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# The Influence of Initial Possession Level on Consumers' Adoption of a Collection Goal: A Tipping Point Effect

Previous research has typically treated collection as a top-down process and focused on its later stages. However, collections may start by accident and are often triggered by incidental, bottom-up factors. The authors propose that a small number of possessions (i.e., a few more than one) represent an unjustified and, thus, unstable possession level that prompts a status change. They examine the collection tipping point at which obtaining items belonging to a series (e.g., a couple of collectible Coke cans) often gives rise to a decision to start a collection. Consumers then seek additional items to fulfill their emerging goal. In six lab studies and one field study, the authors investigate the tipping point at which a collection "project" begins and explore the psychological processes underlying that tipping point. In addition, they discuss the theoretical and managerial implications of this research.

Keywords: collections, tipping point, decision making, justification, marketing tactics

ollection-based marketing programs have become one of the most commonly used tools for retaining customers and stimulating product usage. In particular, evidence that customer retention is cheaper than customer acquisition and that one in three adults in the United States collects something (O'Brien 1981) has led many companies to develop collectible product series (e.g., Starbucks mugs, Beanie Babies), collectible toy premiums (e.g., McDonald's Happy Meal toys), and collection-based loyalty programs (e.g., loyalty cards that require the accumulation of stamps or stickers). In addition, in recent years the emergence of collector organizations and online communities (e.g., the Antiques & Collectibles National Association, Wikicollecting.org), collection-related television shows (e.g., Antiques Roadshow, American Pickers), and online auction sites (e.g., eBay, Heritage Auctions Inc.) has illustrated the increasingly wide range of objects that people collect and the prices they are willing to pay for such objects. Revenues from the online antiques and collectible sales industry, for example, are expected to increase at an average annual rate of 10.2% to \$1 billion in the five years leading to 2014, including a jump in 2014 (IBISWorld 2014).

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Despite the growing popularity of collection programs, little is known about the factors that influence consumers to arrive at a decision to collect. Some marketers believe that the characteristics of the collectibles themselves determine whether they are likely to spark a craze among consumers (e.g., Zimmerman 2010), presumably assuming that consumers make prepurchase collection decisions from their intrinsic preference for a collectible set (McIntosh and Schmeichel 2004; Pearce 1992, 1998). Some researchers assume that after a consumer obtains the first item in a collectible set, his or her desire to complete the set is so strong that it automatically translates into more purchases, depending on the number of products needed to complete the set (see McAlister, Cornwell, and Cornain 2011; Roberts and Pettigrew 2007). In this research, we suggest that contrary to these assumptions, consumers often do not make prepurchase decisions to start a collection, nor does the possession of a single item from a collectible series trigger a commitment to collect. Although in the real world, the timing of a collection decision may vary across consumers and depends on a variety of internal and external factors, we show that in many cases, consumers often "stumble" on a collection through a more bottom-up process by which the incidental state of owning a few items in a collectible series triggers a difficult-to-justify state that prompts a decision to begin a collection.1

To illustrate, imagine a consumer who happens to receive two uniquely designed cans of Coca-Cola. If it were

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<sup>&</sup>lt;sup>1</sup>The stimuli used in the current studies are relatively easily obtained and inexpensive collectibles. Further research might explore whether our findings can be generalized to items with greater intrinsic value.

one can, he would be happy to enjoy the soda and throw away the empty can as he does for a regular Coke. However, he cannot justify disposing of two collectible cans. At the same time, saving both cans would be of little use if he does not collect more. Thus, for this consumer, possessing two collectibles may constitute a difficult-to-justify possession level that is "neither here nor there" and thus calls for a status change. One way to solve the dilemma is to continue acquiring more products from the same series with the goal of creating a collection. The main objective of this research then is to demonstrate how collection goals emerge from consumers' incidental product possession levels.

We adopt Belk's (1995, p. 67) definition of collection as "a process of actively, selectively and passionately acquiring and possessing things removed from ordinary use and perceived as part of a set of non-identical objects or experiences." We propose that consumers' commitment to a collection goal often evolves in a nonlinear way and is subject to the influence of their initial possession levels. We refer to the point at which consumers begin to actively acquire more collectibles as the "collection tipping point." At and beyond this point, consumers tend to continue adding items with the intention of forming a collection; before this point, however, consumers are more likely to maintain their status quo without increasing the number of their possessions. Building on the literature on decision justification (Shafir, Simonson, and Tversky 1993; Simonson 1989), we propose that possessing one collectible item is unlikely to trigger a commitment to collect. Although the main purpose of this study is to demonstrate the existence, rather than the location, of such a collection tipping point, our studies show that possessing two or three items is sometimes enough to trigger a motivation for further collection.

This research makes important contributions to the collection and motivation literature and has important implications for marketing practice. First, this is the first study to demonstrate how consumers' initial possession level serves as a tipping point to stimulate their goal of starting a collection. Second, in addition to collection, our findings have important implications for a broad array of consumer behavior that requires repeated engagement in an area of interest, such as forming hobbies and conducting long-term projects. Third, collection behavior is an important topic for investigating consumers' motivation and goal setting (e.g., Bagozzi and Dholakia 1999). We show that contextual factors may trigger a bottom-up goal activation process that leads to a larger idea or goal, such as collecting. Finally, examination of consumers' collection behavior also has important implications for research on decision justification (Shafir, Simonson, and Tversky 1993; Simonson 1989). Whereas previous research has focused on how the search for justification influences which option consumers choose, when they choose it, and how they consume it, we show that consumers are also motivated to justify how many options

In the next section, we review pertinent prior work on goal setting in collection behavior and present our propositions and hypotheses. We then test the bottom-up goal-setting process across a series of experiments using collectibles in various categories. We show that a small difference in consumers' initial possession level can have a significant effect on their collection goal setting. We conclude with a discussion of the managerial implications and future research directions

# **Collection Goal Setting**

## Collection as a Top-Down, Goal-Driven Process

Collections of art objects, antiques, books, and coins are present in homes throughout the world. Research has shown that the pursuit of collections can be justified on the basis of the collectible items' aesthetic, emotional, or monetary value (for a review, see Belk 1995; McIntosh and Schmeichel 2004; Pearce 1994). Collections can also be explained by multifaceted motivations, such as the needs to feel in control, extend self-identity, relive the past, and achieve immortality (Pearce 1992; see also Breckenridge 1989; Formanek 1991; Marquis 1991; Mick and DeMoss 1990). Research has also described collections as a means of legitimizing consumers' material acquisitiveness (e.g., Clifford 1985; Richins and Rudmin 1994). Previous research has typically viewed collection as a top-down, goal-driven process. After the collection goal is activated, people are motivated to continue acquiring products in the same series. In addition, research has tended to focus on the later stages of the collection process, which occur after the collection decision has been made. However, little is known about how collection goals emerge.

