SELF-ENDORsing EFFECT OF BRAND FILTERS: HOW THE SELF, SELF-CONGRUITY, AND PERCEIVED SELF-EXPRESSIVENESS LEAD TO PERSUASION

BY

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THESIS

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Abstract

I investigated the self-endorsing effect of brand filters on brand attitudes, purchase intentions, sharing intentions, and whether self-congruity and perceived self-expressiveness mediate the relationship between these variables. I conducted two laboratory experiments each with two conditions (self-endorsing vs. other-endorsing). In the first study, participants in the self-endorsing condition viewed their own photos, which were chosen by the participants themselves, paired with a brand filter; the participants in the other-endorsing condition saw the same brand filter paired with a picture of a stranger. In the second study, the pictures that participants in the self-endorsing condition viewed were taken by the experimenter on site. The results showed that creating connections between the self and an ad with brand filters increased purchase intentions, and higher perceived self-expressiveness and self-brand congruity led to higher brand attitudes and purchase intentions. Practical implications and ideas for future studies are discussed.

Keywords: Self-endorsing effect, self-referencing, self-expressiveness, filters, purchase intention
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CHAPTER 1: INTRODUCTION

One day, the final exams were coming, and I sat in front of my desk pretending to study. I felt anxious about the exams, so I opened my Snapchat to see if there was anything new. I turned the camera in Snapchat on, tapped my face on the screen, and a series of lenses appeared. Each lens added a different augmented reality (AR) animation to my photo. A new lens, which was sponsored by Red Bull, an energy drink brand, caught my attention. As soon as I chose the lens, a virtual can of Red Bull showed up on the bottom left of the screen, and a pair of smart-looking glasses appeared on my face. I opened my mouth, and the Red Bull flew to my mouth. A line: “FINALS GOT ME LIKE” flashed across the screen. It was fun, so I made a video of me with the lens and sent it to my friends. Before long, this lens became the buzz among my social circle, and I started to think about getting Red Bull.

What happened may be the self-endorsing effect, which is the persuasive effect induced by depicting an ad with the self (Ahn & Bailenson, 2011). The self-endorsing effect may be caused by its self-referencing element. Self-referencing occurs when a piece of information activates associations with one’s self-concept (Burnkrant & Unnava, 1995). The appearance of one’s face paired with brand-related messages may create an association between the self and the brand and lead to positive attitudes toward the brand. A variety of mediums are found to induce self-referencing, including text ads (Burnkrant & Unnava, 1995), picture ads (Ahn & Bailenson, 2011), models (Lee, Fernandez & Martin, 2002; Martin, Lee & Yang, 2004), and virtual reality avatars (Ahn & Bailenson, 2011). However, whether self-endorsing exists on Snapchat and other similar social media has not been examined. Moreover, scarce attempts have been made to test why self-endorsing works.
The self has always been at the center of intellectual inquiry. From ancient philosophers, poets, scientists, to modern marketers, many wonder about how one's self-concept manifests in the physical world. More recently, a surge of interest regarding the relation between the self and consumerism has emerged since the introduction of the extended self-concept, which refers to the consumers’ use of brands to form their self-concept (Belk, 1988; 2013).

Discussing, displaying and taking pictures of one’s possessions transforms the objects into meaningful symbols that can be incorporated into the self-schema (McCracken, 1986). This process of claiming ownership of symbols also occurs online. The self can be expressed through online user-generated-contents (e.g., one’s Facebook page) and co-constructed by the users and their audiences through feedback (e.g., as when others comment on your Facebook page; Belk, 2013). From the personal websites in the 90s (Schau & Gilly, 2003) to social networking sites (Livingstone, 2008), self-expression has been a primary driver of online user-generated activities.

As a form of user-generated-content, taking selfies with brand filters can also be self-expressive. The photo filter is defined as a layer of image which users can superimpose on their pictures using smartphone apps, and it is an available feature on social media or photo editing apps like Snapchat, Line, Instagram, etc. Snapchat lenses are a similar but more advanced form of filters, where the images are animated and usually interactive. Brand filters and brand lenses are filters which are created or sponsored by brands, and the contents are related to the brands, products, or services. Both the lens and filter features on Snapchat are considered brand filters in this article for simplicity.

The ways brands send their messages are constantly evolving. In the pre-digital age, consumers passively received brand messages through mass media, and an individual consumer
had little impact on brands (Van Belleghem, 2012). Now, consumers actively seek out information, exchange thoughts, and express their opinions of brands online, and they can exert significant influence on brands online; as Kietzmann, Hermkens, McCarthy, & Silvestre (2011) put it, this is a democratization of corporate communications. Brands now need Internet users’ support to thrive, and people make use of the symbolic meanings of brands to create, construct, and express themselves. The new technologies have created a new playing field for marketers. People not only comment on brands but also take a step up to volunteer as brand ambassadors. They recommend brands on social media and take selfies alongside their favorite brands. Brand filters encourage consumers to endorse the brand, and I was curious about the influence of this self-endorsement. Would consumers like a brand more just by looking at a picture of themselves with a brand filter? Would they be more likely to share the brand message because of their own image? What is the difference between seeing images of the self and another?

Not surprisingly, motivations of selfie-making and -posting revolve around the self, including image management (Pounders, 2016), identity construction (Eagar & Dann, 2016) and self-expression (Kedzior, Allen & Schroeder, 2016). In this thesis, I demonstrate the effect of the addition of selfies to brand messages, and I expand our understanding of self-related motivations with two studies.

Many social media such as Facebook, Twitter, and YouTube have been extensively discussed in academia (Jansen, Zhang, Sobel, & Chowdury, 2009; Chu & Kim, 2011; Muntinga, Moorman & Smit, 2011; Yang & Wang, 2015); however, Snapchat is less studied despite its prominence. According to Constine (2018) on the TechCrunch website, Snapchat has 187 million active users as of February 2018, and more than half of the 13 to 34-year-olds in the United States play with Snapchat lenses each week. Snapchat lenses cost brands $500,000 per
day on Fridays and Saturdays, $450,000 per day for the rest of the week, and more than $700,000 during holidays or special events such as Super Bowl ("Snapchat advertising costs – A breakdown of each offering," 2018). Moreover, the lens function has been so popular that Instagram, the Facebook-owned company, has added the same function to the app in 2017 and called it the face filter (McGarry, 2017). Currently, advertisers cannot create sponsored face filters on Instagram, but the face filters can potentially drive down the price of Snapchat filters and make filters more accessible to brands (Sloane, 2017). Hence, I explore the effect of this advertising method available on Snapchat, the brand filter. I offer my insights on the fast-paced and ever-changing digital media landscape and provide managerial recommendations based on the findings.
CHAPTER 2: LITERATURE REVIEW

Self-endorsing

Ahn and Bailenson (2011) propose that visual presentation of self-brand association can increase positive brand attitudes and purchase intentions, which results from the self-endorsing effect. They demonstrate that having a participant immersed in virtual reality and seeing one's own avatar wearing a T-shirt with a brand name can lead to positive attitudes toward that brand. Photo-editing a person's head onto a model in a picture ad can also create a weaker effect, but the effect is still stronger than using texts to reference the viewer directly (e.g., using the second person pronoun “you”); they argue that the effect is caused by self-referencing (Ahn & Bailenson, 2011).

People pay much attention to themselves. Self-related information is processed differently from general information. In cognitive psychology, the self-referencing effect refers to the superior cognitive elaboration of information related to the self (Symons & Johnson, 1997). Because of the self-referencing effect, self-related information is remembered better (Klein & Loftus, 1988; Symons & Johnson, 1997) and recognized faster (Craik et al., 1999) compared to information unrelated to the self. When memorizing words, we recall more details using self-referential encoding (e.g., think about how similar the word is to oneself) than using semantic encoding (e.g., think about how common the word is) (Leshikar, Dulas & Duarte, 2015). We have self-serving biases and interpret events to enhance our self-concepts (Sedikides, Campbell, Reeder, & Elliot, 1998; Campbell & Sedikides, 1999) and protect our self-esteem (Duval & Silva, 2002). The mental processes of dealing with the self are different from those dealing with others (Aron, Aron, Tudor, & Nelson, 1991), and studies using positron emission tomography (PET) (Craik et al., 1999) and functional magnetic resonance imaging (fMRI)
(Fossati et al., 2003) suggest that we have a special region in the brain that deals with the self. However, the distinction between the self and others is not clear-cut; we share this special mental place and processes with our intimate others (Aron et al., 1991; Symons & Johnson, 1997).

People also tend to prefer things that are associated with the self; this is known as implicit egotism (Pelham, Carvallo & Jones, 2005). Research on implicit egotism addresses similar phenomena but stresses the unconsciousness of the process and is mostly focused on the impact of name initials. Nuttin (1985) found that people preferred the letter of their initials and called the phenomenon the name-letter effect. Sometimes people unconsciously pursue negative outcomes when the names of the outcomes are congruent with the letters of their initials (e.g., baseball players with names beginning with the letter K strike out more, students whose names begin with A and B perform better academically than whose names begin with C and D, and participants work less hard on a task when the consolation prize shares their initials, Nelson & Simmons, 2007). People are more prone to give hurricane disaster donations in the aftermath of hurricanes that share their initials (Chandler, Griffin & Sorensen, 2008); it is likely that sharing names with the storm produces more negative feelings, or guilt.

