

Renting More than the Runway:
Essence Transfer in Access-Based Consumption

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DEDICATION

For Bethany, this wouldn't exist without you. I can't thank you enough.

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INTRODUCTION

The recent growth of firms offering access-based consumption has provided consumers with more opportunities than ever to use, without legal ownership, almost anything they need to enhance or enable an experience (Bardhi and Eckhardt 2012). Firms such as Rent the Runway, Zipcar, and AirBnB allow consumers to buy access to products for a limited amount of time. When consumers choose access-based consumption, they are typically doing so for a specific occasion (e.g. renting an outfit for a wedding, a truck to move a piece of furniture, or a beach home for a vacation) (Abbey et al. 2015).

To date, research on access-based consumption has largely examined either consumers' satisfaction with the accessed product or the types of consumers who engage in the practice and their motivations for doing so (i.e. Botsman and Rogers 2010; Eckhardt and Bardhi 2016; Habibi, Kim and LaRoche 2016; Hamari, Sjöklint and Ukkonen 2015; Möhlmann 2015). In our research, we take a different perspective on this growing form of consumption by focusing on the experience which results from using these access-based products. During these rental occasions, the product itself becomes a crucial element of the overall experience, curated by the consumer to make the occasion/experience a positive one.

One distinctive characteristic of the products accessed by consumers in these situations is that they are not new, having been previously used by other consumers. Our research examines the way in which consumers' specific knowledge about the product's prior user influences their satisfaction with the consumption experience. For example, if a consumer rents a dress for a

friend's wedding from *Rent the Runway*, will she enjoy that event more knowing that the woman who wore the dress last was a sophisticated Manhattan socialite rather than a grandmother from Toledo? We argue that she will, and we look to the literature on contagion to support this claim. In doing so, our research contributes to the nascent literature on access-based consumption as well as to the more established contagion literature by examining the consumption experience itself rather than focusing exclusively on either the accessed product or the consumer's reason for accessing it.

Much of the contagion literature has examined the way in which a product's valuation and/or evaluation changes when it is connected, physically or symbolically, to another person. In our research, we argue that the accessed product can serve as a vessel through which traits of prior users can transfer to the current user and influence his/her satisfaction with the consumption experience itself. Recent work by Kramer and Block (2014) has demonstrated a related effect by showing that a prior user's ability can transfer via touch to influence the current user's confidence and subsequent task performance. Our work is similar, in that we expect the essence of the prior user to transfer to the current one, but it is also different in two important ways: first, we examine a number of the prior user's traits rather than a single one, enabling us to examine the influence of trait relevance on contagion; second, we measure users' satisfaction with both the product and with the consumption experience, enabling us to identify the potentially countervailing effects of positive and negative contagion, a possibility that has been proposed but not empirically tested (Nemeroff and Rozin 2018). Addressing these questions

enables us to speak to the call by Huang, Ackerman and Newman (2017) for more research examining the way in which essences are transferred via objects and incorporated into the self-concept.

MOTIVATIONS UNDERLYING ACCESS-BASED CONSUMPTION

Before examining the role of contagion in access-based consumption, we first consider consumers' motivations for engaging in the behavior in the first place. Benoit et al. (2017) identifies four primary motives which prompt consumers to engage in this form of collaborative consumption, including a desire to obtain economic value, hedonic value, social value, and/or the value that comes from the reduction of risk and responsibility. Of these four, economic motives have been shown to be the most important motivation for people who choose access-based consumption over traditional ownership (Lamberton and Rose 2012; Barnes and Mattson 2016). When the price of ownership is too high, consumers turn to access-based consumption rather than foregoing the experience altogether (Lamberton and Rose 2012). Consumers who do so often also gain hedonic value when they are able to have an experience that is "exciting but normally out of reach" (Benoit et al. 2017, p. 221; see also Moeller and Wittkowski 2010 and Eckhardt et al. 2019). For example, the Hertz "Dream Collection" allows consumers to drive a Ferrari for \$1,500 a day, a price 200 times lower than the car's base purchase price. In sum, the pursuit of both economic and hedonic value underscores the importance of the consumption experience.

Consumers also engage in access-based consumption to reduce the risks and/or responsibilities associated with outright ownership, such as storage costs, potential liability, and maintenance. Home Depot explicitly appeals to consumers using this message for its tool rental business (https://www.homedepot.com/c/tool_and_truck_rental). Finally, some consumers pursue access-based consumption for its potential social value (e.g., the opportunity to meet new people; Benoit et al. 2017; Habibi et al. 2016). Spinlister, a worldwide bike rental platform, uses the tagline, “save money, meet awesome people, consume less.” Spinlister requires that anyone looking to list their bikes for rental include a picture as well as a biography that consumers can peruse while deciding on which bike to rent. Listers with higher response rates, and thus a greater connection with potential renters, are recommended first on the app. Making salient the connection between the prior user and the accessed product, however, may have some unintended consequences. For these, we turn to the contagion literature.

CONTAGION

Over two decades ago, Rozin, Nemeroff, and colleagues introduced contagion theory to the field of psychology, and since that time, considerable interest in the topic has expanded to the consumer behavior literature (see Huang et al. 2017; Morales, Dahl, and Argo 2018; and Nemeroff and Rozin 2018 for comprehensive reviews). As one of the laws of sympathetic magic advanced by anthropologists over a century ago, the law of contagion essentially argues that

when two entities touch, the essence of one passes to the other (Frazer, 1890/1922; Mauss, 1902/1972; Nemeroff and Rozin 2018). In early contagion research, it was presumed that physical contact from the “toucher” (or source) was necessary for contagion to occur as the target became contaminated with physical properties from the “toucher” (e.g., skin cells; Argo, Dahl and Morales 2006; Morales and Fitzsimons 2007; Newman, Diesendruck and Bloom 2011; Rozin, Millman and Nemeroff 1986; Rozin and Fallon 1987). The effect typically results in lower valuations of the target by generating feelings of disgust in those evaluating it (Argo et al. 2006; Huang et al. 2017; Morales and Fitzsimons 2007; Rozin and Fallon 1985). However, there have also been a few demonstrations of positive physical contagion, such as when a product has been previously worn by an attractive member of the opposite sex (Argo, Dahl, and Morales 2008) or used by someone with exceptional talent such as Eric Clapton (Fanelli 2017), but these cases are the exception rather than the rule (Nemeroff and Rozin 2018).

To combat negative contagion effects, many of the firms offering access-based consumption work diligently to ensure anonymity between clients, attempting to create a sense of “newness” for each renter. Hotels use bleached white sheets on their beds, rental car companies detail their cars after use, and Rent the Runway is the world’s largest dry cleaner (<https://www.renttherunway.com/about-us/process>). These firms do so for good reason: the contagion literature has demonstrated that removing the physical essence of prior users will typically increase the value of the product to the new user (Argo et al. 2006).

More recent contagion research has begun to relax the assumption that physical contact is necessary for contagion to occur by documenting cases of non-physical essence transfer (see “Amendment 1,” Morales et al. 2018 for a review). For example, contagion effects have been recently observed in situations when the source and the target are connected only by spatial location, spatial proximity, or temporal proximity (Kim and Kim 2011; Newman and Dhar 2014; Smith, Newman, and Dhar 2015; Stavrova et al. 2016; see Morales et al. 2018). These instances of non-physical contagion are described as moral and/or symbolic (Nemeroff and Rozin 2018; Nemeroff et al. 2019). It is, therefore, possible that both physical and moral/symbolic essence transfer can occur simultaneously, and possibly, with opposite valence (Fedotova and Rozin, 2018; Nemeroff and Rozin 2018).

One reason for this proposed simultaneous effect is that people can evaluate products and experiences differently (i.e. Brakus, Schmitt and Zhang 2008; Homburg, Jozić and Kuehnl 2015; Oliver 1993; Schmitt 2011). For example, Brakus, Schmitt and Zhang (2008) found that participants who were presented with two computer disks where the differences were solely functional, participants evaluated the products deliberately on the attributes. However, when presented with a choice between a functionally superior disk and a functionally inferior disk that included an experiential attribute (a translucent case that allowed the consumers to see the interior), consumers were more likely to circumvent the deliberation and choose the functionally inferior product because of the experience.

In differentiating product and experiential evaluation into distinct and yet related constructs, it is possible to see how both positive and negative contagion can occur simultaneously. Picking up on our earlier example, the woman renting from Rent the Runway may be somewhat disgusted at the thought that someone else was recently sweating in her dress but may also believe that the prior renter's positive traits may wear off on her causing her to have a more positive experience. In our research, we test for this effect, which has been proposed but not empirically tested to our knowledge (Schmitt 2011; Nemeroff and Rozin 2018).

Also relevant to our work is the fact that few studies have looked beyond the valuation/evaluation of the target object to understand whether it can serve as a vehicle through which the source's essence can transfer to another entity. The studies that have done so have focused on the effects of physical contagion on task performance. For example, Lee et al. (2011) found that when participants were told that a golf club was previously owned by a professional golfer, participants were more likely to sink their own putts. Similarly, Kramer and Block (2014) found that participants who used an object they believed to have been previously used by a high performer were more confident in their own ability and demonstrated improved task performance compared to those who held no such belief. While both of these examples demonstrate that the essence of a prior user can transfer through an object to influence a person's consumption performance, the studies focus only on the transfer of a single trait (i.e., the prior user's ability) and one that is highly relevant to the focal task. It may be the case that only traits relevant to the consumption experience will transfer from the source via the target to the current user. However,

it may also be the case that a more generalized transfer of traits occurs, with both task-relevant and task-irrelevant traits of the prior user influencing the current user's consumption experience. We examine this question in the following study in which we recruited female participants to engage in an access-based consumption experience for a week by selecting, and subsequently using, a handbag from a collection we created.

STUDY 1

Procedure and Experimental Design

Eighty-seven female graduate and undergraduate students from a large midwestern university participated in this field experiment where one factor was manipulated between-participants: the presence or absence of specific knowledge about the bag's prior user. We chose the context of the accessory rental market, estimated to be larger than \$500 million, because (a) the products are relevant to our target population and (b) are affordable enough for us to purchase a sufficient quantity for the experiment. As a cover story for the study, we told participants that we were working with the Wander Wear company to better understand consumer behavior in the accessory rental market. In reality, Wander Wear is a fictional company we created based on the real accessory rental company Bag, Borrow or Steal.

Participants were recruited through a campus-wide email and were told that in exchange for their participation in the study, they would have the opportunity to carry a purse for a week, would receive \$25 upon completion, and would be entered for a chance to win one of the purses.

Those who wanted to participate responded to a link in the email which brought them to an initial survey containing a set of demographic questions and an introduction to Wander Wear, “our corporate partner in the study.” After learning about the company, participants were instructed to pick up their purse from a room in the business school on the upcoming Monday morning, to use the purse as they normally would, and to return it to the same room on Friday afternoon of the same week. Participants then saw pictures of the available purses, selected their preferred option, and signed up for a pick-up time (see appendix B). Finally, participants answered a set of questions about their impressions of the Wander Wear company to reinforce the cover story.

The Presence or Absence of Specific Knowledge about the Prior User

The knowledge manipulation occurred on Monday morning when participants picked up their purses. Inside each purse, participants found a sheet of paper and were prompted to read it. At the top of the page, all participants saw a description of the Wander Wear company along with its logo. Those in the “knowledge absent” condition then read a series of anonymous testimonials purportedly written by prior users of the purse (e.g., “I was very pleased with the condition of the bag and the service.”; “The purse really fits my style!”; “I will definitely be referring you guys to everybody I know.”; see appendix C). It was important to remind these participants that the purse had been previously used by other consumers given that contagion

beliefs “may remain dormant until they are called into action by either internal or external contamination cues” (Morales et al. 2018, p. 557). Including this prompt ensured that contagion effects could reasonably occur in both conditions.

In contrast, those in the “knowledge present” condition read the following: “At the end of your rental, we will ask you some questions about yourself and your bag. We asked the previous user of this purse, Emily Smith (not her real name) to answer these same questions. Have a look at her answers.” Detailed information about Emily was then provided in a profile that contained information about her year and major in school, GPA, school activities, what she likes to do for fun, etc. (see appendix D). The profile described a set of Emily’s traits, judged by pretest participants on how relevant or irrelevant the traits were in this consumption context (see appendix A for pretest details). Of the ten traits tested, three were rated as relevant (“good with money,” “disciplined,” and “intelligent”), three were rated as irrelevant (“kind,” “creative,” “athletic”), and four were rated as neutral (“honest,” “friendly,” “genuine”, and “helpful”). The profile of Emily, therefore, described her as having the three most relevant and the three most irrelevant traits but made no mention of the other four (see appendix D). With this profile established, we ran an additional pretest to ensure that Emily was perceived to possess these traits and to ensure that there were no differences in their positive valence across the relevant and irrelevant traits (see appendix A).

Dependent and Control Measures.

On the Day of Purse Pick-Up (Monday). Once participants had received their purses and read the knowledge manipulation, they responded to the dependent and control measures. Specifically, on 7-point scales, participants indicated (1) the extent to which they were satisfied with the bag based upon their first impression of it (“initial product satisfaction,” 1 = very dissatisfied; 7 = very satisfied) and (2) how much they expected to enjoy using the purse during the week (“expected experiential satisfaction,” 1 = unlikely to enjoy; 7 = likely to enjoy a great deal). They then responded to the control measures by reporting their monthly disposable income in \$25 increments (1 = \$0-\$24; 13 = \$300 or more), the number of purses they currently owned (0 = 0; 9 = 8 or more), and the cost and brand of their favorite purse in increments of \$25 (0 = \$0-\$24; 13 = \$300 or more).