Collection literature has shown that people are often motivated by an intrinsic preference for the collectibles (McIntosh and Schmeichel 2004; Pearce 1992, 1998). However, research has also reported that people's intrinsic liking for their collectible products is often not revealed until a later point in the collection process. For example, many of the collectors Belk (1995) interviewed reported that their collections had initially been unintended, loosely planned, and even involuntary (e.g., they had received several collectible dolls as birthday or holiday gifts). This finding suggests the possibility that many collections are triggered by contextual factors (Huffman, Ratneshwar, and Mick 2000).

In this research, we examine the decision to start a collection and propose an important contextual antecedent of collection goal setting—consumers' current possession level. We suggest that ownership of a certain number of items triggers a collection decision because maintaining the status quo position is difficult to justify. An unjustified possession level can become the collection tipping point that determines whether consumers will start a collection.

## Collecting as a Bottom-Up Process: Ownership Justification and Tipping Points

Much of the research to date involves situations in which the decision to collect has already been made. We argue that although some collections may involve a top-down process—for example, a person simply decides one day to start collecting stamps—many collections begin in a more bottom-up, ad hoc manner, with the increased commitment to collect occurring at a later point. For example, people

may buy a few refrigerator magnets as a result of a desire to memorize special tourist destinations but gradually develop a habit of collecting fridge magnets of any place they visit. Children often do not have preexisting attachments to McDonald's Happy Meal toys but later may commit to collecting them after owning a few from the set. Parents sometimes also "seed" collections in their children by intentionally buying them products in a series (e.g., Harry Potter books, fossils from different places). Belk (1988) also notes that some collectors began with a set of "inherited" objects or by receiving similar gifts from others. For example, one collector reported receiving a "starter" set of Christmas plates and subsequently embarking on the quest for collection (Belk et al. 1988, p. 549). A collection may even originate from the inaction of disposing unused products. Consider the following case that Belk (1995, p. 83) documents in his interview with a beer can collector:

Per is a 60-year-old Swedish dentist and collector of beer cans. He began collecting fifteen years ago when his wife complained about the clutter in their house of empty cans from the beer he had consumed. He told her beer cans were beautiful and decided to demonstrate this by collecting them.

Although consumers may not intend to start a collection initially, they may feel the need to make a decision about their possession level after a certain ownership status is reached. From this insight, we suggest that collection can be triggered by a need to justify past actions of acquiring multiple similar products. This proposition is consistent with previous research that shows that consumers tend to act in a way that is easy to justify (e.g., Shafir, Simonson, and Tversky 1993; Simonson 1989). For example, consumers tend to avoid or delay choices and to maintain the status quo when a purchase is difficult to justify, such as when they perceive alternatives as unattractive or equally attractive (e.g., Dhar 1996, 1997; Simonson 1989; Tversky and Shafir 1992). Conversely, when the status quo or an already-owned item is relatively unattractive and difficult to justify, consumers are likely to seek change (e.g., Bettman, Luce, and Payne 1998; Shafir, Simonson, and Tversky 1993). They may select compromise options when they regard these options as less susceptible to criticism but avoid them when an "extreme" option appears more appropriate and easier to justify (Dhar and Simonson 2003). Similarly, consistent with the sunk cost effect (Arkes and Blumer 1985), because wasting money is difficult to justify, consumers tend to increase their use of investments they perceive as insufficiently used. The search for justification arises in a variety of situations and may influence not only choice but also consumption levels, satisfaction, and other aspects of consumer behavior (Arkes and Blumer 1985; Bettman, Luce, and Payne 1998; Dhar 1996, 1997; Simonson 1989; Tversky and Shafir 1992). In this research, we propose that consumers also strive to justify their level of possessions. We specifically hypothesize that consumers are more likely to activate a collection goal when they observe an emerging pattern of behavior and possession.

Our argument is built on the assumption that unless people need multiple similar products for their functional utility (e.g., having multiple pairs of shoes for different occasions), redundant possessions are wasteful and therefore call for an explanation. Collection, however, provides a good reason for people to possess multiple similar items that are removed from ordinary use (Belk 1995). As such, after deciding to collect, they have sufficient reasons to possess one type of product in large quantities.

Accordingly, we propose that consumers are unlikely to start a collection when their current possession level is easy to justify, such as when they possess one item. Owning one object (e.g., a Starbucks City Mug) can satisfy consumers' utilitarian needs. The first item in a collectible product series is also likely to be a consumer's favorite, thus enhancing its value. Furthermore, selecting one item without the "burden" of creating a collection is easier and enables consumers to maintain freedom of choice (Brehm 1972). Therefore, unless consumers make, or even entertain, the decision to collect, they are unlikely to buy additional items of the same type. Because possessing one item is easy to justify with simple utilitarian considerations, whereas collections call for ulterior, nonutilitarian values (Carey 2008), we propose that a collection goal is unlikely to be activated when a person owns just one item in a series. Thus, although many collection-based marketing initiatives are geared toward inducing consumers to commit to the program after endowing them with the first item in a collectible series, we argue that possessing one item is unlikely to be the point at which consumers start actively acquiring additional items.

However, when people already possess two or more items that do not yet form a collection, their current possession level may represent an unbalanced status quo that is "neither here nor there," which is difficult to justify and thus prompts a status change. Without an intention to form a collection, possessing a few items in a large collection series fails to provide the psychological benefits of having a collection. In addition, although some collectible items (e.g., mugs) have utilitarian value regardless of their collection status, ownership of a few such items is redundant and wasteful and may even reflect an apparent failure as a collector. A way to resolve this conflict is by collecting. After the idea of collection is activated, a person may begin to perceive his or her current possessions, though small in number, as a temporary step on the way to a collection and its associated goals.

In support of this argument, prior research has found that people tend to pay attention to patterns in small samples (Carlson and Shu 2007). For example, Carlson and Shu (2007) show that people believe that a streak emerges only after three repeated events. Evidence from cognitive research suggests that people begin searching for meaning as soon as they are presented with two stimuli (e.g., two words or pictures; Gentner and Markman 1997); that is, they conduct conceptual mapping to establish a relationship between the stimuli. Note that the earliest point at which the newly added item presents a negative marginal utility is when people possess two items. From a utilitarian perspective (see Carey 2008), two is the smallest multiple number that can imply a "waste" and a failure to harvest the psycho-

logical benefits of having a collection without a specified goal. Yet two items may be sufficient to suggest a pattern and prompt a search for meaning. Thus, an important question is whether the motivation to collect can be triggered as early as when people possess two items from a collectible series. We conducted Study 1a to examine this possibility.

