

The Value of an Object's Social Connection

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Abstract

Past research indicates that an object's history with humans matters in assessing its value. Studies of contagion and value transfer suggest that a person's quality or essence can rub off onto objects he or she comes into contact with, which in turn increases or decreases the value of the object. The current study extends this to the human mind, and implies that the intrinsic value of one's mind can also rub off on objects through deliberate contact. In doing so, we assume that if each human mind possesses intrinsic value, multiple instances of contagion on an object would result in an increase in its value. As predicted, the study found that people who believe 202 others have deliberately thought about and mindfully evaluated an object, value that object significantly more than people who believe only 2 others have similarly attended to this object in the past. Thus, the study's findings hint at some underlying mechanisms of contagious essence transfer, revealing the magnitude of an object's social connection (the amount of people the object is associated with) as a moderator and the capacity to mentalize (to apply one's theory of mind and reflect upon other people's cognitive processes) as a mediator for the relationship between contagion and valuation.

Keywords: contagion, valuation, social connection, social traces, theory of mind, mentalization

Introduction

It is no surprise that people confer value onto objects. However, when an object's value stems purely from its perceived social qualities, valuation involves many unknown and unusual processes. Take, for example, a significant other's T-shirt or a family heirloom – both of these objects instill a feeling of connectedness with the person(s) with whom each object is associated. Similarly, if one were to damage or lose this special item, he/she would feel distressed almost as if his/her relationship with the associated person(s) took a similar toll. The current study explores this phenomenon which has been regarded as a modern form of “magical” thinking attributed to traditional societies that persists in contemporary cultures (Rozin et al., 1989; Nemeroff & Rozin, 1994). More specifically, it analyzes how inanimate objects can attain value through their social history with and connection to other humans.

Anthropologists first presented the “laws of sympathetic magic” over 100 years ago describing the form of “magical” thinking observed within the beliefs and practices of traditional cultures (Frazer, 1890; Mauss, 1902; Tylor, 1871). The first law, the law of contagion, explains that the quality or essence of an individual (the source) can rub off on an object with which he or she comes into contact (the recipient). The second law, the law of similarity, holds that an image of an object shares the essence of the object itself, so that an action on the image can also affect the original source. These two laws can work independently from or simultaneously with one another in conferring a “magical” quality on an object. For example, many people would lament losing a handmade gift from their lover (due to contagion), burning a picture of their grandmother (due to similarity), or tearing an autographed poster of their favorite celebrity (due to both contagion and similarity). However, since the law of contagion is more often directly related to valuation, this paper will primarily focus on effects of contagion. Scholars in the past

have empirically investigated the law of contagion and its influence on the value of consumer products (Argo, Dahl, & Morales, 2006), celebrities' possessions (Newman, Diesendruck, & Bloom, 2011), biological illness i.e. bacteria/viruses (Nemeroff & Rozin, 1994), and food (Rozin, Millman, & Nemeroff, 1986; Nemeroff & Rozin, 1994). These studies collectively give support to the widespread phenomenon of the law of contagion in present-day societies. Previous research indicates that most people presume objects to retain the essence of a positively or negatively viewed individual after deliberate contact. Therefore, our knowledge of a certain object's history involving other humans matters in our valuation of that object.

Surprisingly, even children pay special attention to an object's history of ownership (Gelman, Manczak, & Noles, 2012; Gelman et al., 2016). Children as young as 3 years are more likely to identify an object through descriptions of the owner and traces of ownership, rather than the object's physical features (Gelman, Noles, & Stilwell, 2014). If the law of contagion holds, and objects really do represent the essence of source individuals, it makes sense that humans naturally seek out and attend to the social traces an object possesses and the resulting value these social traces endow upon it.

Other contagion studies have looked at the underlying mechanisms of this value transfer. For instance, past studies have found dimensional differences in contagion value transfer including the nature of the source (positive vs. negative), the type of transfer (moral/interpersonal vs. biological/germ), and the direction of the effect (forward [source action affects object] vs. backward [action on object affects source]) (Rozin et al., 1989; Nemeroff & Rozin, 1994). In addition, Newman and Smith (2016) have recently identified the basic psychological "need to belong" as a moderator between essence transfer and valuation wherein individuals with greater need to belong showed higher valuation of a contagioned object. In

order to further understand the underlying mechanisms behind transmitting human-like value onto objects, the current paper focuses on the factors that mediate and moderate the relationship between essence transfer and valuation.

