp. 1	**Poland**	**Children**	**Posters**	**Generosity**	**126**	**−0.36**
Gasiorowska, Zaleskiewicz, & Wygrab (2012) Exp. 1	Poland	Children	Posters	Generosity	126	−0.63
Gasiorowska, Zaleskiewicz, & Wygrab (2012) Exp. 2	**Poland**	**Children**	**Handling money**	**Helpfulness**	**120**	**−3.02**
Gasiorowska, Zaleskiewicz, Wygrab, Chaplin, & Vohs (2015) Exp. 3a	**Poland**	**Children**	**Handling money**	**Helpfulness**	**129**	**−1.24**
Gasiorowska, Zaleskiewicz, Wygrab, Chaplin, & Vohs (2015) Exp. 3b	**Poland**	**Children**	**Handling money**	**Helpfulness**	**64**	**−1.18**
Gasiorowska, Zaleskiewicz, Wygrab, Chaplin, & Vohs (2015) Exp. 4	**Poland**	**Children**	**Handling money**	**Generosity**	**84**	**−1.05**[a]
Guéguen & Jacob (2013) Exp. 1	**France**	**Pedestrians (Field)**	**Cash withdrawal vs. walk by cash machine**	**Helpfulness**	**100**	**−0.33**
Guéguen & Jacob (2013) Exp. 2	**France**	**Pedestrians (Field)**	**Cash withdrawal vs. walk by cash machine**	**Helpfulness**	**50**	**−0.25**
Kushlev, Dunn, & Ashton-James (2012) Exp. 2	Canada	Parents	Images	Meaningfulness of parent-child event	66	−0.54
Kuźmińska, Vohs, Kröl, & Kowalczyk (2015) Exp. 3	**Poland**	**Undergraduates**	**Handling money**	**Distance between participant's and partner's chair**	**74**	**0.59**
Mogilner (2010) Exp. 1a	United States	National sample of adults	Phrase descramble	Intention to have intimate relations	212	−0.54
Mogilner (2010) Exp. 1a	United States	National sample of adults	Phrase descramble	Intention to socialize	212	−0.38
Mogilner (2010) Exp. 2	United States	Undergraduates (Field)	Phrase descramble	Socializing	88	−0.51
Molinsky, Grant, & Margolis (2012) Exp. 1	United States	Managers	Phrase descramble	Compassion expressed in a letter	50	−0.58
Molinsky, Grant, & Margolis (2012) Exp. 1	United States	Managers	Phrase descramble	Empathy	50	−0.58
Molinsky, Grant, & Margolis (2012) Exp. 1	United States	Managers	Phrase descramble	Feeling it is unprofessional to express emotions	50	−0.25
Molinsky, Grant, & Margolis (2012) Exp. 1	United States	Managers	Phrase descramble	Compassion expressed in a letter	50	−0.64
Molinsky, Grant, & Margolis (2012) Exp. 1	United States	Managers	Phrase descramble	Feeling it is unprofessional to express emotions	50	0.60
Molinsky, Grant, & Margolis (2012) Exp. 2	United States	Undergraduates	Write a story	Compassion expressed in a letter	80	−0.50
Molinsky, Grant, & Margolis (2012) Exp. 2	United States	Undergraduates	Write a story	Empathy	80	−0.47
Molinsky, Grant, & Margolis (2012) Exp. 2	United States	Undergraduates	Write a story	Feeling it is unprofessional to express emotions	80	0.51
Park, Gasiorowska, & Vohs (2015) Exp. 1	United States	Undergraduates	Screensaver	Min. intended to get acquainted with coworker	79	−0.31
Park, Gasiorowska, & Vohs (2015) Exp. 1	**United States**	**Undergraduates**	**Screensaver**	**Solitary activities preferred**	**79**	**0.37**
Park, Gasiorowska, & Vohs (2015) Exp. 2	**Poland**	**Children**	**Handling money**	**Solitary activities preferred**	**40**	**0.72**
Park, Gasiorowska, & Vohs (2015) Exp. 3	**United States**	**Undergraduates**	**Screensaver**	**Generosity**	**74**	**−0.35**
Pfeffer & DeVoe (2009) Exp. 2	**United States**	**Undergraduates**	**Phrase descramble**	**Willingness to volunteer**	**260**	**−0.33**[a]
Piers, Krus, Dooley, & Wallace (2014) Exp. 1	United States	Online sample	Images	Need to belong scores	208	−0.29
Roberts & Roberts (2012) Exp. 1	**United States**	**Adolescents**	**Images**	**Generosity (hypothetical)**	**114**	**−0.38**
Roberts & Roberts (2012) Exp. 1	United States	Adolescents	Images	Positive attitudes toward charitable giving	114	−0.36
Teng, Zhang, Jiang, & Poon (2015) Exp. 4	Hong Kong	Undergraduates	Images	Intention to interact with classmate who helped them	110	−0.54