# Study 1a: World Cup Mints

We designed Study 1a to test the proposition that a difficult-to-justify collectible possession level can create a collection tipping point whereby people become motivated to add new items. We gave participants zero, one, or two collectible items and compared their willingness to obtain an additional item from the series.

#### Method

We conducted Study 1a during the 2010 FIFA World Cup soccer game knockout stage. Study stimuli were collectible boxes of mints that depicted different soccer teams. Participants were 93 undergraduate students (61% female) from a large public university in Hong Kong who completed a series of unrelated lab studies in exchange for a monetary reward. At the beginning of the focal study, all participants received an envelope containing either one box of FIFA mints or two boxes of FIFA mints of different designs. In the control condition, participants received a box of spearmints that was not part of a collectible series (a non-collectible). Thus, the study adopted a three-condition, between-subjects design.

Participants were told that the envelope contained a reward that they could keep after the study. They were instructed to open the envelope to find their rewards. Next, all participants saw a picture of more FIFA mints (see Appendix A) and were told that these mints were a sample of the different collectible mints currently sold in convenience stores and grocery shops. Participants were then told that they could receive one more reward by participating in the study. Specifically, we asked participants to choose between getting another FIFA mint box or a ballpoint pen of equivalent value. Their decision to choose the mints over the pen is a proxy of adopting a collection goal and thus is our dependent variable.

### Results and Discussion

The participants' choices were coded 1 if they chose another FIFA mint box and 0 if they chose a ballpoint pen. A logistic regression with condition as the independent variable and dummy-coded choice as the dependent variable, after controlling for data collection time (data collection lasted for a week during the knockout stage of the tournament in which teams were gradually eliminated), yielded an effect of condition (Wald  $\chi^2(2) = 5.96$ , p = .05). Compared with those in the control condition (who owned no collectible mints), participants who possessed one box of collectible mints were no more likely to select another box of mints as their additional reward (47% vs. 45%, respectively;  $\beta = -.24$ ; n.s.). However, those with two boxes of collectible mints were more likely to select another box of

mints (69%) than owners of zero or one box of collectible mints (Wald  $\chi^2(1) = 5.88$ ,  $\beta = 1.74$ , p = .015).

Our findings suggest that at two items, participants are more likely to continue acquiring products from the same series. Because collection reflects consumers' willingness to acquire multiple similar products (Belk 1995), these results suggest that possessing two items is the lowest possible collection tipping point. That is, at two items, consumers may begin to perceive their possession as unjustified and subsequently commit to the idea of collection.

# **Study 1b: Refrigerator Magnets**

We designed Study 1b to replicate the findings of Study 1a and to provide further support for our conceptualization by adding a condition in which participants possessed three collectibles. Study 1b participants were asked to imagine that they possessed zero, one, two, or three refrigerator magnets from the same collectible series. Participants then made a choice between an additional magnet from the same collectible series and an irrelevant product of equivalent monetary value.

#### Method

One hundred sixty-nine undergraduate students from a large Hong Kong public university participated in a lab study in which they were asked to imagine that they were frequent customers of a boutique that provided a free gift with every purchase. We randomly assigned the participants to one of four conditions in which they were asked to imagine that they had received zero, one, two, or three collectible magnets as free gifts from previous shopping trips to the boutique. Participants saw pictures of the already-possessed magnets in the corresponding conditions. Next, participants were asked to imagine that they had just purchased something from the shop. This time, they were offered either another magnet in the same series or a ballpoint pen of equivalent value as their free gift. Participants were shown pictures of the magnet and the pen and asked to indicate their choice (for the choice stimuli, see Appendix B). Our dependent variable was the percentage of participants who chose the magnet over the pen in the different conditions.

## Results and Discussion

The participants' choices were coded 1 if they chose another magnet and 0 if they chose a ballpoint pen. A logistic regression with the endowed possession number as the independent variable and choice as the dependent variable yielded a main effect of initial possession number (Wald  $\chi^2(3) = 7.76$ , p = .05). We then contrasted the choice share of magnet (vs. pen) between the zero- and one-magnet conditions and between the two- and three-magnet conditions, respectively. Consistent with our expectations, compared with those in the control condition (owning no collectible magnets), those with one magnet were no more likely to select another magnet as their additional reward (32% vs. 40%, respectively;  $\beta = .34$ ; n.s.). Those with two and three magnets also did not differ in their likelihood of getting another magnet (58% vs. 55%, respectively;  $\beta = -.14$ ; n.s.), a finding that is consistent with the assumption that both possession levels are unjustified. We thus pooled the data across the zero- and one-magnet conditions and across the two- and three-magnet conditions. As we expected, those with two or three magnets were significantly more likely to choose another magnet (vs. a pen) as their additional reward than those with zero or one magnet (Wald  $\chi^2(1) = 7.21$ ,  $\beta = .85$ , p = .007). The results were consistent with the tipping point hypothesis: at and beyond two items, participants were more likely to start a collection.

# **Study 1c: Snoopy Figurines**

We designed Study 1c to examine the collection tipping point effect in light of the classical goal gradient hypothesis, which posits that the goal gradient becomes steeper as people approach goal attainment (Hull 1932, 1934; Kivetz, Urminsky, and Zheng 2006). In the context of collections, the goal gradient hypothesis predicts a greater collection motivation as people possess more items. Note, however, that the goal gradient hypothesis assumes a well-specified, preconceived goal (e.g., reaching a certain reward level), whereas the tipping point hypothesis focuses on the emergence of such a goal. Our proposition predicts that a collection goal may originate from a difficult-to-justify initial possession level; the goal gradient hypothesis further suggests that after people decide to collect, collection motivation increases as people possess more items. Although increasing possession level from zero to one may not give rise to a collection goal, a significant motivational increase often occurs at the lower bound of the goal gradient curve. We next report a test of our prediction in the context of people's collections of McDonald's Happy Meal toys.

### Method

We used McDonald's Snoopy World Tour figurines (which were popular in Hong Kong) as the collectible items and asked 268 Hong Kong undergraduate students to choose between two options as a reward for participating in a marketing study: a choice of one of five Snoopy figurines or a mouse pad. After participants indicated their choice, we asked them to report the number of Snoopy toys they already had.

