

Singapore Management University

## Institutional Knowledge at Singapore Management University

---

Research Collection Lee Kong Chian School Of  
Business

Lee Kong Chian School of Business

---

1-2022

### Seeking stability: Consumer motivations for communal nostalgia

Minju HAN

Singapore Management University, minjuhan@smu.edu.sg

George E. NEWMAN

Yale University

Follow this and additional works at: [https://ink.library.smu.edu.sg/lkcsb\\_research](https://ink.library.smu.edu.sg/lkcsb_research)



Part of the [Marketing Commons](#), and the [Sales and Merchandising Commons](#)

---

#### Citation

HAN, Minju and NEWMAN, George E.. Seeking stability: Consumer motivations for communal nostalgia. (2022). *Journal of Consumer Psychology*. 32, (1), 77-86.

Available at: [https://ink.library.smu.edu.sg/lkcsb\\_research/7295](https://ink.library.smu.edu.sg/lkcsb_research/7295)

This Journal Article is brought to you for free and open access by the Lee Kong Chian School of Business at Institutional Knowledge at Singapore Management University. It has been accepted for inclusion in Research Collection Lee Kong Chian School Of Business by an authorized administrator of Institutional Knowledge at Singapore Management University. For more information, please email [cherylds@smu.edu.sg](mailto:cherylds@smu.edu.sg).

**Seeking Stability: Consumer Motivations for Communal Nostalgia**

Minju Han and George E. Newman

Yale University

**Author Note**

Minju Han, Yale School of Management, Yale University.

George E. Newman, Yale School of Management, Yale University.

We have no known conflict of interest to disclose.

Correspondence concerning this article should be addressed to George E. Newman, Yale School of Management, Yale University, 165 Whitney Avenue, New Haven, CT 06511. E-mail: [george.newman@yale.edu](mailto:george.newman@yale.edu)

Seeking Stability: Consumer Motivations for Communal Nostalgia

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

## Abstract

Existing research has examined why consumers are drawn to things from their past (personal nostalgia). However, little empirical work has examined why consumers prefer products that were never a part of their personal history (communal nostalgia). For example, a consumer may purchase vinyl records even though she grew up listening to mp3 files. Here we find that one reason why consumers may be drawn to communal nostalgia is that it can provide a sense of social stability. Drawing on System Justification Theory (Jost & Banaji, 1994), we demonstrate that perceived threats to the social system increase consumer demand for communal nostalgia and enhance the pleasure consumers get from certain retro products. We further show that a retro product's ability to provide a sense of stability to consumers mediates the effect of system justification on communal nostalgia. Together, these findings suggest that communal nostalgia may be driven by its own unique motivational antecedents that are distinct from personal nostalgia, as individuals seek to connect to aspects of society that are perceived as stable and unchanging.

*Keywords:* Communal nostalgia, Nostalgia, System Justification Theory, Compensatory consumption

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

### Seeking Stability: Consumer Motivations for Communal Nostalgia

In 2008, there were a number of anomalous events. The world entered into a global financial crisis; major financial institutions, such as Lehman Brothers, filed for bankruptcy; and several nations were gripped by political and social unrest (Frank & Hesse, 2009). Curiously, this coincided with a spike in sales of vinyl records across the U.S. and Europe for the first time in nearly 30 years (an upward trend that has continued throughout the last decade). In fact, sales of vinyl records in 2019 were roughly equivalent to sales in 1988, despite that sales of all other forms of recorded music (e.g., cassette tapes and compact discs) have dropped precipitously since 2000 (RIAA, 2018). In a time when digital streaming services predominate, what motivates consumers to purchase vinyl records?

One explanation is *personal nostalgia*. Indeed, a substantial body of research has examined the utility consumers get from consuming products associated with their own past (Holbrook & Schindler, 2003; Loveland et al., 2010; Routledge et al., 2012; Wildschut et al., 2006; Wildschut et al., 2010). This research has found that people gravitate toward personal nostalgia when they experience some type of threat to their personal identity. For example, experimentally manipulating loneliness (Wildschut et al., 2006; Zhou et al., 2008) and alienation (Sedikides et al., 2015) increases consumers' desire to purchase items from their past. Moreover, personal nostalgia has been found to buffer against threats posed to one's personal identity, such as those that undermine meaning in life (Routledge et al., 2011), increase awareness of one's mortality (Juhl et al., 2010; Routledge et al., 2008) and lower one's self-esteem (Vess et al., 2012).

However, the majority of vinyl records today are purchased by consumers under 35 (Ringgen, 2015), and some of the bestselling records are from current artists, like Taylor Swift (RIAA, 2018). Therefore, it is unlikely that the recent interest in vinyl records stems solely from

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

consumers' own childhood experiences. Instead, such preferences seem to reflect instances of *communal nostalgia* (Davis, 1979)—preferences for things that are associated with the past at a cultural or societal level but were not directly part of one's personal history.

Although communal nostalgia has been discussed by several scholars (Davis, 1979; Wildschut et al., 2014), to date, no experiments have been conducted to examine its causal antecedents. The empirical work that has been done typically finds lower consumer engagement and emotional reactions for communal (vs. personal) nostalgia (Marchegiani & Phau, 2013). For example, a campaign message that references communal (vs. personal) nostalgia triggered lower levels of positive affect and less favorable attitudes (Muehling & Pascal, 2011). Other research has found that reminders of communal nostalgia may buffer against societal threats such as collective guilt (Baldwin et al., 2018) and encourage preferences for domestic (vs. foreign) products (Dimitriadou et al., 2019).

The present studies investigate the causal antecedents of communal nostalgia; specifically, how communal nostalgia stems from more fundamental desires to see one's broader social system as stable and unchanging. We draw on System Justification Theory (SJT), which proposes that people have a fundamental motive to seek stability in organizations, economic systems, and governments (Jost & Banaji, 1994). Existing research has found that when their system is threatened, consumers engage in several strategies to affirm the stability of social structures. For example, they prefer domestic products (Cutright et al., 2011) and products that suggest an incidental degree of "structure," such as a framed (vs. unframed) painting (Cutright, 2011). Taken together, the literature on SJT suggests that people have a core motive to view their broader social system as stable and, if threatened, will engage in both direct and indirect strategies to restore a sense of stability.

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

Thus, system justification may provide one explanation of why consumers seek communal nostalgia. Specifically, when consumers feel that their collective identity is threatened, they may gravitate toward certain retro products, like vinyl records, because those products reflect some degree of stability and permanence. Importantly, this mechanism is distinct from one that explains personal nostalgia, which is typically associated with threats posed to personal identity (Routledge et al., 2011).

Our prediction builds on Davis' (1979) original theorizing that abrupt social changes, including depressions, wars, and massive natural disasters may increase communal nostalgia. Davis (1979) suggested that people may seek communal nostalgia during times of social instability because it “acts to restore, at least temporarily, a sense of sociohistoric continuity.” However, no experimental work to date has examined whether the desire for system stability indeed increases communal nostalgia.

To test this prediction, we conducted three empirical studies. Study 1 demonstrates that system threat (versus affirmation) makes retro experiences more pleasurable. Study 2 replicates this effect with a larger sample of products. Study 3 further demonstrates that system threat only enhances the demand for retro products that are “communally nostalgic” and that a product’s ability to provide a sense of stability to consumers mediates the effect of system threat on demand for certain retro products.

### **Study 1**

In Study 1, participants were exposed to an established system threat (versus affirmation) manipulation (Kay et al., 2005). Then, participants listened to a song on a record player and rated how much they enjoyed listening to it and their interest in purchasing a record player. We predicted

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

that participants in the system threat (vs. system affirmation) condition would rate the experience as more pleasurable and show greater interest in purchasing a record.

In this study, we also asked participants to indicate whether they associated record players with their own past. We reasoned that participants with a personal connection to vinyl records would have a high desire to use a record player for personally-nostalgic reasons, making them less susceptible to the system threat manipulation. Moreover, the effects of personal nostalgia have been shown to be stronger than those of communal nostalgia (Baker & Kennedy, 1994; Marchegiani & Phau, 2013; Muehling & Pascal, 2011), suggesting that those participants might be at “ceiling” when evaluating their experience with the record player. Consequently, we hypothesized that the effect of system threat on participants’ experience with the record player would be primarily driven by participants who did not have a personal association with vinyl records (i.e., communal nostalgia).

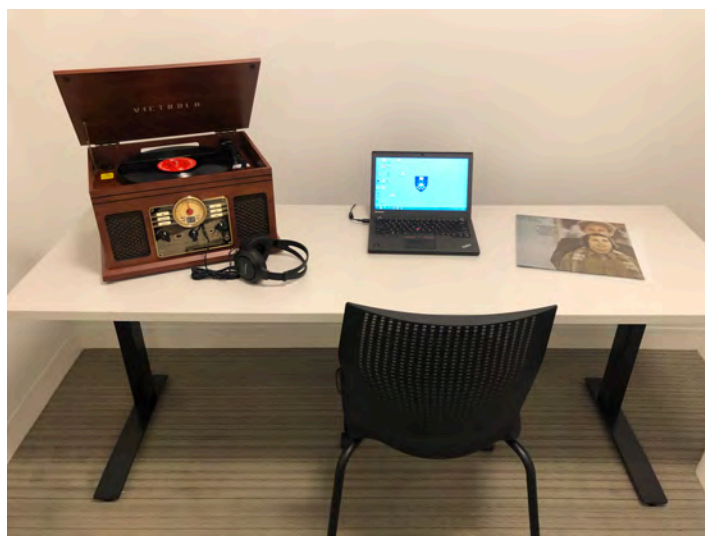
It is important to note that we do not conceive of communal nostalgia and personal nostalgia as mutually exclusive concepts. We conceptualize personal nostalgia as a dichotomous variable: one either has a personal experience with a product or not. However, we conceptualize communal nostalgia as a continuous variable, which is assessed based on the extent to which a product is associated with America’s collective identity and past (explored further in Study 3).