Previous research has shown a positive relationship between psychological ownership and product satisfaction, and to control for this possible alternative explanation, participants indicated on 7-point scales the extent to which they agreed that the purse felt like theirs, that it fit their personal style, that if someone were to insult the purse it would feel like a personal insult, that if someone were to compliment the purse it would feel like a personal compliment, that they felt like they owned the purse and that they felt a high degree of personal ownership of the purse (see Peck and Shu 2009; Shu and Peck 2011). We averaged these measures to create an index of psychological ownership ($\alpha = 0.75$, $M = 3.20$, Range: 1.50 to 6.75).

On the Day of Purse Return (Friday). On the Friday when they were scheduled to return their purses, participants received an email in the morning with a link to a survey which included

the same psychological ownership scale they filled out on Monday ($\alpha = 0.82$, $M = 3.43$, Range: 1.75 to 7.00). Included at the end of the survey were instructions to return the purse, sign out, and receive their \$25.

When they arrived to return their purses, participants filled out a final survey indicating how satisfied they were with the purse (“product satisfaction,” 1 = very dissatisfied; 7 = very satisfied), how satisfied they were with the consumption experience (“experiential satisfaction,” 1 = very dissatisfied; 7 = very satisfied), and how likely they were to use Wander Wear again (1 = not at all likely; 7 = very likely). As a behavioral measure of satisfaction, we asked participants to report the number of times they took the purse with them to class during the week (0 = 0 times; 1 = 1 time; 8 = more than 7 times). This behavioral measure was negatively correlated with reported product satisfaction ($r = -0.22$, $p < 0.04$) and positively correlated with experiential satisfaction ($r = 0.27$, $p < 0.02$). Finally, to assess the extent of trait transfer, all participants rated themselves on the same traits that had earlier been used to describe Emily (good with money, intelligent, disciplined, kind, creative, and athletic).

RESULTS

Control Measures

To ensure there were no significant differences between participants in the two conditions, we ran a series of one-way ANOVAs on the control variables measured at the time participants picked up the purse. The analyses revealed that participants did not differ

significantly on their disposable income ($M_{\text{knowledge absent}} = 6.18$ vs. $M_{\text{knowledge present}} = 5.98$, $F(1,85) = 0.16$, n/s), the number of purses they owned ($M_{\text{knowledge absent}} = 6.02$ vs. $M_{\text{knowledge present}} = 6.05$, $F(1,85) = 0.00$, n/s) or the price they paid for their primary purse ($M_{\text{knowledge absent}} = 6.33$ vs. $M_{\text{knowledge present}} = 5.48$, $F(1,85) = 0.67$, n/s). Importantly, participants did not differ on their perceived psychological ownership of the purses just after receiving them on Monday ($M_{\text{knowledge absent}} = 3.08$ vs. $M_{\text{knowledge present}} = 3.32$, $F(1,85) = 1.17$, n/s) or when they returned them on Friday ($M_{\text{knowledge absent}} = 3.35$ vs. $M_{\text{knowledge present}} = 3.50$, $F(1,85) = 0.36$, n/s). Because there were no significant differences across conditions on these measures, we do not include them as covariates in our subsequent analyses.

Product Satisfaction

When participants first received the purse, the contagion literature would suggest that participants who had specific knowledge about the prior user, Emily, might report lower initial product satisfaction than those who did not have such knowledge because it would make salient the physical essence that she had left on the purse. A one-way ANOVA revealed a marginally significant difference between conditions on initial purse satisfaction ($M_{\text{knowledge absent}} = 6.02$ vs. $M_{\text{knowledge present}} = 5.70$, $F(1,85) = 3.02$, $p < 0.10$). Recall that participants who did not receive the specific knowledge about Emily were still reminded that the purse had had previous users because they read testimonials from them. As such, this measure served as a relatively

conservative test of contagion theory because participants in both conditions were reminded that their purses had been physically contaminated by prior users.

Once a product has been contaminated, it tends to remain so (Rozin et al. 1986). Therefore, we did not expect that the effect of the knowledge manipulation would attenuate throughout the week. Consistent with this expectation, participants in the “knowledge present” condition who had received specific information about prior-user Emily continued to report lower levels of purse satisfaction than did those who had received no such information when they returned their purses on Friday ($M_{\text{knowledge present}} = 5.64$ vs. $M_{\text{knowledge absent}} = 6.17$, $F(1,85) = 4.67$, $p < 0.05$).

Experiential Satisfaction

In contrast to product satisfaction, we expected that participants who had specific knowledge of the prior user of the purse would report greater experiential satisfaction with the consumption experience. While the product had been physically contaminated by Emily, it had also been symbolically contaminated with her desirable traits as well (e.g., Emily had been described as good with money, intelligent, disciplined, kind, creative, and athletic).

When participants initially picked up their purses on Monday, there were no differences in expected experiential satisfaction across conditions ($M_{\text{knowledge absent}} = 5.73$ vs. $M_{\text{knowledge present}} = 5.98$, $F(1,85) = 1.03$, n/s). However, after using the purse for a week, participants who had received the specific information about Emily in the “knowledge present” condition reported

greater experiential satisfaction in using the purse than did those who had received no such information ($M_{\text{knowledge present}} = 3.73$ vs. $M_{\text{knowledge absent}} = 2.95$, $F(1,85) = 6.92$, $p < 0.02$). The “knowledge present” participants also reported taking the purse to class with them more often ($M_{\text{knowledge absent}} = 2.48$ vs. $M_{\text{knowledge present}} = 3.30$, $F(1,85) = 7.58$, $p < 0.01$) and were more likely to use Wander Wear again than those in the “knowledge absent” condition ($M_{\text{knowledge absent}} = 4.17$ vs. $M_{\text{knowledge present}} = 5.02$, $F(1,85) = 6.09$, $p < 0.03$). Notably, a follow-up regression demonstrated that experiential satisfaction ($\beta = 0.66$, $t(85) = 6.33$, $p < 0.00$) rather than product satisfaction ($\beta = -0.19$, $t(85) = -1.40$, $p > 0.1$) significantly predicted repeat purchase.

Trait Transfer

A series of ANOVAs revealed that participants who had received knowledge about prior-user Emily reported that they themselves were better with money ($M_{\text{knowledge absent}} = 5.26$ vs. $M_{\text{knowledge present}} = 5.98$, $F(1,85) = 7.05$, $p < 0.01$), more disciplined ($M_{\text{knowledge absent}} = 5.19$ vs. $M_{\text{knowledge present}} = 5.73$, $F(1,85) = 6.02$, $p < 0.03$), and more intelligent ($M_{\text{knowledge absent}} = 6.07$ vs. $M_{\text{knowledge present}} = 6.43$, $F(1,85) = 5.17$, $p < 0.04$) as compared to those who did not have such information (see Table 1). This set of findings suggests that Emily’s relevant traits had transferred to the purse’s current user. However, the knowledge manipulation had no significant effect on participants’ self-perceptions on the traits that were not relevant to the consumption context (i.e., kindness, creativity and athletic; all p ’s > 0.05 , see Table 1).

DISCUSSION

Study 1 offers a set of interesting insights about contagion effects in an access-based consumption context. First, the findings demonstrate that detailed knowledge about a product's prior user can have a mixed influence on consumer satisfaction. While such knowledge enhanced participants' satisfaction with the overall usage experience, it had the opposite influence on their product satisfaction. One plausible explanation for these disparate effects is that physical contagion may account for the negative influence on product satisfaction while symbolic contagion may account for the positive influence on experiential satisfaction. Our next study is designed to more directly test for this possibility.

Second, the results from study 1 demonstrate that the essence of the prior user did transfer to the current user, but that it did so selectively. Specifically, only the traits relevant to the purse consumption experience influenced the current user's self-perceptions. These findings suggest that a halo effect was *not* at work because we only observed a significant effect of the knowledge manipulation on the transfer of the relevant traits (self-perceived intelligence, discipline, and effectiveness with money). Were a halo effect at work, we should have observed a wholesale improvement in participants' self-perceptions across *both* the relevant and irrelevant traits.

Study 1, however, does have its limitations. First, one could argue that a number of factors varied between the knowledge-absent and knowledge-present conditions including both the type and amount of information they offered participants. The following study is designed to

eliminate these possible confounds. In doing so, we have the opportunity to heed the advice of Nemeroff and Rozin (2018) and more clearly differentiate between association and contagion effects. According to Nemeroff and Rozin (2018), in associational situations, “one object becomes a reminder of another, but there is no sense of essence transfer,” while in contagion, “the essence is transferred between objects” (617). Distinguishing between contagion and association effects is, therefore, critical for isolating the effects of physical contagion. If the lower product satisfaction scores for those in knowledge present condition came as a result of negative *physical* contagion, we would not expect to see a similar effect when the connection between the person and the object is only associational.

Second, study 1 only described Emily on positively-valenced traits. In the following study, we test whether both positive and negative trait information symbolically transfers from the prior user via the product to influence the current user’s self-perceptions. The inclusion of both positive and negative traits furthers our ability to distinguish between physical and symbolic contagion effects as well: physical contagion effects should not differ according to trait valence while symbolic contagion effects should.

TABLE 1
STUDY 1 RESULTS

<i>Measure and Condition</i>	<i>Knowledge Condition</i>		<i>Difference</i>
	<i>Absent</i>	<i>Present</i>	
Expected Product Satisfaction (Monday)	6.02 (1.10)	5.70 (1.47)	F(1,85) = 3.37, n/s
Expected Experiential Satisfaction (Initial Email Survey)	6.09 (1.10)	6.16 (1.47)	F(1,85) = 0.20, n/s
Expected Experiential Satisfaction (Monday)	5.73 (1.30)	5.98 (1.01)	F(1,85) = 0.99, n/s
Product Satisfaction After Use	6.17 (1.03)	5.64 (1.22)	F(1,85) = 4.88, p < 0.05
Good with money	5.26 (1.67)	5.98 (1.00)	F(1,85) = 7.05, p < 0.01
Disciplined	5.19 (1.13)	5.73 (0.87)	F(1,85) = 6.02, p < 0.05
Intelligent	6.07 (0.78)	6.43 (0.66)	F(1,85) = 5.17, p < 0.05
Kind	6.05 (0.85)	6.25 (0.72)	F(1,85) = 1.35, n/s
Creative	5.40 (1.33)	5.57 (1.32)	F(1,85) = 0.30, n/s
Athletic	4.55 (1.63)	4.91 (1.61)	F(1,85) = 1.02, n/s
Experiential Satisfaction	2.95 (1.10)	3.73 (1.55)	F(1,85) = 6.92, p < 0.01
Use Wander Wear Again	4.17 (1.77)	5.02 (1.36)	F(1,85) = 6.09, p < 0.03
How Many Classes	2.48 (1.31)	3.30 (1.39)	F(1,85) = 7.58, p < 0.01

STUDY 2

This field study used the same purse context, cover story, and basic procedure as used in study 1. However, the study design and manipulations differed. In study 2, all participants received detailed information about the prior user of the purse. What differs across conditions in this 2 X 2 between-participants study is (1) the valence of Emily's relevant traits (trait valence: positive vs. negative) and (2) the connection between the prior user and the purse "rented" by our participant. Specifically, we manipulated whether Emily was described as having previously used *this exact* purse (a contagion-based connection) or a purse exactly like it (an association-based connection).

In the contagion-connection conditions, participants were led to believe that Emily had physically had contact with their purse and, therefore, that her physical essence had been transferred to it. In contrast, in the association-connection conditions, participants were led to believe that Emily had previously rented an exact copy of the purse they had selected but that she had not touched the one currently in their possession.

Participants and Procedure

Study 2 was run over the course of 4 separate weeks. Female participants were recruited from an introductory marketing course via email and were offered 2 extra credit points for their participation. Those who were not interested in participating were given the option to complete an alternative task to receive the extra credit. As in study 1, interested participants responded to a link embedded in the email, and 193 women responded. The link brought them to the same

survey that we used in study 1, where they first responded to a set of demographic questions and then read about Wander Wear, selected their purse, and were given a pick-up time and location for the following Monday. The remainder of the procedure followed exactly from study 1, with participants returning their purses on Friday.

Independent Variables

As in study 1, all participants found a sheet of paper in their purse at pick-up which described the Wander Wear company. The sheet also offered a description of Emily, embedded in which were the two manipulations. Participants in the contagion-based conditions were told that Emily had used *this exact purse* while those in the association-based conditions were told that Emily had used a *purse just like this one*.

Trait valence was manipulated such that participants assigned to the positive trait condition saw that Emily was intelligent (e.g., a GPA of 3.87), good with money (i.e. “I enjoy doing things that aren’t too expensive, but that I can enjoy”) and disciplined (i.e. “I often work on assignments early so that I have enough time during the week for other things.”). Participants assigned to the negative trait condition saw that Emily was not overly intelligent (i.e. a GPA of 3.14), not good with money (i.e. “I enjoy doing things that maybe I can’t afford, but that I can enjoy”) and not disciplined (i.e. “I often leave assignments to the last minute so that I can do other things”). All of the descriptions also included information about Emily’s positive, yet irrelevant, traits (athletic, kind and creative; see appendix D).

Manipulation Check and Control Measures

In addition to the control measures included in Study 1, participants responded to additional control measures about Emily at the time they turned in their purses on Friday. Specifically, they indicated the extent to which they agreed that they were similar to Emily, would be interested in being friends with Emily and that they shared similar interests with Emily (1 = strongly disagree; 7 = strongly agree). We averaged these three items to create a similarity index ($\alpha = 0.84$, $M = 4.20$, Range: 1.33 to 7.00).