### Results and Discussion

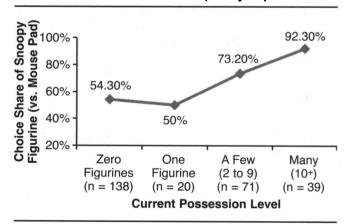
Participants possessed an average of 5.55 Snoopy figurines that they had obtained from previous purchase experiences. The participants' choices were coded 1 if they chose a Snoopy figurine and 0 if they chose a mouse pad. A logistic regression with their current possession number as the (continuous) independent variable and dummy-coded choice as the dependent variable yielded a significant effect of initial possession number (Wald  $\chi^2(1) = 10.83$ ,  $\beta = .13$ , p = .001). This result is consistent with the goal-gradient hypothesis (Hull 1932, 1934; Kivetz, Urminsky, and Zheng 2006), in which a greater possession level is associated with a greater likelihood of choosing another Snoopy figurine rather than a mouse pad as a reward.

Next, we categorized the data into four groups: participants who had zero, one, a few (two to nine), and a large number of possessions (ten or greater) from their previous

purchase experiences. In a separately conducted posttest, we asked 31 participants from the same subject pool, "In your opinion, what is the minimum number of Snoopy figurines that one needs to own before it can be called a collection?" The answers yielded a mean of 10.42 (which then served as our criterion to differentiate "a few" and "a large number" of possessions). Following the possession level grouping, another logistic regression with possession level as the independent variable and dummy-coded choice as the dependent variable yielded a significant effect of initial possession level (Wald  $\chi^2(3) = 17.23$ , p = .001). We then conducted the contrasts across the four possession levels. Consistent with our expectations, compared with those who had previously owned no Snoopy figurines, those who possessed one figurine were no more likely to select another figurine as their reward (54% vs. 50%, respectively;  $\beta = -.17$ ; n.s.). However, those with a few Snoopy figurines were significantly more likely to select another figurine (73%) than owners of zero or one figurines (Wald  $\chi^2(1) = 6.55$ ,  $\beta = .92$ , p = .01). Finally, participants with a large number of figurines were even more likely to choose another figurine compared with those who owned a few figurines (73% vs. 92%, respectively; Wald  $\chi^{2}(1) = 5.05$ ,  $\beta = 1.48$ , p < .05; see Figure 1). Together, our findings suggest that although people are typically more committed to collection as their possession level increases (i.e., the goal gradient hypothesis; Hull 1932, 1934; Kivetz, Urminski, and Zheng 2006), motivation evolves in a nonlinear way and undergoes a tipping point at a low possession level. When consumers possess a few items, they are significantly more likely to continue collecting. This finding relates our conceptualization with that of the goal gradient hypothesis, and the results are consistent with our prediction that possessing a small number of collectibles represents a disequilibrium that is difficult to justify.

A possible alternative explanation of our findings in Studies 1a-1c is that demand effects might have contributed to the results. Specifically, because we randomly endowed participants with different numbers of collectibles to start with (Studies 1a and 1b), owners of two or three items

FIGURE 1
Consumers' Likelihood to Obtain a Snoopy
Figurine as a Function of Their Current
Possession Level (Study 1c)



might have inferred the answer expected of them (e.g., they are more likely to consider themselves the type of people who like to collect, compared with owners of one or zero item). Although we replicated our findings in Study 1c by measuring people's current possession levels *after* they made a choice decision, arguably participants could still infer their task from their endowment, which influenced their decision of whether to add another collectible. Thus, a main purpose of Study 2 is to test the demand-based rival account. Another major objective of Study 2 is to provide direct support for our conceptualization by testing whether participants' ease of justifying their current possession mediates the effect of possession level on their product acquisition propensity.

# Study 2: World Cup Pins Lab Study

Study 2 has three objectives. The first objective is to rule out demand effects as an alternative explanation of our findings in Studies 1a–1c. The second objective is to more directly test our proposition that the ease of justifying one's possession mediates the effect of initial possession level on collection commitment. Third, to provide a more straightforward test of the collection motivation, instead of asking participants to make a choice between a collectible and an unrelated product, we directly asked participants to report their willingness to collect the target product.

To address the possibility that demand effects contributed to our previous results, we designed Study 2 to employ a different research paradigm in which the endowment level was not predetermined by the experimenters. Instead of endowing participants with different numbers of collectibles, we asked all participants to earn rewards by working on small tasks and then self-selecting their rewards.<sup>2</sup> This procedure is similar to real-world situations in which people often make an effort to acquire their selected collectibles. To guard against potential demand effect, we asked all participants to work first on two small tasks to earn two rewards. They then selected their own two gifts by circling 2 of 20 numbers. For the first group of participants, neither reward was a collectible; for the second group, one of two rewards was a collectible; and for the third group, both rewards were collectibles belonging to the same series. We then measured participants' willingness to continue collecting. Thus, Study 2 adopted a three-cell, between-subjects design.

Furthermore, to determine whether possessing two items would represent an unjustified status quo of being "neither here nor there," we included a set of measures of the underlying motives. We also collected participants' verbal protocols commenting on their status quo.

#### Method

We asked 96 undergraduate students at a large Hong Kong public university (73% female; mean age = 21 years) to work on small transcription tasks to earn rewards. Specifically, two conversation recordings with irrelevant content

(about learning English) were played on the computer through headphones, and participants were asked to type what they heard word for word into a blank box on the screen. After completing the transcription task, participants were asked to choose 2 of 20 numbers presented on the computer screen and were told that each number corresponded to a different (albeit unknown) reward. After they had chosen the two numbers, an experimenter pretended to check their number selections and gave them two rewards. Participants were randomly assigned to one of the three conditions: two noncollectible rewards, one collectible reward and one noncollectible reward, and two collectible rewards. The collectible or target stimuli were collectible metal pins that depicted different soccer teams competing for the 2014 FIFA World Cup (Appendix C). Two pins of similar price and quality that did not belong to the World Cup series served as the noncollectible rewards.

Next, all participants answered two questions that assessed their collection intention ("Do you want to collect pins with similar World Cup designs?" and "Do you want to collect the whole set of pins in this 2014 World Cup collection?" 1 = "not at all," and 9 = "extremely"). Finally, participants were told that they could not receive more World Cup pins from the study. They were asked if having only the current number of World Cup pin(s) made them feel that their possession (1) "is difficult to justify," (2) "represents an unbalanced status quo," (3) "is distasteful," and (4) "is disappointing" on four Likert-scale questions (1 = "not at all," and 9 = "extremely"). They were also asked to type any thoughts that came to mind about the inability to add to their collection.