Perhaps most relevant to this study, Job et al. (2017) found that an object's history with generic humans can also trigger value transfer. That is, as strongly valenced individuals, like celebrities or infamous figures, can transfer corresponding positive or negative qualities, nondescript people can also transmit onto objects the general, positive social qualities associated with conspecifics and generic human communities (Job et al., 2017). They explain,

If generic people are associated with positive social qualities, people may perceive these qualities in the object, increasing its perceived value. We assume that social traces arise when people imagine other people having attended to an object, thought about it, felt something about it, or having had goals with regard to it, and that this perceived social attention leads people to ascribe greater value to the object. (Job et al., 2017, p. 786)

Job and colleagues' (2017) findings show across three experiments that individuals value an object more if it possessed these social traces. Their measures of valuation included an average of how much participants would "pay for" the object and how much they believed it was "worth." Then they reported on a 7-point Likert scale how "bothered," "upset," and "disturbed" they would feel, as owners, if this item were destroyed. All of these measures were reliable. Through subsequent tests, the researchers observed that the objects "made by people using machines" were more valued than objects "made by machines run by people," illustrating that the valuation effect indeed stemmed from perceptions of other involved humans (and their agency and attention), not machines. Furthermore, they found that (1) perceptions of social attention, i.e. other people attending to, thinking and feeling about, and having goals with respect

to the object, and (2) positive social qualities of warmth, friendliness, and sincerity both mediated the effect on valuation (Job et al., 2017).

Extant empirical evidence suggests that the value of an object increases or decreases according to the people who created it, owned it, or touched it (Job et al., 2017; Gelman, Manczak, & Noles, 2012; Argo, Dahl, & Morales, 2006). In the case of generic people, a contagioned object's special value emerges from the thought that other humans have employed their agency, effort, and attention onto it (Job et al., 2017). In another sense, this object has entered and resided in the conscious minds of others – not merely in the form of sensation and perception, but deliberate reflection. It is possible then that the contagious value of an agent stems from the value of the human agent's mind and consciousness.

In discussing the sacred value of morality and humanity, topics of the mind and consciousness are central and unavoidable. Discourses in political philosophy especially contemplate the value of human life, or lack thereof, when consciousness seems to be absent i.e. at a vegetative state (Carlin & Capps, 2009; Levy, 2014). Since “consciousness... is intrinsically valuable and/or confers value on those who possess it,” the human mind is also generally believed to have intrinsic value (Levy, 2014).

Evidently, a certain form of value arises in realizing the socially shared basis of human understanding, knowledge, experiences, development, and reality (Echterhoff, Higgins, & Levine, 2009). The value comes from exercising one's theory of mind whereby an individual recognizes in oneself and in others the complex mental processes – thoughts, feelings, knowledge, contemplation, subjective experiences, memory, etc. – of the human mind. This “mentalizing” involves a special reflective function of the mind which allows for human groups to realize an intersubjective reality that is organized by shared experiences, meanings, and

mental states (Fonagy, Gergely, & Jurist, 2004). According to Echterhoff, Higgins, and Levine (2009), “humans have a fundamental need to experience a shared reality with others... [which] involves a (subjectively perceived) commonality of individuals’ inner states (not just observable behaviors)... [and] the experience of a successful connection to other people’s inner states.” In sum, realizing that another person undergoes similar thought processes, when reflecting upon an experience, idea, or object, confers a unique, social value onto the experience, idea, or object and the other’s mind itself.

It is not surprising then that an object’s social connection matters in the evaluation of it. If human minds are intrinsically valued, an object or idea that comes into deliberate contact with another person’s mind should retain some of this intrinsic value through contagion. The social traces of the object then refer to the perceived attention previous individuals have given to the object that can only be understood by mentalizing the operations of these individuals’ minds during the time of contact.

The current study serves to delineate the effects of an object’s connection to other humans regarding valuation, the strength of this effect, and the latent processes involved in this relationship. Integrating the law of contagion and the value of theory of mind, any object that is perceived to be held by an intrinsically valued mind, gains that value itself. A possible implication of this is that an object that is perceived to have a wider social connection, i.e. connected to more minds, possesses more value. Thus, we hypothesize that the magnitude of an object’s social connectedness moderates the effect on valuation. That is, the more number of people attend to a novel object, the more valuable the object becomes.

Method

Participants

A total of 48 college students participated in this study. Among them, 3 participants failed to comply with the experimenter's instructions and were excluded in the final analysis. The remaining 45 participants (28 men, 16 women, 1 non-binary) included students within 18-21 years of age with only one 24-year-old out of that range.