### **Method**

We recruited 395 participants in a university lab ( $M_{\text{age}}=37.2$ , 70% female). All participants completed the study in an individual survey room with a laptop computer, headphones, and a record player in front of them (see Figure 1).



## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

**Figure 1***The Laboratory Set-up Used in Study 1*

Participants were randomly assigned to the system threat or system affirmation condition (manipulation pretest results are reported in the supplementary items, Appendix A). The manipulations were taken directly from previous research (Cutright et al., 2011; Kay et al., 2005; Lau et al., 2008). In the system threat condition, participants read an article reporting that American society and values have deteriorated. In the system affirmation condition, participants read an article reporting that American society and values are relatively stable. Following the protocol from previous research (Brescoll et al., 2013; Sotola, 2016), participants completed two manipulation check questions.

Then, a research assistant came into the room and started the vinyl recording of *The Only Living Boy in New York* by Simon and Garfunkel. When the song finished, participants indicated how much they enjoyed the experience of listening to the record: “How much did you enjoy listening to the song on a vinyl record? How exciting was it to listen to the song on a vinyl record? How pleasant was it to listen to the song on a vinyl record?” (1 = *Not at all*, 9 = *Very much so*).

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

Participants also indicated their interest in purchasing a record player: “I would consider purchasing a record player; I would like to own a record player; I think a record player is worth spending money on” (1=*Not at all*, 9=*Very much so*). A factor analysis indicated that the listening experience items and purchase intention items loaded on two separate factors (see Appendix G).

To assess whether participants had personal nostalgia toward vinyl records, we asked participants to indicate whether they associate vinyl records with their own past (yes vs. no). Finally, participants supplied basic demographic information, including age, gender, political orientation, and religiosity.

### **Results and Discussion**

Nine participants (2.3%) failed at least one of the manipulation check questions and were excluded from the analyses, leaving 386 participants. However, the pattern of results was the same when these participants were included.

#### ***Hedonic Experience***

The hedonic experience items formed a reliable index ( $\alpha = .82$ ). As predicted, participants in the system threat condition enjoyed listening to the vinyl record more than participants in the system affirmation condition ( $M_{threat} = 7.67$  vs.  $M_{affirmation} = 7.34$ ),  $t(384) = 2.23$ ,  $p = .026$ ,  $d = 0.23$ . The effect of system threat on hedonic experience did not interact with age ( $p = .75$ ), gender ( $p = .90$ ), political ideology ( $p = .60$ ), or religiosity ( $p = .50$ ). In Appendix D, we report the main analysis results of all studies with age, gender, political ideology, and religiosity as covariates.

#### ***Purchase Intention***

The purchase intention measures formed a reliable index ( $\alpha = .92$ ). As predicted, participants in the system threat condition were more interested in purchasing a record player than participants in the system affirmation condition ( $M_{threat} = 5.67$  vs.  $M_{affirmation} = 5.15$ );  $t(384) = 1.99$ ,  $p = .048$ ,

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

$d=0.21$ . This effect did not interact with age ( $p=.91$ ), gender ( $p=.66$ ), political ideology ( $p=.61$ ), or religiosity ( $p=.33$ ).

### ***Personal Nostalgia Present vs. Absent***

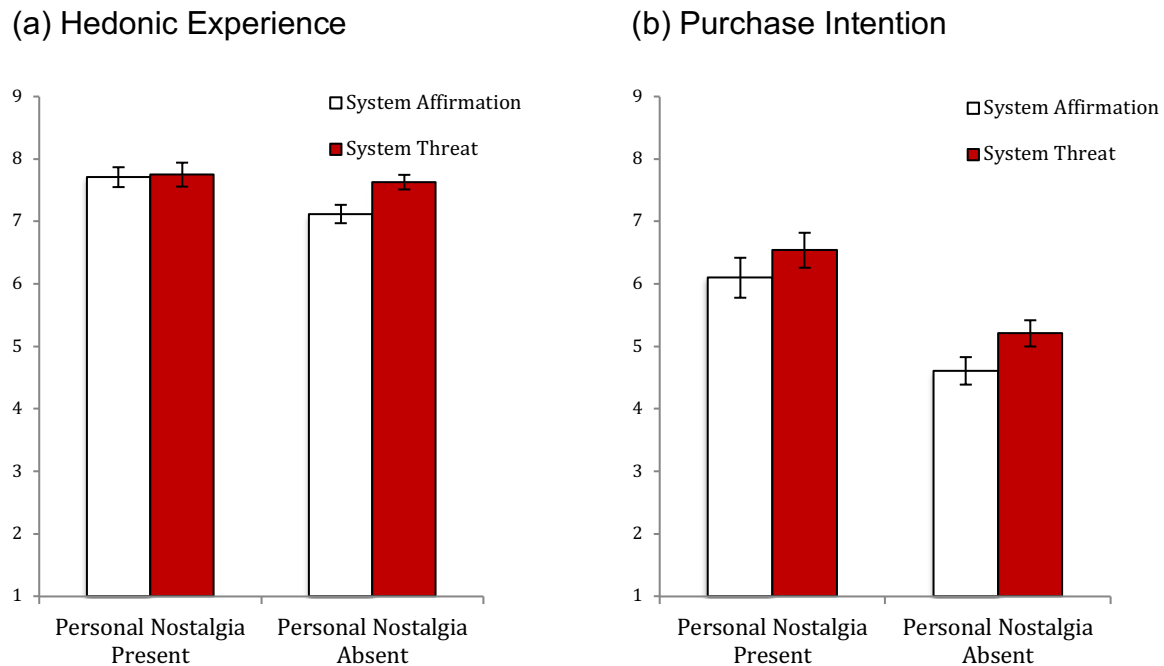
There were 250 participants ( $M_{age}=24.9$ ; 62% female) who did not associate vinyl records with their own past (personal nostalgia absent) and 136 participants ( $M_{age}=37.2$ ; 70% female) who did (personal nostalgia present). Participants who associated vinyl records with their past were significantly older than those who did not ( $t(383)=12.89$ ,  $p<.001$ ). However, there were no systematic differences in gender ( $p=.14$ ), religiosity ( $p=.12$ ), or political orientation ( $p=.40$ ) between the two groups.

To analyze how these groups differed in their response to the manipulation of system threat, we conducted a two-way ANOVA with system threat as one factor and personal nostalgia as the other (see Figure 2). Although the interaction between threat and personal nostalgia (present vs. absent) did not reach statistical significance ( $F(1,382)=2.27$ ,  $p=.13$ ,  $\eta_p^2=0.01$ ), we did find differential effects of system threat on participants who lacked personal nostalgia toward vinyl versus those who reported having personal nostalgia with vinyl records. Indeed, the effect of system threat was driven by participants who were not personally nostalgic toward vinyl records. These participants showed a pronounced effect of system threat on their reported enjoyment ( $M_{threat}=7.63$ , vs.  $M_{affirmation}=7.12$ ),  $t(248)=2.71$ ,  $p=.007$ ,  $d=0.34$ . However, participants who were personally nostalgic toward vinyl records were not affected by the system threat manipulation and appeared to be at “ceiling,” reporting the maximum level of enjoyment in both conditions ( $M_{threat}=7.75$  vs.  $M_{affirmation}=7.71$ ),  $t(134)=0.15$ ,  $p=.88$ .

Analogously, the effect of system threat on purchase interest was driven by the participants who did not associate vinyl records with their own past ( $M_{threat}=5.21$  vs.  $M_{affirmation}=4.61$ ),

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

$t(248)=1.96$ ,  $p=.051$ ,  $d=0.25$ . Personally nostalgic participants were also at ceiling for their reported purchase intentions ( $M_{threat}=6.54$  vs.  $M_{affirmation}=6.11$ ),  $t(134)=1.00$ ,  $p=.32$ .

**Figure 2***Hedonic Experience and Purchase Intention in Study 1*

*Note.* Mean ratings of hedonic experience and purchase intention in Study 1 as a function of participants' personal nostalgia for vinyl records (personal nostalgia present versus absent).

Overall, Study 1 found that system threat (vs. affirmation) increased participants' enjoyment of the listening experience and their interest in purchasing a record player. Interestingly, this effect was driven by participants who were *not* personally nostalgic toward vinyl records, which indicates a unique causal relationship between system justification and communal nostalgia per se. Notably, these results replicated in a series of multivariate analysis of variance (MANOVA) and multivariate analysis of covariance (MANCOVA) reported in Appendix H.