#### Results

One-way analyses of variance (ANOVAs) first revealed a significant between-group difference in collection intention ( $F_{\text{collect\_similar}}(2, 93) = 5.76, p < .01$ ;  $F_{\text{collect\_set}}(2, 93) = 9.47, p < .001$ ). Compared with participants who did not own a pin from the collectible Word Cup series, those who possessed one collectible pin were not more willing to collect similar pins ( $M_0 = 2.78 \text{ vs. } M_1 = 2.78; \text{ n.s.}$ ) or to collect the whole set ( $M_0 = 2.85 \text{ vs. } M_1 = 3.39; \text{ n.s.}$ ). However, owners of two collectible pins were significantly more willing to collect similar pins ( $M_2 = 4.48; p < .001$ ) and to collect the whole set ( $M_2 = 5.52; p < .001$ ) than owners of zero pins or one pin.

We then examined participants' self-perception of their status quo (difficult to justify, unbalanced, distasteful, and disappointing). The four measures were highly correlated ( $\alpha=.82$ ) and loaded on the same factor, so we combined them to create a justification index. Consistent with our hypothesis, there was a significant between-group difference in perceived justification (F(2, 93) = 3.51, p < .05). Compared with owners of zero pins or one pin ( $M_0 = 2.50$ ;  $M_1 = 2.56$ ), owners of two collectible pins were more likely to perceive the status quo as unjustified ( $M_2 = 3.45$ ; p = .001). The difference between the zero- and one-collectible-pin conditions, however, was not significant.

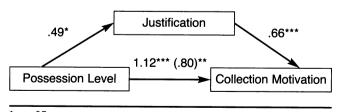
To further examine the underlying process, we combined the two measures of collection intention ( $\alpha = .81$ ) and

<sup>&</sup>lt;sup>2</sup>The authors thank an anonymous reviewer for suggesting this manipulation.

examined whether justification mediated the effect of possession level on participants' willingness to collect using the procedures recommended by Preacher, Rucker, and Hayes (2007). First, we found that the number of possessions influenced both justification ( $\beta = .49$ , t = 2.34, p < .49.05) and willingness to collect ( $\beta = 1.12$ , t = 3.86, p < .001). In addition, we found that justification had a significant impact on willingness to collect ( $\beta = .66$ , t = 5.28, p < .001). Furthermore, when we regressed collection intention on both possession level and justification, the size of the possession level effect on collection intention was clearly reduced ( $\beta = .80$ , t = 3.01, p < .01; Figure 2). Finally, we used a bootstrapping procedure that generated a sample size of 5,000 to assess the mediation effect. The results of a 95% confidence interval (CI) indicated that the indirect effect through justification was significantly different from zero (95% CI = [.09, .64]). The implication is that possession of two collectible pins leads to greater collection intention because this status quo is difficult to justify.

Finally, we coded participants' thought protocols using a standard approach to coding verbal responses (e.g., Simonson 1989; Wright 1974). We instructed two independent coders blind to the hypotheses to code participants' thoughts as 1 if the thoughts were positive regarding the status quo (e.g., "I think the pins I have now are good enough," "I am satisfied with the pins I have as they are unexpected gifts from today's study"), as 0 if they were neutral (e.g., "I don't really mind as I am not interested in football"), and as -1 if they were negative regarding the status quo (e.g., "I would feel quite unhappy as I only get two [pins]," "My current possessions do not satisfy my desire to own the pins from the 2014 World Cup series"). The intercoder agreement level was 92%, and any remaining disagreements were resolved through discussion. A one-way ANOVA showed that possession level affected thought valence (F(2, 118) = 3.14, p < .05) such that thoughts generated by owners of two collectible pins were more negative than thoughts generated by owners of one collectible pin or zero pins (mean score =.10, .14, and -.29 for the zero, one, and two conditions, respectively; F(1, 118) =2.51, p = .01). For example, owners of two collectible pins mentioned that their current possessions felt incomplete to them ("I feel unsatisfied as the collection is incomplete") and even expressed a feeling of "neither here nor there" disequilibrium (e.g., "I feel uncomfortable as my position is





\*p < .05. \*\*p < .01. \*\*\*p < .001. kind of in the middle of something," "The current possession seems less valuable to me if I cannot get more pins").

Finally, compared with participants in the zero- and one-collectible condition, a higher percentage of participants in the two-collectible condition mentioned their intention to collect or search for more items in the collectible series (e.g., "I definitely want the whole collection," "I will come up with ideas to get a set of pins in other ways";  $\chi^2(1) = 16.55$ , p < .001). The percentage of participants mentioning an intention to collect or obtain more collectible pins was 6%, 8%, and 31% for the zero-, one-, and two-collectible conditions, respectively.

#### Discussion

Using an incidental-endowment procedure that addresses the possibility of demand effects and provides additional process measures, Study 2 lends support to our proposition that (1) the results are not due to demand effects and (2) a difficult-to-justify possession level prompts consumers to add more to their possessions. Analysis of thought protocols also shows that the status quo of owning two collectibles reflects a "neither here nor there" disequilibrium that is difficult to justify. Thus, participants were more likely to entertain the idea of owning a collection when they owned two collectibles.

# **Study 3: Home Decorations**

To provide a more direct test of the justification account, in Study 3 we manipulate the ease of justifying one's current possessions. We expect that the collection tipping point will disappear when possession of a small number of items can be justified. According to the results of the previous studies, possession of two items in a collectible series constitutes an unjustifiable state. However, we expect one exception—that is, when the two items constitute a pair. Thus, as we explain next, we manipulate the ease of justifying the possession of two items by giving participants either two paired or two nonpaired items.

#### Method

In a lab study, 133 undergraduate students at a Hong Kong public university (69% female) were asked to imagine that they had recently purchased one or two home decoration pieces from a designer series. A picture and description of the home decoration pieces were presented to participants. They were then asked to imagine that at a later visit to the local boutique store, they discovered that the store was now selling the home decorations in the same size and shape as the ones they had, except that more options and different designs were available. We then measured participants' commitment to adding to their collection as our key dependent variable: "How likely would you be to purchase another item in the series?" (1 = "very unlikely," and 7 = "very likely"). To control for individual differences in preference, we also measured participants' general liking for the designer series (1 = "not at all," and 7 = "very much").

We conducted three pretests involving independent samples from the same participant pool to select the study stimuli and confirm our manipulation of the ease or diffi-

culty of justifying current possessions. We asked the first group (n = 20) to evaluate a series of eight decorations with different design patterns using three five-point Likert-scale questions ("favorable/unfavorable," "positive/negative," and "like/dislike"). On the basis of these ratings, we then selected six items of similar attractiveness (means between 2.72 and 3.20; ps > .1) and created a series of two-item combinations that we further tested in the second pretest.

