

MORE POSSESSIONS CAN MAKE CONSUMERS LESS HAPPY

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*MORE POSSESSIONS CAN MAKE CONSUMERS LESS HAPPY**ABSTRACT*

This research challenges a central tenet of consumerism—the widespread belief that owning more (e.g., more clothes, another TV, or another car) is more satisfying than owning less. We posit and show in the lab and the field that even though consumers prefer to own more goods, ironically, they can be more satisfied owning less. This occurs with contrasting possessions—goods that fulfill similar consumption functions with each good perceived as better than the other on important dimensions. Owning more contrasting possessions can induce an upward shift in the comparison standards that consumers use to assess their satisfaction with the possessions, making each of the goods appear deficient and, thus, causing owning more to feel less satisfying than owning less. Further supporting the proposed mechanism, we show that chronic individual differences in cognitive style and in evaluative tendency moderate the negative effect of owning more on satisfaction. We conclude with a discussion of theoretical contributions, managerial implications, and transformative insights for consumers.

A fundamental tenet of consumerism is that owning more is better than owning less. The desire to acquire more contributes to such ills as consumer debt (U.S. Federal Reserve 2010), overworking (Mishel, Bernstein, and Allegretto 2005), and spending less time on happiness-boosting activities such as socializing and volunteering (Csikszentmihalyi and Hunter 2003). The common yearning to possess more (Kasser 2002; Schor 1999) is reflected in such impressive statistics as Americans owning over 19 pairs of shoes on average (TIME 2006), and average households possessing 2.9 TV's—more TV's than people (Nielsen 2009), and 2.3 cars—more cars than the 1.8 household members who can drive (Federal Highway Administration 2009; Reuters 2008). Fueled by firms' successful marketing endeavors and attractive offerings, this belief of “the more the merrier” drives many consumers to acquire multiple goods across a wide spectrum of categories.

Many such goods are what we refer to as “contrasting possessions”—they fulfill similar consumption functions and each is perceived as better than the others on important dimensions. You may, for example, own two pairs of sports shoes for your daily jogging—one better looking and the other more comfortable, or two laptops for work—one more portable and the other more powerful. Our research examines the impact of owning such contrasting possessions, arguing and illustrating in the lab and the field that, although people may prefer to own multiple items rather than one and like each item by itself, having multiple contrasting possessions can lead to lower satisfaction than owning just one. Our proposition builds on the psychological notion that owning multiple contrasting possessions can induce an upward shift in the standard used to assess satisfaction, making each good appear deficient and thus owning more feel less satisfying than owning less.

Altogether, our work documents an ironic impact of owning more on consumer satisfaction and finds support for our proposed underlying mechanism; our findings yield transformative advice for consumers and insights for managers. The remainder of the paper is organized as follows. We first briefly review pertinent literature and develop our hypotheses. We then report lab and field studies testing our predictions: Study 1 demonstrates the negative effect of owning more contrasting possessions and the mediating role of shifts in comparison standards. Study 2 shows the external validity and robustness of our findings in the field. Providing additional support to the proposed mechanism and shedding light on the conditions under which the effect is accentuated, Studies 3 and 4 show that consumers' cognitive style (reliance on external versus internal standards) and chronic evaluative tendency (stability of internal standards) moderate the negative effect of owning more on satisfaction. We conclude by discussing theoretical contributions of our research, substantive implications of our findings, and potential directions for future research.

THEORETICAL BACKGROUND

There are many reasons for consumers to acquire multiple goods that fulfill similar consumption functions. Having more can, for example, satisfy the desire for variety (Simonson 1990) and the yearning to keep up with the Joneses (Ordabayeva and Chandon 2011), and circumvent the cognitive difficulty and emotional distress associated with choosing between goods having different appeals (Dhar 1997). While such factors as resource (e.g., budget) constraints and waste aversion (Arkes 1996) can sway consumers from owning more, when these factors do not play a major role (and sometimes even when they do), many consumers prefer

having more than less (Dhar 1997). Consumers thus often own multiple goods that fulfill similar consumption functions in a wide range of categories such as shoes, clothes, TV's, cars, and even homes (Nielsen 2009; Reuters 2008; TIME 2006).

Despite the significant implications for consumers, firms, and society, major questions regarding consumers' satisfaction with items they own have yet to be explored (Mick et al. 2011). The current research investigates an important aspect of this gap in the literature—conditions under which owning more can, in and of itself, dampen consumers' satisfaction with their possessions.

Although the effect of owning multiple goods on consumers' satisfaction evaluation is not well understood, prior research examined a related question—how choice and judgment are influenced by options being assessed in isolation or jointly (e.g., Brenner, Rottenstreich, and Sood 1999; Hsee and Leclerc 1998; Nowlis and Simonson 1997). For instance, whereas “comparable attributes” (e.g., TV screen size) that are easy to compare are weighed more heavily in joint evaluations, “enriched attributes” (e.g., brand) that are difficult to compare but meaningful to consumers are weighed more heavily in singular judgments (Nowlis and Simonson 1997). Choice likelihood can also differ when an option is evaluated in isolation versus with other options (Hsee and Leclerc 1998).

Assessing satisfaction with multiple possessions, however, is different from choosing among multiple options. For example, whereas choice contexts such as the ones examined in the prior studies inherently require comparisons of the choice options in order to identify the best option (Dhar and Sherman 1996), a priori, it is unclear what role, if any, comparison plays in assessing overall satisfaction with multiple possessions. After all, there is no need for consumers to identify which possession is better to assess overall satisfaction. Yet, as we discuss next,

owning more can affect consumer satisfaction by changing the comparison standards for evaluating possessions.

Assessments of satisfaction are influenced by the comparison between the evaluated goods and the reference standards applied (e.g., Anderson 1973; Oliver 1980). These reference standards can be formed based on, for example, prior ownership of similar goods and expectations about a particular ownership experience. When a possession set consists of a single good, satisfaction depends on the extent to which the features of that good (e.g., picture and sound quality of a TV) meet consumers' comparison standards. However, if the set includes multiple goods, differences in their attributes (e.g., one TV has built-in digital recording capability; the other, 3D visual display) and attribute values (e.g., one TV has a larger screen but an inferior sound system) become salient as a result of the ownership experience, which can impact satisfaction assessment.

In this research, we refer to goods that fulfill similar consumption functions with each good perceived as better than the other on important dimensions, as contrasting possessions. We posit that as consumers are drawn to the advantages of each contrasting possession (cf. Kahneman, Diener, and Schwarz 1999), owning multiple such possessions can induce an upward shift in the attributes and attribute values of the comparison standard for satisfaction assessment. As a result, the experience with each good feels deficient on some dimensions. Thus, the upward shift in the comparison standard makes each good in the set less satisfying than if it were the only good consumers owned. When satisfaction is aggregated to form an overall satisfaction assessment of the possession set (Yadav 1994), owning more can feel less satisfying than having just one good.