**Study 2**

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

The goal of Study 2 was to replicate the effect demonstrated in Study 1 with a larger sample of products.

### Method

#### *Stimuli*

We constructed eleven product pairs, with each pair containing a retro product and a modern equivalent (see Figure 3). In constructing these pairs, we were mindful of two potential confounds: different inferences regarding the age of the products and different inferences regarding the products' prices. To control for these factors, we selected pairs of products that were the same price in real life and were brand-new and available for purchase on Amazon.com.

### Figure 3

#### *Examples of Product Pairs in Study 2*

Suppose you were presented with the following two tea kettles which are both priced at \$28.

Product A is a ceramic tea kettle, while Product B is an electric tea kettle.



Product A



Product B

Suppose you were presented with the following two music players which are both priced at \$99.

Product A is turntable which plays records, while Product B is a mp3 player.



Product A



Product B

Suppose you were presented with the following two hand fans which are both priced at \$8.

Product A is a paper hand fan, while Product B is an electric hand fan.



Product A



Product B

Suppose you were presented with the following two pencil sharpeners which are both priced at \$14.

Product A is a hand crank pencil sharpener, while Product B is an electric pencil sharpener.



Product A



Product B

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

### ***Procedure***

We recruited 403 participants from Amazon's Mechanical Turk ( $M_{age}=37.1$ ; 50% female). Participants were randomly assigned to the system threat or system affirmation condition. We manipulated the system justifying motives using a modified version of the manipulation from Study 1 (pretest results reported in Appendix B). Participants then viewed pairs of products and indicated their preferences (1=*Strongly prefer Product A*, 9=*Strongly prefer Product B*). We incorporated a random sampling method in which eight product pairs were randomly selected from a pool of eleven (Judd et al., 2012; Westfall et al., 2014). Each product pair was presented on a different page in a randomized order. We recoded the preference ratings for all product pairs, such that the preference for the retro product was associated with higher scores. Finally, participants supplied basic demographic information, including age, gender, political orientation, and religiosity.

### **Results and Discussion**

Six participants (1.5%) failed at least one of the manipulation check questions and were excluded from the analyses, leaving 397 participants. However, the pattern of results was the same when these participants were included.

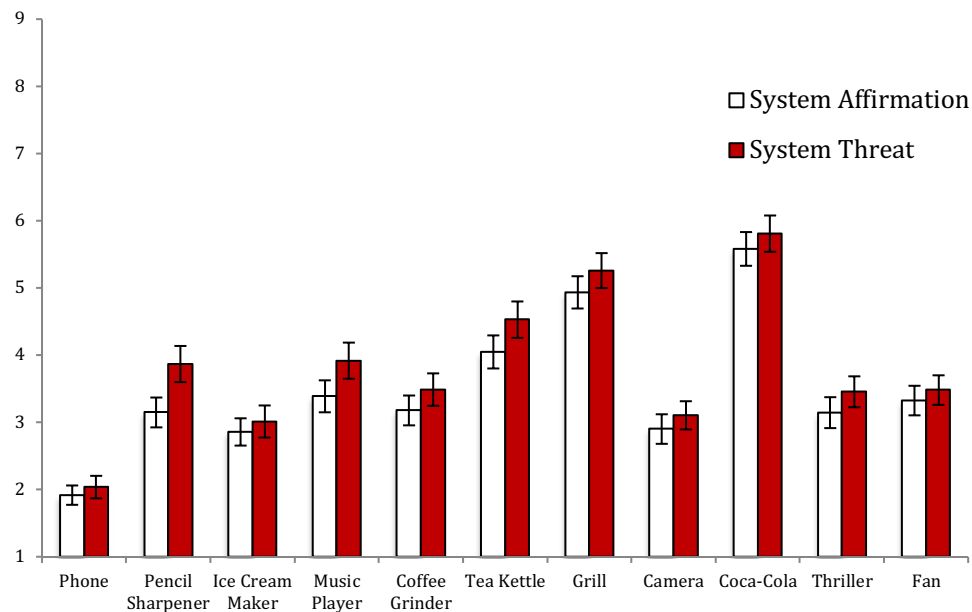
We conducted a linear mixed-model analysis using the restricted maximum likelihood estimation technique based on ARH(1) covariance structure. We included system threat as a fixed factor, eight product ratings as a within-subjects factor, and, based on recommendations made by Judd et al. (2012), included participants and stimuli as random factors. We found that participants in the system threat condition preferred the retro products significantly more than those in the system affirmation condition ( $M_{threat}=3.94$  vs.  $M_{affirmation}=3.59$ ),  $B=-0.34$ ,  $SE=.14$ ,  $p=.018$ , 95%

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

CI=-.62 to -.06 (see Figure 4). The effect of system threat on preference for retro products did not interact with age ( $p=.81$ ), gender ( $p=.10$ ), religiosity ( $p=.28$ ), or political ideology ( $p=.65$ ).

**Figure 4**

*Communal Nostalgia by Product Pair in Study 2*



*Note.* Preference for communally nostalgic products (vs. modern equivalent) is associated with higher scores.

**Study 3**

The goal of Study 3 was two-fold: First, we sought to provide evidence regarding the underlying mechanism. Specifically, we hypothesized that system threat enhances the demand for communal nostalgia because communally-nostalgic products provide a sense of stability and permanence. To test this, we directly measured the perceived stability associated with using the products and then tested via mediation whether perceived stability explained the increased preference for a set of communally-nostalgic products under system threat.

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

Second, we sought to identify a boundary condition. Some retro products, such as a record player, may have stronger cultural associations than other retro products, such as an answering machine. Consequently, we hypothesized that system threat should uniquely increase demand for products with a strong cultural association (i.e., communal nostalgia). To test this, participants were exposed to either the system threat or system affirmation manipulation and were asked to express their interest in using either a set of retro products that are highly associated with America's cultural identity or a set of comparison retro products that did not have the same cultural associations.

### **Method**

#### ***Stimuli Pretest***

Starting with a list of 10 products, we asked participants to rate the extent to which they associate each product with America's collective identity and past. We identified three retro products (a rotary phone, a record player, and a typewriter) that were rated as "high" on communal nostalgia and three retro products (an answering machine, a portable CD player, and a flip phone) that were rated as "low" on communal nostalgia (pretest results in Appendix C).

#### ***Procedure***

We recruited 602 participants on Amazon's Mechanical Turk ( $M_{age}=40.1$ , 50% female). Participants were randomly assigned to one of four conditions in a 2(system threat vs. affirmation) X 2(high vs. low communal nostalgia) between-subjects design. We used the same system threat manipulations and manipulation check questions as Study 1. Then, in an ostensibly unrelated study, participants indicated their interest in using either the three high communal nostalgia products or the three low communal nostalgia products. Specifically, for each product, participants



## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

saw a picture and answered: “To what extent would you enjoy using this product?” (1=*Not at all*, 9=*Very much so*).

To measure the hypothesized mediator, we asked participants to indicate the extent to which using the three products would provide them with a sense of stability: “Using these products would make me feel connected to something timeless; Using these products would give me a sense of stability and permanence; Using these products would make me feel connected to my culture’s past” (1=*Not at all*, 9=*Very much so*). Finally, participants supplied basic demographic information, including age, gender, political orientation, and religiosity.

### **Results and Discussion**

Seventy-one participants (12%) failed at least one of the manipulation check questions and were excluded from the analyses, leaving a total of 531 participants (see Appendix F for further discussion of differences in exclusion rates across the studies). However, the pattern of results was the same when these participants were included.