We showed a second group of pretest participants (n = 43) the different two-item combinations in a within-subject design and asked them, "To what extent do you think these two items can be called a pair?" (1 = "not at all," and 7 = "very much"). From the results, we selected one two-item combination that was perceived as a pair (4.60) and another that was not (2.79; p < .001).

Finally, we asked a third group of pretest participants (n = 35) to imagine owning home decorations in three between-subjects conditions: one item, a pair of items, and two nonpaired items. They were then asked to evaluate the ease or difficulty of justifying their possessions on scales from 1 ("very justified"; "very balanced") to 7 ("very unjustified"; "very unbalanced"). To reduce the potential noise associated with using different collectibles across conditions, we included one common item in all three experimental conditions (Appendix D). As we expected, the ease of justifying possessions (averaged across the two measures,  $\alpha > .84$ ) differed across the three collectible combinations (F(1, 34) = 6.33, p < .01). In particular, participants who possessed two nonpaired items found it more difficult to justify their possessions (4.10) than those who possessed one item (3.54) or a pair of items (3.39; F(1, 34) = 6.61, p <.05). The difference between those possessing one item and two paired items, however, was not significant. Thus, we were confident that our manipulation of possession justifiability was successful.

#### Results

Consistent with our proposition, an analysis of covariance test, after controlling for the degree to which participants liked this designer series, only yielded a main effect of condition (F(2, 126) = 3.29, p < .05). Planned contrasts showed that purchase likelihood was similar in the two "justifiable" conditions (M<sub>1</sub> = 3.95, M<sub>2paired</sub> = 3.98; n.s.) but significantly higher in the nonpaired ("unjustified") condition (M<sub>2nonpaired</sub> = 4.49; t = 6.45, p = .01). That is, participants were motivated to purchase another collectible item only if they perceived their current possessions as unjustified. When considering two items a pair (which thus constitutes a justifiable possession level), participants were no more likely to change their current state than those with one item.

#### Discussion

Study 3 shows that whether participants started a collection was dependent on the ease or difficulty with which they could justify their current possessions. When they perceived possessing two items as a justified status quo, they were no more likely to continue collecting than those possessing one item.

# Study 4: Rare (High-Value) Versus Nonrare (Lower-Value) Coke Cans

We designed Study 4 to examine a boundary condition of our general proposition. In the studies reported so far, we have focused on everyday products that are relatively inexpensive. In Study 4, we examine whether product rareness moderates the collection tipping point effect. In particular, we examine whether the "collection tipping point" also applies to rare and more valuable products.<sup>3</sup> For example, will receiving a rare ancient coin be enough to make a person become a collector? In line with prior findings that people are more likely to collect rare and fine items than mainstream items (e.g., Pearce 1994), we expect the scarcity of a collectible item to highlight the item's collection (nonutilitarian) value. As a result, owning only one item from a rare collectible series may be sufficient to trigger a perceived disequilibrium in possession level and subsequently stimulate further collection as a means to resolve an unjustified status quo.

#### Method

The study employed a 3 (initial possession amount: 0, 1, or 2) × 2 (type of collectibles: rare vs. nonrare) between-subjects design. Participants were 337 Americans (51% female; mean age = 37 years) recruited on Amazon.com's Mechanical Turk. They were first told that we wanted to find out people's preferences for packages designed for the Coca-Cola Company. They were then asked to randomly select 2 of 20 numbers (each number corresponded to a different Coca-Cola package design) to determine the two packages for which they would answer questions. Participants were then shown the images of the two packages they "chose" and answered general questions about how much they liked each package.

Participants were randomly assigned to three conditions, regardless of their choice. One group of participants was shown one regular Coke and one Diet Coke can ("zerocollectible" condition). The second group of participants was shown a regular Coke can and a collectible Coke can ("one-collectible" condition); they were told that the latter can had a special package design and that it belonged to the collectible Coke can series that features unique designs reflecting classical Coke icons during different periods. The third group of participants was shown two collectible Coke cans ("two-collectibles" condition) (for the Coke can images in each condition, see Appendix E, Panels A-C). All participants were then asked to imagine that they currently possessed the two cans that they had evaluated (which included zero, one, or two collectible Coke cans). Next, all participants saw a sample of collectible Coke cans that belonged to the same series (see Appendix E, Panel D).

Furthermore, participants in the "rare" condition were told that the collectible cans were designed in 2007, were only sold in select cities for a limited time, and thus were rare. Participants in the "nonrare" condition were told that the collectible cans were designed in the current year and were available on the market.

<sup>&</sup>lt;sup>3</sup>The authors thank the review team for proposing this study.

Participants then answered two questions that measured their willingness to obtain more cans from the collectible series ("How strongly do you feel like getting more cans from this collectible set?" 1 = "not at all," and 7 = "extremely") and their collection intention ("How strongly do you feel like collecting the whole set of Coke cans from this series?" 1 = "not at all," and 7 = "extremely"). Participants then commented on their current number of collectible Coke cans by answering questions on the extent to which they believed that the current status represented a difficult-to-justify, unbalanced, distasteful, and disappointing status, respectively (1 = "not at all," and 9 ="extremely"). Drawing from the thought protocol results in Study 2, we also asked participants to report the extent to which they believed that the current status is "incomplete." as another measure to capture the difficult-to-justify possession level (1 = "not at all," and 9 = "extremely").

### Results and Discussion

We assessed participants' intention to obtain more cans from the collectible series and their intention to collect the whole set. For both variables, a 3 (possession level)  $\times$  2 (collectible type) ANOVA test revealed a possession-level main effect (F(2, 331) = 17.46 and 18.99, respectively, ps <.001), a collectible-type main effect (F(1, 331) = 6.28 and 7.23, respectively, ps < .01), and an interaction between possession level and collectible type (F(2, 331) = 4.21) and 4.82, respectively, ps < .02). More specifically, for the nonrare conditions, compared with owners of zero (2.75 and 2.56, respectively) or one collectible can (2.73 and 2.54, respectively), owners of two cans (4.29 and 4.04, respectively) were more willing to obtain more items from the collectible series (F(1, 331) = 16.74 and 16.06, respectively,)ps < .001) and were more likely to collect the whole collectible set (F(1, 331) = 16.73 and 16.06, respectively, ps < 16.73 and 16.06, respectively, ps < 16.73 are spectively, ps < 16.73.001). However, for the rare condition, compared with owners of zero collectible can (2.98 and 2.57, respectively), both owners of one (4.00 and 4.00, respectively) and two (4.25 and 4.24, respectively) cans were more willing to obtain more collectible cans (F(1, 331) = 10.09 and 13.69,respectively, ps < .002) and to collect the whole collectible set (F(1, 331) = 17.56 and 21.24, respectively, ps < .001; Table 1).