While owning contrasting possessions can cause comparison standards to shift upward, the extent to which this shift occurs is likely influenced by consumers' cognitive style—how they perceive, process, and respond to stimuli (Witkin and Goodenough 1981). One of the important individual differences in cognitive style is the extent to which people rely on external contextual information versus internal standards in evaluations (also referred to as field dependence; Witkin, Goodenough, and Oltman 1979). To illustrate, in a classic study (Witkin and Asch 1948), participants were asked to sit in a darkened room and shown a mechanical apparatus that displayed a glowing rod surrounded by a glowing square frame. Both the rod and the frame were manipulated to tilt at different angles. Participants were asked to adjust the rod to the perfect vertical—parallel to the walls of the building they were in. The adjustments they made varied greatly: Whereas some individuals were more influenced by external contextual information (i.e., the tilt of square frame) and thus made larger errors in their adjustments, others relied more on internal information (i.e., the orientation of vertical walls they saw and stored in memory) and hence adjusted the line more accurately. This type of individual difference has been shown to correlate with activation of different brain areas pertaining to the processing of external versus internal information (Hedden et al. 2008). In our research context, consumers with a cognitive style of relying more on external contextual information are likely to be more affected by owning multiple contrasting possessions, as the differences between the possessions are likely to alter these consumers' comparison standards more and hence affect their satisfaction more. Conversely, consumers who tend to rely on their internal standards in satisfaction assessment are likely to be affected less by the contrasting attributes of their possessions.

Further, consumers also differ in the extent to which they hold developed and stable, internal standards, and thus in the extent to which they modify their standards based on their

possessions. Such chronic evaluative tendency as need-to-evaluate (Jarvis and Petty 1996) that pertains to development of internal standards is therefore likely to moderate the effect of owning more. The logic is that consumers with high need-to-evaluate (NTE) chronically make more judgments of objects and experiences they encounter, hold more established views on a wide spectrum of issues (Jarvis and Petty 1996), and possess stronger and more available object-judgment associations (Hermans, De Houwer, and Eelen 2001). As a result, high NTE individuals tend to possess more stable internal standards than those with low NTE. For example, in the political domain, those with high NTE tend to have more developed political knowledge schemas and hold more integrated, less ambiguous internal standards towards political figures, and rely on these standards more in their judgments and decisions (Bizer et al. 2004). Thus, in our research context, because low NTE individuals' internal standards tend to be less developed and more malleable, they are more likely to alter their comparison standards for satisfaction assessment and hence be more negatively affected by contrasting possessions.

More formally, we offer the following hypotheses:

- H1:** Owning more contrasting possessions can be less satisfying than owning less.
- H2:** The decrease in satisfaction is mediated by upward shifts in consumers' comparison standards.
- H3:** Individual differences in cognitive style moderate H1—those who rely more on external contextual (vs. internal) information are more negatively affected by owning more contrasting possessions.
- H4:** Individual differences in chronic evaluative tendency also moderate H1—those with low (vs. high) need-to-evaluate are more negatively affected by owning more contrasting possessions.

STUDY 1: CAN OWNING MORE BE LESS SATISFYING THAN OWNING LESS?

Study 1 examined whether owning two contrasting possessions can in fact be less satisfying than having just one (H1), and whether owning more shifts the comparison standard consumers rely on and thus dampens consumer satisfaction (H2).

Stimuli, Pretests, and Procedure

As shown in Figure 1, three possession sets (Set_{TV1} , $\text{Set}_{\text{TV1\&2}}$, $\text{Set}_{\text{TV1\&3}}$) were developed. Set_{TV1} included a single good, TV1. $\text{Set}_{\text{TV1\&2}}$ consisted of two contrasting possessions—TV1 had both better (e.g., picture quality) and worse attributes (e.g., sound quality) than TV2. $\text{Set}_{\text{TV1\&3}}$, on the other hand, consisted of possessions without contrasting attributes—TV1 dominated TV3 on all dimensions. TV3 was designed to be inferior to TV2 (of $\text{Set}_{\text{TV1\&2}}$) on all dimensions, thus making $\text{Set}_{\text{TV1\&3}}$ objectively inferior to $\text{Set}_{\text{TV1\&2}}$. As expected, a pretest ($N = 92$) established that, when given a choice between the three possession sets, the majority of the participants (83%) selected $\text{Set}_{\text{TV1\&2}}$ over the other two sets ($\chi^2 = 101.11, p < .001$). That is, the majority preferred owning more over less (Set_{TV1} , 11%), and preferred the set with contrasting possessions over the set without ($\text{Set}_{\text{TV1\&3}}$, 6%).

One hundred and ninety-seven individuals (106 women, average age of 31) participated in the main experiment as a part of a battery of unrelated studies and were compensated \$6 for a one-hour session. They were randomly assigned one of the three possession sets, and asked to imagine that they owned the corresponding TV(s). They then indicated the extent to which they would be satisfied with this ownership on two 11-point scales (1 = not satisfied/happy at all, 11 = completely satisfied/happy). Thereafter, participants responded to measures pertaining to the changes in the comparison standards they used to assess satisfaction—they rated on 7-point scales the extent to which they believed that the TV(s) were inadequate on some attributes (1 = very adequate; 7 = very inadequate) and extent to which they thought their TV(s) deviated from

the ideal (1 = quite ideal; 7 = quite imperfect). Finally, participants were debriefed, thanked, and dismissed.

 Insert Figure 1 about here

Results

H1 predicts that owning Set_{TV1&2} can be less satisfying than owning Set_{TV1}. To test this, the two measures of ownership satisfaction (Cronbach's $\alpha = .90$) and those of deviation from the ideal (Cronbach's $\alpha = .86$) were averaged, respectively, into single measures. Supporting H1, participants with Set_{TV1&2} were significantly less satisfied than those assigned Set_{TV1} ($M_{TV1&2} = 7.11$, $M_{TV1} = 7.70$, $F(1, 194) = 4.57$, $p = .03$). Interestingly, though TV3 was objectively inferior to TV2, participants with Set_{TV1&3} were significantly more satisfied than those who had Set_{TV1&2} ($M_{TV1&2} = 7.11$, $M_{TV1&3} = 8.17$, $F(1, 194) = 14.48$, $p < .001$), the result of a strong test of the proposition that contrasting possessions can lower satisfaction (see Figure 2). Moreover, that participants with Set_{TV1&3}—two possessions without contrasting attributes—were marginally more satisfied than those who had Set_{TV1} ($F(1, 194) = 2.88$, $p < .10$) also suggests that the contrasting attributes of Set_{TV1&2} were a source of reduced satisfaction for participants who had that set. Finally, participants who had Set_{TV1&2} ($M_{TV1&2} = 3.95$) believed that their TV's deviated from the ideal significantly more than those who had Set_{TV1} ($M_{TV1} = 3.28$, $F(1, 194) = 10.47$, $p = .001$) or Set_{TV1&3} ($M_{TV1&3} = 3.23$, $F(1, 194) = 11.79$, $p = .001$). However, no significant difference was found between Set_{TV1} and Set_{TV1&3} conditions on the deviation from the ideal measure ($p > .50$), suggesting that no shifts in comparison standards occurred in the Set_{TV1&3} condition.