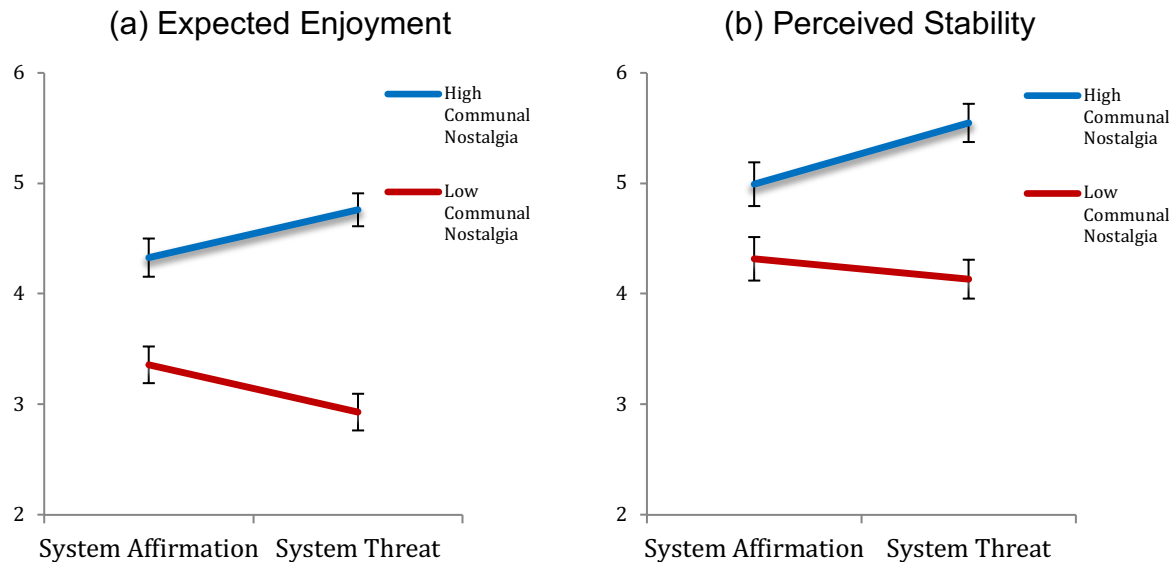
#### ***Expected Enjoyment***

We created an index of participants’ expected enjoyment by averaging the ratings of three products presented in each condition. We then conducted a 2(system threat vs. system affirmation) X 2(high vs. low communal nostalgia) ANOVA. We found no main effect of system threat,  $F(1,527)=0.00$ ,  $p=.99$ . There was a significant effect of product type, such that participants expected to enjoy using the high communal nostalgia products significantly more than the low communal nostalgia products ( $M_{\text{high}}=4.54$  vs.  $M_{\text{low}}=3.13$ ),  $F(1,527)=73.41$ ,  $p<.001$ ,  $\eta_p^2=.12$ . Importantly, however, the magnitude of this effect varied depending on whether participants were exposed to the system threat or affirmation manipulation,  $F(1,527)=6.92$ ,  $p=.009$ ,  $\eta_p^2=.013$ . The preference for high (vs. low) communal nostalgia products was significantly greater when

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

participants were exposed to system threat ( $M_{\text{high}}=4.76$  vs.  $M_{\text{low}}=2.93$ ,  $t(272)=8.22$ ,  $p<.001$ ,  $d=0.99$ ) versus system affirmation ( $M_{\text{high}}=4.33$  vs.  $M_{\text{low}}=3.36$ ,  $t(255)=4.04$ ,  $p<.001$ ,  $d=0.50$ ) (see Figure 5).

**Figure 5**  
Expected Enjoyment and Perceived Stability in Study 3



*Note.* Mean ratings of expected enjoyment and perceived stability in Study 3 as a function of experimental condition.

The effect of system threat on expected enjoyment did not interact with age ( $p=.46$ ), gender ( $p=.82$ ), or political ideology ( $p=.87$ ). However, religiosity significantly interacted with the system threat manipulation ( $p=.029$ ) (see General Discussion for further discussion of this interaction).

### ***Perceived Stability and Permanence***

We conducted an analogous two-way ANOVA on the perceived stability index ( $\alpha=.86$ ). Overall, participants responded that high (vs. low) communal nostalgia products provided a greater sense of stability ( $M_{\text{high}}=5.27$  vs.  $M_{\text{low}}=4.22$ ),  $F(1,527)=31.56$ ,  $p<.001$ ,  $\eta_p^2=.06$ . However, the magnitude of this effect also significantly varied depending on whether participants were exposed to the system threat or affirmation manipulation,  $F(1,527)=3.95$ ,  $p=.047$ ,  $\eta_p^2=.007$ . Indeed, the

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

extent to which high (vs. low) communal nostalgia products were rated as providing a sense of stability was significantly greater when participants were exposed to system threat ( $M_{\text{high}}=5.55$  vs.  $M_{\text{low}}=4.13$ ,  $t(272)=5.72$ ,  $p<.001$ ,  $d=0.69$ ) versus system affirmation ( $M_{\text{high}}=4.99$  vs.  $M_{\text{low}}=4.32$ ,  $t(255)=2.42$ ,  $p=.016$ ,  $d=0.30$ ).

The effect of system threat on perceived stability of retro products did not interact with age ( $p=.17$ ), political ideology ( $p=.34$ ), or gender ( $p=.98$ ). However, religiosity significantly interacted with the system threat manipulation ( $p=.006$ ).

### ***Mediation Analysis***

To test for mediation, we used PROCESS macro (Model 7; Hayes, 2013) with 10,000 bootstrap samples to estimate a moderated mediation model with product type as the independent variable (0=*low communal nostalgia*, 1=*high communal nostalgia*), perceived stability index as the mediator, expected enjoyment index as the dependent variable, and system threat as the moderator (0=*system affirmation*, 1=*system threat*). The results indicated significant moderated mediation (index of moderated mediation =.40, 95% CI=.005 to .81). Expected enjoyment was significantly mediated by perceived stability in the system threat condition ( $B=0.77$ , 95% CI=.50 to 1.06), and to a significantly lesser extent, in the system affirmation condition ( $B=0.37$ , 95% CI=0.07 to 0.67).

## **General Discussion**

Across three experiments, we find that one reason why consumers may be drawn to communal nostalgia is that those products can provide a sense of stability when the broader social system is threatened. Furthermore, we distinguish this mechanism from personal nostalgia. We find, for example, that the effect of system justification on the enjoyment of retro products is actually more pronounced among consumers who are not personally nostalgic about the product

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

(Study 1), and that age does not moderate the effect of system justification (all studies). Importantly, we provide direct evidence that the perceived stability of products explains the increased preference for those retro products under system threat (Study 3).

Beyond establishing the causal link between system justifying motives and preferences for retro products, we also contribute to the literature by differentiating the antecedents of communal nostalgia from those of personal nostalgia (also see Appendix E, where we report an additional study that compares the effect of system threat versus an established antecedent of personal nostalgia). Specifically, while past work has shown that threats to one's personal identity enhance personal nostalgia (Routledge et al., 2008), the present studies demonstrate how threats to one's collective identity may enhance communal nostalgia.

The relationship between societal threats and nostalgia has been discussed in previous research (Davis, 1979). However, the current research extends the previous theorizing in three important respects. First, our work uses experimental methods to demonstrate a causal effect of perceived social instability on nostalgia. Second, we establish that such societal threats do not enhance all forms of nostalgia equally. We show that under system threat, consumers show a greater preference for only those retro products that have high cultural associations. Finally, we identify the underlying psychology and show that the ability of certain retro products to provide a sense of stability and permanence mediates the effect of system threats on communal nostalgia.

Our research directs attention to an interesting question for future research, which concerns exploring moderators of the effect of system threat on communal nostalgia. For example, in Study 3, we found that religiosity significantly interacted with the effect of system threat on expected enjoyment of retro products, such that the effect of system threat was stronger for religious individuals. This result is consistent with research that found religiosity as strongly associated with

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

endorsement of current social institutions (Jost et al., 2014). Analogously, another variable that is positively associated with system justifying tendency is political conservatism (Napier & Jost, 2008). Future research may endeavor to explore individual difference measures such as religiosity and political ideology as potential moderators of communal nostalgia.

Additionally, future research could explore how different types of retrospective consumption may interact with one another. For example, products may be old (vintage), may be new but use outdated technologies, or may only appear “retro”; additionally, consumers themselves may have personal associations, communal associations, or both, with those products. Our work importantly demonstrates that with respect to communal and personal nostalgia per se, different psychological forces are at work. Future research could create a more structured taxonomy of how different forms of nostalgia are psychologically similar and distinct.

In terms of practical implications, the present studies suggest several marketing strategies. One approach may be for marketers to directly frame retro products as stable and unchanging. For instance, a company could frame a stovetop kettle as having “transcended time and endured changes in society,” making stability a salient attribute. Additionally, by understanding the distinct antecedents of communal nostalgia and personal nostalgia, marketers could more accurately understand the symbolic value of their products. For example, marketers could discern whether the majority of their target audience has personal experience with the product or not (personal nostalgia) and assess the extent to which their product is seen as associated with the communal past. If products are seen as personally nostalgic by most consumers, marketers may benefit from messages that emphasize social bonds, empathy, and self-concepts. If products are seen as communally nostalgic, marketing messages that emphasize the immutability of those products may be more successful.

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

In sum, the current studies find that consumers may be drawn to communally-nostalgic products when they feel that their broader social system is threatened. Our research demonstrates the causal link between system justification and communal nostalgia and thereby contributes to a more fine-grained understanding of the psychological motivations and values underlying various forms of retrospective preferences and nostalgia.

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

## References

- Baker, S. M., & Kennedy, P. F. (1994). Death by nostalgia: A diagnosis of context-specific cases. *ACR North American Advances*.
- Baldwin, M., White, M. H., & Sullivan, D. (2018). Nostalgia for America's past can buffer collective guilt. *European journal of social psychology*, 48, 433-446.
- Brescoll, V. L., Uhlmann, E. L., & Newman, G. E. (2013). The effects of system-justifying motives on endorsement of essentialist explanations for gender differences. *Journal of Personality and Social Psychology*, 105(6), 891-908.
- Cutright, K. M. (2011). The beauty of boundaries: When and why we seek structure in consumption. *Journal of Consumer Research*, 38(5), 775-790.
- Cutright, K. M., Wu, E. C., Banfield, J. C., Kay, A. C., & Fitzsimons, G. J. (2011). When your world must be defended: Choosing products to justify the system. *Journal of Consumer Research*, 38(1), 62-77.
- Davis, F. (1979). *Yearning for yesterday: A sociology of nostalgia*: Free Press.
- Dimitriadou, M., Maciejovsky, B., Wildschut, T., & Sedikides, C. (2019). Collective nostalgia and domestic country bias. *Journal of experimental psychology: applied*, 25, 445.
- Frank, N., & Hesse, H. (2009). *Financial spillovers to emerging markets during the global financial crisis*: International Monetary Fund.
- Hayes, A. F. (2013). Model templates for PROCESS for SPSS and SAS. In.
- Holbrook, M. B., & Schindler, R. M. (2003). Nostalgic bonding: Exploring the role of nostalgia in the consumption experience. *Journal of Consumer Behaviour: An International Research Review*, 3(2), 107-127.