As a manipulation check, participants responded to a set of questions about Emily's attributes (i.e., "Emily is intelligent", "Emily is good with money", "Emily is disciplined"; 1 = strongly disagree; 7 = strongly agree).

Product and Experiential Satisfaction Measures

Product satisfaction was measured both on Monday and Friday as it had been in Study 1. The initial measure of expected experiential satisfaction was also measured as it had been on Monday in Study 1. However, we strengthened the measure of actual experiential satisfaction by including additional items. In addition to reporting the extent to which they enjoyed using the purse during the week and their likelihood of renting again from Wander Wear, participants also indicated the extent to which they agreed that they were *not* satisfied with the experience of using the purse (reverse coded) and were sad to return the purse (1 = Strongly Disagree; 7 = Strongly Agree). All four items loaded on a single factor and were averaged to form an index of experiential satisfaction ($\alpha = 0.82$, $M = 4.12$, Range: 1.67 to 6.67). Participants also indicated exactly how many days they took the purse with them to class (0 = 0 times; 1 = 1 time; 8 = more than 7 times). As in study 1, this behavioral measure was positively correlated with reported

experiential satisfaction ($r = 0.31, p < 0.01$) and negatively correlated with reported product satisfaction ($r = -0.21, p < 0.04$).

Trait Transfer

Because we did not want to bias our participants as to the nature of the study, trait transfer from the prior user to the current user was only measured at the end of the week, on Friday, just before they returned the purse. Participants rated themselves on how good they were with money, and how disciplined, intelligent, kind, creative and athletic they were (1 = not at all; 7 = very). To make the test for moderated mediation more tractable, we averaged participants' responses on the relevant traits (good with money, disciplined and intelligent) to form a relevant trait transfer index ($\alpha = 0.82, M = 3.36, \text{Range: } 1.33 \text{ to } 6.67$). We did the same for the irrelevant traits (kind, creative and athletic; $\alpha = 0.75, M = 2.94, \text{Range: } 1.00 \text{ to } 5.33$).

Discriminant Validity

To establish the discriminant validity of our measures, we subjected the individual items measuring similarity, product satisfaction, experiential satisfaction, and trait transfer to an exploratory factor analysis with a varimax rotation. The findings indicate that the constructs are distinct: the similarity measures loaded on their own factor as did the experiential satisfaction measures. Product satisfaction loaded on its own factor, as did expected experiential satisfaction and initial product satisfaction. It is important to note that the relevant and irrelevant traits did not co-load on the satisfaction factors.

RESULTS

Manipulation Check

A series of 2X2 ANOVAs revealed that the valence manipulation was successful. Participants in the positive valence trait conditions felt that the prior user was more intelligent ($M_{\text{positive}} = 5.18$ vs. $M_{\text{negative}} = 4.75$, $F(1,189) = 6.12$, $p < 0.05$), good with money ($M_{\text{positive}} = 4.94$ vs. $M_{\text{negative}} = 4.17$, $F(1,189) = 17.59$, $p < 0.01$) and disciplined ($M_{\text{positive}} = 5.07$ vs. $M_{\text{negative}} = 4.28$, $F(1,189) = 16.42$, $p < 0.01$) than did those in the negative trait conditions. No other significant effects emerged.

Control Measures

A series of 2X2 ANOVAs revealed no significant differences on participants' disposable income, the number of purses they own, and how much they paid for their primary purse (all p 's > 0.1 see appendix E). After receiving their purses on Monday, participants did not differ on initial purse satisfaction, expected experiential satisfaction or on psychological ownership of the purse (all p 's > 0.1 see appendix E). Importantly, after using the purse for a week, participants reported no significant differences in psychological ownership or in their perceived similarity to Emily (all p 's > 0.1 see appendix E). These findings replicate those observed in study 1, and as a result, we do not include these measures as covariates in our subsequent analyses.

Product Satisfaction

Our expectation was that physical, but not symbolic, contagion would influence participants' satisfaction with the purse, and a 2X2 ANOVA offers support for this prediction. Only a main effect of the connection factor (contagion versus association) emerged, with those in

the contagion condition reporting significantly lower satisfaction with the purse than those in the association condition ($M_{\text{contagion}} = 3.97$ versus $M_{\text{association}} = 4.65$, $F(1,189) = 6.15$, $p < 0.01$).

Because trait valence had no significant influence on product satisfaction, either independently or in conjunction with the connection factor, it is unlikely that symbolic contagion effects were at work.

Experiential Satisfaction

Similar to product satisfaction, we expected that experiential satisfaction would be influenced by trait valence only when participants believed they were using the exact purse that Emily had used. Specifically, we predicted that for those in the contagion-based conditions, positively-valenced traits would lead to greater experiential satisfaction than would negatively-valenced traits. For those in the association-based conditions, we expected this effect to be attenuated. A 2X2 ANOVA revealed the predicted interaction between the independent factors ($F(1,189) = 12.281$, $p < 0.01$). Planned contrasts revealed that participants in the contagion-based condition who received positive information about Emily reported higher experiential satisfaction than did those who received negative information ($M_{\text{positive contagion}} = 4.61$ vs. $M_{\text{negative contagion}} = 3.52$, $F(1,189) = 38.63$, $p < 0.01$). No differences emerged for those in the association-based conditions ($M_{\text{positive association}} = 4.03$ vs. $M_{\text{negative association}} = 4.27$, $F(1,189) = 1.44$, n/s).

To understand the behavioral implications of our manipulations, we ran a 2X2 ANOVA using our behavioral indicator as the dependent measure: the number of classes to which participants reported taking the purse. Only the interaction between valence and connection with the prior user was significant ($F(1,189) = 2.54$, $p < 0.05$). Participants in the contagion-connection condition who received positive information about Emily took the purse to class with

them more often than those who received negative information ($M_{\text{positive contagion}} = 2.76$ vs. $M_{\text{negative contagion}} = 1.84$, $F(1,189) = 6.84$, $p < 0.01$). Importantly, no differences emerged for those in the association-based conditions ($M_{\text{positive association}} = 2.69$ vs. $M_{\text{negative association}} = 2.24$, $F(1,189) = 1.54$, n/s).

The independent factors had a similar effect on participants' likelihood of using the WanderWorld platform again. Only the interaction between valence and connection with the prior user was significant ($F(1,189) = 4.02$, $p < 0.05$). Participants in the contagion-connection condition who received positive information about Emily were more likely to rent from WanderWear in the future than those who received negative information ($M_{\text{positive contagion}} = 3.92$ vs. $M_{\text{negative contagion}} = 3.01$, $F(1,189) = 6.09$, $p < 0.02$). No differences emerged for those in the association-based conditions ($M_{\text{positive association}} = 3.61$ vs. $M_{\text{negative association}} = 3.67$, $F(1,189) = 0.04$, n/s). As in Study 1, a follow-up regression demonstrated that experiential satisfaction ($\beta = 0.60$, $t(191) = 5.00$, $p < 0.01$) rather than product satisfaction ($\beta = 0.10$, $t(191) = 1.42$, $p > 0.2$) significantly predicted repeat purchase intent.

Trait Transfer

A 2X2 ANOVA on the relevant trait transfer index revealed a significant interaction between the two independent factors ($F(1,189) = 5.49$, $p < 0.03$). In the contagion-based condition, participants who had received positive knowledge about Emily rated themselves as higher on the relevant trait index than did participants who received negative information ($M_{\text{positive contagion}} = 3.92$ vs. $M_{\text{negative contagion}} = 2.83$, $F(1,189) = 28.96$, $p < 0.01$). In the association-based condition, this effect was attenuated: ($M_{\text{positive association}} = 3.35$ vs. $M_{\text{negative association}} = 3.30$, $F(1,189) = 0.04$, n/s). We expected that Emily's irrelevant traits would not be influenced

participants' self-perceptions. A 2X2 ANOVA on the irrelevant trait index revealed no significant effects.

Moderated Mediation

We ran a moderated mediation analysis using the relevant trait transfer index as our mediator and trait valence as our moderator. We conducted a bootstrapping analysis (PROCESS Model 7; Hayes, 2013) on the experiential satisfaction with the association vs. contagion factor (coded as 1 for contagion and -1 for association) as the independent variable. This analysis (5000 resamples) revealed that for participants in the contagion condition, trait transfer significantly mediated the relationship between contagion and experiential satisfaction positively when the traits were positive (estimated indirect effect = 0.16; 95% confidence interval [CI], 0.08 to 0.41) and negatively when they were negative (estimated indirect effect = -0.27; 95% confidence interval [CI], -0.52 to -0.01).

As a robustness check, we ran an additional moderated mediation analysis again using trait valence as the moderator, the relevant trait transfer index as the mediator and the association vs. contagion-based factor as the independent variable. This time, however, we used product satisfaction as our dependent variable. As expected, this analysis (5000 resamples) revealed that trait transfer did not significantly mediate the relationship between contagion vs. association and product satisfaction when the traits are positive (95% CI, -0.07 to 0.08) or when they are negative (95% CI -0.07 to 0.09). This finding supports our prediction that product satisfaction is driven by a separate contagion pathway. Additionally, the fact that trait transfer mediates experiential satisfaction, but not product satisfaction provides support for the idea that positive and negative contagion are working through different mechanisms.

DISCUSSION

Like study 1, the findings from this field study demonstrate that a consumer's specific knowledge about a product's prior user can influence their own satisfaction with both the product and the consumption experience. This study, however, extends the study 1 findings by offering greater insight into the process by which these effects occur, and importantly, provides empirical evidence for the Nemeroff and Rozin (2018) premise that the "relative spottiness of positive contagion effects" may be the result of "positive effects competing with negatives ones" (p. 618).

Specifically, study 2 shows that product satisfaction is influenced by negative physical contagion effects. When participants believed that Emily had used the exact same purse they were currently using (a contagion connection), they reported lower levels of purse satisfaction than when they believed that Emily had used an identical copy of their purse (an association connection). This effect occurred regardless of the valence of Emily's traits, and such a finding, in conjunction with the results from the test for moderated mediation, effectively rule out a symbolic contagion account.

Experiential satisfaction, however, is influenced by both positive and negative *symbolic* contagion effects. When Emily's traits were positive (negative), participants in the contagion connection condition transferred Emily's relevant traits to themselves, and this transfer resulted in higher (lower) reported experiential satisfaction. Participants in the association connection condition did not reveal such a pattern. The results from the test for moderated mediation lend additional empirical support to this claim.

While the process evidence offered in study 2 is important, our next study is designed to provide further support for this process by including a standardized control condition by which to compare positive and negative traits of the prior user. Further, due to the nature of the studies in

the field used in studies 1 and 2, having a controlled lab experiment allows us to more cleanly isolate the mechanism by which the process is occurring. Study 3 also aims to generalize the process of trait transfer beyond the context of purses and include both genders.

TABLE 2
STUDY 2 RESULTS

<i>Measure and Condition</i>	<i>Knowledge Condition</i>		<i>Difference</i>	<i>Interaction</i>
	<i>Association</i>	<i>Contagion</i>		
Initial Product Satisfaction				F(1,189) = 0.39, n/s
Positive Trait Valence	4.18 (1.60)	4.10 (1.61)	F(1,189) = 0.063, n/s	
Negative Trait Valence	4.29 (1.41)	4.48 (1.43)	F(1,189) = 0.44, n/s	
Product Satisfaction After Use				F(1,189) = 0.02, n/s
Positive Trait Valence	4.59 (1.43)	3.94 (1.75)	F(1,189) = 4.10, p <0.05	
Negative Trait Valence	4.71 (1.71)	4.00 (1.61)	F(1,189) = 4.40 p <0.05	
Intelligent				F(1,189) = 10.40, p <0.01
Positive Trait Valence	3.49 (0.89)	4.20 (1.41)	F(1,189) = 8.94, p <0.01	
Negative Trait Valence	3.55 (1.19)	3.17 (1.14)	F(1,189) = 2.48, n/s	
Good With Money				F(1,189) = 8.96, p <0.01
Positive Trait Valence	3.65 (1.20)	4.27 (1.62)	F(1,189) = 4.53, p <0.05	
Negative Trait Valence	3.86 (1.41)	3.26 (1.34)	F(1,189) = 4.44 p <0.05	
Disciplined				F(1,189) = 5.36, p <0.05
Positive Trait Valence	3.71 (1.69)	4.29 (1.83)	F(1,189) = 3.78, p=0.05	
Negative Trait Valence	3.63 (1.63)	3.04 (1.63)	F(1,189) = 3.53, n/s	

TABLE 2
STUDY 2 RESULTS CONTINUED

<i>Measure and Condition</i>	<i>Knowledge Condition</i>		<i>Difference</i>	<i>Interaction</i>
	<i>Association</i>	<i>Contagion</i>		
How Many Classes				F(1,189) = 1.02, n/s
Positive Trait Valence	2.69 (1.69)	2.76 (1.75)	F(1,189) = 1.73, n/s	
Negative Trait Valence	2.22 (1.79)	1.84 (1.33)	F(1,189) = 1.53, n/s	
Experiential Satisfaction Index				F(1,189) = 31.01, p < 0.01
Positive Trait Valence	4.03 (0.99)	4.61 (0.73)	F(1,189) = 12.10, p < 0.01	
Negative Trait Valence	4.27 (0.71)	3.52 (0.71)	F(1,189) = 19.27, p < 0.01	

STUDY 3

Conceptual Development

In studies 1 and 2, both experiential and product satisfaction are being influenced by contagion simultaneously, and, under certain circumstances, in different directions. One aim of study 3 is to make clear the distinction between product and experiential satisfaction. Study 3 is designed to further distinguish contagion's effects on product and experiential satisfaction by including additional distinct indicators for each type of satisfaction. To accomplish this goal we, first, turn to Oliver's (1993) research on product satisfaction, which demonstrates that product satisfaction is a function of attribute satisfaction and expectancy disconfirmation. Consumers are likely to be satisfied with the product if they are satisfied with each of the functional attributes of the product. We propose that functional attribute satisfaction will influence the overall product satisfaction, such that the more satisfied consumers are with the individual attributes, the more satisfied they will be with the product. To that end we include functional product attributes ratings in study 3.