 Insert Figure 2 about here

Following the procedure for multi-categorical mediation analysis suggested by Hayes and Preacher (2011), we established that changes in the comparison standards mediated the effect of owning more goods on satisfaction. Two dummy variables were created, respectively, for Set_{TV1} and $\text{Set}_{\text{TV1\&3}}$ (thus zero values on the two dummy variables representing $\text{Set}_{\text{TV1\&2}}$). Both dummies had a significant negative effect ($\beta_{\text{TV1}} = -.68, t = -3.24, p < .005$; $\beta_{\text{TV1\&3}} = -.73, t = -3.43, p < .001$) on the deviation from the ideal. This measure regarding changes in comparison standard, in turn, had a significant effect on satisfaction ($\beta = -.88, t = -12.52, p < .001$). Further, the direct effects of two dummy variables on satisfaction were significant ($\beta_{\text{TV1}} = .59, t = 2.14, p = .03$; $\beta_{\text{TV1\&3}} = 1.06, t = 3.81, p < .001$). However, when the indirect effects were controlled for, the direct effects of these dummy variables became non-significant ($\beta_{\text{TV1}} = -.01, t = -.04, p > .90$; $\beta_{\text{TV1\&3}} = .42, t = 1.96, p > .05$). These results thus support H2.

Discussion

Altogether, the findings of Study 1 support the proposed mechanism. Participants who had two TV's with contrasting attributes were less satisfied than those who had just one TV (H1), and changes in participants' comparison standards mediated the differences in satisfaction (H2). Further, the negative effect of owning more disappeared when the contrasting attributes were removed by downgrading the attributes of one of the TV's (i.e., downgrading from TV2 to TV3). These findings are important and counterintuitive because when given a choice between the three possession sets, most [pretest] participants selected the multi-good set containing contrasting possessions over the alternatives. That is, the majority of participants did not choose the set that could make them happier. In fact, they opted for the set that was the least satisfying.

One might argue that the satisfaction differences observed in this study could be driven by calibration differences in the satisfaction scale across conditions. In other words, participants

in Set_{TV1} versus $\text{Set}_{\text{TV1}\&2}$ conditions might have thought of different satisfaction levels when responding to the satisfaction scale. While this notion could not explain why those with $\text{Set}_{\text{TV1}\&3}$ (non-contrasting possessions) were more satisfied, we further examined this possibility in a follow-up study with another group of participants ($N = 133$) utilizing different measures pertaining to ownership satisfaction. Participants were assigned one of the three possession sets utilized Study 1 (those in the owning-more conditions were informed that goods were of the same brand). Participants in each condition indicated their attitudes towards the brand of the good(s) on two 7-point scales (1 = very negative/unfavorable, 7 = very positive/favorable), as well as purchase intentions towards the brand—whether they would be willing to purchase another TV from that brand in the future (1 = completely agree, 7 = completely disagree) and how likely they would be to purchase a TV from that brand if they were to buy a new one (1 = very unlikely, 7 = very likely). The scale items for brand attitude and purchase intentions were averaged, respectively, to form two single measures (α 's $> .92$).

Consistent with the findings of Study 1, compared to those who received Set_{TV1} or the non-contrasting $\text{Set}_{\text{TV1}\&3}$, participants who had $\text{Set}_{\text{TV1}\&2}$ contrasting possessions reported significantly less favorable attitudes towards the brand and were less likely to want to own products from the brand in the future (F 's > 5 , p 's $< .05$). Further, changes in participants' comparison standards mediated these differences. These results support the robustness of our findings across different measures relating to ownership satisfaction—measures that should not have been affected by the notion that participants in different conditions calibrated the scales differently—and also suggest that contrasting possessions can have detrimental downstream effects that are managerially consequential.

*STUDY 2: CAN THE DETRIMENTAL EFFECT OF OWNING MORE BE FOUND IN THE
FIELD?*

Study 1 illustrated that owning more contrasting possessions can indeed be less satisfying than owning less, and that shifts in the comparison standard mediate the level of satisfaction consumers derive from their possession(s). However, the scenario used in Study 1 did not allow participants to fully experience ownership of goods; the format of the stimuli also made the target goods easier to compare, which might have increased participants' reliance on comparisons. It might be that with actual ownership, consumers are more satisfied when they have more contrasting possessions. Another possibility is that ownership satisfaction in the real world can be affected by a wide spectrum of idiosyncratic factors that our lab study did not explore but might overwhelm our effect. To address these concerns, and examine the external validity of our findings, Study 2 investigated an actual ownership experience in the field. Further, Study 2 also utilized different measures of satisfaction and changes in comparison standards, thus assessing robustness of the effects we found in Study 1.

Stimuli and Pretests

To design two contrasting framed photos, we asked participants in a pretest ($N = 63$) to rate the attractiveness of each of several frames and photographs that were presented in a random order. The frame (photo) rated as the most attractive was then paired with a photo (frame) rated as moderately attractive to create two contrasting framed-photo products. As Figure 3 shows, Good1 consisted of a stylish crystal glass frame with a natural wood stand, but the photograph was only moderately attractive. Good2, on the other hand, included an outstanding picture in an average looking brown plastic frame. A second, within-participant pretest ($N = 45$) established

that when given a choice between owning Good1, Good2, or both of the goods, significantly more participants chose to have both (71%) than just one ($p < .01$). In a third pretest ($N = 41$), participants were randomly assigned one of the two goods and asked to evaluate the good on two 7-point scales (1 = not beautiful at all, 7 = very beautiful; 1 = I totally dislike it, 7 = I like it a great deal), which were averaged into a single score ($\alpha = .84$). Given that a t-test revealed no difference in the likability of the two goods ($p > .50$), we selected one of the goods for the single good condition to simplify the implementation of the main study.