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

- Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology, 33*(1), 1-27.
- Jost, J. T., Hawkins, C. B., Nosek, B. A., Hennes, E. P., Stern, C., Gosling, S. D., & Graham, J. (2014). Belief in a just God (and a just society): A system justification perspective on religious ideology. *Journal of Theoretical and Philosophical Psychology, 34*, 56.
- Judd, C. M., Westfall, J., & Kenny, D. A. (2012). Treating stimuli as a random factor in social psychology: A new and comprehensive solution to a pervasive but largely ignored problem. *Journal of Personality and Social Psychology, 103*(1), 54.
- Juhl, J., Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2010). Fighting the future with the past: Nostalgia buffers existential threat. *Journal of Research in Personality, 44*(3), 309-314.
- Kay, A. C., Jost, J. T., & Young, S. (2005). Victim derogation and victim enhancement as alternate routes to system justification. *Psychological Science, 16*(3), 240-246.
- Lau, G. P., Kay, A. C., & Spencer, S. J. (2008). Loving those who justify inequality: The effects of system threat on attraction to women who embody benevolent sexist ideals. *Psychological Science*.
- Loveland, K. E., Smeesters, D., & Mandel, N. (2010). Still preoccupied with 1995: The need to belong and preference for nostalgic products. *Journal of Consumer Research, 37*(3), 393-408.
- Marchegiani, C., & Phau, I. (2013). Development and validation of the personal nostalgia scale. *Journal of Marketing Communications, 19*(1), 22-43.



## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

- Muehling, D. D., & Pascal, V. J. (2011). An empirical investigation of the differential effects of personal, historical, and non-nostalgic advertising on consumer responses. *Journal of Advertising, 40*(2), 107-122.
- Napier, J. L., & Jost, J. T. (2008). Why are conservatives happier than liberals? *Psychological Science, 19*, 565-572.
- Recording Industry Association of America (2018). *RIAA 2018 Year-end Music Industry Revenue Report*. Retrieved from <http://www.riaa.com/wp-content/uploads/2019/02/RIAA-2018-Year-End-Music-Industry-Revenue-Report.pdf>
- Ringgen, J. (2015). Digital May Dominate Music Consumption, But Majority of Vinyl Buyers Are 35 and Under. *Billboard*. Retrieved from <https://www.billboard.com/articles/business/6494974/digital-dominate-vinyl-buyers-are-35-under>
- Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2008). A blast from the past: The terror management function of nostalgia. *Journal of Experimental Social Psychology, 44*(1), 132-140.
- Routledge, C., Arndt, J., Wildschut, T., Sedikides, C., Hart, C. M., Juhl, J., . . . Schlotz, W. (2011). The past makes the present meaningful: Nostalgia as an existential resource. *Journal of Personality and Social Psychology, 101*(3), 638.
- Routledge, C., Wildschut, T., Sedikides, C., Juhl, J., & Arndt, J. (2012). The power of the past: Nostalgia as a meaning-making resource. *Memory, 20*(5), 452-460.
- Sedikides, C., Wildschut, T., Routledge, C., & Arndt, J. (2015). Nostalgia counteracts self-discontinuity and restores self-continuity. *European Journal of Social Psychology, 45*(1), 52-61.

## CONSUMER MOTIVATIONS FOR COMMUNAL NOSTALGIA

Sotola, L. (2016). The Effects of System Justification and Reminders of Ingroup Disadvantage on Just World Beliefs.

Vess, M., Arndt, J., Routledge, C., Sedikides, C., & Wildschut, T. (2012). Nostalgia as a resource for the self. *Self and Identity, 11*(3), 273-284.

Westfall, J., Kenny, D. A., & Judd, C. M. (2014). Statistical power and optimal design in experiments in which samples of participants respond to samples of stimuli. *Journal of Experimental Psychology: General, 143*(5), 2020.

Wildschut, T., Bruder, M., Robertson, S., van Tilburg, W. A., & Sedikides, C. (2014). Collective nostalgia: A group-level emotion that confers unique benefits on the group. *Journal of Personality and Social Psychology, 107*, 844.

Wildschut, T., Sedikides, C., Arndt, J., & Routledge, C. (2006). Nostalgia: content, triggers, functions. *Journal of Personality and Social Psychology, 91*(5), 975-993.

Wildschut, T., Sedikides, C., Routledge, C., Arndt, J., & Cordaro, F. (2010). Nostalgia as a repository of social connectedness: the role of attachment-related avoidance. *Journal of Personality and Social Psychology, 98*(4), 573.

Zhou, X., Sedikides, C., Wildschut, T., & Gao, D.G. (2008). Counteracting loneliness: On the restorative function of nostalgia. *Psychological Science, 19*(10), 1023-1029.

## **APPENDIX A: Experimental manipulation pretest (Study 1 and 3)**

The manipulation of system threat (vs. affirmation) was taken directly from previous research (Cutright et al. 2011; Kay et al. 2005; Lau et al. 2008). To ensure successful manipulation of system threat (vs. affirmation) used in Study 1 and Study 3, we conducted a pretest with 300 participants ( $M_{age}=36.9$ , 40.3% female), who were recruited from Amazon's Mechanical Turk.

Participants were told that they will complete two different surveys. As part of the first survey, participants were informed that they will read an excerpt from a newspaper and will be given a memory quiz about the article. Participants in the system threat condition read the following paragraph, which was introduced as a news article written by a British journalist following his trip to the United States.

In the past, American society has been held up across the world as an example to follow. For instance, its democratic system of government and ideal of “life, liberty and the pursuit of happiness” for all were touted as gold standards for the world's nations to strive for, and both the American government and the American people were admired by all for actively upholding values of kindness, tolerance and harmony between groups and between individuals.

However, the past few decades have seen objective deterioration of the quality of American life and standards of living, and in the face of internal and international strife, those values which were once seen as quintessentially American have gradually been replaced by more selfish and narrow-minded attitudes.

In recent years, the global community has begun to recognize that their positive view of America has more basis in the past than in current reality, and has increasingly tended towards more negative appraisals of America.

Participants in the system affirmation condition read the same instruction and read the following article:

In the past, American society has been held up across the world as an example to follow. For instance, its democratic system of government and ideal of “life, liberty and the pursuit of happiness” for all have been touted as gold standards for the world's nations to

strive for, and both the American government and the American people have been admired by all for actively upholding values of kindness, tolerance and harmony between groups and between individuals.

Perhaps the most remarkable feature of American society, however, has been its steadfastness in the face of external forces contrary to it. The quality of American life and standards of living have improved in each of the past few decades, and even in the face of increased internal and international strife, those quintessentially American values have continued to be defended by American citizens and officials, at home and abroad.

In recent years, the global community has begun to recognize that their positive view of America warrants active efforts to encourage other nations to emulate its successful sides.

Following the protocol from previous research (cf. Brescoll et al., 2013; Sotola, 2016), participants completed two manipulation check questions that appeared as a “memory quiz.” See MDA page 11 for the exact wordings of these questions.

On the next page, participants were directed to “Survey 2,” where they were asked to answer a set of questions based on their personal beliefs. Participants completed the 8-item system confidence index, which was taken from previous research (Kay & Jost, 2003). See MDA page 12 for the exact wording of these items. The eight system confidence items formed a reliable system confidence index ( $\alpha=.92$ ).

Two participants (1%) who failed any of the manipulation check questions were excluded from this analysis, leaving us with 298 participants. We observed a main effect of the threat manipulation on system confidence such that participants in the system affirmation condition reported greater system confidence ( $M_{affirmation}=4.96$ ,  $SD=1.92$ ) than those in the system threat condition ( $M_{threat}=4.43$ ,  $SD=1.83$ ),  $F(1,296)=5.75$ ,  $p=.017$ ,  $\eta^2=.02$ .

## APPENDIX B: Experimental manipulation pretest (Study 2)

To ensure robustness of the system threat manipulation, Study 2 employed modified stimuli to manipulate system threat (vs. affirmation). To ensure successful manipulation of the new stimuli used in Study 2, we conducted a pretest with 328 participants ( $M_{\text{age}}=39.1$ , 46.7% female) recruited from Amazon's Mechanical Turk.

Participants were told that they will complete two different surveys. As part of the first survey, participants were informed that they will read an excerpt from a British newspaper and will be given a memory quiz about the article. Participants were randomly assigned to either system threat or system affirmation condition. See below for stimuli used in two conditions:

(a) System threat condition



(b) System affirmation condition



As a manipulation check, after reading the assigned paragraph, participants were asked to recall, based on the excerpt, how Americans feel about the current condition of the United States and how the nation was doing in comparison to other countries (see MDA page 14 for exact wordings). Then, participants completed the same system confidence index as the Study 1 system threat manipulation pretest. The eight system confidence items formed a reliable system confidence index ( $\alpha=.91$ ).