Advertising researchers focus on the persuasive aspect and positive attitudinal outcome of self-referencing. Since associations to the self will generally produce positive attitudes (Pelham et al., 2005), it is not surprising that the positive attitudes can be transferred to political candidates (Bailenson, Iyengar, Yee, & Collins., 2008) and brands and messages (Ahn & Bailenson, 2011; Burnkrant & Unnava, 1989). In this article, I borrow Ahn and Bailenson’s (2011) definition of self-endorsing, which is “incorporating the consumer within an advertisement, depicting the self endorsing a brand or product,” (p. 93).
Self-referencing can be induced in many ways in advertising besides self-endorsement. Using first-person pronouns in brand names (e.g., the “I” in iPhone, “My” in Myspace) can produce self-referencing effects and positive brand attitudes (Fennis & Wiebenga, 2017). Addressing the audience by second person pronoun (e.g., you) in a text ad can also induce self-referencing effect, but the effect will only exist if the argument is strong but not weak (Burnkrant & Unnava, 1989; Escalas, 2007). Self-referencing messages in the form of narratives can also produce positive attitudes toward the brand, regardless of argument strength (Escalas, 2007). For ethnic minority groups, models of the same ethnicity can also create more favorable model attitudes, purchase intentions, ad attitudes, but not brand attitudes (Lee, Fernandez, & Martin, 2002; Martin, Lee, & Yang, 2004). Lee et al. (2002) cited Sujan et al. (1993) and Schwarz (1990) to suggest that although people experience positive affect due to self-referencing, they may also engage in discounting, which involves dismissing the positive self-referencing feeling as a relevant factor for making judgements about a topic (in this case, brand attitudes).

The self-referencing effect of photos in ads was explored as well. Ahn and Bailenson (2011) found that seeing one’s picture endorsing the brand/product on an ad would produce both more favorable attitudes towards the brand and purchase intention than seeing a stranger’s picture. In their 2 (photo self-endorsing vs. photo other-endorsing) X 2 (text self-endorsing vs. text other-endorsing) within-subject online study, the participants volunteered pictures of their face and Photoshopped the pictures on the ads by themselves; next, four ads were automatically generated (photo-endorsing X text-endorsing), and participants would see four ads that included either their picture or a stranger's picture and had either written in the second person (i.e., “you”) or third person (i.e. “they”) pronoun. Their results showed that photo- and text-self-endorsing both significantly influenced purchase intentions, and photo-endorsing had a larger influence.
than text-endorsing. They found that brand attitudes induced by photo-self-endorsing were significantly higher than those induced by text-self-endorsing \((d = 0.44)\), and further analysis revealed that the more favorable brand attitudes were induced by photo-self-endorsing but not text-self-endorsing. Overall, their study showed that photo-self-endorsing was more effective than text-self-endorsing, and purchase intentions were more easily influenced than brand attitudes.

Having one’s face Photoshopped on an ad is similar to adding the ad to one's picture with a brand filter. Moreover, in the context of social media, the positive attitudes associated with the ad might transfer to the intentions to share the ad with others. Hence, I propose that:

H1: The self-endorsing condition (i.e., seeing a picture of oneself with a brand filter) will produce more positive (a) brand attitudes, (b) purchase intentions and (c) sharing intentions than the other-endorsing condition (i.e., seeing a picture of an unfamiliar other with a brand filter).

**Perceived self-expressiveness**

Perceived self-expressiveness is the extent to which the user views the referent (e.g., the brand, the product, or the ad) to be expressive of one's self-concept. The human need for self-expression is very well documented, and it is motivated by the desire to be viewed the way one wants (Baumeister, 1982; Kokkoris & Kühnen, 2013). Just as objects and experiences can be transformed into symbolic representations in the mind to be included into our self-concepts (McCracken, 1986), objects and actions can also serve to express and communicate our self-concepts. People engage in many online activities to self-express, including online communication (Belk, 2013), creating content on personal websites (Schau & Gilly, 2003; Livingstone, 2008), and taking selfies (Eagar & Dann, 2016; Pounders, Kowalczyk & Stowers,
Behaviors related to consumption can also serve as a means to self-express, such as choosing a brand (Belk, 1988; Aaker, 1999), voicing opinions about a brand (Kokkoris & Kühnen, 2013), creating and contributing to a brand-related conversation online (Muntinga, Moorman & Smit, 2011).

Taylor, Strutton & Thompson (2012) propose that by publicly discussing or advocating a product or brand, the consumer can transfer the symbolic meaning of the product or brand to their self-concept, just like the actual ownership of the brand or product would. The self-expressiveness, which is defined by Taylor et al. (2012) as the extent to which the consumers perceive that the message supports and enacts their self-concepts and will be recognized publicly as such, is a significant predictor (direct standardized estimates = 0.42) of sharing intentions (although they called it the likelihood to share, I labeled it as such since the two constructs and the questions in the measures are very similar and also to maintain consistency through the literature; Taylor et al., 2012). Self-brand congruity (i.e., whether the brand's image or product matches the consumer's self-concept) does not directly influence sharing intentions, but has an indirect effect on sharing intentions through self-expressiveness (indirect standardized estimates = 0.14); moreover, involvement directly (direct standardized estimates = 0.08) and indirectly influences sharing intentions through self-expressiveness (indirect standardized estimates = 0.05); entertainment value had a direct (direct standardized estimates = 0.34) and indirect effect on sharing intentions through self-expressiveness (indirect standardized estimates = 0.20; Taylor et al., 2012).

In a study of online videos using two samples, the U.S. college student sample perceived the act of passing along online videos as a way of expressing social and personal identity, but the general consumer sample disagreed (Yang & Wang, 2015), which suggests that this particular
form of self-expressiveness is only crucial for the younger population. However, I deem self-expressiveness as an important factor in my case, because young people are the most active on social media and they would be most likely to use photo filters.

Just like online video ads, it is possible that the perceived self-expressiveness of brand filters would influence sharing intentions; also, the positive intents may spread to brand attitudes and purchase intentions.

H2: Perceived self-expressiveness positively influences (a) brand attitudes, (b) purchase intentions, and (c) sharing intentions.

I suspect that self-endorsement could increase the perceived self-expressiveness through self-brand congruity. Although Ahn & Bailenson (2011) did not directly measure self-related concepts in their study of photo- and text-self-endorsing ads, they measured brand association (i.e. asking which brand the participant associated with the most out of the four (2 photo X 2 text self-endorsing vs. other-endorsing conditions)) as an indirect measure of self-referencing, which they had theorized as the underlying mechanism of self-endorsing effect. They found that the brand with both photo- and text-self-endorsement was chosen the most by the participants. However, the categorical data which the brand association measure produced is not as informative as interval/ratio data. Self-brand congruity might be a better measure to explore the connection between the consumer and the brand established by self-referencing.

**Self-brand congruity**

Self-brand congruity is the extent to which one perceives a referent (in the case of this thesis, an ad) to be consistent with one's self-schema; as it increases, favorability toward the brand also increases (Aaker, 1999). A brand can be congruent to the ideal self (i.e., the self-image one aspires to) or actual self (i.e., the self-image one believes others perceive) (Malär,
The positive effects of actual self-brand congruity on attitudes toward brands are reported quite consistently, while evidence suggests that the influence of ideal self-congruity on brand attitudes varies: it can be positive (Sirgy, 1985), negative (Koo, Cho & Kim, 2014), or it can depend on personal characteristics such as self-esteem, product involvement or public self-consciousness (Malär et al., 2011). In this study, I only address actual self-congruity.

Self-brand congruity may be more important for some products than others. Sirgy and Johar (1991) predicted that the self-congruity effect is more evident for ads of symbolic products. Take cars, for example: the role of self-brand congruence was reported as early as 1968 by Birdwell. In a study of different car brand owners, a close relationship between the owner's perceptions of himself and the perceptions of his car was found; the relationship was strongest for owners of very symbolic and prestigious car brands such as Cadillac (Birdwell, 1968). Birdwell (1968) attributed this phenomenon to the perceived self-expressiveness of cars, especially highly symbolic cars. Kressmann et al., (2006) also found that self-congruity positively influences the brand loyalty for cars, suggesting the importance of self-brand congruity.

In a study of eight different product categories, self-brand congruity significantly affected consumers’ brand attitudes as well as their evaluations of the utilitarian attributes of the brands (Sirgy & Johar, 1999). Thus, although self-congruity is most crucial for symbolic products such as cars, it can influence attitudes toward general products as well. Because self-brand congruity induces positive attitudes toward brands (Sirgy & Johar, 1999), I propose that the positive attitudes would transfer to purchase intentions and sharing intentions.
H3: Self-congruity positively influences (a) brand attitudes, (b) purchase intentions, and (c) sharing intentions.

One thing I am trying to establish with these two studies is the connection between self-endorsing and self-congruity. Since people perceive psychological distance in an egocentric way (i.e., the self is the origin of all psychological distances; Trope & Liberman, 2010), I propose that self-endorsing is psychologically proximal and other-endorsing is distal.

Self-brand congruity is operationalized in this study as how close the perceptions of self-image and the referent-image are. I argue that the further away a brand’s image is from one’s self-perception, the more psychologically distant it is. Hence, seeing a self-endorsing brand filter will pull the brand psychologically closer to the viewer, and the viewer may see the filter as more self-congruent. If the self-endorsing filter does not create a sense of congruence and instead is perceived as incongruent to the self, it is unlikely that the filter will have a positive influence on the viewer.

H4: Self-congruity mediates the relationships of filter conditions (i.e., self-endorsing and other-endorsing) on (a) brand attitudes, (b) purchase intentions and (c) sharing intentions.

Perceived Self-expressiveness and Self-congruity

For online video advertising, self-congruity positively influences the intentions to share; however, the effect is fully mediated by perceived self-expressiveness (Taylor et al., 2012). I propose that self-congruity also comes first and is followed by perceived self-expressiveness in the case of brand filters because perceived similarity between oneself and the brand filter would qualify the filter as a medium for self-expression. Moreover, self-congruity influences perceived self-expressiveness and indirectly influences brand attitudes, purchase intentions and sharing intentions through perceived self-expressiveness. In other words, the relationship between filter
conditions (self vs. other) and the dependent measures will be mediated by self-congruity and perceived self-expressiveness in serial.