Insert Figure 3 about here

Main Study

Eighty-one individuals (49 women, average age of 27) participated in the study and got to keep the good(s) they received in return for their participation. Participants were told that they would participate in a market study by a firm that manufactures home decoration products, and that the purpose of the study was to assess consumers' interest in the firm's product offerings. Participants were randomly assigned to receive either a set of two framed photos or a single one. They were asked to provide contact information so that the experimenter could reach them later to ask a few questions. Participants were contacted two days after they received the product(s). They were asked to indicate how satisfied they were with owning the framed photo(s) they received on two 11-point scales (1 = very dissatisfied/unhappy, 11 = very satisfied/happy). After answering a few filler questions, participants responded to measures pertaining to shifts in their comparison standards, i.e., the extent to which they thought the product(s) was/were ideal (1 = completely flawless/perfect; 11 = completely deficient/imperfect). This was followed by an open-ended question asking them to describe the ideal framed photo they had in mind, which

served as a more direct measure of the changes in comparison standard for assessing satisfaction. Participants then provided basic demographic information, and were debriefed and thanked. Seventy-two usable data points were obtained (nine individuals who could not be reached were excluded).

The scale items for satisfaction and deviation from the ideal were averaged, respectively, into two single measures (α 's > .90). Two independent judges who were unaware of the hypotheses coded the attributes of the ideal good each participant described. For example, "natural wood frame," "high quality glass," "[photo of] white sand beach," and "sunset" were each coded as one product attribute. All differences (3% disagreement) in coding were resolved through discussions. The total number of attributes each participant described was then calculated.

Results

As predicted by H1, participants who owned both framed photos were significantly less satisfied than those who owned just one ($M_{Good1\&2} = 7.62$, $M_{Good1} = 8.66$, $t = -2.11$, $p < .04$). Further, consistent with our prediction that consuming multiple goods can shift the standard of comparison upward, participants who owned both products believed their framed photos deviated from the ideal significantly more than those who owned just one ($M_{Good1\&2} = 6.28$, $M_{Good1} = 5.11$, $t = 2.17$, $p = .03$). A significant difference was also found for the number of product attributes of the ideal framed photo participants described ($M_{Good1\&2} = 5.19$, $M_{Good1} = 3.8$, $t = 3.64$, $p < .01$). That is, participants who owned both products had comparison standards that were higher than those who owned just one product.

Following the procedure recommended by Zhao, Lynch, and Chen (2010), we established that differences in comparison standards mediated the effect of owning more contrasting

possessions on satisfaction: The indirect effect of owning more on satisfaction (through the changes in comparison standards) was negative and significant ($a \times b = -.62$, $Z = -2.05$, $p < .04$). Owning both goods significantly increased changes in comparison standards ($a = 1.17$, $t = 2.17$, $p = .03$). This, in turn, significantly lowered satisfaction ($b = -.53$, $t = 5.86$, $p < .01$). Further, the direct effect of owning more on satisfaction was negative and significant ($c = -1.04$, $t = -2.11$, $p < .04$). However, when the indirect effect was accounted for, this direct effect became non-significant ($c' = -.42$, $t = -1.01$, $p > .30$; see Figure 4). Thus, providing support for H2 in the field, the upward shifts in comparison standards mediated the impact of owning more contrasting possessions on satisfaction.

 Insert Figure 4 about here

STUDY 3: DOES COGNITIVE STYLE MODERATE THE NEGATIVE EFFECT OF OWNING MORE CONTRASTING POSSESSIONS?

The results of Studies 1 and 2 illustrate that owning multiple contrasting possessions shifts the comparison standards that consumers rely on, which in turn, can negatively impact satisfaction. Study 3 further explored the underlying mechanism by investigating whether consumers' cognitive style—tendency to rely on external contextual versus internal information—interacts with owning more to affect satisfaction (H3). Further, to demonstrate the generalizability of our findings, a different product category was examined in Study 3.

Stimuli, Pretests, and Procedure

As shown in Figure 5, two possession sets ($\text{Set}_{\text{Watch1}}$ and $\text{Set}_{\text{Watch1\&2}}$) were developed. $\text{Set}_{\text{Watch1}}$ consisted of a single good, Watch 1. $\text{Set}_{\text{Watch1\&2}}$ included two contrasting possessions—

Watch 1 had both superior (e.g., accuracy) and inferior attributes (e.g., brand) versus Watch 2. As expected, a pretest ($N = 77$) established that, when given a choice between the two possession sets, the majority of the participants (81%) preferred owning $\text{Set}_{\text{Watch1\&2}}$ over $\text{Set}_{\text{Watch1}}$ ($\chi^2 = 28.69$, $p < .001$). That is, pretest participants preferred owning more than less.

Two hundred and eighteen individuals (112 women, average age of 32) participated in this computer-based experiment as a part of a battery of unrelated studies and were compensated \$6 for a one-hour session. They were randomly assigned to either $\text{Set}_{\text{Watch1}}$ or $\text{Set}_{\text{Watch1\&2}}$, and asked to imagine owning the watch(es). They then assessed the extent to which they would be satisfied owning the good(s) on two 10-point scales (1 = very dissatisfied/unhappy, 10 = very satisfied/happy). The rest of measures were similar to those used in the Study 1.

To assess participants' chronic tendency to rely on external contextual versus internal information, the cognitive style aspect that was the focus of H3, we utilized a framed line task (adapted from Kitayama et al. 2003). As shown in Figure 6, participants were first shown a square frame with vertical line (composed of the number 11), and asked to respond to a series of distraction questions on a separate screen (e.g., "To what extent would you consider the image a work of art?"). On a new screen, participants were shown a square frame that was 30% smaller than the first square. Participants were asked to use the number "11" to draw a vertical line of exactly the same length as the one they saw. Following Kitayama et al. (2003), we calculated the extent to which each participant's response deviated from the actual length of the line they saw, which served as a measure of that individual's chronic tendency to rely on external contextual information.

Insert Figures 5 & 6 about here

Results

The scale measures for ownership satisfaction ($\alpha = .95$) and for the deviation from the ideal ($\alpha = .82$) were averaged, respectively, into single measures. Providing further support for H1, participants who owned $\text{Set}_{\text{Watch1}\&2}$ were significantly less satisfied than those with $\text{Set}_{\text{Watch1}}$ ($M_{\text{Watch1}\&2} = 6.82$, $M_{\text{Watch1}} = 7.43$, $t = -2.74$, $p < .01$) and believed that their possessions deviated from the ideal more ($M_{\text{Watch1}\&2} = 5.93$, $M_{\text{Watch1}} = 4.69$, $t = 4.89$, $p < .001$).