(*table continues*)

Table 2 (*continued*)

Experiment	Country	Sample characteristics	Manipulation	Dependent measure	*N*	$d_{\text{money vs. neutral}}$
Xie & Wu (2013) Exp. 1	**China**	**Undergraduates**	**Phrase descramble**	**Solitary activities preferred**	**94**	**0.66**[a]
Xie & Wu (2013) Exp. 2	**China**	**Undergraduates**	**Phrase descramble**	**Distance between participant's and partner's chair**	**125**	**0.35**
Xie & Wu (2013) Exp. 2	**China**	**Undergraduates**	**Phrase descramble**	**Solitary activities preferred**	**126**	**0.52**

Note. Effects in bold are replications of Vohs et al. (2006).
[a] Indicates that similar conditions (such as neutral conditions) were aggregated.

et al., 2012; Pfeffer & Devoe, 2009; Tong et al., 2013). It might be that becoming more calculating (especially about monetary opportunity costs) is part of the story. As mentioned, professionalism, business-oriented perspectives, concerns about costs and mistakes, and an exchange mindset have been shown to be important for some of the money priming effects (Kouchaki et al., 2013; Jiang et al., 2014; Molinsky et al., 2012; Tong et al., 2013; van Laer et al., 2013).

There are several factors that suggest why money priming effects can be more durable and larger than classic cognitive priming effects. One factor is the potential for an outcome to be interpreted in multiple ways. For instance, money cues can encourage or discourage unethical behavior, depending on the circumstance (Gino & Mogilner, 2014; Kouchaki et al., 2013; Mazar, Amir, & Ariely, 2008; Yang et al., 2013). Ambiguity of the outcome variable determines when and why primes exert their effects (Higgins & Brendl, 1995; Loersch & Payne, 2011). A situation that does not leave much room for interpretation is unlikely to show a consistent or large priming effect. This idea may underlie the effect size differences between classic cognitive semantic priming effects and social psychology's priming effects. The more specific and less ambiguous the outcome (such as when responding to the word *doctor* after seeing the word *nurse*), the smaller the expected priming effect because there is less wiggle room for the prime to alter the response (e.g., Loersch & Payne, 2011).

This idea comes to light with an experiment that systematically tested the role of situational ambiguity. It primed some participants with the idea of business (which occupies a similar psychological place as money; Molinsky et al., 2012) and framed the outcome task as either a "community game" or merely a "situation" (Kay, Wheeler, Bargh, & Ross, 2004). Whereas business priming led to more competitive behaviors than neutral primes when the task was blandly called a "situation," there was no effect of prime condition when the task was called the "community game." Presumably the norms for appropriate behavior were largely constrained in the community condition, and hence the prime did not have much room to affect people's understanding of what to do in the situation.

The extent to which a prime can be attached to the self may also play a role. Two field studies in France showed that getting money out of a cash machine (and thus being reminded of one's own money) reduced behavioral helpfulness more than walking by a cash dispenser (Guéguen & Jacob, 2013). Those studies provided field replications of Vohs et al. (2006) effects. Pfeffer and Devoe (2009) instructed people to think about their own, as opposed to others', wages. Thinking of one's own money weakened the motivation to volunteer, which also replicates Vohs et al.'s (2006) findings. Parallels between general money prime effects and primes that highlight the self owning money suggest that self activation might be an important contributor. This idea aligns with theories that depict primes' effectiveness as stemming from changes in the phenomenological self (Wheeler, Demarree, & Petty, 2007).