To test our proposed underlying process, we examined the mediating role of justification by performing a mediated moderation analysis using the procedures recommended by Preacher, Rucker, and Hayes (2007, Model 8). We combined the two measures of collection intention ( $\alpha = .93$ ) as

TABLE 1
Collection Intentiona Means Across Conditions
(Study 4)

Collection Type	Initial Possession Level		
	0	1	2
Rare	2.78	4.00	4.25
Nonrare	2.66	2.64	4.17

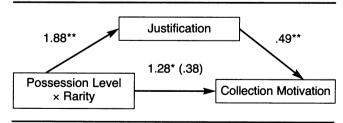
<sup>&</sup>lt;sup>a</sup>Collection intention = average of the items "Willingness to obtain more items from the collectible series" and "Willingness to collect the whole collectible set" (1 = "not at all," and 7 = "extremely").

the dependent variable, created a mediator by combining the five justification measures (difficult to justify, unbalanced, distasteful, disappointing, and incomplete;  $\alpha > .87$ ). In accordance with Wan and Rucker (2013), we excluded the zero-collectible baseline condition to focus on examining whether rarity and possession level jointly affect collection intention. First, regressing collection intention on possession level, rarity, and their interaction indicated a significant main effect of possession level ( $\beta = -1.53$ , t = -4.31, p <.001) and a significant interaction effect ( $\beta = 1.28$ , t = 2.65, p < .01). Next, regressing justification on possession level, rarity, and their interaction indicated a significant main effect of possession level ( $\beta = -2.15$ , t = -5.89, p < .001) and a significant interaction effect ( $\beta = 1.88$ , t = 3.71, p < .001). Finally, we regressed collection intention on possession level, rarity, the possession × rarity interaction, and justification. The results showed that justification predicted collection intention ( $\beta = .49$ , t = 8.60, p < .001), whereas neither possession level nor the possession × rarity interaction was significant ( $\beta_{interaction} = .38$ , t = .89, n.s.;  $\beta_{possession} = -.48$ , t = -1.46, n.s.; Figure 3). Furthermore, the results of a 95% CI indicated that the indirect effect was significantly different from zero (95% CI = [.47, 1.45]), providing evidence of mediation (Preacher, Rucker, and Hayes 2007).

To further examine the indirect effect of possession level through justification on collection intention across the nonrare and rare conditions, we conducted simple mediation analyses (Preacher, Rucker, and Hayes 2007, Model 4) within the rare and nonrare conditions, respectively. Consistent with our expectations, the mediation effects of justification were significant and comparable in both the rare condition (95% CI = [.43, .86]) and the nonrare condition (95% CI = [.34, .76]). This result provides additional support to our hypothesis.

In summary, Study 4 indicates that a difficult-to-justify status quo increases participants' collection intention regardless of the collectible's monetary value. However, unlike other studies, in which two items seem to be the collection tipping point, we found that when consumers' first-owned collectible is rare and valuable, owning only one item is enough to stimulate a desire to collect more items from the series. We also demonstrated that the different locations of the collection tipping point between rare and nonrare collectibles are mediated by participants' desire to complete a set and avoid a difficult-to-justify possession level.

FIGURE 3
Mediated Moderation Effects (Study 4)



\*p < .01. \*\*p < .001.

# Study 5: World Cup Pins: Real Decisions

The studies reported thus far demonstrate that consumers expressed greater willingness to collect the series of products in question as a means to resolve a difficult-to-justify possession level. An important question then is whether greater motivation transfers to actual behavior such that people obtain more collectibles when they have to make real effort. We tested this possibility in Study 5. In a field study, we first invited students on campus to fill out a short survey in return for one or two collectible pin(s) or a noncollectible pin (control condition) as a gift. We then invited all participants to take part in a second study in which they would have a chance to win the whole set of collectibles in a prize drawing. We tested whether those who received two collectibles for the first study would be more likely to participate in the second study than those who received zero or one collectible. The study adopted a three-cell, betweensubjects design.

### Method

The field study was conducted on a campus of a large university in Hong Kong during spring 2014. An experimenter approached 300 undergraduate students (41% female) and invited them to participate in a short paper-and-pencil survey; their task was to answer a few questions about their knowledge of and intention to watch the 2014 World Cup soccer games. We also collected participants' student identification number, which later served as the case-matching variable. As a token of appreciation, all participants received pins as a small gift and were randomly assigned to one of three conditions. One group of participants received a noncollectible pin, the second group of participants received a collectible pin that belonged to the 2014 World Cup series, and the third group of participants received two different collectible pins from the same series. Next, the experimenter handed each participant a flier promoting a tenminute online study on consumer behavior, which the same group of researchers conducted for an unrelated project. Participants were given the URL address and Quick Response code for the online study and were told that by taking part in the online study, their names would be entered into a prize drawing in which one out of ten participants could win the whole set of 32 collectible pins in the 2014 World Cup series. They were also shown a picture of the whole collection and were told that they could participate in the online study in the coming week.

#### Results and Discussion

A total of 52 participants completed the online study to win the collectible pins. A logistic regression with condition as the independent variable and whether the participants completed the follow-up study (1 = yes, 0 = no) as the dependent variable yielded a significant main effect of condition (Wald  $\chi^2(2) = 18.53$ , p < .001). Compared with participants who received no collectible pin in the paper-and-pencil survey, those with one pin were no more likely to participate in the follow-up study ( $\beta = .54$ , n.s.). The participation rate of the follow-up study was 8% and 13% in the zero- and one-

collectible conditions, respectively. However, compared with those who received zero or one collectibles, participants with two collectible pins were significantly more likely to participate in the follow-up study to win more pins in the 2014 World Cup series (31%; Wald  $\chi^2(1) = 18.30$ ,  $\beta = 1.37$ , p < .001). The results of Study 5, in which actual decisions entailed real expenses, provide further support for our basic proposition. We showed that owning a small number of collectibles could ignite the collection engine and lead people to spend real effort to obtain more products.

## **General Discussion**

The decision to collect is usually characterized as a top-down, goal-driven process; for example, a consumer may decide to collect stamps or teddy bears, which then leads to specific actions to achieve that goal. However, collections may often reflect a bottom-up, incidental process: after a certain inflection or tipping point is reached, the likelihood of starting a collection disproportionally increases. As the current research demonstrates, the collection decision point often occurs at the stage of possessing two or three collectible items. Two or three is the inflection point because maintaining a status quo of a few collectible items is difficult to justify—it is "neither here nor there."