Following the procedure recommended by Zhao, Lynch, and Chen (2010), we established that differences in comparison standards mediated the effect of owning more contrasting possessions on satisfaction: The indirect effect of owning more on satisfaction (through the changes in comparison standards) was negative and significant ($a \times b = -.53$, $Z = -4.21$, $p < .001$). Owning both goods significantly increased the changes in comparison standards ($a = 1.24$, $t = 4.89$, $p < .001$). This, in turn, significantly lowered satisfaction ($b = -.42$, $t = -8.15$, $p < .001$). Further, the direct effect of owning more on satisfaction was negative and significant ($c = -.61$, $t = -2.74$, $p < .01$). However, when the indirect effect is accounted for, this direct effect became non-significant ($c' = -.08$, $t = -.39$, $p > .60$). These findings thus provide further support for H2.

Hypothesis 3 predicts that consumers with a cognitive style of chronically relying more on external contextual information in judgment and decision-making are likely to be more affected by owning more contrasting possessions. To test this, we ran a regression with the dummy variable for owning more vs. less, the mean-centered external contextual information reliance tendency measure, and their interaction term, as the independent variables. A significant owning more \times external contextual information reliance tendency interaction effect was found ($\beta = -.27$, $t = -2.03$, $p = .04$; see Figure 7), in addition to a main effect of owning more ($\beta = -.56$, $t = -2.55$, $p = .01$). A spotlight analysis of the interaction at one standard deviation above

and below the mean of external contextual information reliance tendency revealed a significant negative effect of owning more on those who chronically rely more on external contextual information (beta = -1.01, $t = -3.24$, $p = .001$) but not on those who rely more on internal information (beta = -.11, $t = -.36$, $p > .70$). These results thus offer additional evidence of the proposed mechanism and support H3—consumers’ cognitive style moderated the negative impact of owning more contrasting possessions on satisfaction; those who chronically rely more on external contextual information were more negatively affected.

 Insert Figure 7 about here

*STUDY 4: DOES CHRONIC EVALUATIVE TENDENCY MODERATE THE NEGATIVE
 EFFECT OF OWNING MORE CONTRASTING POSSESSIONS?*

The results of Study 3 illustrated how consumers’ cognitive style moderates the negative effect of owning more contrasting possessions. Study 4 sought further support for the underlying process we propose by exploring the interaction between consumers’ chronic evaluative tendency and owning more—whether those who with low need-to-evaluate (hence less developed, more malleable, internal comparison standards) are more negatively affected (H4). Further, given that consumers typically consume one good at a time, it is substantively interesting to investigate whether owning multiple contrasting possessions dampens satisfaction with each possession. Study 4 explored these questions.

Design and Procedure

Two hundred and ninety-one individuals (162 women, average age of 33) participated in the experiment as a part of a battery of unrelated studies and were compensated \$6 for a one-

hour session. They were randomly assigned to one of three possession set conditions. The first two conditions were identical to those of Study 1: Whereas Set_{TV1} included just TV1, $\text{Set}_{\text{TV1\&2}}$ consisted of two contrasting possessions—TV1 had both better (e.g., picture quality) and worse attributes (e.g., sound quality) than TV2. In the third condition ($\text{Set}_{\text{TV1}|\text{TV1\&2}}$), participants received both TV1 and TV2 but were asked to assess their satisfaction with only TV1. Participants in each condition imagined that they owned the TV(s) and then assessed the extent to which they would be satisfied owning the TV(s) on two 7-point scales (1 = not satisfied/displeased at all, 7 = completely satisfied/pleased). Participants then completed measures regarding changes in the comparison standards they used to assess satisfaction, and the need-to-evaluate scale (Jarvis and Petty 1996), an indirect measure of the extent to which participants possess developed and stable comparison standards. The procedure was otherwise the same as that of Study 1.

Results

The scale measures for ownership satisfaction ($\alpha = .88$) and for the deviation from the ideal ($\alpha = .81$) were averaged, respectively, into single measures. H1 was again supported; participants who owned $\text{Set}_{\text{TV1\&2}}$ were significantly less satisfied than those with Set_{TV1} ($M_{\text{TV1\&2}} = 4.85$, $M_{\text{TV1}} = 5.30$, $F(1, 288) = 6.92$, $p < .01$) and believed that their TV's deviated from the ideal more ($M_{\text{TV1\&2}} = 4.12$, $M_{\text{TV1}} = 3.71$, $F(1, 288) = 5.52$, $p < .02$). Further, compared to participants with Set_{TV1} , those who had $\text{Set}_{\text{TV1}|\text{TV1\&2}}$ reported significantly lower satisfaction with TV1 ($M_{\text{TV1}|\text{TV1\&2}} = 4.65$, $M_{\text{TV1}} = 5.30$, $F(1, 288) = 14.31$, $p < .001$) and believed that their TV deviated from the ideal more ($M_{\text{TV1}|\text{TV1\&2}} = 4.48$, $M_{\text{TV1}} = 3.71$, $F(1, 288) = 20.54$, $p < .001$).

Following the same procedure for multi-categorical mediation analysis used in Study 1, we found that the dummy variable for Set_{TV1} had a significant effect (beta = $-.41$, $t = -2.35$, $p <$

.02) on the deviation from the ideal. This measure of shifts in comparison standards, in turn, had a significant effect on satisfaction ($\beta = -.67, t = -16.11, p < .001$). Further, the direct effect of the dummy variable for Set_{TVI} on satisfaction was significant ($\beta = .45, t = 2.63, p < .01$). However, when the indirect effect was controlled for, the direct effect of that dummy variable became non-significant ($\beta = -.18, t = -1.41, p > .10$). These results thus further support H2—upward shifts in comparison standards mediated the negative impact of owning more contrasting possessions on satisfaction.

To examine the moderating role of consumers' chronic evaluative tendency, we averaged the need-to-evaluate (NTE) scale items and mean-centered the score. A regression with two dummy variables representing the possessions set conditions, the NTE score, and NTE's interaction terms with the dummy variables, as the independent variables, revealed a significant $\text{Set}_{\text{TVI}} \times \text{NTE}$ interaction effect ($\beta = -.59, t = -2.13, p = .03$; see Figure 8), in addition to a main effect of Set_{TVI} ($\beta = .45, t = 2.66, p < .01$). A spotlight analysis of the interaction at one standard deviation above and below the mean of NTE score revealed a significant effect of Set_{TVI} on those who with low NTE scores ($\beta = .83, t = 3.36, p = .001$) but not on those who with high NTE scores ($\beta = .08, t = .31, p > .70$). These results thus support H4—the extent to which consumers hold stable internal comparison standard (as reflected in their chronic need-to-evaluate tendency) moderated the negative impact of owning more contrasting possessions on satisfaction.