In order to participate in the survey, subjects had to be 18 or older and currently enrolled at the University of Tennessee at Knoxville. Before participating, all individuals were asked to read and sign an Informed Consent form and were told that they could withdraw from the study at any time without penalty. Participants received course credit for Introductory Psychology or extra credit for upper-level Psychology courses upon completion of the experiment.

Design and Procedures

Participants who volunteered for the experiment were ran individually. Each participant was instructed to arrive at the scheduled time, complete an Informed Consent form, then directed to a small cubicle with a computer. The participant would sit down and find the survey already up on the screen, a "Smokey Buck" – our object of contagion (See Figure 1) – placed in front of them, and a fabricated list of either 2 or 202 past participants pinned on the side wall of the cubicle. Subsequently, the experimenter would steer the participant's attention toward the Smokey Buck, encouraging him or her to touch it and form opinions about it, then ask the participant to sign the list of participants as either the 3rd or 203rd "fellow Vol to participate." After the list is pinned back on the wall, the participant proceeds to complete the survey.

All data were collected through the survey software Qualtrics. The survey started with a title page that outlined the intended uses of the object to be evaluated:

Today we will ask you to evaluate the Smokey Buck. The Smokey Buck is a potential new initiative being considered by the University. The students would be able to use Smokey bucks to start an informal economy, where they can use Smokey Bucks to pay one another for goods and services.

Importantly, Smokey Bucks would only be traded among students, and could NOT be used to pay for any University services or products such as purchases in campus dining, the bookstore, or the VolShop.

Here at the psychology department we are evaluating whether this initiative would be welcomed by the student body.

Afterwards, the subject was given ten minutes to open-handedly type their opinions of the object's "look, design, size, shape, color, etc." Next, the participants responded to several simple attitudinal statements (e.g. "I like it"; "It would be useful") on a 7-point Likert scale (1-Strongly disagree; 7-Strongly agree) before moving onto the next page where they were asked to tear the Smokey Buck in half. The time the participants took to rip the object and proceed to the next page was recorded by Qualtrics. Immediately following the tearing, another set of 7-point Likert-type questions assessed the subjects' attitudes toward tearing the object (e.g. "I felt bad about tearing the Smokey Buck"; "I felt guilty about tearing the Smokey Buck"). Demographic questions (gender, age, academic year) were asked at the end of the survey.

Figure 1: Smokey Buck Design

Manipulations and Measures

In order to test the effect of the magnitude of social connection, each participant was randomly placed in either the “3rd” condition ($n = 24$) or the “203rd” condition ($n = 21$) where he or she was lead to believe to be the 3rd or 203rd person to participate in the experiment. Therefore, one group’s object had minimal to no social traces while the latter group perceived the object had 202 similar others who had also mindfully attended to the same object.

The current study instructed every participant to attend to the object by taking the first 10 minutes of the experiment to touch, feel, think about, and thoroughly evaluate the object. Later in the study, the participants were required to tear the object in half which Job and colleague’s (2017) findings suggest the hesitation to do so serves as a reliable measure for valuation. Hence, the time (in seconds) each subject took to destroy the object was recorded to quantitatively measure valuation. To minimize human error in tracking time, the study incorporated an automatic timer in the survey to measure this. Following the 10-minute evaluation and simple-attitude scale, a new page instructed participants to, “Due to University regulations, at this time, please tear up the Smokey buck in half, and press continue when you are finished.” The survey tracked the time elapsed on this page for each participant.