Conversely, experiential satisfaction has been shown to be influenced by different indicators (Brakus, Schmitt and Zhang 2014; Homburg, Koschate and Hoyer 2006; Van Boven and Gilovich 2003). We expect, then, that functional attribute satisfaction, being related to the product and not the experience, will not influence experiential satisfaction. In fact, Brakus, Schmitt and Zhang (2014) show that consumers process experiential attributes (such as a sensory or affective) differently, in a more fluent (Winkielman et al. 2003; Alter and Oppenheimer 2009) way than they process functional attributes, which are processed more deliberately. Further, Homburg, Koschate and Hoyer (2006) found that participants rated the experience of completing

a series of math problems higher when they had a positive affective response to the training. We propose, then, that affective response will influence the experiential satisfaction. The more positive affective response, the more positive the experiential satisfaction will be. We expect that because affective response is related more to the experience than the product, that there will be no effect on product satisfaction. Taken together, functional attributes and affective response allow study 3 to more accurately support the distinction between experiential and product satisfaction found in studies 1 and 2.

In studies 1 and 2, purses were used as the experimental context. For study 3, we chose a new product category: pens. We chose this context because (a) it is a context which was not gender specific, (b) it is a context where the product is significantly inexpensive, allowing us to purchase many and (c) it is a context in which borrowing a pen is not unusual. Additionally, study 3 is designed as a lab experiment in order to control the specific experience that the participants have with the pen. Study 2 provided empirical support for *symbolic* contagion, not association, influencing experiential satisfaction based on the valence of the prior user. In this study, we again propose that experiential satisfaction will be influenced positively (negatively) when participants have positive (negative) information about the prior user of the product.

Finally, due to the field nature of study 2, we were unable to compare product satisfaction between contagion conditions. This comparison is important because previous literature (Argo, Dahl and Morales 2008) have found positive effects of contagion on product satisfaction. When participants saw a highly attractive confederate of the opposite gender touch a sweater, they were willing to pay more money for the sweater than when the sweater was touched by an average attractive confederate. It is important to note, the mean effect across contagion condition was still negative compared with the control, no contagion, condition. Study 3 is designed to allow us to

test for the possibility that positive traits could positively influence product satisfaction compared with negative traits. However, consistent with studies 1 and 2, as well with prior contagion literature, we propose that while the positive traits of prior users may have a more positive effect on product satisfaction than negative traits, the overall effect of contagion on product satisfaction will be negative compared to no contagion.

Design and Procedure

Five hundred forty-five students (260 women) participated in the experiment for extra course credit. Specifically, participants from an introductory marketing class were recruited via email, and interested participants signed up for a specific time to come to the lab to complete the study. As a cover story, we adapted the cover story of Kramer and Block (2014) and informed participants that they would be completing a series of tasks using the provided pen and pad of paper. Participants were told that we were interested in learning about their experience in completing these tasks and that they may be provided with some information about the prior user of the pen and the experience that they had had.

On the day of the study, participants came to the lab and were seated at a table where they were handed an envelope that included a cover sheet with a link to the online study (see appendix G), a pen, and a pad of paper. Like study 2, we manipulated the valence of the traits of the prior user (trait valence: positive vs. neutral vs. negative) and the connection of the prior user to the product (connection: contagion vs. association) in this between-participant study. Just as in study 2, we manipulated whether the person described had previously used this *exact* pen (contagion) or a pen exactly like it (association).

At the start of the study, all participants opened the envelope and read the instructions on the cover sheet which directed them to open the provided link on their own device. To reinforce the cover story, the cover sheet included a unique ID number (see appendix G) that participants were told was used to track users of the pen (see appendices J and K for the explanation). When participants went to the study link, they were randomly assigned to a condition. Participants entered the ID number on their own device and then read information about the prior user of the pen (see appendices J and K). Participants then responded to our manipulation check questions.

Next, because we are interested in looking at the experience consumers have with access-based products, we wanted participants to have an experience with the pen, more than simply completing a single task. We asked them to complete a series of tasks (counterbalanced between participants) with the pen and pad of paper: a math task, a drawing task and a writing task. The tasks, described below, were chosen based on prior research (Alter et al. 2010; Griskevicius, Cialdini and Kenrick 2006). Pretests (see below) were used to identify particular traits of interest: intelligence, creativity and laziness.

After completing the three tasks, participants responded to our dependent variables. To ensure that there were no demand effects, the product satisfaction and experiential satisfaction questions were counterbalanced between participants. There was no difference between order presented so we collapsed the results in the following analyses. Finally, participants rated themselves on the traits and responded to demographic questions.

Experience with a Pen

In the drawing task, participants were asked to draw a picture using only one line, without picking up the pen or crossing any of the previously drawn lines (see appendix H).

Creativity was rated as the most relevant trait when drawing this picture with a pen (see appendix A for details), so this task was chosen to focus on creativity. The participants were given 10 seconds to complete this task. Ten seconds was chosen as the appropriate amount of time to complete this task because a pretest (see appendix A for details) showed that while this task was particularly difficult to complete in 10 seconds, it was able to be completed in this time frame.

The math task was adapted from Alter et al., (2010) and intelligence was rated as the most relevant trait associated with completed this task (see appendix A for details). We chose this particular math task and questions because they were moderately difficult, required a pen and paper to complete and did not require complex calculations. Participants were asked to complete a set of 5 mathematic questions from a sample Graduate Record Examination Quantitative section test (see appendix I). They were given 1 minute to complete as many questions as they could.

Finally, the writing task was adapted from Griskevicius, Cialdini and Kenrick (2006). For the writing task, hard-working was rated as the most relevant trait when writing a short story (see below). Participants were asked to write a short, two sentence story that began with the phrase: “Once upon a time there was a family of ducks who...” Participants were given 1 minute to complete the short story. We chose this task because it required the use of a pen and paper and focused on an additional trait than the other two tasks. Taken together these three tasks allowed the participants to have 3 separate experiences with the pen.

Because we were interested in tasks which related to a specific trait, we used pretests to determine which traits were most relevant to the tasks. Two-hundred participants were recruited from mechanical Turk in exchange for money. The participants rated the relevance of 5 different traits to the specific tasks. They were asked to rate the relevance of each of the traits to the task

of (a) drawing a specific picture with a pen, (b) solving a series of math problems and (c) writing a short story on a 1-7 scale (1 = extremely irrelevant and 7 = extremely relevant) and were reminded that the valence of the trait did not matter to the relevance. Specifically, they were instructed to “[N]ot consider how positive or negative the traits are when considering relevancy. For example, while the trait clumsy is negative, it is extremely relevant to the activity of skateboarding.”

Intelligence (vs. creativity, responsibility, athletic and disorganized) was rated the most relevant trait when solving math problems ($M_{\text{intelligence}} = 5.91$ vs. $M_{\text{averageofothervariables}} = 3.21$, $t = 13.34$, $p < 0.01$). Creativity (vs. intelligence, responsibility, hardworking, and egocentric) was rated the most relevant when drawing the specific picture with a pen ($M_{\text{creativity}} = 5.95$ vs. $M_{\text{averageofothervariables}} = 2.80$, $t = 16.31$, $p < 0.01$). Hard-working (vs. egocentric and responsible) was rated the most relevant trait when writing a short story ($M_{\text{hardworking}} = 5.97$ vs. $M_{\text{averageofothervariables}} = 2.80$, $t = 15.63$, $p < 0.01$). However, it was only directionally more relevant than either creativity ($M_{\text{creativity}} = 5.95$, $t = 0.14$, $p = 0.89$) or intelligence ($M_{\text{intelligence}} = 5.91$, $t = 0.55$, $p = 0.60$).

Independent Variables

Participants assigned to the contagion conditions were told that the *exact pen* was previously used by another participant to complete the study and were given information about that user (see appendix J). We pretested the traits of interest (see appendix A for pretest details). To manipulate trait valence, participants in the positive trait condition saw that the prior user was intelligent (e.g. a GPA of 3.9). However, study 3 added a stronger negative condition (a GPA of 2.4) and a neutral condition (a GPA of 3.4).

For this pretest, the same two-hundred participants from mechanical Turk were used. After completing the questions about the relevance of the traits to the specific tasks, the participants were asked to rate how intelligent someone with a GPA of 3.9, a GPA of 3.4 and a GPA of 2.4 (counterbalanced between participants) were on a 1-7 scale (1=extremely unintelligent; 7=extremely intelligent). Participants rated those with a GPA of 3.9 as significantly more intelligent than those with a GPA of 3.4 ($M_{3.9GPA} = 6.15$ vs. $M_{3.4GPA} = 5.81$, $t = 3.88$, $p < 0.01$). Further, participants rated someone with a GPA of 2.4 as significantly less intelligent than someone with a GPA of 3.4 ($M_{3.4GPA} = 5.81$ vs. $M_{2.4GPA} = 4.91$, $t = 7.49$, $p < 0.01$).

Additionally, to ensure that the traits of the prior user were explicit, rather than inferred as in studies 1 and 2, participants saw the specific self-rating of the prior user on 11 traits (see table 3). These traits were pretested for valence and for relevance to the specific tasks completed in this study (see appendix A for pretest details).

Participants in the association conditions were told explicitly that the pen was brand new, but they were given information about a prior user of the *same type of pen* (see appendix K). In the association conditions, the valence of the traits was exactly the same as those in the contagion conditions.

TABLE 3
SELF-IDENTIFIED TRAITS OF THE PRIOR USER

<i>Trait</i>	<i>Valence</i>		
	<i>Positive</i>	<i>Neutral</i>	<i>Negative</i>
Disciplined	7	4	1
Grateful	6	4	2
Hard working	7	5	1
Emotional	4	7	4
Respectful	6	3	2
Hostile	2	2	6
Athletic	5	6	5
Creative	6	4	2
Loyal	7	3	1
Intelligent	6	4	2
Self-Sufficient	6	5	2

Manipulation Check and control measures

As a manipulation check for the valence of the traits, participants indicated on an 8-point scale how intelligent they felt the prior user was (1 = Extremely Unintelligent; 7 = Extremely Intelligent; 8 = There was no prior user of this pen). Additionally, the participants indicated how hard-working the prior user was on an 8-point scale (1 = Extremely Lazy; 7 = Extremely Hard-working; 8 = There was no prior user). Finally, the participants indicated how creative the prior user was on an 8-point scale (1 = Extremely Non-creative; 7 = Extremely Creative; 8 = There was no prior user).

Product Satisfaction

In this study we measured product satisfaction as we had in studies 1 and 2 with the participants responding to the question, how satisfied were you with the pen on a 1-7 scale (1 = Extremely Dissatisfied; 7 = Extremely Satisfied).

Experiential Satisfaction

To measure experiential satisfaction, participants responded to the question, “How satisfied were you with the experience of using the pen for the various tasks?” on a 1-7 scale (1 = Extremely Dissatisfied; 7 = Extremely Satisfied).

Functional Product Attribute Ratings

To look at functional product attributes ratings of the pen we adapted Tse and Wilton’s (1988) measure of attribute satisfaction. Participants indicated their satisfaction with the following attributes of the pen on a 1-7 scale (1 = Extremely Dissatisfied; 7 = Extremely Satisfied): Ease of use, size, color and weight. All 5 measures loaded on a single factor and we averaged them together to form a functional product attribute rating index ($\alpha = 0.88$, $M = 5.38$, Range: 1.00 to 7.00).

Affective response

Additionally, for this study to strengthen the results from study 2 we adapted Peck and Wiggin’s (2006) affective response scale. The items included “The tasks were enjoyable”; “The tasks were very likeable”; “The tasks made me feel very angry (reverse coded)”; “The tasks were very interesting” (1 = Strongly Disagree; 7 = Strongly Agree).

As a final measure of affective response we asked the participants to indicate how difficult they felt each of the individual tasks were on a 1-7 scale. Participants indicated the extent that they agreed with the following statements (1 = Extremely Difficult; 7 = Extremely Easy): “How difficult was the drawing to complete without picking up the pen or crossing any of your previous lines?”; “How difficult were the math questions to complete?”; “How difficult was it to come up with a 2 sentence short story?” We averaged the responses from the affective response scale and difficulty questions to form an index ($\alpha = 0.87$, $M = 4.32$, Range: 1.00 to 7.00).

Trait Transfer

As a measure of trait transfer, all participants rated themselves on the same traits that they had seen from the prior user on a 1-7 scale (Disciplined, Grateful, Hard-working, Emotional, Respectful, Hostile, Athletic, Creative, Loyal, Intelligent, Self-Sufficient). We used the relevant traits (Intelligent, Hard-working and Creative) for the analysis.

RESULTS

As a first step in our analyses, we tested for gender effects. Finding none, we collapsed across gender in the analyses reported below.

Manipulation Check

A series of 3X2 ANOVAs revealed that the valence manipulation was successful. Participants in the contagion condition who had positive information felt that the prior user was more intelligent than those who had neutral information ($M_{\text{contagion, positive}} = 6.05$ vs. $M_{\text{contagion, neutral}}$

= 5.14, $F(1,544) = 40.19$, $p < 0.01$). They also felt that the prior user was harder working ($M_{\text{contagion, positive}} = 6.33$ vs. $M_{\text{contagion, neutral}} = 4.96$, $F(1,544) = 102.10$, $p < 0.01$) and more creative ($M_{\text{contagion, positive}} = 6.01$ vs. $M_{\text{contagion, neutral}} = 5.25$, $F(1,544) = 27.02$, $p < 0.01$).