H5: Perceived self-expressiveness mediates the effect of filter condition on (a) brand attitudes, (b) purchase intentions and (c) sharing intentions.

H6: Self-congruity and perceived self-expressiveness mediate the effects of filter condition on (a) brand attitudes, (b) purchase intentions and (c) sharing intentions in serial.

**Outcome Variables**

I have chosen brand attitudes, purchase intentions and sharing intentions as my dependent variables. Brand attitudes and purchase intentions are common dependent variables to gauge the effectiveness of ads, and they do provide valuable information in practice. Sharing intentions are the behavioral intentions to share the filter on social media.

**Summary**

All in all, the proposed model will be a sequential two mediation effect (see fig. 1). The independent variable is brand filter conditions (self-endorsing vs. other-endorsing), and the dependent variables are brand attitudes, purchase intentions and sharing intentions. Self-brand congruity and perceived self-expressiveness are mediating the effects of filter on the DVs. There is an indirect effect of filter condition on dependent variables through self-congruity, and there is also an indirect effect of filter condition on dependent variables through perceived self-expressiveness. Finally, there is an indirect effect of filter condition on dependent variables through self-congruity and perceived self-expressiveness in serial.
Figure 1. Proposed model.
CHAPTER 3: STUDY ONE

Design

This was a one-way experiment with two conditions (self-endorsing vs. other-endorsing), two mediating variables (self-brand congruity and self-expressiveness) and three outcome variables (brand attitudes, purchase intentions and sharing intentions).

Sample

Participants were undergraduate students recruited through the Advertising Research Participation System at the University of Illinois. Each participant was given one extra credit point for participation. A total of 231 participants were initially recruited. But, after removing two who guessed the hypothesis correctly and ten who saw the incorrect stimuli, 219 respondents were left.

Stimuli

Before the experiment began, the participants received an email asking them to send a photo of themselves to the researcher upon signing up for the study. The picture must have met the following requirements: front view, showing facial features clearly, good lighting. The participants were warned about the risk of disseminating their pictures online and were advised to send only pictures they were willing to share with anyone. If a participant was unwilling or unable to provide a picture, s/he was not allowed to participate in the study.

After receiving a picture, the experimenter used photo-editing software to superimpose a layer of image, which was designed to resemble a real brand filter, on the photo. This image was a mock brand filter by a mock sunglasses brand, Luminosa, and consisted of three elements: a catchphrase “just chill” at the top, the product (i.e., a pair of sunglasses) on the participant’s forehead, and a brand logo at the bottom. The combined image was shown to the corresponding
participant in the self-endorsing condition and was only seen by the researcher and the participant.

For the other-endorsing condition, the participants were shown a picture of a stranger instead of their own. The strangers' pictures were stock photos from the Chicago Face Database, which is an online database of high-resolution photos of human faces including different ethnicity and gender (Ma, Correll, & Wittenbrink, 2015). The Chicago Face Database was considered to be an excellent source for the stimuli because all photos were rated on various traits such as attractiveness, dominance, prototypicality of certain race and gender, etc. Since White was the plurality race (43.44%) of the students at University of Illinois (Demographic, 2018), I only included photos of White models. To eliminate potential biasing effects of gender and attractiveness, I chose models of average attractiveness and the same gender as the participant (see Appendix B for sample experimental stimuli).

**Procedure**

The study was conducted in a laboratory at the University of Illinois. An experimental session took about 10 minutes. Depending on the sign-ups, there could be one to four participants per experimental session, and those in the same session were assigned to the same experimental condition. Thus, participants were randomly assigned to the two experimental conditions at the session level. After all participants for one session arrived, the researcher gave a brief introduction and consent forms for the participants to sign. Dividers between the computer stations provided the participants privacy.

The researcher advised the participants to read the instructions carefully, then turned on the computer monitor. The computer screen was divided into two. The experimental stimulus was displayed on the left side of the screen, and the questionnaire collected via Qualtrics was on
the other side. The instruction stated, “We want to understand how different visual elements of filters influence consumers’ brand attitudes. We will ask you to evaluate one of our filters. To make the filter more similar to what you would see in real life, we asked you to provide a picture of yourself. Some filters are harder to generate customized images for because of the design, so some filters are showcased by a volunteer.”

In the self-endorsing condition, the participants saw their own pictures with the brand filter displayed on the screen and based on that image responded to the questionnaires in the following order: self-brand congruity, self-expressiveness, brand attitudes, purchase intentions, and sharing intentions. In the other-endorsing condition, the participants saw a picture of a stranger with the brand filter and based on that image responded to the same set of measures as the self-endorsing condition. At the end of the questionnaires, all participants answered an open-text question, “what do you think the study is about?”, which served as a hypothesis guessing check. The participants were thanked and debriefed after the experiment. Each participant’s photo and personalized stimuli were deleted after the experiment.

**Dependent Measures**

There were three dependent variables: brand attitudes, purchase intentions, and sharing intentions. All were on 7-point scales with higher numbers being positive and lower numbers being negative, and the individual’s score was the average of the items of the specific measure. See table 1 for the internal consistencies of all measures except purchase intentions, which was accessed with only one question.

The brand attitudes and purchase intentions questions were the same as ones used in Ahn & Bailenson (2011). For brand attitudes, three questions were used, including “how strongly would you recommend this brand to your friend?”, “how much did you like the brand?”, “how
would you describe your attitude about this brand?” Purchase intentions was assessed by one question, “how likely are you going to buy this product if its available to you?” for the participant to rate from 7 (very likely) to 1 (very unlikely).

The sharing intentions measure was adapted from Taylor et al. (2012); and was consisted of one statement, “if you discovered this filter on social media and had taken a selfie with it on your phone, what is the likelihood for you to share it with others?” and seven semantic differential items for the participants to rate (likely (7) – unlikely (1); probable (7) – improbable (1); probably would (7) – probably would not (1); definitely would (7) – definitely would not (1); existent (7) – non-existent (1); possible (7) – impossible (1); certain (7) – uncertain (1)).

**Mediating Variables Measures**

Both mediating variables were rated on 7-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree). The self-congruity measure is adapted from Sirgy et al. (1997) and modified by Taylor et al. (2012), including four items “people who use this brand are like me,” “I am very much like the typical person who uses this brand,” “the image of this brand's users is consistent with how I see myself,” “I can identify with people who use this brand.” The internal consistencies of the perceived self-expressiveness and self-brand congruity measures are reported in table 1.

The perceived self-expressiveness measure was adapted from Escalas and Bettman (2005) and modified by Taylor et al. (2012). The word “video” in Taylor et al.’s (2012) measure were all changed to “picture” to suit the context of this study. The measure consisted of six items in the following order: “this picture reflects whom I consider myself to be,” “this picture reflects who I am,” “passing along this picture would communicate who I am to other people,” “this picture is consistent with how I want to present myself to others,” “I can identify with this
picture,” “my reaction to this picture would tell others something important about me.” All the scales used in this study are in Appendix A.

Results

I conducted analyses using statistical software, SPSS and Jamovi. Welch's t-tests of the dependent and mediating variables between the two conditions and Pearson correlation of the measures were conducted. Table 1 shows the descriptive statistics of the two conditions, self-endorsing \((n = 110)\) and other-endorsing \((n = 109)\). The first three rows are the dependent variables, and the last two rows are the mediating variables. Table 2 shows the correlations among all the measures, and in table 3 I split the correlation table into two by condition.
Table 1

*Study One Group Descriptive Statistics and T-tests*

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<td>0.98</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purchase Intentions</strong></td>
<td>Self</td>
<td>3.71</td>
<td>1.31</td>
<td>2.34</td>
<td>216</td>
<td>0.01*</td>
<td>0.32</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>3.28</td>
<td>1.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sharing Intentions</strong></td>
<td>Self</td>
<td>3.99</td>
<td>1.63</td>
<td>1.51</td>
<td>217</td>
<td>0.07</td>
<td>0.20</td>
<td>0.96</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>3.67</td>
<td>1.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-brand Congruity</strong></td>
<td>Self</td>
<td>4.16</td>
<td>1.38</td>
<td>1.17</td>
<td>214</td>
<td>0.12</td>
<td>0.16</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>3.95</td>
<td>1.22</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Self-expressiveness</strong></td>
<td>Self</td>
<td>3.71</td>
<td>1.27</td>
<td>2.04</td>
<td>213</td>
<td>0.02*</td>
<td>0.28</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>3.38</td>
<td>1.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* H₀ Self conditions > other conditions, one-tailed.  
* * p < .05, ** p < .01, *** p < .001

Table 2

*Study One Correlation Matrix (All condition)*

<table>
<thead>
<tr>
<th></th>
<th>SE</th>
<th>A_b</th>
<th>PI</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 219</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>.715***</td>
<td>.718**</td>
<td>.537***</td>
<td>.579**</td>
</tr>
<tr>
<td>SE</td>
<td></td>
<td>.652***</td>
<td>.506***</td>
<td>.550***</td>
</tr>
<tr>
<td>A_b</td>
<td>-</td>
<td></td>
<td>.737***</td>
<td>.552***</td>
</tr>
<tr>
<td>PI</td>
<td>-</td>
<td>-</td>
<td></td>
<td>.461***</td>
</tr>
</tbody>
</table>

*Note.* ** p < .01, *** p < .001 (two-tailed)  
SC = self-brand congruity; SE = self-expressiveness; A_b = brand attitudes; PI = purchase intentions; SI = sharing intentions.
Table 3

Study One Correlation Matrices by Condition

<table>
<thead>
<tr>
<th>Condition</th>
<th>SE</th>
<th>A_b</th>
<th>PI</th>
<th>SI</th>
</tr>
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<tbody>
<tr>
<td>Self</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 110)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>.777***</td>
<td>.799***</td>
<td>.686***</td>
<td>.767***</td>
</tr>
<tr>
<td>SE</td>
<td>-</td>
<td>.753***</td>
<td>.691***</td>
<td>.688***</td>
</tr>
<tr>
<td>A_b</td>
<td>-</td>
<td>-</td>
<td>.788***</td>
<td>.733***</td>
</tr>
<tr>
<td>PI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.696***</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(n = 109)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>.630***</td>
<td>.601***</td>
<td>.372***</td>
<td>.405***</td>
</tr>
<tr>
<td>SE</td>
<td>-</td>
<td>.498***</td>
<td>.284**</td>
<td>.421***</td>
</tr>
<tr>
<td>A_b</td>
<td>-</td>
<td>-</td>
<td>.685***</td>
<td>.426***</td>
</tr>
<tr>
<td>PI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.382***</td>
</tr>
</tbody>
</table>

Note. ** p < .01, *** p < .001 (two-tailed)
SC = self-brand congruity; SE = self-expressiveness; A_b = brand attitudes; PI = purchase intentions; SI = sharing intentions.