Another factor that renders primes more or less influential is accessibility, which is related to experience and motivational relevance. To the extent that money frequently passes through people's hands, their visual landscape, or their minds—which is likely often for many—the idea of money can become highly accessible. When the content of a prime is easily accessible, it can take only subtle cues reminiscent of it to alter outcomes (Higgins & Brendl, 1995).

Different ideas have motivational implications, resulting in different effects. For instance, nations go to war over some ideas but not others. Also, bad information has a psychologically stronger effect than good information (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001).

The motivational relevance of money is undeniable, as illustrated by this quotation by Lea and Webley (2006, p.197):

> "The evidence of labor market history is that there is no job that absolutely no one could be induced to do, if sufficient money was offered. And beyond legitimate employment, it is clear that if a crime is apparently profitable, there is no level of punishment, up to and including death, which will completely eliminate it so long as there is some chance of escaping detection. In the right circumstances, money has the capacity to overwhelm all other motivators."

Hence the psychology of money could differ from many cognitive psychology effects (such as the nurse-doctor semantic connection) if only because of money's alluring motivational power.

Money is not the same as other means of exchange. Money priming does not produce the same effects as another popular method of exchange, credit cards. The effect of thinking about credit cards, compared to neutral controls or cash, has been studied by marketing scientists for almost 30 years. Findings from the laboratory and field, for hypothetical as well as real spending decisions, show consistent and, at times, large effects (Chatterjee et al., 2013; Chatterjee & Rose, 2012; Feinberg, 1986; McCall & Belmont, 1996; Prelec & Simester, 2001; Raghubir & Srivastava, 2008; Soman, 2001a; Tong et al., 2013). A credit card prime, compared to a no prime condition, led to a 200% increase in intended donations in a laboratory experiment (Feinberg, 1986). A credit card prime, versus cash, led to a 113% percent increase in a real, binding auction (Prelec & Simester, 2001). The effects of priming credit cards versus cash primes is greater when the target of evaluation is ambiguous (Prelec & Simester, 2001), which again

highlights the importance of an outcome's multiple interpretations in order for priming to have a big effect (Higgins & Brendl, 1995; Kay et al., 2004). Credit cards seem to release constraints (Feinberg, 1986; McCall & Belmont, 1996; Prelec & Simester, 2001; Raghubir & Srivastava, 2008; Soman, 2001b; Tong et al., 2013). Cash cues, in contrast, heighten sensitivity to costs, as seen in more paying attention to price, reduced desire to spend, and a broad motivation to avoid mistakes (Chatterjee et al., 2013; Chatterjee & Rose, 2012; Mandel & Johnson, 2002; Tong et al., 2013).

And There's More

I did not have the space to cover the entirety of money priming experiments, which are 165 at last count. To name a few: Money priming mitigates the fear of death (Zaleskiewicz, Gasiorowska, et al., 2013), potentiates the persuasiveness of messages aimed at the self (Reutner & Wänke, 2013), and curtails the savoring of experiences (Devoe & House, 2012; Quoidbach, Dunn, Petrides, & Mikolajczak, 2010). Money cues make people averse to others' emotional expressiveness (Jiang et al., 2014), and induce feelings of being physically colder than otherwise (Reutner, Hansen, & Greifeneder, 2015). In the time I spent writing this commentary, multiple papers came across my desk relating money priming to trust, connectedness to the workplace after social ostracism (Mok & DeCremer, in press-b), and disinterest in religion. A narrative literature review is under review (Baumeister & Vohs, 2015).

Conclusion

Recently I read a quotation that is not about science but could well be. It said that democracy is valuable because it "doesn't think of itself as finished or perfect" (Anonymous, 2014)—and neither does science. It takes many scholars and many attempts to figure out the way the world works. For decades, economists have had the last (and often the only) word on money, and yet some of the biggest worldwide events of recent history stem from a failure to understand the psychology of money. The time is now for psychological scientists to delve into why and how even the mere idea of money can change responses and behaviors.

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