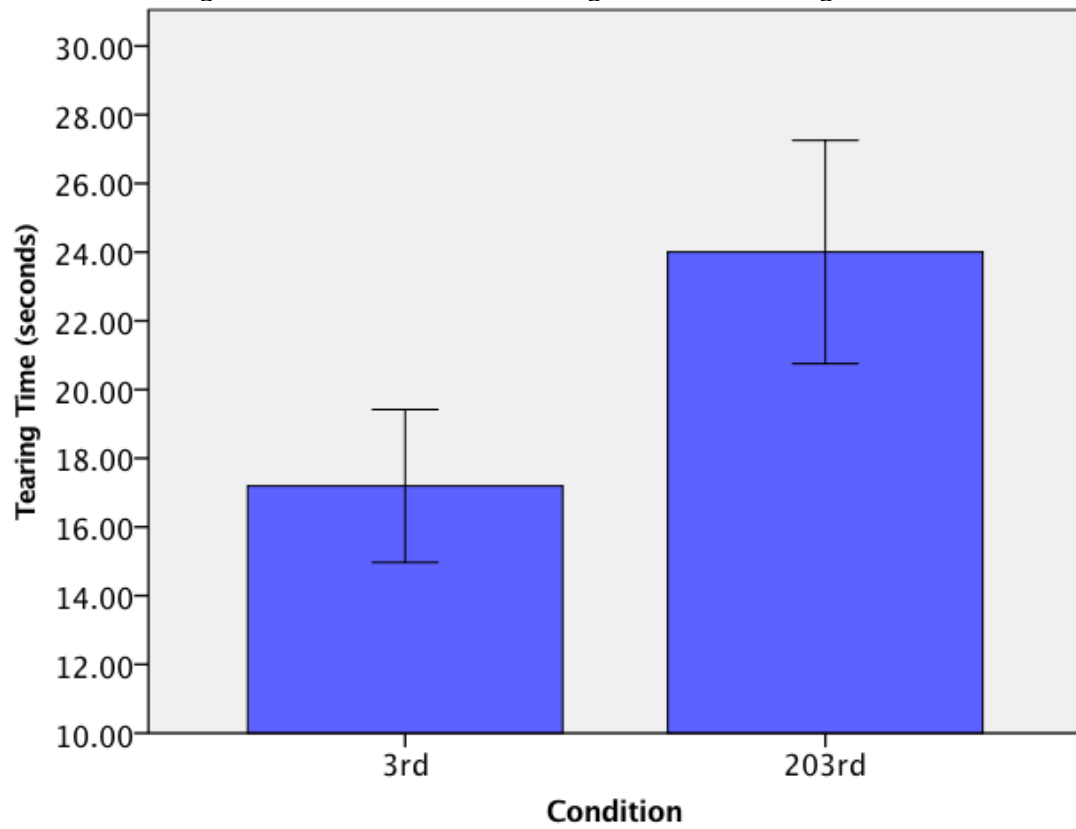
Additionally, the law of similarity (Rozin, Millman, & Nemeroff, 1986) indicates that each replicated copy of the Smokey Buck should represent the same essence. So, although all participants had their own Smokey Buck that they attended to and tore, we reasoned that the contagion effect would generalize to each Smokey Buck.

Results and Discussion

All data collected from the survey were transferred onto the statistical software SPSS for the final analysis.

In line with our hypothesis, participants in the 203rd condition ($M = 24.00$ sec., $SD = 14.90$) significantly took longer to destroy the Smokey Buck than participants in the 3rd condition ($M = 17.20$ sec., $SD = 10.90$), $t = 1.77$, $p = 0.04$ (one-tailed), $R^2 = 0.068$, 95% confidence interval of difference = $[-14.59, 0.97]$ (See Figure 2). According to Job et al.'s (2017) findings regarding the measures for valuation, one's hesitation to destroy an object accurately signals his or her valuation of the object. As such, our data also found that tearing time directly correlated with negative attitudes toward tearing the Smokey Buck (See Figure 3). Moreover, the tearing-attitude scale items proved to be reliable ($\alpha = 0.84$), so the responses to the 4 negative-attitude and 2 positive-attitude (reverse-scored to be convergent with other items) statements were averaged for another analysis. As expected, tearing time and the averaged scale for negative attitudes toward tearing correlated significantly with each other (Pearson's $r = 0.42$, $p = 0.002$ [one-tailed]), further supporting tearing time as a reliable measure for valuation. One possible reason why participants in the 203rd condition showed more hesitation to tear the Smokey Buck relates to what the object might represent to them. According to the law of similarity (Rozin, Millman, & Nemeroff, 1986), each copy of the Smokey Buck was a different physical object but represented the same idea. Each Smokey Buck acted as the recipient of multiple essences, an

object of a collective mind of 3 people or 203 people. Members of the 203rd group perceived the Smokey Buck to have been mindfully attended to, evaluated, and felt by 202 other conspecifics' minds. To them, it had come to represent the entire group's essence and emblemize the value of 202 other minds/consciousnesses through contagion. Perhaps, when the object is perceived to be an idea, its numeracy collapses into a single unit, an exclusive symbol of shared reality. When members of a group share a similar experience regarding an object or idea, their minds actualize an intersubjective reality built from mutual understanding and active mentalization. The members of this group are exercising their theory of mind and entering a shared reality through this object. Then, taking into account Rozin et al.'s (1989) analysis of "backward" contagion, the motives for vacillation in destroying the object are clear: tearing the object means tearing the essence of the group, destroying the unity of 203 valuable minds in a shared reality.