Table 3 shows that all measures were significantly correlated with each other in both the self-endorsing and other-endorsing condition, confirming the positive relationship between self-brand congruity and the three dependent variables (H3a, b, c), and the positive relationship between self-expressiveness and the three dependent variables (H2a, b, c) (see Appendix C for the scatterplots).

Linear regression analyses were conducted to further probe the effect of the perceived self-expressiveness and self-brand congruity on the dependent variables and are presented in Tables 4 and 5. The results confirmed that self-brand congruity positively influenced brand attitudes, purchase intentions, and sharing intentions (H3a, b, c), and one unit of self-brand congruity led to 0.61, 0.60, and 0.71 unit increase of brand attitudes, purchase intentions, and sharing intentions, respectively (Table 4). Self-expressiveness also positively influenced brand attitudes, purchase intentions, and sharing intentions (H2a, b, c), and one unit of self-expressiveness led to 0.60, 0.57, and 0.74 unit increase of brand attitudes, purchase intentions, and sharing intentions, respectively (Table 5).
Table 4

Linear Regression of Self-Brand Congruity on the Dependent Variables

<table>
<thead>
<tr>
<th>IV</th>
<th>DV</th>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>BA</td>
<td>1</td>
<td>(Constant)</td>
<td>1.887</td>
<td>.170</td>
<td>11.100</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>SC</td>
<td></td>
<td>SC</td>
<td>.606</td>
<td>.040</td>
<td>.718</td>
<td>15.178</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>1</td>
<td>(Constant)</td>
<td>1.230</td>
<td>.254</td>
<td>4.846</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td></td>
<td>SC</td>
<td>.559</td>
<td>.060</td>
<td>.537</td>
<td>9.382</td>
</tr>
<tr>
<td></td>
<td>SI</td>
<td>1</td>
<td>(Constant)</td>
<td>.945</td>
<td>.290</td>
<td>3.258</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>SI</td>
<td></td>
<td>SC</td>
<td>.712</td>
<td>.068</td>
<td>.579</td>
<td>10.454</td>
</tr>
</tbody>
</table>

$R^2 = 0.515$; adjusted $R^2 = 0.513$; $F(1) = 230.37$ (p < 0.001)

$R^2 = 0.289$; adjusted $R^2 = 0.285$; $F(1) = 88.023$ (p < 0.001)

$R^2 = 0.335$; adjusted $R^2 = 0.332$; $F(1) = 109.279$ (p < 0.001)

Note. SC = self-brand congruity; SE = self-expressiveness; Ab = brand attitudes; PI = purchase intentions; SI = sharing intentions. Constant is the intercept.
Table 5

*Linear Regression of Perceived Self-Expressiveness on the Dependent Variables*

<table>
<thead>
<tr>
<th>IV</th>
<th>DV</th>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>SE</td>
<td>BA</td>
<td>1</td>
<td>(Constant)</td>
<td>2.219</td>
<td>.177</td>
<td>12.527</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>SE</td>
<td>1</td>
<td>(Constant)</td>
<td>1.463</td>
<td>.248</td>
<td>5.892</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>1</td>
<td>(Constant)</td>
<td>1.463</td>
<td>.248</td>
<td>5.892</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>SI</td>
<td>1</td>
<td>(Constant)</td>
<td>1.221</td>
<td>.284</td>
<td>4.294</td>
<td>.000</td>
</tr>
</tbody>
</table>

*Note.* SC = self-brand congruity; SE = self-expressiveness; \( A_b \) = brand attitudes; PI = purchase intentions; SI = sharing intentions. Constant is the intercept.

Figure 2 shows the comparison of the outcome variables' means as a graph. Figure 3 shows the comparison of the mediating variables' means as a graph. Although all mean differences were in the predicted direction (self-endorsing higher than other-endorsing), one-tailed t-tests revealed that the group differences were only significant \( p < 0.05 \) for purchase intentions and self-expressiveness (Table 1). Thus, we do not have enough evidence to say the self-endorsing and other-endorsing groups were significantly different when it comes to brand attitudes and sharing intentions, nor can we say self-brand congruity was affected by the experimental manipulation.
Figure 2. Dependent variables mean by condition.

Figure 3. Mediating variables mean by the condition.
Only purchase intentions was significantly different between the two conditions, while brand attitudes and purchase intentions were not. So, only H1b was established. Hence, I cannot proceed to test the entire mediation model in Figure 1 (Preacher & Hayes, 2004).

However, purchase intentions and self-expressiveness of the self-Endorsing group were significantly higher than the other-endorsing group, so H5b, which states the relationship between filter conditions and purchase intentions is mediated by self-expressiveness was tested and presented in Figure 4. The mediation analysis was conducted by using Hayes’ (2013) PROCESS SPSS add-on (model four). The level of confidence for all confidence intervals was 95.00, and the number of bootstrap samples for percentile bootstrap confidence intervals was 5000. The analysis confirmed that perceived self-expressiveness mediates the relationship between filter conditions and purchase intentions. Total effect of filter condition on purchase intentions was $b = 0.42$ ($p = 0.02$). The direct effect of filter condition on purchase intentions was $b = 0.24$ ($p =0.13$). The indirect effect of filter condition on purchase intentions through perceived self-expressiveness was $b = 0.18$, and the partially standardized indirect effect of filter condition on purchase intentions was $b = 0.14$.

The effect of filter condition on perceived self-expressiveness was $b = 0.33$ ($R^2 = 0.02$; $F(1, 217) = 4.15$, $p = 0.04$), and the effects of the filter condition and perceived-self-expressiveness together on purchase intentions were $b = 0.24$ ($p = 0.13$) and $b = 0.56$ ($p < 0.001$), respectively ($R^2 = 0.26$; $F(2, 216) = 38.73$, $p < 0.001$). Although the total effect of filter condition on purchase intentions was significant, but after controlling perceived self-expressiveness, it was insignificant. Hence, the effect of filter condition on purchase intentions was fully mediated by perceived self-expressiveness, confirming H5b.
Additional exploratory analyses, which tested the proposed serial mediation model using purchase intentions as the dependent variable, were conducted but are not be included in the main text since there were no a priori hypotheses about these analyses. The results partially confirmed the model proposed, established the effect of self-congruity on perceived self-expressiveness, self-expressiveness on purchase intentions, and self-congruity on purchase intentions. For more details on the exploratory analyses, see Appendix D.

**Study One Discussion**

The relationship between self-expressiveness and the dependent variables ($A_b$, $PI$, $SI$) and the relationship between self-brand congruity and the dependent variables were established. The more the consumers perceived the product or brand to be self-expressive, and the image of the brand to be similar with themselves, the more favorable were their attitudes toward the brand, purchase intentions, and sharing intentions. The mediation model was partially supported (H5b). The effect of self-endorsing (vs. other-endorsing) on purchase intentions was fully mediated by perceived self-expressiveness.
However, only one of the three dependent variables, purchase intentions, of the self-endorsing group was significantly higher than the other-endorsing group. The differences between the two filter conditions were not as large as expected, and I could not proceed to test the entire mediation model proposed in figure 1.

There are several possible explanations for the unexpected results. First, it is possible that self-endorsing effects exist in the photo filter context but the participants engaged in discounting, as discussed previously in the study of ethnic minority model by Lee et al. (2002). The participants might experience general positive feelings due to self-referencing. However, they dismissed the positive feelings as irrelevant when evaluating their attitudes toward the brand.

Second, five participants commented in the hypothesis-guessing-check section that they were not very confident to judge or evaluate the mock brand as a whole because they do not have any knowledge of this brand besides the filter. This is quite different from the real brand filters consumers would encounter in real life. As of the Snapchat situation around Champaign-Urbana at this moment (April 12, 2018), sponsored Snapchat lenses are promoted by big and well-known national brands, including lenses by the movie Truth or Dare and the brand Crest, as well as one brand filter sponsored by the fast-food chain restaurant, Wendy's. It is rare that the consumers would have no information other than the filter while evaluating the brand. Also, consumers would probably be more inclined to choose filters for brands they already like. Moreover, the significant result of purchase intentions might be caused by the fact that the mock product, a pair of sunglasses, was a familiar product displayed on the filter. Hence, the participants had more information about the product as well as the confidence to evaluate their purchase intentions. To encourage the participants to make judgments about the brand, a brief introduction of the brand may be needed.
Third, the quality of the pictures may have a great influence. The experimenter received many low-quality photos despite the fact that participants were instructed to send pictures that met certain standards. Lots of pictures were either too dark, extremely slanted, cutting off parts of the participants' face, etc., while the stock photos for the other-endorse group were of high resolution and perfect lighting. The quality of the pictures might diminish the self-endorse effect. Hence, in the follow-up study, the pictures of the participants were taken in the laboratory by the experimenter to ensure their quality is as good as the control group’s stock photo.