Additionally, participants in the contagion condition who had negative information about the prior user felt that the prior user was less intelligent than those who had neutral information ($M_{\text{contagion, negative}} = 3.40$ vs. $M_{\text{contagion, neutral}} = 5.14$, $F(1,544) = 147.22$, $p < 0.01$). Further, they felt that the prior user was lazier ($M_{\text{contagion, negative}} = 2.31$ vs. $M_{\text{contagion, neutral}} = 4.96$, $F(1,544) = 383.29$, $p < 0.01$) and less creative ($M_{\text{contagion, negative}} = 2.67$ vs. $M_{\text{contagion, neutral}} = 5.25$, $F(1,544) = 311.98$, $p < 0.01$). No other significant effects emerged.

Product Satisfaction

We expected that physical contagion, not association, would influence participants satisfaction with the pen. We ran a 3X2 ANOVA using our pen satisfaction as the dependent variable. We found only a main effect for prior user, such that those in the contagion condition reported significantly lower product satisfaction with the pen than those in the association condition ($M_{\text{contagion}} = 4.35$ versus $M_{\text{association}} = 5.18$, $F(1,543) = 42.55$, $p < 0.01$).

Additionally, we predicted that within the contagion conditions, participants in the positive contagion condition would be more satisfied with the pen than those in the negative contagion condition. Planned contrasts revealed that those who had positive information about the prior user were more satisfied with the pen than those in the negative contagion condition ($M_{\text{positive contagion}} = 4.58$ versus $M_{\text{negative contagion}} = 4.11$, $F(1,543) = 5.31$, $p < 0.03$).

Experiential Satisfaction

Like study 2, we expected that experiential satisfaction would be influenced by trait valence only when participants believed the pen they were using had been previously used. A 3X2 ANOVA with experiential satisfaction as the dependent variable revealed the predicted interaction between the variables ($F(2,543) = 3.181, p < 0.05$). Specifically, we predicted that experiential satisfaction would increase when the prior user had positive traits, when compared with neutral traits. Planned contrasts revealed that those who had positive information about the prior user of the pen were more satisfied with the experience than those who had neutral information ($M_{\text{positive contagion}} = 3.96$ vs. $M_{\text{neutral contagion}} = 3.53, F(1,544) = 4.63, p < 0.04$).

Further we predicted that experiential satisfaction would decrease when the prior user had negative traits, again when compared against neutral traits. Planned contrasts revealed that those who had negative information about the prior user were less satisfied with the experience than those who had neutral information ($M_{\text{negative contagion}} = 3.13$ vs. $M_{\text{neutral contagion}} = 3.53, F(1,544) = 4.25, p < 0.05$).

No differences emerged for those in the association-based conditions ($M_{\text{positive association}} = 3.55$ vs. $M_{\text{neutral association}} = 3.50$ vs. $M_{\text{negative association}} = 3.53, \text{ all } p\text{'s} > 0.1$)

Functional Product Attribute Ratings

We expected that the functional product attribute ratings would have an effect on the product satisfaction but not the experiential satisfaction. To test for this, we regressed the functional product attribute rating index on pen satisfaction. We found that the functional product attribute rating significantly predicted product satisfaction ($\beta = 0.09, t(544) = 11.18, p > 0.01$), but did not predict product satisfaction ($\beta = 0.05, t(544) = 1.16, p > 0.2$).

Affective response

We expected that affective response would influence experiential satisfaction, but not product satisfaction. To test for this we regressed the affective response index on the experiential satisfaction index as well as the product satisfaction index and found that the affective response index significantly predicted experiential satisfaction ($\beta = 0.13$, $t(544) = 3.62$, $p < 0.00$), but did not predict product satisfaction ($\beta = -0.07$, $t(544) = 1.57$, $p > 0.09$).

Trait Transfer

Finally, we expected that the traits which were relevant to the experience would transfer only in the participants in the contagion conditions. A series of 3X2 ANOVAs revealed a significant interaction between the two independent variables ($F(2,543) = 19.54$, $p < 0.01$). Within the contagion conditions, the participants who had positive information about the prior user rated themselves higher than those who had neutral information on intelligence ($M_{\text{contagion, positive}} = 5.82$ vs. $M_{\text{contagion, neutral}} = 5.47$, $F(1,544) = 5.67$, $p < 0.02$), creativity ($M_{\text{contagion, positive}} = 5.00$ vs. $M_{\text{contagion, neutral}} = 4.53$, $F(1,544) = 4.69$, $p < 0.04$) and hard working ($M_{\text{contagion, positive}} = 5.95$ vs. $M_{\text{contagion, neutral}} = 5.50$, $F(1,544) = 5.83$, $p < 0.02$). Those who had negative information rated themselves lower than those who had neutral information on intelligence ($M_{\text{contagion, negative}} = 4.66$ vs. $M_{\text{contagion, neutral}} = 5.47$, $F(1,544) = 31.21$, $p < 0.01$), creativity ($M_{\text{contagion, negative}} = 4.01$ vs. $M_{\text{contagion, neutral}} = 4.53$, $F(1,544) = 5.91$, $p < 0.02$), and hard-working ($M_{\text{contagion, negative}} = 4.58$ vs. $M_{\text{contagion, neutral}} = 5.50$, $F(1,544) = 25.15$, $p < 0.01$).

Within the association conditions, the effect was attenuated (see table 4). We expected that there would be no difference between self-reported traits between conditions for the irrelevant traits and a 3X2 ANOVA revealed no significant effects (see table 4).

DISCUSSION

The results of this study replicate the findings of studies 1 and 2, demonstrating that under certain conditions consumers can take on the traits of prior users. When consumers know trait information about the prior user of the product and when those traits are relevant to the experience they are having, consumers can transfer those traits onto themselves and this can influence their experience. This study replicates and generalizes the previous findings in a lab setting and in a new context. In this study, as in study 2, we found that when participants had positive trait information about the prior user of the pen, they were more satisfied with the experience than participants who did not have any information about the prior user.

We also replicated the findings for product satisfaction, when participants had information about the prior user, regardless of valence, they were less satisfied with the product than when they did not have information. However, study 3 also extended these findings to show that consumers who have positive trait information will be more satisfied with the product than consumers who have negative trait information. Importantly this finding is consistent with previous work on positive contagion (i.e. Argo, Dahl and Morales 2008).

Further, this study provides empirical support for the theoretical distinction between experiential and product satisfaction. In this study, the more satisfied the participants were with the functional attributes, the more satisfied they were with the pen overall. There was no effect of functional attribute satisfaction on experiential satisfaction. Affective response, however, influenced experiential satisfaction, but not product satisfaction. The more positively the

consumers felt about different aspects of the experience, the more satisfied they were with the experience overall. These different indicators of product and experiential satisfaction add to the work of Brakus, Schmitt and Zhang (2008, 2014) showing that consumers can evaluate products and experiences separately.

Our next study is designed to provide additional support for the proposed mechanism by manipulating rather than measuring the trait transfer process. To accomplish this goal, we turn to Dweck's research on individuals' implicit theories of self (e.g., Dweck, Chiu and Hong 1995) which demonstrates that that people vary in the extent to which they believe that their personalities are malleable (incremental orientation) or stable (entity orientation; see Jain, Mathur and Maheswaran 2009; Chiu, Hong and Dweck, 1997; Mathur, Block and Yucel-Aybat 2014). We propose that consumers primed with a malleable (incremental) orientation are more susceptible to symbolic contagion effects than those with a stable (entity) orientation.

An additional goal of this study is to gain further insight into the relationship between physical and symbolic contagion using a different type of knowledge manipulation. Specifically, in study 4, we manipulate whether or not participants receive salient information about the attractiveness of the prior user. Argo et al. (2008) showed that consumers are more likely to buy a shirt when it was previously worn by an attractive person but only when the attractive toucher was member of the opposite sex (Argo et al. 2008). Indeed, positive *physical* contagion effects may depend on such an evolutionary drive (Nemeroff and Rozin 2000). However, positive *symbolic* contagion effects may operate quite differently. An attractive member of one's own gender may be viewed as aspirational, and if that person is known to have previously used a given product, their positive essence may symbolically transfer through the product to influence the current user's self-perceptions. Argo et al. (2008) did not test for evidence of this type of

symbolic contagion and, thus, were unable to assess whether an attractive prior user of the same gender could generate positive symbolic contagion effects. We test for this possibility in the following study.

TABLE 3
STUDY 3 RESULTS

	<i>Knowledge Condition</i>		<i>Difference</i>	<i>Interaction</i>
	<i>Association</i>	<i>Contagion</i>		
Prior User Intelligent				
Positive Trait Valence	NA	6.05 (1.12)		
Neutral Trait Valence	NA	5.14 (1.20)		
Negative Trait Valence	NA	3.40 (1.47)		
Prior User Hard-working				
Positive Trait Valence	NA	6.33 (0.90)		
Neutral Trait Valence	NA	4.96 (1.21)		
Negative Trait Valence	NA	2.31 (1.30)		
Prior User Creative				
Positive Trait Valence	NA	6.01 (1.18)		
Neutral Trait Valence	NA	5.25 (1.21)		
Negative Trait Valence	NA	2.67 (1.48)		
Product Satisfaction Index				F(2,543) = 1.03, n.s.
Positive Trait Valence	5.32 (1.16)	4.58 (1.57)	F(1,544) = 12.47, $p < 0.01$	
Neutral Trait Valence	5.07 (1.27)	4.37 (1.60)	F(1,544) = 11.30, $p < 0.01$	
Negative Trait Valence	5.15 (1.22)	4.11 (1.54)	F(1,544) = 25.72, $p < 0.01$	

TABLE 3
STUDY 3 RESULTS CONTINUED

	<i>Knowledge Condition</i>		<i>Difference</i>	<i>Interaction</i>
	<i>Association</i>	<i>Contagion</i>		
Experiential Satisfaction				F(2,543) = 0.01, n.s.
Positive Trait Valence	3.55 (1.36)	3.96 (1.51)	F(1,544) = 4.31, <i>p</i> < 0.04	
Neutral Trait Valence	3.50 (1.25)	3.53 (1.25)	F(1,544) = 0.03, n.s.	
Negative Trait Valence	3.53 (1.36)	3.13 (1.30)	F(1,544) = 4.11, <i>p</i> < 0.05	
Intelligent				F(2,543) = 19.53, <i>p</i> < 0.01
Positive Trait Valence	5.16 (0.992)	5.82 (0.63)	F(1,544) = 20.71, <i>p</i> < 0.01	
Neutral Trait Valence	5.25 (1.08)	5.47 (1.01)	F(1,544) = 2.23, n.s.	
Negative Trait Valence	5.26 (1.02)	4.66 (1.12)	F(1,544) = 17.28, <i>p</i> < 0.01	
Hard-working				F(2,543) = 9.20, <i>p</i> < 0.01
Positive Trait Valence	5.59 (1.14)	5.95 (0.982)	F(1,544) = 3.99, <i>p</i> < 0.05	
Neutral Trait Valence	5.38 (1.14)	5.50 (1.26)	F(1,544) = 1.54, n.s.	
Negative Trait Valence	5.25 (1.49)	4.58 (1.41)	F(1,544) = 13.25, <i>p</i> < 0.05	
Creative				F(2,543) = 3.93, <i>p</i> < 0.03
Positive Trait Valence	4.57 (1.51)	5.00 (1.45)	F(1,544) = 3.99, <i>p</i> < 0.05	
Neutral Trait Valence	4.50 (1.61)	4.53 (1.46)	F(1,544) = 0.02, n.s.	
Negative Trait Valence	4.51 (1.29)	4.01 (1.47)	F(1,544) = 5.28, <i>p</i> < 0.03	

TABLE 3
STUDY 3 RESULTS CONTINUED

	<i>Knowledge Condition</i>		<i>Difference</i>	<i>Interaction</i>
	<i>Association</i>	<i>Contagion</i>		
Grateful				F(2,543) = 0.67, n.s
Positive Trait Valence	6.06 (1.05)	6.05 (0.84)	F(1,544) = 0.09, n.s.	
Neutral Trait Valence	5.99 (1.07)	6.02 (1.04)	F(1,544) = 0.79, n.s.	
Negative Trait Valence	6.02 (1.01)	5.91 (0.95)	F(1,544) = 0.54, n.s.	
Emotional				F(2,543) = 0.47, n.s
Positive Trait Valence	4.88 (1.61)	4.53 (1.62)	F(1,544) = 1.64, n.s.	
Neutral Trait Valence	4.62 (1.86)	4.57 (1.59)	F(1,544) = 0.05, n.s.	
Negative Trait Valence	4.57 (1.66)	4.49 (1.67)	F(1,544) = 0.10, n.s.	
Respectful				F(2,543) = 0.52, n.s
Positive Trait Valence	6.40 (0.84)	6.35 (0.74)	F(1,544) = 0.53, n.s.	
Neutral Trait Valence	6.29 (0.82)	6.17 (0.82)	F(1,544) = 1.02, n.s.	
Negative Trait Valence	6.48 (0.69)	6.27 (0.90)	F(1,544) = 3.34, n.s.	
Hostile				F(2,543) = 0.06, n.s
Positive Trait Valence	3.05 (1.47)	3.08 (1.53)	F(1,544) = 0.06, n.s.	
Neutral Trait Valence	3.34 (1.46)	3.26 (1.61)	F(1,544) = 0.12, n.s.	
Negative Trait Valence	3.00 (1.42)	3.00 (1.49)	F(1,544) = 0.00, n.s.	