 Insert Figure 8 about here

GENERAL DISCUSSION

A fundamental tenet of consumerism is the belief that owning more is more desirable than owning less. In lab and field studies involving different product categories and different measures of ownership satisfaction, we challenge the validity of this belief, illustrating that owning more contrasting possessions—goods that fulfill similar consumption functions with each good perceived as better than the other on important dimensions—can in fact be less satisfying than owning less. In Study 1, we found that owning two contrasting possessions was significantly less satisfying than owning just one, and changes in participants' comparison standards mediated this negative effect of owning more. Further, when the contrasting attributes were removed from the two goods by downgrading the attributes of one of the goods (and hence making the set objectively inferior), the negative effect of owning more disappeared. This thus suggests that the contrasting attributes of the goods were a cause of the lowered satisfaction.

In Study 2, we investigated the phenomenon in the field. Further supporting our propositions, consumers who owned two contrasting possessions were indeed significantly less satisfied than those who owned just one. When asked to describe the ideal product they had in mind, the former group described significantly more product attributes than did the latter group—a finding supporting our notion of shifts in comparison standards. Finally, Studies 3 and 4 revealed that, consistent with the mechanism we propose, the extent to which consumers chronically relied on external contextual information in evaluations (an important aspect of their cognitive style) and the extent to which they held stable internal comparison standards (reflected in their chronic evaluative tendency) moderated the negative impact of owning more on satisfaction. We also found that owning more contrasting possessions not only lowered satisfaction with the entire set of goods but also with the individual good in the set.

These findings are important and counterintuitive. In the pretests of all four studies, when participants were given a choice between the various possession sets, the majority selected the multi-good set with contrasting possessions over the single-good set or the multi-good set without contrasting possessions. That is, the majority of consumers did not choose the set that could make them happier. In fact, they opted for the set that was the least satisfying.

The current research opens up interesting questions for future research. While our studies investigated the moderating roles of cognitive style and chronic evaluative tendency, other dispositional factors might also interact with owning more to impact satisfaction from possession. For example, whereas some consumers tend to construe objects at a high level by abstracting their essence, others tend to have a low construal level and focus more on the specific details and concrete features (Trope and Liberman 2010). Because a low construal level can increase comparison tendencies (Khan, Zhu, and Kalra 2011), consumers with a low construal may be more negatively affected by owning more contrasting possessions, as the relative deficiencies of the goods might loom larger to them. Future research could thus investigate whether and how chronic differences in construal levels interact with owning more.

Our results show that comparison standards for satisfaction assessments incorporate the superior attributes of the goods in the possession set when the goods fulfill similar consumption functions. However, the extent to which this alteration of comparison standards occurs should depend on the degree to which these consumption activities are similar. To illustrate, if one owns a pair of sports shoes specifically for yard work, that the shoes are heavier than a second pair of sports shoes she owns should not necessarily be deemed as deficient—as comparison standards for different consumption activities are likely to differ. However, if both pairs are used for running, the heavier weight of the first pair is likely to be perceived as more of a shortcoming. In

fact, in a study not reported in the paper, consumers were assigned a single possession or multiple contrasting possessions. Half of those in the owning more condition were informed that the goods were for different consumption functions, and the other half were not. While those who had multiple goods with distinctive functions were more satisfied than those who owned just one good, those who had multiple goods with non-distinctive functions were less satisfied. These findings suggest that how consumers construe and categorize their possessions can attenuate the effect of contrasting possessions. Future research could explore whether and how consumers and firms can leverage this to overcome the potential pitfalls of contrasting possessions.

A major finding of our research is that not only the individual goods in a possession set can become less satisfying than they would otherwise be, but also the aggregate satisfaction with the entire set of possessions can be lower than if there is just one good. Our studies allowed us to examine a potential alternative explanation of the phenomenon we investigate—whether when assessing their overall satisfaction with multiple goods they own, consumers simply average their satisfaction with each good. For example, if one TV is extremely satisfying and the second TV, moderately satisfying, the averaged satisfaction of the two will be lower than the satisfaction with the first TV. This “naïve averaging” account, if correct, is more parsimonious than the proposed mechanism as it does not require contrasting possessions or shifts in comparison standards. However, the findings of Study 1 are inconsistent with this account: Participants with an inferior set of two non-contrasting TV’s were more satisfied than those who with the superior set of contrasting TV’s. If the alternative averaging account were correct, the opposite pattern of results should have emerged.

Nonetheless, it might be that after contrasting possessions shifted the comparison standards and negatively affected satisfaction with the individual goods, averaging plays role in integrating the satisfaction with each good into an overall satisfaction assessment (Yadav 1994). It is also possible that an additive mechanism is used in the integration stage: If the shifts in comparison standards are large, satisfaction with each good can be so dampened that their sum is lower than the satisfaction consumers would gain from owning just one good. It will be interesting for future research to investigate this integration process, shedding further light on how consumers assess their satisfaction with multiple possessions.

Our research offers theoretical and substantive contributions. Broadly, it helps fill the gap in the literature on post-choice consumption experiences, and more specifically, it offers a theory of a detrimental impact of owning more on consumer satisfaction: For sets of goods that fulfill similar consumption functions with each perceived as better than the other on important dimensions, consumers can be less satisfied owning multiple goods than just one. This is because owning these contrasting possessions induces an upward shift of the comparison standard used to assess satisfaction, making each good in the possession set appear so deficient that owning more can feel less satisfying than owning less. Furthermore, consumers' cognitive style (chronic reliance on external contextual information) and chronic evaluative tendency (development of stable internal comparison standards) moderate this effect. This thus adds to theoretical development of how judgment and decision-making tendencies impact consumer behavior, and the emerging stream of research on how dispositional factors interact with situations to impact well-being (see Diener 2009 for a recent review).

Our findings have managerial implications. Across different product categories, we show that when given a choice, consumers prefer owning more contrasting possessions than owning

less. However, they can be less satisfied owning more (independently of the pain that potentially higher expenditures might impose, which could make the detrimental impact even worse). This lowered consumer satisfaction can negatively impact firms' bottom lines. As the follow-up experiment of Study 1 shows, compared to consumers who own a single product, those who own multiple contrasting possessions may develop a significantly less favorable attitude towards the brand of the products and become less likely to purchase products from that brand in the future. Thus, complementing prior research (e.g., Nowlis and Simonson 1996), our studies highlight that firms should be cognizant that while creating and promoting products with contrasting attributes may entice consumers to acquire more (as the results of the pretests of our studies suggest), consumers can become less satisfied with the brand, reducing the likelihood of subsequent purchases. Further, to circumvent the detrimental effect of contrasting possessions, firms could, for example, consider positioning their product offerings as tailored for unique consumption activities. As suggested in the discussions above, when consumers construe two goods as for different purposes, that the goods have contrasting attributes may in fact boost satisfaction.