Nine participants (2.7%) who failed any of the manipulation check questions were excluded from this analysis. As expected, we found that the system threat article significantly lowered people's system confidence in comparison to the system affirmation article ( $M_{affirmation}=5.11$  vs.  $M_{threat}=4.64$ );  $F(1,317)=6.11$ ,  $p=.014$ ,  $\eta^2=.02$ .

## APPENDIX C: Stimuli Pretest for Study 3

### Stimuli Pretest 1

We compiled a set of ten retro products and conducted a pretest to understand which of those products are seen as communally nostalgic. These included a rotary phone, typewriter, a record player, a polaroid camera, a VHS player, a film camera, a portable cassette tape player, a portable CD player, a flip phone, and an answering machine. We recruited an independent group of 100 U.S. participants from Amazon's Mechanical Turk (52.0% female). The sample ranged in age from 19 to 70 ( $M_{age}=39.8$ ,  $SD=11.72$ ).

Participants rated the extent to which they perceived each of the ten retro products as communally nostalgic. All products were presented in randomized order, each on a separate page. Specifically, participants were asked: to what extent do you associate the following product with America's collective identity and past? (1=Not at all, 9=Very much so). For each product, participants were also given an option to indicate "I am not familiar with this product." The table below summarizes the mean values for all ten products.

Table 1.  
Ratings of communal nostalgia perception for each product

Product	Mean	SD
<b>Rotary phone</b>	7.56	1.85
<b>Typewriter</b>	7.30	1.88
<b>Record player</b>	7.06	2.01
Polaroid camera	7.01	1.85
VHS player	6.89	2.02
Film camera	6.78	2.14
Portable Cassette tape player	6.58	2.12
<b>Portable CD player</b>	6.48	2.13
<b>Flip phone</b>	6.24	2.50
<b>Answering machine</b>	6.04	2.27

Based on these results, we categorized the three highest-rated products (rotary phone, typewriter, record player) as high communal nostalgia products and the three lowest-rated products (portable CD player, flip phone, answering machine) as low communal nostalgia products.

### **Stimuli Pretest 2**

We conducted an additional pretest to ensure that the “high communal nostalgia” products were indeed rated as significantly higher on communal nostalgia than the “low communal nostalgia” retro products. We recruited an independent group of 100 U.S. participants from Amazon’s Mechanical Turk (52.0% female). The sample ranged in age from 23 to 68 ( $M_{age}=39.2$ ,  $SD=11.20$ ). Participants were randomly assigned to rate either the three “high communal nostalgia” products or three “low communal nostalgia” products identified in the first pretest. All products were presented in randomized order, each on a separate page. For each product, participants rated the extent to which they associated it with America’s collective identity and past (1=Not at all, 9=Very much so). For each product, participants were also given an option to indicate “I am not familiar with this product.” We found that the mean rating of the high communal nostalgia products was higher ( $\alpha=.70$ ;  $M=7.50$ ,  $SD=1.31$ ) than that of the low communal nostalgia products ( $\alpha=.93$ ;  $M=6.56$ ,  $SD=2.06$ );  $t(98)=2.74$ ,  $p=.007$ ,  $\eta_p^2=.071$ .



**APPENDIX D: Main analyses (all studies) after controlling  
for age, gender, religiosity, and political affiliation**

**Study 1**

Nine participants who failed at least one of the manipulation check questions and eight participants who did not provide at least one of the demographic information were excluded from the analyses, leaving 378 participants. However, the pattern of results was the same when these participants were included.

***Hedonic experience***

The hedonic experience items formed a reliable index ( $\alpha=.82$ ). As predicted, participants in the system threat condition enjoyed listening to the vinyl record more than participants in the system affirmation condition ( $M_{threat}=7.66$  vs.  $M_{affirmation}=7.37$ ),  $F(1,372)=4.80$ ,  $p=.029$ ,  $\eta_p^2=.013$ . All covariates did not have significant effects on hedonic experience: age ( $p=.26$ ), gender ( $p=.20$ ), political ideology ( $p=.64$ ), or religiosity ( $p=.09$ ).

***Purchase intention***

The purchase intention measures also formed a reliable index ( $\alpha=.92$ ). As predicted, participants in the system threat condition said they were more interested in purchasing a record player than participants in the system affirmation condition ( $M_{threat}=5.65$  vs.  $M_{affirmation}=5.16$ );  $F(1,372)=4.96$ ,  $p=.026$ ,  $\eta_p^2=.013$ . While gender did not significantly affect purchase intention ( $p=.32$ ), age ( $p=.03$ ,  $\eta_p^2=.013$ ), political ideology ( $p=.03$ ,  $\eta_p^2=.013$ ), and religiosity ( $p=.02$ ,  $\eta_p^2=.016$ ) had significant effects.

***Personal Nostalgia Present versus Absent***

To analyze how these groups differed in their response to the manipulation of system threat (affirmation), we conducted a two-way ANCOVA with hedonic experience as the

dependent variable, threat (vs. affirmation) and communal nostalgia (vs. personal nostalgia) as independent factors, and age, gender, religiosity, and political affiliation as covariates. All covariates did not have significant effects on hedonic experience: age ( $p=.90$ ), gender ( $p=.20$ ), political ideology ( $p=.72$ ), or religiosity ( $p=.08$ ). Although the interaction between threat and nostalgia type did not reach statistical significance ( $F(1,370)=1.74, p=.19, \eta_p^2=0.01$ ), we did find differential effects of system threat on participants who lacked personal nostalgia toward vinyl versus those who reported some degree of personal nostalgia. Indeed, the effect of system threat (affirmation) on hedonic experience was driven by participants who were not personally nostalgic toward vinyl records. These participants showed a pronounced effect of system threat (affirmation) on their reported experience ( $M_{threat}=7.62$  vs.  $M_{affirmation}=7.19$ ),  $F(1,239)=5.59, p=.019, \eta_p^2=.023$ . However, participants who were also personally nostalgic toward vinyl records were not affected by the system threat manipulation and appeared to be at “ceiling,” reporting the maximum level of enjoyment in both conditions ( $M_{threat}=7.75$  vs.  $M_{affirmation}=7.68$ ),  $F(1,127)=0.19, p=.67$ .

Analogously, the effect of system threat on purchase interest was driven by the participants who did *not* associate vinyl records with their own past (although this effect did not reach statistical significance):  $M_{threat}=5.18$  vs.  $M_{affirmation}=4.68$ ;  $F(1,239)=3.03, p=.083, \eta_p^2=.013$ .

Personally nostalgic participants were also at ceiling for their reported purchase intentions:  $M_{threat}=6.56$  vs.  $M_{affirmation}=6.02$ ;  $F(1,127)=2.59, p=.11$ .

## Study 2

Six participants (1.5%) who failed any of the manipulation check questions were excluded from the analysis, leaving 397 participants. However, the pattern of results was the same when these participants were included.

We conducted a linear mixed-model analysis with system threat as a between-subjects factor, eight product ratings as a within-subjects factor, and participants and stimuli as random factors.

We also included religiosity, age, gender and political affiliation as covariates.

We found that participants in the system threat condition preferred the retro products significantly more than the participants in the system affirmation condition ( $M_{threat}=3.94$  vs.  $M_{affirmation}=3.59$ ),  $B=-0.34$ ,  $SE=.14$ ,  $p=.018$ , 95% CI = -.62 to -.06. All covariates did not have significant effects on expected enjoyment: age ( $p=.94$ ), gender ( $p=.75$ ), political ideology ( $p=.62$ ), or religiosity ( $p=.98$ ).

### **Study 3**

Seventy-one participants (12%) who failed any of the manipulation check questions were excluded from the analyses, leaving a total of 531 participants. However, the pattern of results was the same when these participants were included.

#### ***Expected Enjoyment***

We conducted a 2(system threat vs. system affirmation) X 2(high vs. low communal nostalgia) ANCOVA on the measure of expected enjoyment with system threat and product type as two factors, and age, gender, religiosity, and political affiliation as covariates. All covariates did not have significant effects on expected enjoyment: age ( $p=.72$ ), gender ( $p=.29$ ), political ideology ( $p=.57$ ), or religiosity ( $p=.13$ ). We found no main effect of system threat,  $F(1,523)=0.002$ ,  $p=.97$ . There was a significant effect of product type, such that participants expected to enjoy using the high communal nostalgia products significantly more than the low communal nostalgia products ( $M_{high}=4.54$  vs.  $M_{low}=3.13$ ),  $F(1,523)=73.99$ ,  $p<.001$ ,  $\eta_p^2=.12$ . Importantly, however, the magnitude of this effect varied depending on whether participants were exposed to the system threat or affirmation manipulation,  $F(1,523)=6.71$ ,  $p=.010$ ,  $\eta_p^2=.013$ . Indeed, the preference for the

high (vs. low) communal products was larger when participants were exposed to system threat ( $M_{\text{high}}=4.76$  vs.  $M_{\text{low}}=2.93$ ,  $F(1,268)=68.36$ ,  $p<.001$ ,  $\eta_p^2=.20$ ) versus the system affirmation manipulation ( $M_{\text{low}}=3.36$  vs.  $M_{\text{high}}=4.33$ ,  $F(1,251)=16.60$ ,  $p<.001$ ,  $\eta_p^2=.062$ ).