TABLE 3
STUDY 3 RESULTS CONTINUED

	<i>Knowledge Condition</i>		<i>Difference</i>	<i>Interaction</i>
	<i>Association</i>	<i>Contagion</i>		
Athletic				F(2,543) = 0.78, n.s
Positive Trait Valence	5.43 (1.30)	5.09 (1.37)	F(1,544) = 2.78, n.s.	
Neutral Trait Valence	5.38 (1.38)	5.11 (1.56)	F(1,544) = 1.75, n.s.	
Negative Trait Valence	5.18 (1.39)	5.01 (1.34)	F(1,544) = 0.00, n.s.	
Loyal				F(2,543) = 1.27, n.s
Positive Trait Valence	6.29 (0.97)	6.42 (0.83)	F(1,544) = 0.92, n.s.	
Neutral Trait Valence	6.25 (0.85)	6.15 (1.11)	F(1,544) = 0.53, n.s.	
Negative Trait Valence	6.40 (0.81)	6.29 (0.79)	F(1,544) = 0.66, n.s.	
Self-Sufficient				F(2,543) = 0.68, n.s
Positive Trait Valence	5.98 (1.12)	6.02 (1.04)	F(1,544) = 0.08, n.s.	
Neutral Trait Valence	5.90 (1.08)	5.96 (0.95)	F(1,544) = 0.12, n.s.	
Negative Trait Valence	6.05 (1.06)	5.88 (1.06)	F(1,544) = 1.24, n.s.	
Disciplined				F(2,543) = 1.99, n.s
Positive Trait Valence	5.70 (1.14)	5.65 (1.12)	F(1,544) = 0.08, n.s.	
Neutral Trait Valence	5.45 (1.35)	5.63 (1.13)	F(1,544) = 1.09, n.s.	
Negative Trait Valence	5.66 (1.18)	5.34 (1.26)	F(1,544) = 3.15, n.s.	

STUDY 4

Design and Procedure

Three hundred seventy-six business students (170 women) from the same university participated in the experiment for extra course credit. Similar to study 3, participants from an introductory marketing class were recruited via email, and interested participants signed up for a specific time to come to the computer lab to complete the study. On the day of the study, participants came to the lab and were seated at a computer where they read the on-screen instructions. As a cover story, we informed participants that they would be completing two separate and unrelated studies. The study was a 2 (knowledge of the prior user: limited vs. extensive) x 2 (theory of the self: incremental vs. entity) between-participants design with two parts.

In part 1, we situationally activated implicit theory orientation, with participants randomly assigned to either an incremental or entity theory of the self (see below for a detailed description of this manipulation). Participants then answered a series of demographic questions which we used as part of our cover story to suggest that the first study was complete. In part 2, participants were told to imagine that they had rented an outfit for a friend's wedding from an online vendor. We again created a hypothetical company, *Crane Clothing*, to keep any pre-existing brand associations from influencing our results. Participants read through a detailed description of the wedding and the outfit they were renting. The outfit, a dress or tuxedo, was matched to the gender that the participant indicated in the demographic questions at the end of part 1. Given the high variance in individuals' fashion tastes, we did not show them pictures of

either the dress or the tuxedo. Consequently, measures of product satisfaction are not included in this study.

To help the participants better imagine the experience, the wedding description included various pictures of wedding-related scenes including the people giving toasts and the catering tables (see appendix G). Additionally, to reinforce our manipulation, participants were asked to list three words that they would use to describe the wedding and three words that they would use to describe the outfit. Finally, they responded to the dependent measures.

Implicit Theory Orientation Manipulation

We manipulated implicit theory orientation using the general trait manipulation used in Chiu et al. (1997) and Yorkston, Nunes and Matta (2010). Participants were told they were being tested on reading comprehension and memory. We instructed them to read a paragraph containing concepts that they would be tested on later. Those in the entity theory condition read the following:

In his talk at the American Psychological Association's annual convention held at Washington D.C. in August, Dr. George Medin argued that "in most of us, by the age of ten, our character has set like plaster and will never soften again." He reported numerous large longitudinal studies showing that people "age and develop, but they do so on the foundation of enduring dispositions.

Those in the incremental theory condition read the following:

In his talk at the American Psychological Association's annual convention held at Washington D.C. in August, Dr. George Medin argued that "no one's character is as 'hard as a rock' so that it cannot be changed. Only for some, greater effort and determination are needed to effect changes." He reported numerous large longitudinal studies showing that people can mature and change their character. He also re-ported research findings showing that people's personality characteristics can change, even in their late sixties.

Once participants had finished reading their respective paragraphs, they completed an unrelated filler task and moved on to what they believed was the second in a series of studies.

Knowledge of the Prior User

In study 4, participants' knowledge of the prior user was manipulated by either including or excluding one key piece of information: a picture of the attractive prior user. All of the other information about the prior user was held constant across conditions. As in study 1, we used a pre-test to determine which desirable traits were relevant to a consumption experience for which an outfit is rented (see appendix A for a detailed description and results). "Life of party" and "energetic" were both found to be experientially relevant. Based on the pretest results, the testimonial included from the prior user that implied that s/he possessed these desirable, experientially relevant traits. Specifically, participants read a note from the previous renter that stated the following: "*Thank you Crane Clothing for this outfit! You saved me a ton of money, and I looked fantastic in the outfit at my holiday party. I had a great time and danced until they turned off the music.*" Participants in the extensive knowledge condition also received a picture of the previous renter of the outfit, which was in fact an attractive model (see appendix M). Importantly, the gender of the model in the picture matched the gender of the participant. Following exposure to the knowledge manipulation, participants all read the same description of their receipt of the outfit and of the wedding itself (see appendix L). Finally, they completed the dependent measure, experiential satisfaction.

Manipulation Check

As a manipulation check for the implicit theory orientation, we used the methodology of Chiu et al. (1997). Each participant indicated on a 7 point scale the extent to which they agreed with the following statements “The kind of person someone is, is something basic about them and can’t be changed very much,” “People can do things differently, but the important parts of who they are can’t really be changed,” “Everyone is a certain kind of person, and there is not much that they can do to really change that” (1 = Strongly Disagree; 7 = Strongly Agree). We averaged the responses to form an index of implicit theory orientation ($\alpha = 0.84$, $M = 3.47$, Range: 1.00 to 6.00).

Experiential Satisfaction

Similar to study 3, we used a set of questions to measure experiential satisfaction. The items included “The wedding was fun”; “The wedding was meaningful to me”; “I enjoyed the wedding”; “The wedding made me happy” (1 = Strongly Disagree; 7 = Strongly Agree). We averaged the responses to form an index of experiential satisfaction ($\alpha = 0.93$, $M = 5.46$, Range: 1.75 to 7.00).

RESULTS

As a first step in our analyses, we tested for gender effects. Finding none, we collapsed across gender in the analyses reported below.

Manipulation Check

To assess the effectiveness of the theory of self manipulation, we conducted a 2X2 ANOVA on the implicit theory orientation index. We found only a main effect for implicit self

theory, such that those who were primed with entity theory felt that they were significantly more stable than those who were primed with an incremental theory ($M_{\text{entity}} = 3.68$ vs. $M_{\text{incremental}} = 3.25$, $F(1,372) = 16.11$, $p < 0.01$). There was no effect of the amount of knowledge of the prior user and no interaction between the factors (both p 's > 0.4). Thus, the manipulation was effective.

Experiential Satisfaction

We had predicted that participants primed with an incremental theory of the self would be more susceptible to symbolic contagion effects than those primed with an entity self-theory. A 2x2 ANOVA revealed this predicted interaction ($F(1,372) = 4.92$, $p < 0.05$). Participants who were primed with an incremental self-theory reported greater experiential satisfaction with the wedding when they had extensive information (i.e., a photo) versus limited information about the prior user ($M_{\text{incremental, extensive}} = 5.70$ vs. $M_{\text{incremental, limited}} = 5.05$, $F(1,372) = 7.03$, $p < 0.01$). Importantly, there was no difference in experiential satisfaction for those primed with an entity theory ($M_{\text{entity, extensive}} = 5.69$ vs. $M_{\text{entity limited}} = 5.37$, $F(1,372) = 0.87$, n/s).

DISCUSSION

Study 4 leveraged Dweck's work on implicit theories to demonstrate the process (via moderation) underlying symbolic essence transfer in an access-based consumption context. Participants primed with an incremental theory of self were more susceptible to symbolic essence transfer from the prior user than were those primed with an entity theory of self. Specifically, participants primed with an incremental self-theory reported enjoying the wedding more when they received more (versus less) positive knowledge about the outfit's prior user. Importantly, this extensive information contained a picture of the attractive prior user who was

of the same gender as the participant. Prior work suggests that positive physical contagion effects require that the attractive previous user must be of the opposite sex. Our findings suggest that for positive symbolic contagion effects to occur, that requirement is unnecessary. This distinction is an important one, as it sheds additional light on the different ways that positive contagion effects occur.

GENERAL DISCUSSION

As internet speed continues to increase, digital platforms are enabling the “access economy” to thrive (Eckhardt and Bardhi 2015). Klaus Schwab, founder of the World Economic Forum, has argued that we are now in the midst of the Fourth Economic Revolution (Schwab 2016) during which revenues generated by firms participating in the access economy are expected to rise from \$15 billion in 2015 to \$335 billion in 2025 (Olalla and Crespo 2019). As EU adviser, Jeremy Rifkin, states, “So instead of sellers and buyers, you have providers and users... instead of ownership, you have access” (Olalla and Crespo 2019). Understanding the factors influencing consumers’ satisfaction with the experiences and products to which they gain access is, therefore, important for firms building such platforms.

In our research, we examine the influence of one such factor: the current user’s knowledge about the prior user’s traits and characteristics. Specifically, we investigate how such knowledge differentially influences consumers’ product and experiential satisfaction in access-based consumption situations. In doing so, we are able to make theoretical and substantive contributions to both the mature literature on contagion and the developing literature on access-based consumption.

Theoretical Contributions

While the literature on contagion is well-established, recent articles highlight a number of important issues which remain unresolved (Huang et al. 2017; Morales et al. 2018; Nemeroff and Rozin 2018). Among these are the distinction between the process by which physical and moral/symbolic contagion effects occur and the possibility that “positive contagion may follow a different model than negative contagion” (Nemeroff and Rozin 2018, 618). Our research speaks to both of these points.

The findings from our first three studies demonstrate that physical contagion effects operate in access-based consumption contexts much as they do in other situations. Specifically, our studies show that when a contagion cue is made salient (e.g., by describing the previous user in significant detail), product satisfaction decreases, presumably because the current user believes the product to be contaminated by the physical residue of the previous user. Studies 2 and 3, in particular, offer support for this explanation by showing that a physical connection between the prior user and the product decreases product satisfaction whereas a purely associational connection does not. Importantly, the decrease occurs regardless of whether the prior user was characterized by positive or negative traits.

Symbolic contagion effects, however, depend upon the nature of the prior user’s traits and whether or not they are relevant to a given consumption context. All four of our studies offer evidence that the prior user’s relevant traits form an essence which transfers through the rented product to influence the current user’s satisfaction with the particular consumption experience for which the product was rented. Study 1 demonstrates that participants’ perceptions of their own financial ability, intelligence, and discipline are higher when they have carried a purse previously used by Emily (who possessed those traits) as compared to one previously used by an

anonymous consumer. Study 2 subsequently shows that those self-perceptions can explain participants' satisfaction with their overall consumption experience.

Study 3 generalizes the results from the first two studies and shows that the consumers can view experiential and product satisfaction distinctly. Participants who were more satisfied with the functional product attributes of the pen, were more satisfied with the pen overall. Functional product attribute ratings did not influence the experiential satisfaction, though. In terms of the experience, it was affective response that had an impact. Affective response did not influence product satisfaction for the participants. This distinction is what allows physical and moral/symbolic contagion to occur simultaneously and in different directions.

Study 4 then uses a “process by moderation” approach to offer further support for the process by which symbolic contagion occurs. This study demonstrates that participants primed with a more malleable incremental theory of the self are more susceptible to trait or essence transfer than those primed with a more rigid entity theory of self. In doing so, Study 4 also offers insight into the different ways that physical and symbolic essence transfer occurs and does so by focusing on a particular trait of the prior user – his/her physical attractiveness. In contrast to Argo et al. 2008, who found that positive physical contagion effects only occur when the attractive prior user was of the opposite sex, we found that positive symbolic contagion effects can occur when the attractive user is of the same gender.

Substantive Implications

One of the high-level contributions of our work lies in our demonstration that product satisfaction and satisfaction with the consumption experience are differentially determined in access-based consumption contexts. In particular, our findings reveal that a consumer's intention

to rent again from a firm operating an access-based consumption platform is driven more by their satisfaction with the consumption experience rather than with the product itself. Given the business models of many of these access-based firms, this insight into consumer loyalty is important. While access-based consumption firms likely measure product satisfaction, they may well be overlooking the important influence that experiential satisfaction has on their repeat business.

At a more tactical level, our findings indicate that firms may be able to strategically limit the negative effects of physical contagion by highlighting the cleansing efforts that follow as a product transfers from one user to another. An opportunity exists, however, to also highlight the positive essence that may symbolically transfer via the product by intentionally creating connections between renters. For example, firms could ask their consumers to “pay it forward” to the next renter by offering them a discount on future rentals if the current consumer leaves a note for the future renter which contains a positive description of themselves and details about their own positive consumption experience with the accessed product.