Our findings also contribute to transformative consumer research. Many consumers spend more money than they can afford (Watson 2003), buying more goods than they need (Schor 1999) and thus often accumulating contrasting possessions. Past research suggests that financing such acquisitions requires consumers to work more (Kasser 2002; Mishel et al. 2005), reducing the time available for activities such as socializing with friends and loved ones and volunteering to help others, which are known to boost happiness (Burroughs and Rindfleisch 2002; Csikszentmihalyi and Hunter 2003). Our results offer a new additional perspective on why having more possessions may make consumers less happy—owning more can, in and of itself, be less satisfying than owning less.

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FIGURE 1

Study 1 Stimuli

Set_{TV1}

Screen Size	42 inches
Resolution and Color Quality	★★★★★
Sound Quality	Surround
Max. Screen Refresh Speed (for displaying fast motions)	60 Hz
Built-in Speakers	2
Max. No. of Channels	300
Ports and Connectors	<ul style="list-style-type: none"> • A/V Output • S-Video • DVI • HDMI • Optical Digital
Start Up Speed	5 sec.
Remote Control Battery Life	10 months
Warranty	1 year

Set_{TV1&2}

	TV1	TV2
Screen Size	42 inches	25 inches
Resolution and Color Quality	★★★★★	★★★★☆
Sound Quality	Surround	Ultra Surround with 3D Waves
Max. Screen Refresh Speed (for displaying fast motions)	60 Hz	240 Hz
Built-in Speakers	2	8
Max. No. of Channels	300	900
Ports and Connectors	<ul style="list-style-type: none"> • A/V Output • S-Video • DVI • HDMI • Optical Digital 	<ul style="list-style-type: none"> • A/V Output • S-Video • USB 2.0
Start Up Speed	5 sec.	0.2 sec.
Remote Control Battery Life	10 months	2 months
Warranty	1 year	4 years

Set_{TV1&3*}

	TV1	TV2
Screen Size	42 inches	25 inches
Resolution and Color Quality	★★★★★	★★★☆☆
Sound Quality	Surround	Surround
Max. Screen Refresh Speed (for displaying fast motions)	60 Hz	55 Hz
Built-in Speakers	2	2
Max. No. of Channels	300	280
Ports and Connectors	<ul style="list-style-type: none"> • A/V Output • S-Video • DVI • HDMI • Optical Digital 	<ul style="list-style-type: none"> • A/V Output • S-Video
Start Up Speed	5 sec.	5 sec.
Remote Control Battery Life	10 months	2 months
Warranty	1 year	1 year

Note: To keep the labels consistent between conditions, TV3 was labeled as “TV2” in the stimuli shown in the Set_{TV1&3} condition.

FIGURE 2

Study 1 Results: Choice Share (Pretest) and Satisfaction (Main Study)

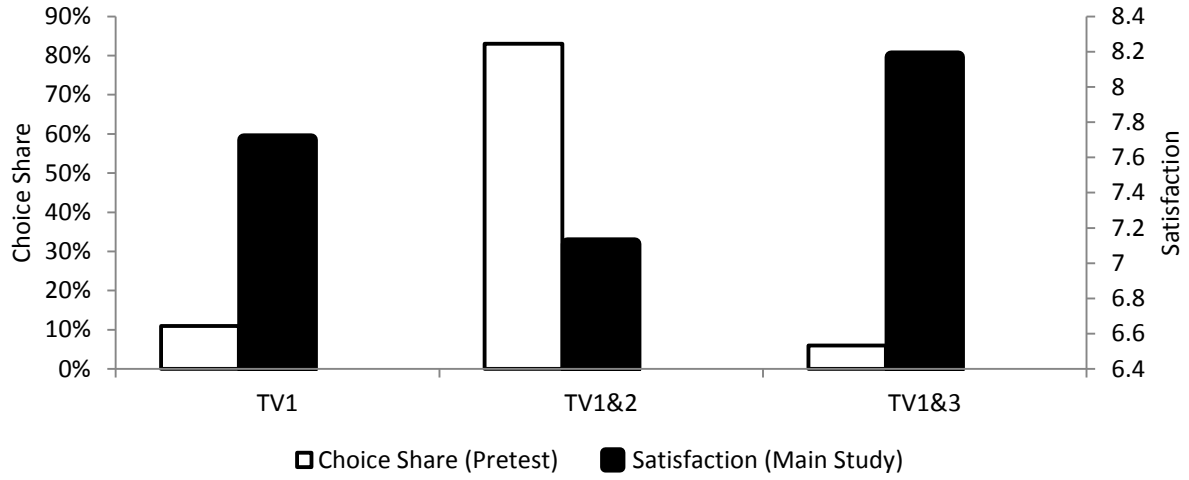


FIGURE 3
Study 2 Stimuli

Good1

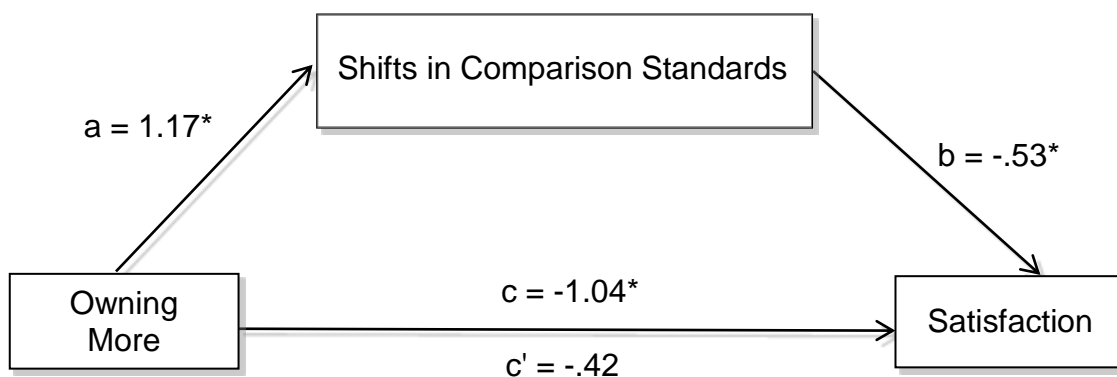


Good2



FIGURE 4

Study 2 Results: Shifts in Comparison Standards Mediate the Effect of Contrasting Possessions on Satisfaction