During the experiment, some participants made comments about not using social media; hence it is unlikely for them to share any content. People's social media activity intensity may cap their likelihood to share the brand filter on social media. To explore the relationship between social media habits and sharing intentions, I included a social media intensity scale in study two. An additional hypothesis was proposed, and details of the measure are explained in the measure section of study two.

H7: Social media intensity moderates the relationship between filter condition (self-endorse vs. other-endorse) and sharing intentions. As social media intensity increases, the relationship between filter conditions and sharing intentions will also increase.
CHAPTER 4: STUDY TWO

Study two was conducted to clarify and address many unanswered questions that arose during the first study. The study structure remained the same as study one, but three changes were made. First, a brief introduction to the mock brand, presented as a screenshot of the brand's website, was provided to the participants before they were shown the photo filter ad. Second, photos of the participants in the self-endorsing condition were taken in the lab to ensure a consistent quality of the photos. Third, two new measures were included: a social media intensity scale, to gauge participants’ social media habits and test H7, and a global warming beliefs survey was added to filter out participants who might have strong biases against the mock brand used in study two.

A new mock brand was developed for study two. It was a supermarket chain dedicated to stopping global warming by tracking carbon footprint information for the products it carries and providing that information to its consumers. However, although the majority (70%) of Americans believed that global warming was happening as of 2017 (Leiserowitz, Maibach, Roser-Renouf, Rosenthal, & Cutler, 2017), there was still a small proportion of people who deny the existence of climate change. It was possible that the climate change deniers and doubters would reject the mock brand based on their climate beliefs. I decided to include a global warming beliefs survey created by Howe, Mildenberger, Marlon, & Leiserowitz (2015). The survey consisted of four multiple choice questions (see Appendix A for the full survey).

Because the mock brand was built upon the premises that global warming was happening and was caused by human activities, those who disagree may reject the mock brand based on their beliefs. I excluded two types of respondents: those who did not believe in global warming (i.e. answered “no” on the first question) and those who thought global warming was happening,
but natural changes were causing it (i.e. answered “caused mostly by natural changes in the environment” on the second question). If the answers to the above two questions contradict each other, the other two questions would be used to determine the respondents’ attitudes (i.e. whether they have realistic beliefs about the scientists), which did not happen in this sample. The survey served as a criterion to filter out possibly biased participants who, subsequently, were not included in the analyses.

Pretest

In order to make sure the new experimental materials would not cause a ceiling effect, a pretest was conducted using the screenshot of the mock brand's website. An online survey including 35 respondents (17 female and 18 male) was conducted on Amazon Mechanical Turk. The participants received $0.50 for a five-minute survey. After viewing a screenshot of a mock brand's website, they completed the brand attitudes scale, purchase intentions scale, the global warming beliefs scale, social media intensity scale, and an attention check. The mean of brand attitudes was 5.67 (SD = 0.99), 5.80 (SD = 1.25) for female, and 5.54 (SD = 0.67) for male. The mean of purchase intentions was 5.46 (SD = 1.22), 5.65 (SD = 1.58) for female, and 5.28 (SD = 0.75) for male on a 7-point scale. The Welch's t-tests of brand attitudes and purchase intentions between female and male showed no gender difference (brand attitudes Welch’s t(71) = -0.78, p = 0.44; purchase intentions t(71) = -0.88, p = 0.39). Although the results suggested the possibility of a ceiling effect, I did not change the stimuli design.

Design

The design of study two was the same as study one except for two additional measures, including the social media intensity scale and a global warming beliefs measure.
Sample

Participants were undergraduate students recruited through the Advertising Participant Participation System of the University of Illinois. Each participant was given one extra credit for participation. A total of 73 participants were initially recruited. However, after removing one who guessed the hypothesis correctly, one who denied that global warming was happening, and four who thought human activities were not the cause of global warming, 67 respondents remained.

Stimuli

The stimulus was a picture of either the participant’s portrait or a same-sex-as-the-participant stock photo from the Chicago Face Database combined with the brand filter of a mock supermarket brand, Ecofresh. The brand filter consisted of three elements: a catchphrase “change the world one [step] at a time” at the top, a picture of a shopping cart, and an Ecofresh logo at the bottom (the word step was replaced with the shape of a foot). The participants would also see a screenshot of the brand’s website prior to seeing the filter, which contained information of the mock brand’s background, business model, and goals. The screenshot serves the purpose of adding authenticity and context to the stimuli (See Appendix B for the stimuli).

Procedure

The study was conducted in a laboratory at the University of Illinois. An experimental session took about 15 minutes. Participants were randomly assigned to one of two conditions.

In the self-endorsing condition, after explaining the procedure and obtaining consent, the experimenter used a digital camera to take the participant’s portrait. A tripod, a chair, and a blue screen background were set up to make sure all pictures were taken from a similar angle. Then, the participants viewed the screenshot of the mock brand’s website for one minute or until they
signaled the experimenter that they had finished reading. The experimenter uploaded the photo to the computer and added the filter to make the experimental stimulus, which was then placed on the left side of the screen. On the right side was the same questionnaire as study one with a social media intensity scale and the global warming beliefs survey.

In the other-endorsing condition, the participants went through the same process as the self-endorsing condition except for the photo-taking part. After signing the consent form, the participants viewed the screenshot of the mock brand's website for one minute or until they signaled the experimenter that they had finished reading. Then, the experimenter chose the stock photo that matched the gender of the participant and added the filter to the photo in the same way as in the self-endorsing condition. The stock photos were the same as those used in study one. The participants completed the questionnaires as the control stimulus was displayed on the screen.

**Measures**

Measures of the three dependent variables (brand attitudes, purchase intentions, and sharing intentions), two mediating variables (self-brand congruity and self-expressiveness), and the hypothesis-guessing check were the same as study one. See table 6 for the internal consistencies of the above measures except the purchase intentions measure. An additional moderating variable, social media intensity scale, was added at the end of the survey before the hypothesis-guessing check (see Appendix A for social media intensity scale).

The social media intensity scale used in this study was adapted from the Facebook intensity scale originally developed by Ellison, Steinfield, and Lampe (2007) and refined by Karapanos, Teixeira, and Gouveia (2015) in a study of human need, Facebook, and WhatsApp. For the present study, the scale was modified from the four items used by Karapanos et al.
(2015). The words Facebook and WhatsApp were changed to social media and the fourth item “I would be very sorry if X shuts down” was modified as “I would be very sorry if social media is not available anymore” to better suit the context while maintaining the original meaning. The items were as follows, "Social media is part of my everyday activity," "I am proud to tell people I'm on social media," "Social media has become part of my daily routine," and "I would be very sorry if social media is not available anymore." The internal consistency of this adapted version was good (Cronbach’s $\alpha = 0.84$).

**Results**

Table 6 shows the descriptive statistics of the two conditions, self-endorsing ($n = 29$) and other-endorsing ($n = 38$), and the measures. The first three rows are the dependent variables, and the last two rows are the mediating variables.
Table 6

*Study Two Group Descriptive and T-tests*

<table>
<thead>
<tr>
<th></th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>Welch’s t</th>
<th>df</th>
<th>p</th>
<th>Cohen's d</th>
<th>Cronbach’s α</th>
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<tbody>
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<td><strong>Brand Attitudes</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purchase Intentions</strong></td>
<td>Self</td>
<td>4.62</td>
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<td>-0.58</td>
<td>60.1</td>
<td>0.72</td>
<td>-0.14</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Other</td>
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<td>1.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sharing Intentions</strong></td>
<td>Self</td>
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<td>1.41</td>
<td>-0.59</td>
<td>58.2</td>
<td>0.72</td>
<td>-0.15</td>
<td>0.93</td>
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<tr>
<td></td>
<td>Other</td>
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<td>1.32</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Self-brand Congruity</strong></td>
<td>Self</td>
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<td>0.93</td>
<td>-0.82</td>
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<td>0.79</td>
<td>-0.20</td>
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<td>1.17</td>
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<td></td>
</tr>
<tr>
<td><strong>Self-expressiveness</strong></td>
<td>Self</td>
<td>4.27</td>
<td>1.00</td>
<td>1.21</td>
<td>64.5</td>
<td>0.12</td>
<td>0.29</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>3.94</td>
<td>1.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: H₄ Self conditions > other conditions, one-tailed.*

After conducting a series of one-tailed Welch’s t-tests, we found that none of the group differences were significant ($p < 0.05$). The t-test results are presented in Table 6, the correlations between all measures are presented in Table 7. Table 8 presented the correlations among all variables by condition. Table 7 shows that perceived self-expressiveness positively correlated with brand attitudes (H2a) and purchase intentions (H2b), and self-brand congruity positively correlated brand attitudes (H3a) and purchase intentions (H3b) (see Appendix C for the scatterplots).
Table 7

*Study Two Correlation Matrix*

<table>
<thead>
<tr>
<th></th>
<th>SE</th>
<th>Ab</th>
<th>PI</th>
<th>SI</th>
<th>SMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>Pearson's r</td>
<td><strong>.515</strong>*</td>
<td><strong>.303</strong>*</td>
<td>.374**</td>
<td>.068</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>&lt; .001</td>
<td>.013</td>
<td>.002</td>
<td>.583</td>
</tr>
<tr>
<td>SE</td>
<td>Pearson's r</td>
<td>-</td>
<td><strong>.339</strong>*</td>
<td><strong>.429</strong>*</td>
<td>.170</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>-</td>
<td>.005</td>
<td>&lt; .001</td>
<td>.170</td>
</tr>
<tr>
<td>Ab</td>
<td>Pearson's r</td>
<td>-</td>
<td>-</td>
<td><strong>.590</strong>*</td>
<td>.234</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>-</td>
<td>&lt; .001</td>
<td>.056</td>
<td>.550</td>
</tr>
<tr>
<td>PI</td>
<td>Pearson's r</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.100</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>-</td>
<td>-</td>
<td>.422</td>
<td>.691</td>
</tr>
<tr>
<td>SI</td>
<td>Pearson's r</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note.* *p* < .05, **p** < .01, ***p*** < .001 (two-tailed)

SC = self-brand congruity; SE = self-expressiveness; Ab = brand attitudes; PI = purchase intentions; SI = sharing intentions; SMI = social media intensity.

