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Brief article

Money is essential: Ownership intuitions are linked to physical currency

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ABSTRACT

Due to basic processes of psychological essentialism and contagion, one particular token of monetary currency is not always interchangeable with another piece of currency of equal economic value. When money loses its physical form it is perceived as "not quite the same" money (i.e., to have partly lost the original essence that distinguished it from other monetary tokens), diminishing its intuitive link with its original owner. Participants were less likely to recommend stolen or lost money be returned when it had been subsequently deposited in an electronic bank account, as opposed to retaining its original physical form (Studies 1a and 1b). Conversely, an intuitive sense of ownership is enhanced through physical contact with a piece of hard currency. Participants felt the piece of currency a person had originally lost should be returned to him rather than another piece of currency of equivalent value, even when they did not believe he would be able to tell the difference and considered distinguishing it from other money illogical. This effect was reduced when the currency had been sterilized, wiping it clean of all physical traces of its previous owner (Studies 2a, 2b, and 3).

1. Introduction

In the comedic film *Meet the Parents* Greg Focker caps a disastrous trip to visit his girlfriend's parents by losing their beloved cat, Mr. Jinx. Desperate to restore his standing with his hosts, Greg finds a similar looking stray cat and spray paints its tail in an effort to reproduce Mr. Jinx's signature stripe. When his deception is unmasked, the horrified family throws Greg out of their house. This natural sense of outrage occurs because Mr. Jinx is a non-fungible asset: a beloved family pet cannot simply be substituted for another animal, no matter how similar in appearance.

At the opposite end of the spectrum from Mr. Jinx—at least according to standard economic theories—is monetary currency. In principle and by design freely substitutable, one dollar should be treated the same as any other. Challenging this conventional wisdom, classic investigations by Thaler and colleagues demonstrate that money is often placed in different mental accounts (e.g., windfall gains as opposed to regular income) and hence not treated as fully substitutable (for reviews, see Thaler, 1985, 1990, 1999). For example, consumers would rather spend windfall gains than their regular income to finance a trip to Maui, even when both sources of income are equally available.

The present research suggests that physical monetary currency is more like Mr. Jinx (i.e., even less fungible) than previously realized. Specifically, even within a given mental account (e.g., windfall gains), one particular token of monetary currency is not necessarily interchangeable with any other. This prediction is based on theories of psychological essentialism (Haslam & Whelan, 2008; Medin & Ortony, 1989) and contagion (Nemeroff & Rozin, 1994; Rozin, Millman, & Nemeroff, 1986).

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Research from a variety of fields indicates that human beings view both living organisms and physical objects as possessing a deep underlying essence that makes them what they are (Bloom, 2004, 2010; Dar-Nimrod & Heine, 2011; Hamilton, Sherman, & Rodgers, 2004; Haslam & Whelan, 2008; Medin & Ortony, 1989; Plaks, Levy, Dweck, & Stroessner, 2004; Yzerbyt, Corneille, & Estrada, 2001). But in contrast to living organisms, which are perceived to possess essential characteristics that survive the destruction of their bodies (Bering, 2006), the essence of inanimate objects is more closely tied to their physicality. For instance, the essence of a mahogany table is not automatically assumed to survive its physical destruction and subsequently lead a non-corporeal existence in the same way that a human soul is widely believed to survive the destruction of its body. This suggests that an intuitive sense of ownership should diminish when the original physical currency is exchanged, dispersed and not physically recoverable (as occurs when it is deposited in a bank). In such cases the particular tokens of monetary currency in question are perceived to be no longer "quite the same" money as before (i.e., to have partly lost the original essence that distinguished them from other tokens of monetary currency).