### ***Perceived Stability and Permanence***

We conducted an analogous two-way ANCOVA on the stability scores. We found no significant effects of age ( $p=.91$ ), gender ( $p=.07$ ), or religiosity ( $p=.10$ ) on perceived stability; however, there was a significant effect of political ideology ( $p=.03$ ,  $\eta_p^2=.009$ ). Overall, participants responded that the high communal nostalgia products provided a greater sense of stability than the low communal nostalgia products ( $M_{\text{high}}=5.27$  vs.  $M_{\text{low}}=4.22$ );  $F(1,523)=33.15$ ,  $p<.001$ ,  $\eta_p^2=.060$ . However, the magnitude of this effect also significantly varied depending on whether participants were exposed to the system threat or affirmation manipulation,  $F(1,523)=3.92$ ,  $p=.048$ ,  $\eta_p^2=.007$ . Indeed, the extent to which high (vs. low) communal nostalgia products were rated as providing a significantly greater sense of stability was larger when participants were exposed to system threat ( $M_{\text{high}}=5.55$  vs.  $M_{\text{low}}=4.13$ ,  $F(1,268)=35.42$ ,  $p<.001$ ,  $\eta_p^2=.12$ ) versus the system affirmation manipulation ( $M_{\text{high}}=4.99$  vs.  $M_{\text{low}}=4.32$ ,  $F(1,251)=6.39$ ,  $p=.012$ ,  $\eta_p^2=.025$ ).

### ***Mediation Analysis***

To test for mediation, we used the Hayes macro (Model 7) with 10,000 bootstrap samples to estimate a moderated mediation model with product type as the independent variable (0=*low communal nostalgia*, 1=*high communal nostalgia*), perceived stability index as the mediator, expected enjoyment index as the dependent variable, and system threat as the moderator (0=*system affirmation*, 1=*system threat*). We also included age, gender, religiosity, and political affiliation as covariates. All covariates did not have significant effects: age ( $p=.72$ ), gender ( $p=.97$ ), political

ideology ( $p=.31$ ), or religiosity ( $p=.52$ ). The results indicated significant moderated mediation (index of moderated mediation  $=.40$ ,  $SE=.20$ , 95%  $CI=.003$  to  $.81$ ). Expected enjoyment was significantly mediated by perceived stability in the system threat condition ( $B=0.78$ , 95%  $CI=.51$  to  $1.08$ ), and to a significantly lesser extent, in the system affirmation condition ( $B=0.38$ , 95%  $CI=0.08$  to  $0.69$ ).

## **APPENDIX E: Additional study conducted**

We conducted an additional study to further support our proposal that communal nostalgia and personal nostalgia are indeed distinct phenomena with distinct antecedents. In this study, we directly compare the effect of system threat versus mortality threat, which is an established antecedent of personal nostalgia (Juhl et al., 2010). We show that only system threat can increase preference for a communally nostalgic experience.

### **Methods**

#### ***Participants and Design***

Four hundred participants were recruited on Amazon's Mechanical Turk (44 % female). The sample ranged in age from 18 to 70 ( $M_{\text{age}}=36.80$ ,  $SD=10.98$ ). A power analysis indicated that this study had enough statistical power to detect a medium-size effect (power of .99 for  $f=.25$ ). We employed a mixed model design in which participants were randomly assigned to one of four conditions in a 4 (system threat, system affirmation, mortality threat, and control) between-subjects x 2 (MP3 vs. vinyl record) within-subjects design.

#### ***Threat Manipulations***

Participants in the system threat and system affirmation conditions were exposed to the same manipulations and manipulation check questions as Study 1. Participants in the mortality threat condition wrote about their own death (taken from Sarial-Abi et al., 2017). Participants in the control condition wrote about dental pain (taken from Sarial-Abi et al., 2017).

#### ***Expected Hedonic Experience***

All participants were asked to imagine listening to *All You Need is Love* by the Beatles. Participants then rated the extent to which they would enjoy listening to an MP3 recording of the

song versus a vinyl recording of the song, using nine-point scales (1 = *Not at all*, 9 = *Very much so*). The order in which they rated their experience with MP3 and the record player was randomized.

### ***Demographics***

Participants answered religiosity and political affiliation questions, as well as basic demographic questions, including age and gender.

### **Results and Discussion**

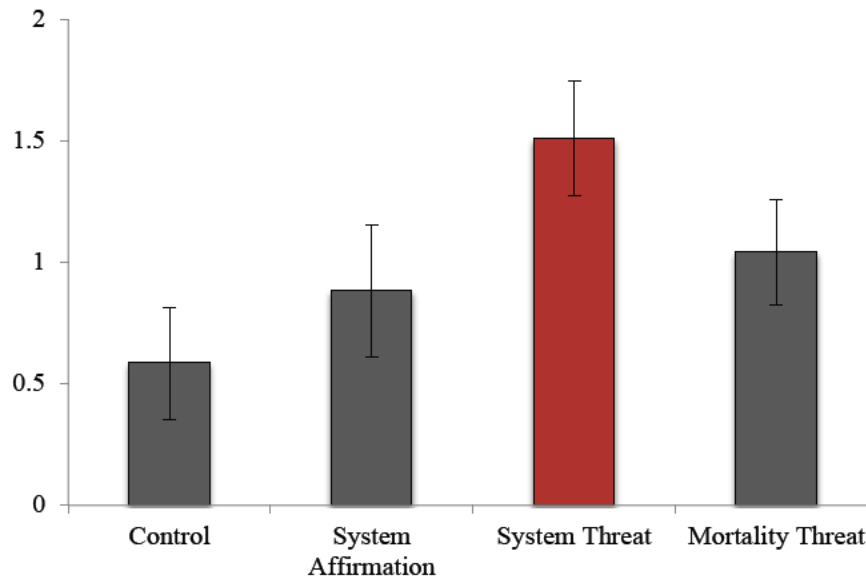
Thirty-one participants (8%) who failed any of the manipulation check questions were excluded from the analyses, leaving 369 participants. The results, however, were the same when those participants were included.

### ***Expected Hedonic Experience***

We conducted a repeated-measures ANOVA with the two music formats (vinyl record vs. MP3) as a within-subjects factor and condition as a between-subjects factor. We observed a significant interaction between the type of threat manipulation and the music format,  $F(3,365) = 2.76, p = .042, \eta^2 = .02$ . That is, while participants in all four conditions expected the experience with the record player to be more enjoyable than the experience with the MP3 recording ( $F(1,365) = 70.19, p < .001, \eta^2 = .16$ ), the extent to which participants expected the vinyl record experience to be better differed across the various threat conditions. Thus, we computed a difference score by subtracting the expected enjoyment for the MP3 from that of the record player. A one-way ANOVA indicated that, compared to participants in the other three conditions, participants in the system threat condition ( $M_{threat} = 1.51, SD = 2.27$ ) expected the vinyl record experience to be better than the MP3 experience by a more considerable margin,  $t(365) = 2.44, p = .015$  (see the figure below).

**Figure 1**

*Relative Enjoyment of Listening to the Vinyl Record (vs. MP3) by Conditions*



### *Demographics*

The effect of system threat on relative preference for record player did not interact with age ( $p = .80$ ), gender ( $p = .74$ ), religiosity ( $p = .26$ ), or political ideology ( $p = .46$ ).

In this study, we found that the manipulations that have previously been shown to affect personal nostalgia have a weaker effect on preference for retro products compared to system justification. By empirically differentiating communal nostalgia from personal nostalgia, this study implies that communal nostalgia and personal nostalgia may arise from distinct psychological processes.



## APPENDIX F: Exclusion rate and post hoc power analysis in each study

	Participant pool	Manipulation of system threat	Date of data collection
Study 1	University Laboratory	Established manipulation of system threat from Cutright et al., 2011	Feb, 2019
Study 2	Amazon's Mechanical Turk	A modified version of the manipulation used in studies 1 and 3	Oct, 2017
Study 3	Amazon's Mechanical Turk	Established manipulation of system threat from Cutright et al., 2011	Oct, 2020

### Study 1

We recruited 395 participants in a university lab. The sample was mostly female (70%) and ranged in age from 18 to 65 ( $M_{age}=37.2$ ). A post hoc power analysis using the G\*Power (Faul et al., 2007) indicated that the study had enough statistical power to detect a medium-size effect (power above .99 for  $f=.25$ ).

In Study 1, exclusion rate did not vary by condition ( $\chi^2 = .18, p = .67$ ):

	System Threat	System Affirmation	Overall
Excluded	5	4	9
Total	192	203	395

### Study 2

We recruited a new sample of 403 participants from Amazon's Mechanical Turk ( $M_{age}=37.1$ ; 50% female). A post hoc power analysis using the G\*Power (Faul et al., 2007) indicated that the replication attempt had enough statistical power to detect a medium-size effect (power of .99 for  $f=.25$ ).