Table 8

*Study Two Correlation Matrices by Condition*

<table>
<thead>
<tr>
<th>Pearson correlation</th>
<th>SE</th>
<th>Ab</th>
<th>PI</th>
<th>SI</th>
<th>SMI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self</strong> (n = 29)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td><strong>.392</strong></td>
<td>.126</td>
<td>.203</td>
<td>.236</td>
<td>-.047</td>
</tr>
<tr>
<td>SE</td>
<td>-</td>
<td>.040</td>
<td>.191</td>
<td>.265</td>
<td>.213</td>
</tr>
<tr>
<td>Ab</td>
<td>-</td>
<td>-</td>
<td><strong>.562</strong></td>
<td>.326</td>
<td>-.008</td>
</tr>
<tr>
<td>PI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.097</td>
<td>-.060</td>
</tr>
<tr>
<td>SI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td><strong>.090</strong></td>
</tr>
<tr>
<td><strong>Other</strong> (n = 38)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td><strong>.610</strong></td>
<td><strong>.400</strong></td>
<td><strong>.475</strong></td>
<td>-.051</td>
<td><strong>.093</strong></td>
</tr>
<tr>
<td>SE</td>
<td>-</td>
<td><strong>.543</strong></td>
<td><strong>.610</strong></td>
<td>.130</td>
<td><strong>.077</strong></td>
</tr>
<tr>
<td>Ab</td>
<td>-</td>
<td>-</td>
<td><strong>.607</strong></td>
<td>.157</td>
<td><strong>.151</strong></td>
</tr>
<tr>
<td>PI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.093</td>
<td><strong>.154</strong></td>
</tr>
<tr>
<td>SI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.008</td>
</tr>
</tbody>
</table>

*Note.* *p* < 0.05, **p** < 0.01 (two-tailed).

SC = self-brand congruity; SE = self-expressiveness; Ab = brand attitudes; PI = purchase intention; SI = sharing intention; SMI = social media intensity.
Table 8 shows the correlation between all measures in the two conditions. The constructs seem to correlate more strongly between each other in the other-endorsing group than in the self-endorsing group.

The results of the linear regression analyses confirmed that self-brand congruity positively influenced brand attitudes and purchase intentions (H3a, b), and one unit of self-brand congruity led to 0.21 and 0.41 unit increase of brand attitudes and purchase intentions, respectively (Table 9). Self-expressiveness also positively influenced brand attitudes and purchase intentions (H2a, b), and one unit of self-expressiveness led to 0.22 and 0.45 unit increase of brand attitudes and purchase intentions, respectively (Table 10). Although brand attitudes and purchase intentions did increase when self-expressiveness or self-brand congruity increase, the extent of increase per unit (b) were smaller in study two than in study one, suggesting a weaker relationship in study two than in study one.

Table 9

Linear Regression of Self-Brand Congruity on Brand Attitudes and Purchase Intentions

<table>
<thead>
<tr>
<th>IV</th>
<th>DV</th>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>SC</td>
<td>BA</td>
<td>1</td>
<td>(Constant)</td>
<td>4.255</td>
<td>.342</td>
<td></td>
<td>12.444</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SC</td>
<td>.206</td>
<td>.080</td>
<td>.303</td>
<td>2.566</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R² = 0.092; adjusted R² = 0.078; F(1) = 6.585 (p &lt; 0.05)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>PI</td>
<td>1</td>
<td>(Constant)</td>
<td>3.039</td>
<td>.533</td>
<td></td>
<td>5.701</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R² = 0.140; adjusted R² = 0.127; F(1) = 10.568 (p &lt; 0.01)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. SC = self-brand congruity; SE = self-expressiveness; Ab = brand attitudes; PI = purchase intentions; SI = sharing intentions. Constant is the intercept.
### Table 10

**Linear Regression of Perceived Self-Expressiveness on Brand Attitudes and Purchase Intentions**

<table>
<thead>
<tr>
<th>IV</th>
<th>DV</th>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>SE</td>
<td>BA</td>
<td>(Constant)</td>
<td>4.209</td>
<td>.320</td>
<td>.339</td>
<td>13.166</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SE</td>
<td>.219</td>
<td>.075</td>
<td>.339</td>
<td>2.904</td>
<td>.005</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>(Constant)</td>
<td>2.900</td>
<td>.492</td>
<td></td>
<td>5.901</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SE</td>
<td>.445</td>
<td>.116</td>
<td>.429</td>
<td>3.830</td>
<td>.000</td>
</tr>
</tbody>
</table>

*R^2 = 0.115*; adjusted *R^2 = 0.101*; *F*(1) = 8.431 (*p < 0.01)*

*R^2 = 0.184*; adjusted *R^2 = 0.172*; *F*(1) = 14.666 (*p < 0.001)*

**Note.** SC = self-brand congruity; SE = self-expressiveness; Ab = brand attitudes; PI = purchase intentions; SI = sharing intentions. Constant is the intercept.

Since the Welch’s t-tests between the self-and other-endorsing group showed no significant differences (Table 6), I did not proceed to test the entire mediation model.

**Moderator**

A regression analysis of the effect of filter condition, social media intensity, and filter condition X social media intensity on sharing intentions was conducted to test H7 using SPSS. Social media intensity scores were Z-transformed for the analysis. No significant interaction effect of filter condition by social media intensity was found while controlling the filter condition and social media intensity; hence, H7 was not supported. The moderation analysis result is presented in Table 11.
Table 11

Moderator Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized B</th>
<th>Coefficients Std. Error</th>
<th>Standardized Coefficients Beta</th>
<th>t</th>
<th>sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td>3.39</td>
<td>0.56</td>
<td>0.5</td>
<td>6.06</td>
<td>0.00</td>
</tr>
<tr>
<td>Condition</td>
<td>0.20</td>
<td>0.34</td>
<td>0.07</td>
<td>0.59</td>
<td>0.56</td>
</tr>
<tr>
<td>Z-score: Social Media Intensity (SMI)</td>
<td>0.24</td>
<td>0.53</td>
<td>0.18</td>
<td>0.45</td>
<td>0.65</td>
</tr>
<tr>
<td>Cond x SMI</td>
<td>-0.13</td>
<td>0.34</td>
<td>-0.15</td>
<td>-0.37</td>
<td>0.71</td>
</tr>
</tbody>
</table>

Note. Dependent variable: Sharing intentions
Cond = condition (self- vs. other-endorsing)

Study Two Discussion

Although study two demonstrated the link between the mediating variables (self-brand congruity and perceived self-expressiveness) and two dependent variables (brand attitudes and purchase intentions), it did not replicate other findings of study one. There were no significant differences between the two filter conditions.

The largest differences between studies one and two were how the pictures for the self-endorsing condition were obtained and the mock brands. Since there was no apparent reason for people to react to the brand filter in study two differently from study one, as potentially biased participants had already been excluded from the analyses, I suspect the picture-taking process was the reason for the unexpected results of study two. It was possible that having pictures taken by a stranger (the experimenter) was a very unpleasant experience, and the negative experience dragged the positive self-endorsing effect down. Being told to sit in a photo booth and being shot with a camera, while having no control over the image might make people uneasy. Ahn &
Bailenson (2011) found a significant self-endorsing effect by letting the participants chose their pictures to put on the ad, and the process was done by the participants themselves alone online. In their case, the picture was seen by the participants themselves only, and they could do it as privately as they wish. In study one, although the participants know that the experimenter saw their pictures, they still had control over their image unlike what happened in study two.
CHAPTER 5: GENERAL DISCUSSION

Overview

The self-endorsing effect of brand filters and the mediating effects of self-congruity and perceived self-expressiveness were examined in two studies. I conducted two lab experiments and randomly assigned participants into two conditions: self-endorsing vs. other-endorsing. In the self-endorsing condition, participants saw pictures of themselves with the brand filter. In the other-endorsing condition, the participants saw pictures of an unknown person paired with the same brand filter. In the first study, after seeing the brand filter, the participants completed measures of self-congruity and perceived self-expressiveness, and then reported their brand attitudes, purchase intentions and sharing intentions. In the second study, the participants completed the same set of measures along with a social media intensity scale and global warming beliefs survey. Self-brand congruity and self-expressiveness positively influenced brand attitudes, purchase intentions (in both studies one and two) and sharing intentions (in study one). I found evidence of self-endorsement positively influencing purchase intentions and self-expressiveness in study one, and the effect of self-endorsing on purchase intentions was fully mediated by perceived self-expressiveness. However, no significant difference between the two conditions was found in study two.