Empirical investigations further indicate that essences are implicitly seen as contagious, spreading from one target to another based on physical contact (Frazer, 1890/1959; Mauss, 1902/1972; Morales & Fitzsimons, 2007; Nemeroff & Rozin, 1994). For example, college students refuse to wear a sweater that was once worn by Hitler, out of an intuitive sense that Hitler's evil has spread to the sweater and could infect them as well (Rozin et al., 1986). In addition, consumers are willing to pay premium prices for everyday objects (e.g., a tape measure) that have come into close contact with well-liked individuals (e.g., John F. Kennedy), but less so if the objects have been thoroughly sterilized (Newman, Diesendruck, & Bloom, 2011; see also Argo, Dahl, & Morales, 2006, 2008). Such contagion effects suggest that an intuitive sense of ownership should be enhanced through physical contact with a given piece of hard currency, and reduced when all traces of such contact have been erased. Thus, it is partly through a process of psychological contagion that the underlying essence of a piece of cold, hard cash becomes linked to that of a person who has (literally) had it in her rightful possession.

Of course essentialism and contagion are far from the sole basis of ownership attributions, which prior research shows are driven by factors such as control over permission to use the object (Merrill, 1998; Neary, Friedman, & Burnstein, 2009), being the first person to possess the object (Friedman, 2008; Friedman & Neary, 2008), and being necessary for the object coming to be possessed (Friedman, 2010; Palamar, Le, & Friedman, 2012), among others. These *prima facie* more rational and logically defensible considerations likely explain the bulk of the variance in ownership judgments. However, the present studies do show that an intuitive link between owner and object based on essentialism and contagion can play a significant (albeit probably much smaller) role as well.

Notably, despite the importance and relevance of ownership judgments in everyday life, there is actually surprisingly little empirical work on the psychological underpinnings of intuitions about property and ownership (Friedman & Ross, 2011). In addition, what work does exist has typically dealt with intuitions about ownership over non-monetary objects (Berti, Bombi, & Lis, 1982; Cram & Ng, 1989, 1994; Friedman & Ross, 2011; Gelman, Manczak, & Noles, 2012; Palamar et al., 2012; although see Oxoby & Spraggon, 2008). Thus, the present studies are rather novel investigations into some of the irrational underpinnings of ownership beliefs regarding monetary currency.

2. Study 1a: money in the bank

Studies 1a and 1b tested the idea that when a piece of monetary currency loses its physical form it also loses part of the unique essence that distinguishes it from other monetary tokens, and can become less intuitively linked to its owner. We hypothesized that stolen or lost cash would be seen as "not quite the same" money after it had been deposited in the bank, and that participants would be less likely to recommend it be returned to the descendants of its original owner (Study 1a) or even its original owner (Study 1b).

2.1. Method

Fifty-two adults ($M_{age} = 30$, range = 21–64) were recruited from Amazon.com's Mechanical Turk service (for reviews regarding the use of Mechanical Turk for conducting psychological research, see Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010).

Participants read that 40 years previous Ted's great-grandfather had stolen $1,000 from Donna's great-grandfather, money that Ted eventually inherited. In the *physical currency condition,* Ted's great-grandfather placed the cash in a box that was passed down to Ted. In the *bank account condition* Ted's great-grandfather deposited the money in a bank account that was likewise passed down to Ted. (In both conditions, the scenario indicated that the total value of Ted's inheritance from his parents was $9,000.) Years later, Donna investigates what happened to her great-grandfather's money. After discovering the truth, she asks Ted to give her $1,000.

2.1.1. Recommended restitution

Participants were asked "Should Ted give Donna the $1,000?" (*1 = definitely not, 7 = definitely yes*), "I feel that Donna is the rightful owner of the $1,000 she is asking for" (*1 = strongly disagree, 7 = strongly agree*), "Donna is making a reasonable request" (*1 = strongly disagree, 7 = strongly agree*), "I feel that Ted should give Donna the $1000 she is asking for" (*1 = strongly disagree, 7 = strongly agree*), and "Is Ted morally obligated to give Donna the $1,000?" (*1 = definitely not, 7 = definitely yes*). These items were all highly correlated with one another, loaded on a single underlying factor, and were averaged into a reliable index ($\alpha = .93$).

In addition to the primary outcome measures, participants further completed items that served as manipulation and comprehension checks and to address potential