Limitations

The limitations of our research need to be acknowledged. Our field studies were both situated in the context of the handbag rental market and, thus, engaged only female participants. Further, the participants in all four of our studies was almost exclusively between 20 and 30 years of age. Future research should consider different access-based consumption contexts and seek to identify differences between utilitarian and hedonic rental motivations, short-term versus long-term rental durations, and public versus private consumption occasions.

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APPENDIX A

Pretest 1 (Study 1): Determining the Relevance of Emily's Traits

Three-hundred and twenty female students participated in this pretest in exchange for course credit. The goal of this pretest was to assess the relevance of 10 traits to the purse consumption context. They were given a list of 10 traits that we had generated and were asked to rate them on a 7-point scale to indicate how relevant they felt the traits were to the experience of being a college student using a purse (1 = not at all relevant; 7 = extremely relevant). Good with money (M = 5.55), disciplined (M = 5.23) and intelligent (M = 5.47) were rated the highest, while kind (M = 2.60), creative (M = 2.34) and athletic (M = 2.25) were rated the lowest. Honest (M = 4.21), friendly (M = 4.20), genuine (M = 4.08), and helpful (M = 3.98) were close to the mid-point on the scale. We averaged the three most relevant and the three least relevant traits, and used a one-way ANOVA to confirm that their ratings were significantly different from each other ($M_{\text{relevant}} = 5.41$ vs. $M_{\text{irrelevant}} = 2.40$, $t = 48.66$, $p < 0.01$).

Pretest 2 (Study 1)

A separate pre-test was used to ensure that all of these six traits, when embedded in the profile of "Emily," were viewed as equally positive and associated with Emily. In this pre-test, 21 female students, recruited from an undergraduate marketing research course, read the "information present" manipulation describing Emily and rated her on 7 point scales indicating the extent to which they found her to be good with money (M = 5.94), disciplined (M = 5.88), intelligent (M = 5.93), kind (M = 5.69), creative (M = 6.06) and athletic (M = 5.81). While there

were no significant differences in Emily's rating across these traits, they were all significantly above the 3.5 midpoint of the scale (all t 's > 4.98 , $p < 0.01$).

Pretest 3 (Study 3): Determining the valence of prior user traits and relevance to the tasks

Two-hundred participants were recruited from mechanical Turk in exchange for money. The goal of this pretest was to assess the valence of traits to use for the study. The participants were given a list of 60 traits taken from Gunkel's (2020) list of primary personality traits (20 positive, 20 neutral and 20 negative) counterbalanced between participants. They were asked to rate each trait on a 1-7 scale on how they viewed each trait (1 = extremely negative; extremely positive). Intelligent ($M = 6.03$), hard-working ($M = 5.96$), disciplined ($M = 5.88$), responsible ($M = 6.05$) and creative ($M = 5.77$) were all rated as the most positive. Lazy ($M = 2.69$), deceptive ($M = 2.55$), abrasive ($M = 2.96$) and ungrateful ($M = 2.30$) were all rated the lowest. We averaged the most positive and the most negative traits, and used a one-way ANOVA to confirm that their ratings were significantly different from each other ($M_{\text{positive}} = 5.94$ vs. $M_{\text{irrelevant}} = 2.63$, $t = 27.71$, $p < 0.01$).

After the participants rated the traits on positivity, they rated the relevance of 5 different traits to the specific tasks from study 3. The participants were asked to rate the relevance of each of the traits to the task of (a) drawing a specific picture with a pen, (b) solving a series of math problems and (c) writing a short story on a 1-7 scale (1 = extremely irrelevant and 7 = extremely relevant) and were reminded that the valence of the trait did not matter to the relevance. Specifically, they were instructed to "[N]ot consider how positive or negative the traits are when considering relevancy. For example, while the trait clumsy is negative, it is extremely relevant to the activity of skateboarding."

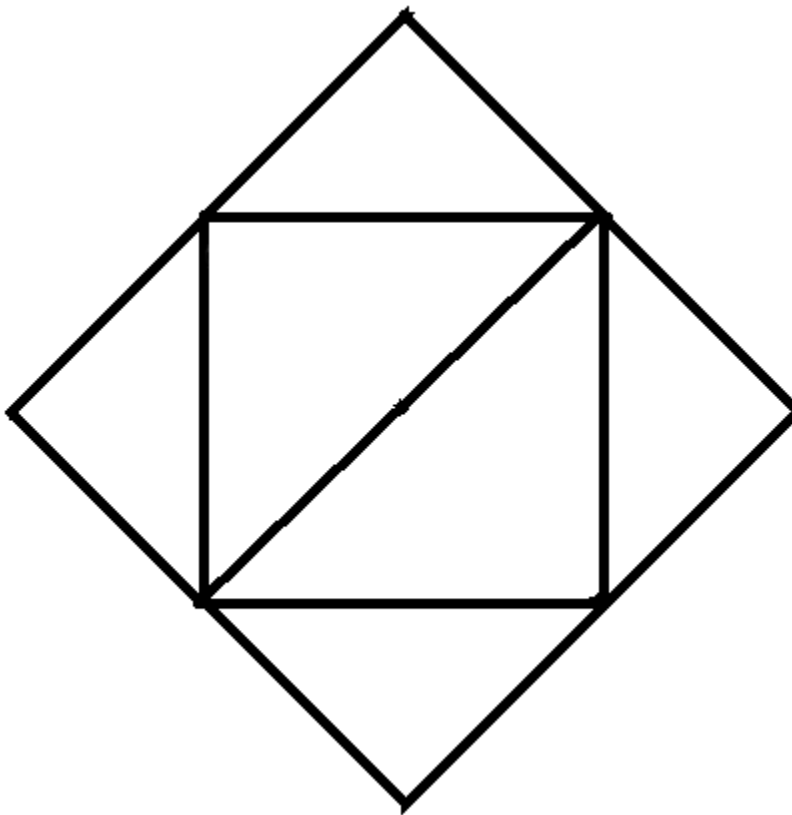
Intelligence (vs. creativity, responsibility, athletic and disorganized) was rated the most relevant trait when solving math problems ($M_{\text{intelligence}} = 5.91$ vs. $M_{\text{averageofothervariables}} = 3.21$, $t = 13.34$, $p < 0.01$). Creativity (vs. intelligence, responsibility, hardworking, and egocentric) was rated the most relevant when drawing the picture with a pen ($M_{\text{creativity}} = 5.95$ vs. $M_{\text{averageofothervariables}} = 2.80$, $t = 16.31$, $p < 0.01$). Hard-working (vs. egocentric and responsible) was rated the most relevant trait when writing a short story ($M_{\text{hardworking}} = 5.97$ vs. $M_{\text{averageofothervariables}} = 2.80$, $t = 15.63$, $p < 0.01$). However, it was only directionally more relevant than either creativity ($M_{\text{creativity}} = 5.95$, $t = 0.14$, $p = 0.89$) or intelligence ($M_{\text{intelligence}} = 5.91$, $t = 0.55$, $p = 0.60$).

Finally, because in studies 1 and 2 we used implied, but not explicit measures of the traits, we wanted to use GPA as an implied measure of intelligence. The participants were asked to rate how intelligent someone with a GPA of 3.9, a GPA of 3.4 and a GPA of 2.4 (counterbalanced between participants) were on a 1-7 scale (1=extremely unintelligent; 7=extremely intelligent). Participants rated those with a GPA of 3.9 as significantly more intelligent than those with a GPA of 3.4 ($M_{3.9\text{GPA}} = 6.15$ vs. $M_{3.4\text{GPA}} = 5.81$, $t = 3.88$, $p < 0.01$). Further, participants rated someone with a GPA of 2.4 as significantly less intelligent than someone with a GPA of 3.4 ($M_{3.4\text{GPA}} = 5.81$ vs. $M_{2.4\text{GPA}} = 4.91$, $t = 7.49$, $p < 0.01$).

Pretest 4 (Study 3):

Two-hundred fifty seven students participated in this pretest in exchange for course credit. The aim of this pretest was to determine difficulty of completing the drawing task for study 3. The participants were seated at a computer and had a pad of paper and a pen. The instructions and the study were immediately available to them on the screen. After answering an

initial demographic question, participants were given the following instructions. “On the next page you will see a graphic. Please use the pad of paper and pen to draw it in one pen stroke, without lifting the pen from the page, without crossing any of your previous lines and without drawing the same line twice. You will be given 10 seconds to complete the drawing. Please click the forward arrow when you are ready to draw.” When the participants clicked the link they saw the following picture and a timer counting down from 10 seconds.



After 10 seconds the page automatically moved forward and the participants answered a few questions about the task. First, they responded with whether they were able to complete the task in the given time. Two hundred eleven (82%) of the participants indicated that they were able to complete the task in the given time. The participants then indicated how difficult the task

was the complete in the given time on a 1-7 scale (1 = extremely difficult; 7 = extremely difficult). Overall, the participants rated the task as fairly difficult ($M_{\text{difficulty}} = 3.36$). Participants who were able to complete the task felt that the task was significantly easier to complete than those who could not complete it ($M_{\text{Complete}} = 4.38$ vs. $M_{\text{Incomplete}} = 3.01$, $F(1,256) = 26.90$, $p < 0.05$).

Pretest 5 (Study 4):

Fifty-two students from an undergraduate consumer behavior class participated in this pre-test for extra credit. The participants were recruited in class and were asked to fill out a brief survey. The survey asked the participants to rate on a 7-point scale how relevant 10 traits were to the experience of going to a party (1 = not relevant at all; 7 = extremely relevant). Life of the party ($M = 6.02$) and energetic ($M = 5.97$) were both rated the highest, while creative ($M = 2.72$) and intelligent ($M = 2.91$) were rated the lowest. Honest ($M = 4.05$), caring ($M = 3.98$), good with money ($M = 4.13$), genuine ($M = 4.15$), helpful ($M = 4.08$) and disciplined ($M = 4.01$) were all close to the midpoint of the scale. We averaged the two most relevant traits and the two most irrelevant traits and used a one-way ANOVA to confirm their ratings were significantly different from each other ($M_{\text{relevant}} = 6.00$ vs. $M_{\text{irrelevant}} = 2.82$, $t = 38.598$, $p < 0.01$).

APPENDIX B
PURSES OPTIONS IN STUDIES 1 AND 2



BOSTANTEN Women's Cow Leather Designer Handbags Purses Tote Shoulder Bags Black

★★★★☆ (76)

\$73.98 ✓Prime

Color: Black

Price dropped 5% (was \$77.98 when added to List)

In Stock. Offered by BOSTANTEN.

[Add comments, quantity & priority](#)



Iswee Leather Tote Shoulder Messenger Bags Purse Handbags for Women (Brown)

★★★★★ (12)

\$63.98 ✓Prime

Color: Brown

In Stock. Offered by Iswee.

2 Used & New from **\$63.98**

[Add comments, quantity & priority](#)



Covelin Women's Handbag Genuine Leather Tote Shoulder Bags Soft Hot Brown

★★★★☆ (368)

\$54.99 ✓Prime

Color: Brown-cross

In Stock. Offered by Covelin.

[Add comments, quantity & priority](#)



Obosoyo Women's Handbag Genuine Leather Tote Shoulder Bags Soft Hot Wine-red

★★★★☆ (143)

\$57.99 ✓Prime

Color: Wine Red-big

In Stock. Offered by Obosoyo.

[Add comments, quantity & priority](#)



Aldo Chesa Top Handle Handbag, Cognac

★★★★★ (12)

\$60.00 ✓Prime

Color: Cognac

In Stock. Offered by Amazon.com.

[Add comments, quantity & priority](#)

APPENDIX C
STUDY 1 KNOWLEDGE MANIPULATION: KNOWLEDGE ABSENT CONDITION

Thank you for renting this purse!

At Wander Wear, our key to success is understanding what makes our customers tick. Our goal is to help people express themselves, whoever they are and whatever style they value. So, we typically ask our customers to share some interesting and important facts about themselves.

Here are some customer testimonials!

“I was very pleased with the condition of the bag and the service.”

“I just received my purse and it really fits my style!”

“I couldn’t be happier with my decision to rent from Wander Wear.”

“I will definitely be referring you guys to everybody I know!!”



APPENDIX D
STUDY 1 KNOWLEDGE MANIPULATION: KNOWLEDGE PRESENT CONDITION

Thank you for renting this purse!

At Wander Wear, our key to success is understanding what makes our customers tick. Our goal is to help people express themselves, whoever they are and whatever style they value. So, we typically ask our customers to share some interesting and important facts about themselves.

At the end of your rental we will also ask you some questions about yourself and your experience with your bag. We asked the previous user of this purse, Emily Smith (not her real name), to answer these same questions. Have a look at her answers (used with her permission, of course)!

Name: Emily Grey

Customer since: 2016

Age: 21

Year in School: Junior

Major: Finance

GPA: 3.87

Favorite Color: Blue

What do you do for fun: I really like going out with my sorority sisters. Whether it's a night out at a Karaoke Bar, going to a party, going to the gym, or catching a movie, we just always find something fun to do. I often work on assignments early so that I have enough time during the week to enjoy doing things that aren't too expensive, but that I can enjoy with other people.

Are you involved with any student activities: I am the president of a Student Retail Organization on campus and I'm a casual member of the Wisconsin Running Club.

Why did you rent this purse: I wanted to try out a few different purses before I bought anything. I make a little money from a work study, and I'd rather save it by trying different options before buying anything. I also love pairing different outfits and purses.

What is your favorite piece of clothing: I love my Patagonia jacket.

How busy are you: I work a few hours a week as part of a work study. I also volunteer with the American Cancer Society. Between the work study, volunteering, sorority requirements and school work, I keep a very tight schedule and try to never miss anything.