* $p < .05$

FIGURE 5

Study 3 Stimuli

Set_{Watch1}

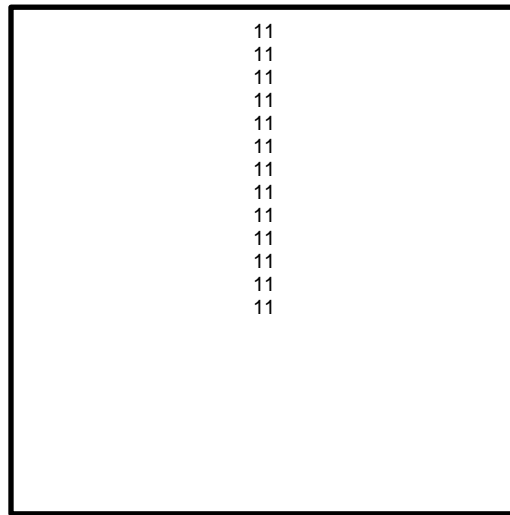
Accuracy	★★★★★
Brand	★★★★☆
Cover Glass Material	Hardened Glass
Other Features	<ul style="list-style-type: none"> • Chronology • Stop Watch • Timer • Shock Resistant Design
Battery Life	5 Years
Warrantee	1 Year

Set_{Watch1&2}

Accuracy	★★★★★	★★★★☆
Brand	★★★★☆	★★★★★
Cover Glass Material	Hardened Glass	Ultra-Hardened Scratch Resistant Sapphire Glass
Other Features	<ul style="list-style-type: none"> • Chronology • Stop Watch • Timer • Shock Resistant Design 	<ul style="list-style-type: none"> • Calendar • Waterproof
Battery Life	5 Years	1 Year
Warrantee	1 Year	3 Years

FIGURE 6

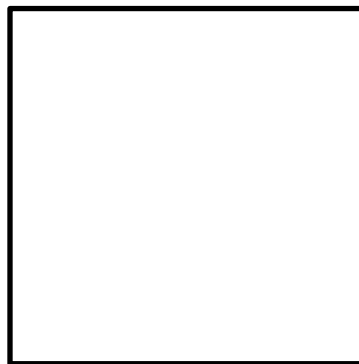
Study 3 Framed Line Task



Participants were first shown a framed box containing a vertical line.



They then responded to a few (distraction) questions on another screen.

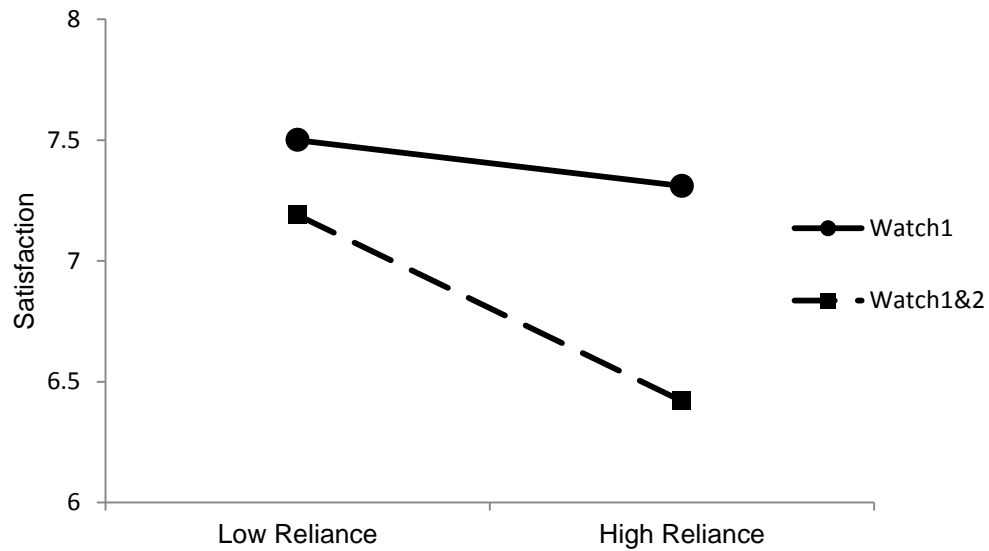


On a new screen, participants saw a smaller framed box and were asked to draw a vertical line of exactly the same length as the one they saw in the first box.

FIGURE 7

Study 3 Results: Cognitive Style (Reliance on External Contextual Information)

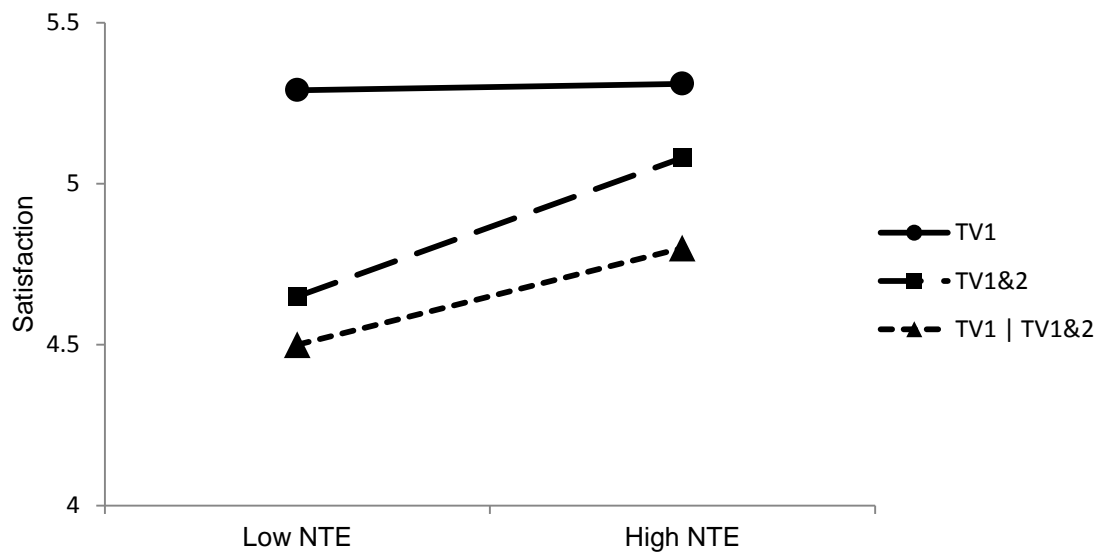
Moderates the Effect of Owning More Contrasting Possessions on Satisfaction



Note: Low and high reliance on external contextual information were plotted based on a median split for illustration purposes. Continuous data was used in the spotlight analysis.

FIGURE 8

Study 4 Results: Need-to-Evaluate (Hence Stability of Internal Standards) Moderates the Effect of Owning More Contrasting Possessions on Satisfaction



Note: Low and high NTE were plotted based on a median split for illustration purposes. Continuous data was used in the spotlight analysis.