Theoretical Implications

Self-expressiveness and self-brand congruity can induce more favorable brand attitudes and purchase intentions. Moreover, looking at a brand filter with a picture taken by oneself can create more purchase intention and perceiving the ad as more self-expressive, and the effect of self-endorsing on purchase intentions was mediated by perceived self-expressiveness. By activating the self-referencing process of the viewers, they see the brand, product, or ad to be
representative of themselves. They felt the brand, product, or ad to be able to convey their identity. Because I randomly assigned the participants into the self- and other-endorsing condition, the mock brand should be equally self-expressive to the participants in both groups objectively. However, the image of the self successfully persuaded the participants that the mock brand was self-expressive to a larger extent, which led to higher purchase intentions.

However, the effect can be easily canceled out, possibly by feelings of embarrassment or uneasiness when an unfamiliar stranger is taking the photo. In study one, the self-endorsing effect was successfully induced, and the differences of the means of the outcome variables (brand attitudes, purchase intentions, and sharing intentions) between groups were in the predicted direction. However, only purchase intentions was significantly larger in the self-endorsing group than in the other-endorsing group. Even if the participants chose their own picture and felt positive about the brand filter, they may have engaged in discounting, dismissing the generally positive attitudes as relevant while evaluating their brand attitudes. The purchase intentions were significant possibly because the participants perceived the brand filter as relevant while judging their purchase intentions. As for sharing intentions, either the participants engaged in discounting or the relationship was moderated by social media intensity. However, in study two, the moderation effect of social media intensity between filter conditions and sharing intentions (H7) was insignificant, suggesting that discounting may have affected both brand attitudes and sharing intentions. It may be a good idea to explore the role of favorability toward the selfie, anxiety, and the sense of control in the context of photo-self-endorsing. The self-endorsing effect may be more evident when the participants have privacy, feel at ease, and feel confident.
The experiential situation was unnatural and unfamiliar to the participants, which was very different from how people engage with photo filters in real life. There are dimensions of the photo filter experience which lab experiments cannot capture. In reality, when people decide to use a filter, they have many options available to them, including sponsored and non-sponsored ones. The theory of cognitive dissonance, which is the drive induced by the inconsistency between two pieces of information in a person’s cognition (e.g. feelings, beliefs, behaviors), states that the act of choosing between two approximately equal alternatives can increase favorable attitudes towards the chosen option (Festinger, 1957; Elliot & Devine, 1994; Izuma et al., 2010). By choosing to use and share a filter, the participants may prefer the filter even more, and a positive cycle of attitudes and action may be formed. However, cognitive dissonance and its effect would not be aroused in a lab environment deprived of choice.

Moreover, reactance theory predicts that when people feel forced to do something, they will react negatively to the objects that are forced upon them (Brehm, 1989). Although all participants in the self-endorsing group consented to have pictures taken in the lab and knew their rights to withdraw from the study, they could still be participating reluctantly because they did not want to waste their time or were too shy to reject the experimenter. Or, the picture-taking experience did not sound so bad while the experimenter was saying it, but once they sat in front of the camera, they realized they did not want the experience. The negative reaction of reactance may cancel out or even reverse the self-endorsing effect in this situation.

**Practical Implications**

Ahn and Bailenson (2014) pointed out that “because much of the footprints that individuals leave in the digital space such as LinkedIn and Facebook are considered public information, self- endorsed advertisements may be easily created by anyone with affordable or
free software,” (p. 137). However, now, self-endorsed ads are created by consumers themselves using social applications like Snapchat. Not only that the users create self-endorsing ads, but they also forward the ads to their friends. Advertisers do not have to use Facebook pictures and run the risk of being perceived as privacy invading to achieve the self-endorsing effect. They can increase purchase intentions by inducing self-endorsing effect through brand filters. It would be a good idea to include images or messages that encourage consumers to take pictures of their faces with the filter. For instance, special effects which are activated by detecting facial features will be better than effects that can be activated by just tapping on the phone screens. Moreover, self-endorsement increased self-expressiveness in the first study. For product categories in which self-expression is an important consideration for consumers such as clothing, lifestyle, home décor, and electronics, brand filters can boost the self-expressiveness of the advertised brand.

**Limitations and Future Research**

The two studies were both lab experiments, and the unnaturalness of lab settings might inhibit the self-endorsing effect of brand filters in unexpected ways. It would be better to conduct field experiments or quasi-experiments since lab experiments cannot fully capture the real brand filter experience. Compared with study two, study one was more similar to what the participants would experience in real life. The experimental manipulations were more successful in study one than study two, which suggests experiments designed to resemble real-life experience would be more suitable for studying the self-endorsing effect of photo filters. An example would be a field experiment in which participants are asked to use a real photo filter on an app and complete measures of brand attitudes, purchase intentions. Another example would be to create a photo filter application specifically for the study and study the self-endorsing effect in vivo.
The age of the female model in the picture used in the other-endorsing condition seemed significantly older compared to our participants, who were all college students. The age differences between the participant and the models in the stock photo might have unwanted influences on the participant’s attitudes and intentions. It is possible that seeing a younger versus older endorser of the brand or product would have different effects. Although the pretest results of study two suggested a possibility of ceiling effects, there seems to be no ceiling effect in the actual experimental results. As a best practice, more attention should be paid to the selection of models and the design of the stimulus.

**Limitations of the measures**

The social media intensity scale was modified and abbreviated from the original scale to suit the context of my study. Since the validity and reliability of the original scales cannot be automatically transferred to the shortened scales (Smith, McCarthy, & Anderson, 2000), the validity of the social media intensity scale is questionable. However, due to time and resource constraints, I could not validate the scales used in these two studies.

A test or measure itself cannot be validated; only the interpretation or use of the test scores can (Kane, 2013). Hence validity is not a constant characteristic of a measure. Since the Internet environment changes fast, using a ten-year-old measure about the Internet or social media use is far from ideal. First, even if the social media intensity scale was sufficiently validated, today’s college students might interpret and respond to the scales in a very different way. Second, as social media evolves over the years, there may be more dimensions concerning social media behavior, which the scale would fail to capture. It would be best if the social media intensity scale, as well as other scales, are validated prior to the experiments.
In conclusion, the two studies in this thesis established the relationship between the self-endorsing effect of purchase intentions and brand filters and explored the role of self-expressiveness in this context. I demonstrated in the first study that the effect of self-endorsing on purchase intentions was fully mediated by perceived self-expressiveness. The outcomes of the second study have useful implications for anyone who wishes to study brand filters in the future.
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-----------------------------&-----------------------------


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Pounders, K., Kowalczyk, C. M., & Stowers, K. (2016). Insight into the motivation of selfie


Snapchat advertising costs – A breakdown of each offering. (2018, February 6). Retrieved from:


Table 12

*Self-brand Congruity Scale*

<table>
<thead>
<tr>
<th>Questions</th>
<th>strongly agree</th>
<th>agree</th>
<th>slightly agree</th>
<th>neutral</th>
<th>slightly disagree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>People who use this brand are like me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am very much like the typical person who uses this brand.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The image of this brand's users is consistent with how I see myself.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can identify with people who use this brand.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 13

*Perceived Self-expressiveness Scale*

<table>
<thead>
<tr>
<th>Questions</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Slightly agree</th>
<th>Neutral</th>
<th>Slightly disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>This picture reflects who I consider myself to be.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This picture reflects who I am.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passing along this picture would communicate who I am to other people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This picture is consistent with how I want to present myself to others.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can identify with this picture.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My reaction to this picture would tell others something important about me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 14

*Brand Attitudes Scale*

1. **How strongly would you recommend this brand to your friend?**

<table>
<thead>
<tr>
<th>I would definitely recommend</th>
<th>I would recommend</th>
<th>I would probably recommend</th>
<th>neutral</th>
<th>I would probably not recommend</th>
<th>I would not recommend</th>
<th>I would definitely not recommend</th>
</tr>
</thead>
</table>

2. **How much did you like the brand?**

<table>
<thead>
<tr>
<th>Like a great deal</th>
<th>Like a moderate amount</th>
<th>Like a little</th>
<th>Neither like nor dislike</th>
<th>Dislike a little</th>
<th>Dislike a moderate amount</th>
<th>Dislike a great deal</th>
</tr>
</thead>
</table>

3. **How would you describe your attitude about this brand?**

<table>
<thead>
<tr>
<th>Very favorable</th>
<th>Favorable</th>
<th>Slightly favorable</th>
<th>Neither favorable nor unfavorable</th>
<th>Slightly unfavorable</th>
<th>Unfavorable</th>
<th>Very unfavorable</th>
</tr>
</thead>
</table>
Table 15

_Purchase Intentions Scale_

<table>
<thead>
<tr>
<th>How likely is it you would buy this product if its available to you?</th>
<th>Very likely</th>
<th>Likely</th>
<th>Probably</th>
<th>Neutral</th>
<th>Probably not</th>
<th>Unlikely</th>
<th>Very unlikely</th>
</tr>
</thead>
</table>
Table 16

*Sharing Intentions Scale*

<table>
<thead>
<tr>
<th>If you discovered this filter on social media and had taken a selfie with it on your phone, what is the likelihood that you would share the selfie with others?</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlikely</td>
<td>Likely</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Improbable</td>
<td>Probable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Probably would not</td>
<td>Probably would</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Definitely would not</td>
<td>Definitely would</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Nonexistent</td>
<td>Existent</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Impossible</td>
<td>Possible</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Uncertain</td>
<td>Certain</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Table 17

*Social Media Intensity Scale*

<table>
<thead>
<tr>
<th>Questions</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Slightly agree</th>
<th>Neutral</th>
<th>Slightly disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social media is part of my everyday activity.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am proud to tell people I am on Social Media.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social media has become a part of my daily routine.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be very sorry if social media is unavailable anymore.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Global Warming Beliefs Questionnaire

1. Recently, you may have noticed that global warming has been getting some attention in the news. Global warming refers to the idea that the world’s average temperature has been increasing over the past 150 years, may be increasing more in the future, and that the world’s climate may change as a result. What do you think: Do you think that global warming is happening?
   • Yes
   • No
   • Don’t know

2. Assuming global warming is happening, do you think it is… ?
   • Caused mostly by human activities
   • Caused mostly by natural changes in the environment
   • Other
   • None of the above because global warming isn’t happening

3. Which comes closest to your own view?
   • Most scientists think global warming is happening
   • There is a lot of disagreement among scientists about whether or not global warming is happening
   • Most scientists think global warming is not happening
   • Don’t know enough to say

4. How much do you trust or distrust climate scientists as a source of information about global warming?
   • Strongly trust
   • Somewhat trust
   • Somewhat distrust
   • Strongly distrust
APPENDIX B: EXPERIMENT MATERIALS

Study One Stimuli

*Figure 5.* Study one brand filter.
Figure 6. Stock photos of male and female models for the other-endorsing condition used in both study one and two.
Figure 7. Example of study one brand filter demonstrated with the female model picture.
Letters to the Participants in Study One

Dear ________,
You have signed up for the Filter study through the SONA system. Thank you for your participation!