What did you do with the purse during your time: I took it to class with me. I liked that I was able to carry most of my essentials in it.

Why did you choose to use Wander Wear: I really like having the option to save money upfront to try out different accessories before buying them. This really helps me to not waste the little money I have on a product that I don't love. I really appreciate the truthfulness of their advertising, which means a lot to me. The fact that Wander Wear gives me the option to purchase a different purse of the same style if I liked it, fits my lifestyle well.

What was the best experience you had with the purse: I took this purse with my on a first date. I was nervous about what to wear, but this purse worked well with a lot of the outfits I already own. The purse easily held everything I needed. It was definitely a great night.

Would you recommend Wander Wear: Definitely I would recommend Wander Wear. It was so simple to choose a product, have it shipped right to me and use it for a week.



APPENDIX E

STUDY 2 POSITIVE TRAIT VALENCE CONTAGION CONDITION

Thank you for renting this purse!

At Wander Wear, our key to success is understanding what makes our customers tick. Our goal is to help people express themselves, whoever they are and whatever style they value. So, we typically ask our customers to share some interesting and important facts about themselves.

At the end of your rental we will also ask you some questions about yourself and your experience with your bag. We asked the previous user of **this purse**, Emily Smith (not her real name), to answer these same questions. Have a look at her answers (used with her permission, of course)!

Name: Emily Smith

Customer since: 2016

Age: 21

Year in School: Junior

Major: Finance

GPA: 3.87

Favorite Color: Blue

What do you do for fun: I really like going out with my sorority sisters. Whether it's a night out at a Karaoke Bar, going to a party, going to the gym, or catching a movie, we just always find something fun to do. I often work on assignments early so that I have enough time during the week to enjoy doing things that aren't too expensive, but that I can enjoy with other people.

Are you involved with any student activities: I am the president of a Student Retail Organization on campus and I'm a casual member of the Wisconsin Running Club.

Why did you rent this purse: I wanted to try out a few different purses before I bought anything. I make a little money from a work study, and I'd rather save it by trying different options before buying anything. I also love pairing different outfits and purses.

What is your favorite piece of clothing: I love my Patagonia jacket.

How busy are you: I work a few hours a week as part of a work study. I also volunteer with the American Cancer Society. Between the work study, volunteering, sorority requirements and school work, I keep a very tight schedule and try to never miss anything.

What did you do with the purse during your time: I took it to class with me. I liked that I was able to carry most of my essentials in it.

Why did you choose to use Wander Wear: I really like having the option to save money upfront to try out different accessories before buying them. This really helps me to not waste the little money I have on a product that I don't love. I really appreciate the truthfulness of their advertising, which means a lot to me. The fact that Wander Wear gives me the option to purchase a different purse of the same style if I liked it, fits my lifestyle well.

What was the best experience you had with the purse: I took this purse with my on a first date. I was nervous about what to wear, but this purse worked well with a lot of the outfits I already own. The purse easily held everything I needed. It was definitely a great night.

Would you recommend Wander Wear: Definitely I would recommend Wander Wear. It was so simple to choose a product, have it shipped right to me and use it for a week.



APPENDIX F
STUDY 2 CONTROL VARIABLES

	<i>Knowledge Condition</i>		<i>Difference</i>	<i>Interaction</i>
	<i>Association</i>	<i>Contagion</i>		
Disposable Income				F(1,189) = 0.00, n.s.
Positive Trait Valence	2.33 (1.18)	2.45 (1.42)	F(1,189) = 0.27, n.s.	
Negative Trait Valence	2.59 (1.21)	2.28 (0.81)	F(1,189) = 1.64, n.s.	
Number of Purses				F(1,189) = 0.00, n.s.
Positive Trait Valence	3.88 (1.78)	3.86 (1.65)	F(1,189) = 0.00, n.s.	
Negative Trait Valence	3.37 (2.01)	3.42 (1.89)	F(1,189) = 0.00, n.s.	
How Much They Paid for the Purse				F(1,189) = 0.46, n.s.
Positive Trait Valence	4.20 (1.61)	4.10 (1.61)	F(1,189) = 0.11, n.s.	
Negative Trait Valence	4.29 (1.43)	4.49 (1.44)	F(1,189) = 0.39, n.s.	
Monday Psychological Ownership Index				F(1,189) = 0.88, n.s.
Positive Trait Valence	3.12 (1.64)	3.19 (1.59)	F(1,189) = 0.78, n.s.	
Negative Trait Valence	2.56 (1.27)	2.69 (1.28)	F(1,189) = 0.20, n.s.	

APPENDIX F
STUDY 2 CONTROL VARIABLES CONTINUED

	<i>Knowledge Condition</i>		<i>Difference</i>	<i>Interaction</i>
	<i>Association</i>	<i>Contagion</i>		
Friday Psychological Ownership Index				F(1,189) = 0.00, n.s.
Positive Trait Valence	3.51 (1.53)	3.63 (1.56)	F(1,189) = 0.15, n.s.	
Negative Trait Valence	3.77 (1.56)	3.87 (1.73)	F(1,189) = 0.08, n.s.	
Similar to Emily				F(1,189) = 0.78, n/s
Positive Trait Valence	4.06 (1.52)	4.18 (1.54)	F(1,189) = 0.16, n/s	
Negative Trait Valence	4.02 (1.41)	3.96 (1.55)	F(1,189) = 0.07, n/s	

APPENDIX G
STUDY 3 Cover Sheet

ID: 8113

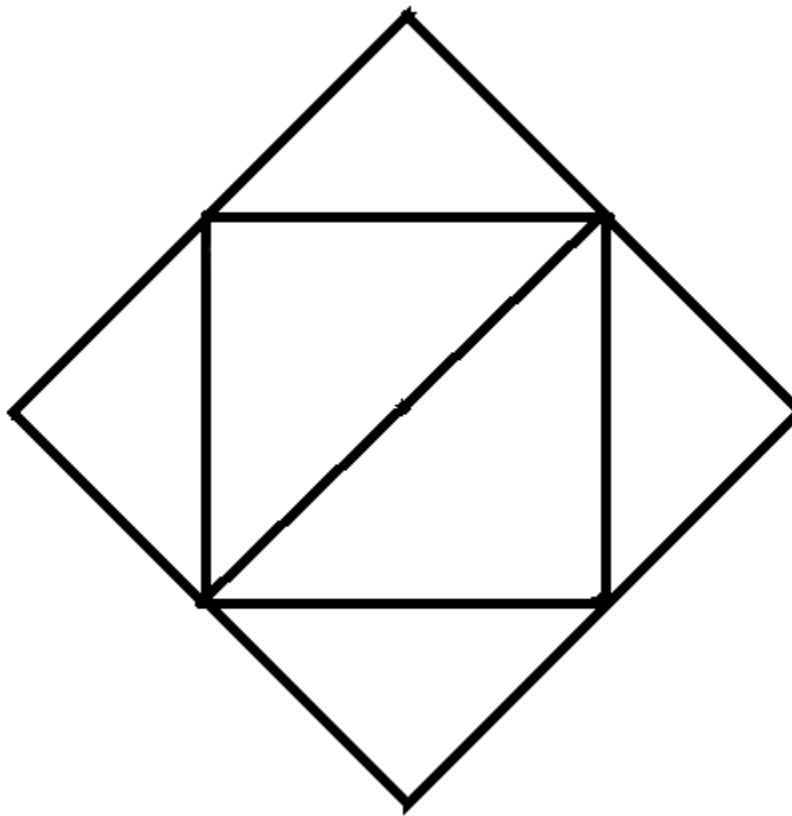
Study 2

For this part of the study, please open an internet browser and navigate to this link. Once you enter the link, go ahead and follow the instructions to begin.

<http://bit.ly/MKT300study>

APPENDIX H
STUDY 3 Drawing Task

On the next page you will see a graphic. Please use the pad of paper and pen to draw it in one pen stroke, without lifting the pen from the page, without crossing any of your previous lines and without drawing the same line twice. Please click the forward arrow when you are ready to draw. Once the graphic appears you will have 10 seconds to complete the drawing before the survey moves forward.



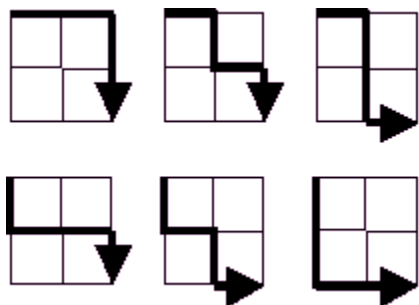
APPENDIX I
STUDY 3 Math Task

Please complete as many of these math problems using the pen and pad of paper as you can in 1 minute.

1. If we list all the natural numbers below 10 that are multiples of 3 or 5, we get 3, 5, 6 and 9. The sum of these multiples is 23.

Find the sum of all the multiples of 3 or 5 below 20.

2. Starting in the top left corner of a 2×2 grid, and only being able to move to the right and down, there are exactly 6 routes to the bottom right corner.



How many such routes are there in a 4×4 grid

3. The fraction $\frac{49}{98}$ is a curious fraction, as an inexperienced mathematician in attempting to simplify it may incorrectly believe that $\frac{49}{98} = \frac{4}{8}$, which is correct, is obtained by cancelling the 9s.

We shall consider fractions like, $\frac{30}{50} = \frac{3}{5}$, to be trivial examples.

There are exactly four non-trivial examples of this type of fraction, less than one in value, and containing two digits in the numerator and denominator. What are 2 of these non-trivial examples.

4. It is possible to write five as a sum in exactly six different ways:

$$4 + 1$$

$$3 + 2$$

$$3 + 1 + 1$$

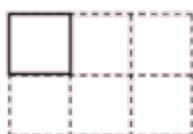
$$2 + 2 + 1$$

$$2 + 1 + 1 + 1$$

$$1 + 1 + 1 + 1 + 1$$

How many different ways can twenty be written as a sum of at least two positive integers?

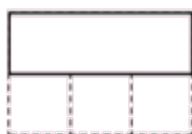
5. By counting carefully it can be seen that a rectangular grid measuring 3 by 2 contains eighteen rectangles:



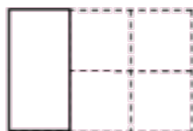
6



4



2



3



2



1

How many rectangles are contained in rectangular grid measuring 4 by 3?

APPENDIX J
STUDY 3 KNOWLEDGE MANIPULATION: KNOWLEDGE PRESENT CONDITION

Thank you for coming in today. For the study today you will be completing a series of 3 tasks using the provided pen and notepad of paper, then you will answer a series of questions about the experience. The ID number on the cover sheet is used to track the users of this specific pen.

Before you begin the tasks we're going to give you some information about the prior user of the pen. Please indicate below the ID Number located in the center of the cover sheet of paper found in the envelope. This ID Number is unique to the pen.

---Page Break---

The prior user of this pen was a college student. We asked them to fill out some information about themselves, which you will also do at the end of the survey.

Year in school: Sophomore

Major: MHR

GPA: 3.4

How disciplined are you: 4 - Neither Disciplined nor Undisciplined

How grateful are you: 4 - Neither Grateful nor Ungrateful

How hard working are you: 5 - Slightly Hard Working

How emotional are you: 7 - Extremely emotional

How respectful are you: 3 - Slightly Disrespectful

How hostile are you: 2 - Moderately Nonhostile

How athletic are you: 6 - Moderately Athletic

How creative are you: 5 - Slightly Creative

How loyal are you to your friends: 3 - Moderately Disloyal

How intelligent are you: 4 - Neither Intelligent nor Unintelligent

How self-sufficient are you: 5 - Slightly Self-sufficient

APPENDIX K
STUDY 3 KNOWLEDGE MANIPULATION: KNOWLEDGE ABSENT CONDITION

Thank you for coming in today. For the study today you will be completing a series of 3 tasks using the provided pen and notepad of paper, then you will answer a series of questions about the experience. The ID number on the cover sheet is used to track the users of this specific pen.

Before you begin the tasks we're going to give you some information about the prior user of the pen. Please indicate below the ID Number located in the center of the cover sheet of paper found in the envelope. This ID Number is unique to the pen.

---Page Break---

This pen has not been used by anyone previously. However, other participants have used a pen exactly like the one you have.

We asked a participant who used another pen exactly like the one you have, to fill out some information about themselves, which you will also do at the end of the survey.

Year in school: Sophomore
Major: MHR
GPA: 2.4

How disciplined are you: 1 - Extremely Undisciplined
How grateful are you: 2 - Moderately Ungrateful
How hard working are you: 1 - Extremely Lazy
How emotional are you: 4 - Neither emotional nor non-emotional
How respectful are you: 2 - Moderately Disrespectful
How hostile are you: 6 - Moderately Hostile
How athletic are you: 5 - Slightly Athletic
How creative are you: 2 - Moderately Uncreative
How loyal are you to your friends: 1 - Extremely Disloyal
How intelligent are you: 2 - Moderately Unintelligent
How self-sufficient are you: 2 - Moderately Reliant on Others

APPENDIX L
STUDY 4 WEDDING DESCRIPTION

You put the outfit on to try it out and it fit perfectly.

On the morning of the wedding, you put on the outfit and headed out. The wedding was beautiful. It was warm and intimate. After the vows, everyone went out for a group picture among the hills and they even had fireworks. Before dinner there were plenty of appetizers and the opportunity to talk with the other guests.



At dinner, your friend encouraged everyone and anyone to make a speech or toast. A lot of these were heartfelt and funny. The wedding did not have a particular color scheme and each of the attendants wore something different. There was plenty of food and the music played until 1 in the morning. The overall vibe of the evening was chill.



APPENDIX M
STUDY 4 MODEL PICTURES