Figure 2: Social Connection Magnitude vs. Tearing Time

*The error bars indicate one standard error of the mean

Figure 3: Correlations between Tearing Attitudes vs. Tearing Time

		"I did not like tearing the Smokey buck"	"I was hesitant to tear the Smokey buck"	"I felt bad about tearing the Smokey buck"	"I felt guilty about tearing the Smokey buck"	"I enjoyed tearing the Smokey buck"	"I felt proud about tearing the Smokey buck"
Tearing Time	Pearson Correlation	.370	.334	.398	.402	-.163	-.136
	Sig. (two-tailed)	.012	.025	.007	.006	.284	.372
	N	45	45	45	45	45	45

Interestingly, the 203rd group ($M = 4.52$, $SD = 1.66$) also believed the Smokey Buck would be more useful than the 3rd group ($M = 3.58$, $SD = 1.79$), $p = 0.04$ (one-tailed). This finding hints at another reason for the socially influenced valuation of an object. Given that the 203rd condition group believed the object to have a stronger social connection, it is possible that the members of the 203rd group felt the object could physically connect them to other participants in the future. Concerning the usefulness of the Smokey Buck, they might have asked themselves, “Does this ultimately connect me to more people?” or “Can this be the means to forming camaraderie with others?” Further, 203rd participants perhaps saw a simpler, more concrete use for the Smokey Buck, perceiving a wider sphere for the “informal economy” for which the experimenter led the participants to believe the Smokey Buck’s intended use was to be. Philosophers would classify this value as extrinsic value as it is a means to an end, the end being some form of intrinsic value (Bradley, 1998). If connection with other human minds is intrinsically valued, all of the above cases would have extrinsic, or instrumental, value. So, as an object’s magnitude of social connectedness increases, both intrinsic and instrumental/extrinsic values of the object are perceived to be higher.

Past research has suggested that humans display a fundamental need to belong and to experience shared reality with other minds (Baumeister & Leary, 1995; Newman & Smith, 2016; Echterhoff, Higgins, & Levine, 2009). These studies show that people possess a basic desire for human connections and are fundamentally motivated to experience such human connections. The desire is so strong in most cases that even the mere perception of working together with fellow others increases intrinsic motivation in both children and adults (Master & Walton, 2013; Carr & Walton, 2014; Butler & Walton, 2013). Likewise, goal sharing with a group promotes similar, goal-oriented behavior, or implicit coordination, within the group (Shteynberg & Galinsky,

2011). Although such shared motivation and cooperation studies do not directly relate to contagion and valuation, both spheres of research indicate theory of mind and mentalization as an important mediator for many social-psychological phenomena. As the need to belong acts as a moderator in the relationship between essence contagion and valuation (Newman & Smith, 2016), the present research suggests that theory of mind acts as a mediator for this relationship. After all, without mentalizing one cannot even recognize another person's essence or the value of his/her mental processes.

In sum, the current study's findings imply that the awareness of other minds mediates the valuation of an object. It also identifies a new moderator in the transfer of value from human sources onto objects, namely the magnitude of an object's social connection. The current study complements past contagion studies that reveal the value of an object's social connection and history. However, as a pilot study, this paper proved to be limited in some ways. Primarily, the sample of this study could be improved by future investigations that attempt to replicate this study's findings. As a convenience sample of 45 introductory-psychology students, the sample failed to be representative. Future studies could improve upon this by recruiting more participants through a more random sampling method. Additionally, a study in the future could further discern the possible contrast between mentalization and simple sensory perception. The present study induced theory of mind by requiring each participant to thoroughly evaluate and think about the Smokey Buck while being aware of past participants' parallel involvement in the study. If they were told to simply look at the object instead of meticulously reflecting on it, it is possible that the contagion effect would be mitigated or not even exist. Another interesting direction for future research is to see if the value transfer also translates to humans' social connections. For example, if someone often comes into direct contact with a highly esteemed

celebrity, do others perceive this person as representing this celebrity's qualities? Does the law of contagion hold for human-to-human contact, and, if so, does one acquire value from sustaining such contact?

In a larger scale, this experiment reminds us that all things, including inanimate objects, have a story worth telling. For an object to exist, someone had to employ meticulous thought and deliberate a design. Someone had to forge its name and name its use. The object holds onto this design, name, and all other stains of the past. As it passes from person to person, it retains the small fragments of each human mind and multiplies its experience. Through all this, the object brings its constituents to a shared reality; it links people to a common, mentally synchronized world.

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