Across seven studies, we provide converging evidence that when certain possession levels are difficult to justify, such as having several related items not yet perceived as a collection, people are prone to add more to their possessions to form a collection. For example, in Study 5, we show that participants who had received two collectible items were more likely to spend real effort to earn the whole collectible set. Setting a goal to collect legitimizes people's current possessions of redundant items and enables them to enjoy having multiple related items without utilitarian value.

### Theoretical and Managerial Implications

Our research sheds new light on the role of justification in consumer decision making. Previous research has highlighted the role of justification in choice, consumer satisfaction, and other types of consumer behavior. Our findings indicate that people also tend to justify their possession level such that an unjustified possession calls for a status change and serves as the collection tipping point.

An important managerial implication of our research is that successful collection-based marketing initiatives can generate consumer commitment after a certain ownership level is reached. As we show herein, offering a single attractive but relatively inexpensive item (as many companies do) may be insufficient to generate loyalty or motivate consumers to start building a collection. Accordingly, giving out two or more small collectibles could significantly increase their impact on consumer loyalty and persistence. For example, marketers could either endow the first few collectibles as free premiums (e.g., giving out the first two collectible Lego figurines together with the purchase of a Lego toy set) or lower the threshold of obtaining the first few collectibles (e.g., lower the required effort to earn the first few stickers/stamps in a loyalty program) to get con-

sumers committed to a program. Similarly, companies could cultivate consumers' charitable behaviors by "seeding" consumers with a few small donations at the beginning (e.g., making two small donations to a charity on behalf of consumers and soliciting continuous support in the future).

Our research also sheds light on how to strategically promote collectibles or collection-based marketing programs. Because a collection goal is unlikely to be triggered unless people possess a few items, an initial marketing emphasis should not highlight "building a collection," which might temper consumers' response. Rather, marketers should focus on sparking consumer interest in obtaining individual collectibles. Only after consumers already own a few items should marketers highlight the benefits of building a collection.

In addition, our studies suggest that the exact location of the collection tipping point depends on the value and scarcity of the collectibles. When dealing with low-involvement categories, possessing at least two or three items is necessary to motivate further collections. However, when the collectibles are relatively more valuable (e.g., the rare Coke can in Study 4), we showed that the first item may be enough to ignite the collection engine. Marketers could match their promotional strategies with the characteristics of the collectibles to design the optimal program.

Although collections are important for consumers and marketers in their own right, our analysis and findings have implications that extend to other domains of consumer behavior. Specifically, our results suggest that a single action or moving one step in a direction of a distant goal is often insufficient to create motivation, whereas two or three steps are sometimes enough to build momentum toward completing a larger project. For example, going to the opera once does not make a person an opera fan. However, going two or three times (even involuntarily) makes it more likely that the person will go more often so that he or she can explain the emerging pattern of behavior. Our findings suggest that a key to motivating consumers' repeated engagement in an area of interest, such as forming hobbies and conducting long-term projects, lies in forging the first few trials and helping them identify an emerging pattern.

#### Future Research Directions

Our findings suggest several directions for further research. First, the results of Study 4 suggest that when the first owned collectible is rare and valuable, one is enough to ignite the collection engine. It could still be argued that a Coke can, regardless of how "rare" it is, is far less expensive than more expensive collectibles, such as art, jewelry, and antique collectibles. Is it likely that owning a small number of Picasso paintings or Ferrari cars makes people

feel that they already have a collection and cease wanting more? Further research could examine whether the collection tipping point we observed for low-involvement categories holds for luxuries and antiques.

Second, in this project we replicated the collection tipping point effect (at more than two) when consumers are making the decision for themselves. It would be worthwhile to examine whether the desire to convert possessions into collections is rooted on signaling to the self or is a more social phenomenon of signaling to others. Further research could examine whether the collection tipping point effect is affected by whether the product acquisition decision is made in public versus in private, and whether consumers make the collection decision for themselves or for others (e.g., institutional collections).

Third, research could examine when and how people attempt to resolve the conflict in a current status quo. Note that in our research, participants were presented with opportunities to resolve a difficult-to-justify status quo, which was to build a collection. However, disposal of current possessions (e.g., throw away, give to friends) could potentially be an alternative means to resolving such a conflict.

Another important question is whether the collection tipping point effect that we documented under short-term conditions persists over time. Study 5 shows that participants who received two collectibles were more likely to take part in a subsequent survey in the following week, suggesting that the effect is not transitory. An empirical investigation of this question, however, would require a longitudinal design. Further research could examine how a bottom-up induced collection compares with a top-down collection motivation in affecting people's long-term interest.

Relatedly, the participants in our studies either earned or were endowed with different numbers of possessions at one time. However, in many real-world situations, consumers accumulate products one at a time. Does a piece-by-piece versus multiple-item acquisition of collectible items affect the point at which the collection concept emerges? How would such a process modify the effects we observed? These questions deserve further study, and their answers would not only offer new insights into collecting behavior but also shed light on a broader class of bottom-up processes that lead to goal adoption.

Finally, it is important to examine when and why collection is a top-down versus bottom-up process. For example, could an item's rarity, significance, or similarity to other items in the set trigger an intrinsically motivated collecting process? Exploring the situational factors and product characteristics that determine whether an intrinsically or extrinsically triggered collection will likely provide richer and more general implications for marketers and researchers alike.

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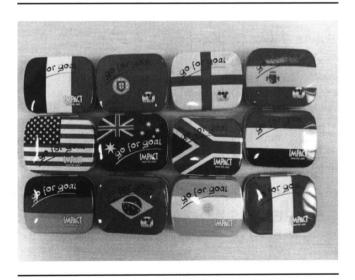
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# APPENDIX A World Cup Collectible Mints (Study 1a)



# APPENDIX B Choosing a Free Gift (Study 1b)

Imagine that you are a frequent shopper at a local boutique. Every time you purchase a product from this shop, you receive a small gift for free. Also, you know that the shop gives out different gifts every month. In previous months, you have purchased items from this boutique and received the following cartoon refrigerator magnets as gifts.







Gift 1

Gift 2

Gift 3

Imagine that you have just purchased something from the shop today, and this time you are offered one of the following gifts.



Gift 3A Another Cartoon Magnet



Gift 3B A Ballpoint Pen

Which gift would you choose? \_\_\_

# APPENDIX C World Cup Collectible Pins (Study 2)



# APPENDIX D Gourd-Shaped Home Decorations (Study 3)

## A: One Collectible



**B: A Pair of Collectibles** 





**C: Two Nonpaired Collectibles** 





# APPENDIX E Coke Can Stimuli (Study 4)

## A: Zero-Collectible Condition





**B: One-Collectible Condition** 





**C: Two-Collectible Condition** 





D: Sample of Collectible Coke Cans