Before the study begins, we need you to provide a photo of yourself to use in the experiment. This picture has to show your entire face clearly from the front view (no side face) with good lighting. A recent selfie of yourself is the most preferable, since we want to make the filtered photo as “natural” as possible! Professional portrait, mugshot, and ID photo are valid as well. Please send us the photo 2 days before the study, so we have time to prepare.

This picture will be deleted right after the experiment, be seen by the research team only, and will not be disseminated in any way. We will do our best to protect your personal information and confidentiality. However, there are always risks regarding online communication and we cannot 100% guarantee data security. We strongly advise you to send a picture which you are comfortable to share with anyone.

Upon sending us the photo, you agree to let us use the photo in the study. If you are unable or unwilling to provide a qualified photo, you will not be able to participate. Hence, if you don’t wish to provide a photo, please go ahead and cancel the appointment through the SONA system (48 hours before the appointment), so you can be dropped out of the study without any penalty.

See you at the lab!

Best,
Rachel Yang
M.S. Advertising
Welcome to EcoFresh

Global warming is the most pressing issue we face as humans. We at EcoFresh are dedicated to stopping the dangerous march of greenhouse gases by challenging the shopping habits of our society.

EcoFresh is the first supermarket chain to provide customers with the carbon footprints of every product sold. Carbon footprints measure the total carbon dioxide and methane, the biggest causes of global warming, produced along with each product. Allowing our customers to visually compare the impact on the Earth they have when shopping for groceries.

Many people want to save the Earth, but their busy lives make it hard to help. Enter EcoFresh! Our revolutionary carbon footprints estimation of our products makes it easy for anyone to stop global warming one shopping trip at a time.

Figure 8. Screenshot of the mock brand’s website in study two.
Figure 9. Study two brand filter.
Figure 10. Example of study two brand filter demonstrated with the male model picture.
APPENDIX C: ADDITIONAL GRAPHS

Study One Self-Brand Congruity and Self-Expressiveness Scatterplots
Study Two Self-Brand Congruity and Self-Expressiveness Scatterplots
APPENDIX D: ADDITIONAL ANALYSES

The additional analysis was conducted using Hayes’ (2013) PROCESS SPSS add-on (model six). I tested the proposed serial mediation model using purchase intentions as the only outcome variable. The results are visually presented in Figure C1. The total effect and direct effect of filter condition on purchase intentions is $b = 0.43 \ (p = 0.02)$ and $b = 0.26 \ (p = 0.09)$, respectively. The indirect effects of different paths are presented in Table C1.

![Mediation Analysis Diagram]

*Note.*  *p < .05, ** p < .01, *** p < .001

*Figure 11.* Result of the mediation analysis.
Table 18

*Indirect Effect of Filter Condition Through Different Paths*

<table>
<thead>
<tr>
<th>Path</th>
<th>Effect ($b$)</th>
<th>BootSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>0.16</td>
<td>0.10</td>
</tr>
<tr>
<td>Con -&gt; SC -&gt; PI</td>
<td>0.078</td>
<td>0.70</td>
</tr>
<tr>
<td>Con -&gt; SE -&gt; PI</td>
<td>0.05</td>
<td>0.42</td>
</tr>
<tr>
<td>Con -&gt; SC -&gt; SE -&gt; PI</td>
<td>0.04</td>
<td>0.34</td>
</tr>
</tbody>
</table>

*Note.* Con = filter conditions (self- vs. other-endorsing); SC = self-brand congruity; SE = self-expressiveness; PI = purchase intentions.
APPENDIX E: INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

Study One IRB Approval Letter

October 17, 2017

Patrick Vargas
Advertising
320 Gregory Hall
810 South Wright Street
Urbana, IL 61801

RE: Self-Endorsing Effect of Brand Filters: How the Self-Self-Congruity and Perceived Self-Expressiveness Lead to Persuasion
IRB Protocol Number: 18230

Dear Dr. Vargas:

This letter authorizes the use of human subjects in your project entitled Self-Endorsing Effect of Brand Filters: How the Self-Self-Congruity and Perceived Self-Expressiveness Lead to Persuasion. The University of Illinois at Urbana-Champaign Institutional Review Board (IRB) approved, by expedited review, the protocol as described in your IRB application. The expiration date for this protocol, IRB number 18230, is 10/15/2020. The risk designation applied to your project is no more than minimal risk.

Copies of the attached date-stamped consent form(s) must be used in obtaining informed consent. If there is a need to revise or alter the consent form(s), please submit the revised form(s) for IRB review, approval, and date-stamping prior to use.

Under applicable regulations, no changes to procedures involving human subjects may be made without prior IRB review and approval. The regulations also require that you promptly notify the IRB of any problems involving human subjects, including unanticipated side effects, adverse reactions, and any injuries or complications that arise during the project.

You were granted a three-year approval. If there are any changes to the protocol that result in your study becoming ineligible for the extended approval period, the RPI is responsible for immediately notifying the IRB via an amendment. The protocol will be issued a modified expiration date accordingly.

If you have any questions about the IRB process, or if you need assistance at any time, please feel free to contact me at the OPRS office, or visit our website at https://www.cprs.research.illinois.edu.

Sincerely,

Rebecca Muller, MSW
Human Subjects Research Specialist, Office for the Protection of Research Subjects
October 31, 2017

Patrick Vargas
Advertising
320 Gregory Hall
810 South Wright Street
Urbana, IL 61801

RE: Self-Endorsing Effect of Brand Filters: How the Self Self-Congruity and Perceived Self-Expressiveness Lead to Persuasion
IRB Protocol Number: 18230

Dear Dr. Vargas:

Thank you very much for forwarding the modifications to the University of Illinois at Urbana-Champaign Institutional Review Board (IRB) office for your project entitled Self-Endorsing Effect of Brand Filters: How the Self Self-Congruity and Perceived Self-Expressiveness Lead to Persuasion. I will officially note for the record that these minor modifications to the original project, as noted in your correspondence received 10/19/2017, asking that participants send a photo of themselves prior to the experimental session, have been approved. The expiration date for this protocol, IRB number 18230 is 10/15/2020. The risk designation applied to your project is no more than minimal risk.

Please note that additional modifications to your project need to be submitted to the IRB for review and approval before the modifications are initiated. To submit modifications to your protocol, please complete the IRB Research Amendment Form (see https://www.oprs.research.illinois.edu/forms-templates/forms/protocol-amendment-form). Unless modifications are made to this project, no further submittals are required to the IRB.

You were granted a three-year approval. If there are any changes to the protocol that result in your study becoming ineligible for the extended approval period, the RPI is responsible for immediately notifying the IRB via an amendment. The protocol will be issued a modified expiration date accordingly.

We appreciate your conscientious adherence to the requirements of human subjects research. If you have any questions about the IRB process, or if you need assistance at any time, please feel free to contact me at the OPRS office, or visit our website at https://www.oprs.research.illinois.edu.

Sincerely,

Rebecca Miller, MSW
Human Subjects Research Specialist, Office for the Protection of Research Subjects

c: Rachel Yang
Study Two IRB Amendment Letter

Notice of Approval: Amendment 2

January 24, 2018

Principal Investigator  Patrick Vargas
CC  Rachel Yang
Protocol Title  Self-Endorsing Effect of Brand Filters: How the Self-Self-Congruity and Perceived Self-Expressiveness Lead to Persuasion
Protocol Number  18230
Funding Source  Unfunded
Review Category  Expedited
Amendment Requested  ☐ Updating photo filter and mock brand,
☐ Adding a website browsing session to procedures,
☐ Updating procedures to take photo in experiment
Status  Active
Risk Determination  no more than minimal risk
Approval Date  01/24/2018
Expiration Date  10/15/2020

This letter authorizes the use of human subjects in the above protocol. The University of Illinois at Urbana-Champaign Institutional Review Board (IRB) has reviewed and approved the research study as described.

The Principal Investigator of this study is responsible for:

☐ Conducting research in a manner consistent with the requirements of the University and federal regulations found at 45 CFR 46.
☐ Requesting approval from the IRB prior to implementing modifications.
☐ Notifying OPRS of any problems involving human subjects, including unanticipated events, participant complaints, or protocol deviations.
☐ Notifying OPRS of the completion of the study.

Office for the Protection of Research Subjects
University of Illinois at Urbana-Champaign
(217) 333-2670
irb@illinois.edu

University of Illinois at Urbana-Champaign
Institutional Review Board
Approved January 24, 2018
Expires October 15, 2020
IRB # 18230