In Study 2, exclusion rate did not vary by condition ( $\chi^2 = .63, p = .43$ ):

	System Threat	System Affirmation	Overall
Excluded	2	4	6
Total	199	204	403

### Study 3: Amazon’s Mechanical Turk

We recruited 602 participants on Amazon’s Mechanical Turk (50.1% female). The sample ranged in age from 19 to 77 ( $M_{age}=40.1$ ). A power analysis indicated that this study had enough statistical power to detect a medium-size effect (power of .99 for  $f=.25$ ).

In Study 3, the exclusion rate varied by condition:

	System threat – Low communal nostalgia	System threat – High communal nostalgia	System affirmation – Low communal nostalgia	System affirmation – High Communal nostalgia	Overall
Excluded	11	6	25	29	71
Total	154	137	149	162	602

There was a higher rate of exclusion in two system affirmation conditions than in two system threat conditions ( $\chi^2 = 32.40$ ,  $p < .001$ ). The exclusion criteria as well as the recruiting criteria on Amazon’s Mechanical Turk for studies 2 and 3 was the same. The higher rate of exclusions in Study 3 (vs. other studies in our empirical package) may possibly be attributed to the date of data collection. We collected the Study 3 data in October 2020 in the midst of the COVID-19 pandemic. While participants were specifically instructed to answer the manipulation check questions based on what they read from the article, participants may have had difficult time suspending their belief and indicating the correct answer: “the quality of American life and standards of living have improved.”

### APPENDIX G: Factor analysis results of main dependent measures in Study 1

We conducted a factor analysis (Varimax rotation) of the six dependent measures to identify the latent structure among the dependent variables. This analysis indicated that the items formed two reliable factors with Eigenvalues  $> 1$ , which together accounted for 81% of the variance in scores. The first factor consisted of the three items that measured purchase intention. The second factor consisted of the other three items that measured hedonic experience. Based on this analysis, we averaged the items that loaded onto the first factor to create an index of purchase intention ( $\alpha = .92$ ), and averaged the items that loaded onto the second factor to create an index of hedonic experience ( $\alpha = .82$ ).

#### Rotated Component Matrix

	Component	
	Factor 1	Factor 2
I would consider purchasing a record player.	<b>.93</b>	.21
I think a record player is worth spending money on.	<b>.91</b>	.19
I would like to own a record player.	<b>.86</b>	.27
How much did you enjoy listening to the song on a vinyl record?	.21	<b>.91</b>
How pleasant was it to listen to the song on a vinyl record?	.15	<b>.88</b>
How exciting was it to listen to the song on a vinyl record?	.28	<b>.73</b>

## APPENDIX H: MANOVA and MANCOVA analyses for Study 1

To supplement the analyses reported in Study 1, we conducted a series of multivariate analysis of variance (MANOVA) and multivariate analysis of covariance (MANCOVA).

### MANOVA analysis

Nine participants (2.3%) failed at least one of the manipulation check questions and were excluded from the analyses, leaving 386 participants.

### *Evaluation of Vinyl Records*

We conducted a one-way MANOVA with participants' hedonic experience ratings and purchase intention index as two dependent variables and system threat as an independent variable. Consistent with the results reported in Study 1, participants in the system threat condition had higher evaluation of the vinyl records compared to those in the system affirmation condition,  $F(2,383) = 3.05, p = .049$ ; Wilk's  $\Lambda = 0.98, \eta_p^2 = .02$ . That is, participants in the system threat (versus system affirmation) condition enjoyed listening to the vinyl record more ( $M_{threat}=7.67$  vs.  $M_{affirmation}=7.34$ ) and had a higher interest in purchasing a record player ( $M_{threat}=5.67$  vs.  $M_{affirmation}=5.15$ ).

### *Personal Nostalgia Present vs. Absent*

There were 250 participants ( $M_{age}=24.9$ ; 62% female) who did not associate vinyl records with their own past (personal nostalgia absent) and 136 participants ( $M_{age}=37.2$ ; 70% female) who did (personal nostalgia present). We conducted a two-way MANOVA with participants' hedonic experience ratings and purchase intention index as two dependent variables, and system threat and personal nostalgia (present versus absent) as the independent variables. Although the interaction between threat and personal nostalgia (present vs. absent) did not reach statistical significance ( $F(2,381) = 1.22, p = .30$ ; Wilk's  $\Lambda = 0.99, \eta_p^2 = .01$ ), we did find differential effects of system

threat on participants who lacked personal nostalgia toward vinyl versus those who reported having personal nostalgia with vinyl records.

In fact, the effect of system threat was driven by participants who were not personally nostalgic toward vinyl records. These participants showed a pronounced effect of system threat on their reported enjoyment ( $M_{threat}=7.63$ , vs.  $M_{affirmation}=7.12$ ) and purchase intention ( $M_{threat}=5.21$  vs.  $M_{affirmation}=4.61$ ) ( $F(2,247) = 4.09$ ,  $p = .018$ ; Wilk's  $\Lambda = 0.97$ ,  $\eta_p^2 = .02$ ). However, participants who were personally nostalgic toward vinyl records were not affected by the system threat manipulation, reporting a similar level of enjoyment ( $M_{threat}=7.75$  vs.  $M_{affirmation}=7.71$ ) and purchase intention ( $M_{threat}=6.54$  vs.  $M_{affirmation}=6.11$ ) in both conditions ( $F(2,133) = 0.60$ ,  $p = .55$ ; Wilk's  $\Lambda = 0.99$ ).

### **MANCOVA analysis**

Nine participants (2.3%) failed at least one of the manipulation check questions and were excluded from the analyses, leaving 386 participants.

### ***Evaluation of Vinyl Records***

We conducted a one-way MANCOVA with participants' hedonic experience ratings and purchase intention index as two dependent variables, system threat as an independent variable, and age, gender, religiosity, and political affiliation as covariates. Consistent with the results reported in Study 1, participants in the system threat condition had higher evaluation of the vinyl records compared to those in the system affirmation condition,  $F(2,371) = 3.36$ ,  $p = .036$ ; Wilk's  $\Lambda = 0.98$ ,  $\eta_p^2 = .02$ . That is, participants in the system threat (versus system affirmation) condition enjoyed listening to the vinyl record more ( $M_{threat}=7.66$  vs.  $M_{affirmation}=7.37$ ) and had a higher interest in purchasing a record player ( $M_{threat}=5.65$  vs.  $M_{affirmation}=5.16$ ). Age ( $p=.09$ ), gender ( $p=.09$ ), and political ideology ( $p=.07$ ) did not have significant effect on participant

evaluations. Religiosity, however, had a significant effect,  $F(2, 371) = 3.18, p = .043$ ; Wilk's  $\Lambda = 0.98, \eta_p^2 = .02$ .

### ***Personal Nostalgia Present vs. Absent***

There were 250 participants ( $M_{age}=24.9$ ; 62% female) who did not associate vinyl records with their own past (personal nostalgia absent) and 136 participants ( $M_{age}=37.2$ ; 70% female) who did (personal nostalgia present). We conducted a two-way MANCOVA with participants' hedonic experience ratings and purchase intention index as two dependent variables, system threat and personal nostalgia (present versus absent) as two independent variables, and age, gender, religiosity, and political affiliation as covariates. Although the interaction between threat and personal nostalgia (present vs. absent) did not reach statistical significance ( $F(2,369) = 1.18, p = .31$ ; Wilk's  $\Lambda = 0.99, \eta_p^2 = .01$ ), we did find differential effects of system threat on participants who lacked personal nostalgia toward vinyl versus those who reported having personal nostalgia with vinyl records.

Indeed, the effect of system threat was driven by participants who were not personally nostalgic toward vinyl records. These participants showed a pronounced effect of system threat on their reported enjoyment ( $M_{threat}=7.62$ , vs.  $M_{affirmation}=7.19$ ) and purchase intention ( $M_{threat}=5.18$  vs.  $M_{affirmation}=4.68$ ) ( $F(2,238) = 3.16, p = .044$ ; Wilk's  $\Lambda = 0.97, \eta_p^2 = .03$ ). However, participants who were personally nostalgic toward vinyl records were not affected by the system threat manipulation, reporting a similar level of enjoyment ( $M_{threat}=7.75$  vs.  $M_{affirmation}=7.68$ ) and purchase intention ( $M_{threat}=6.56$  vs.  $M_{affirmation}=6.02$ ) in both conditions ( $F(2,126) = 1.40, p = .25$ ; Wilk's  $\Lambda = 0.98$ ).

## **METHODOLOGICAL DETAIL APPENDIX**

### **Contents**

Study 1 Stimuli and Measures	p. 2
Study 2 Stimuli and Measures	p. 5
Study 3 Stimuli and Measures	p. 9
Study 1 & Study 3 Experimental Manipulation Pretest Stimuli and Measures	p. 11
Study 2 Experimental Manipulation Pretest Stimuli and Measures	p. 13
Study 3 Pretest Stimuli and Measures	p. 16
Appendix E (Additional Study) Stimuli and Measures	p. 18
Descriptive statistics for all studies	p. 20

## Study 1 Stimuli and Measures

2 (System threat vs. System affirmation) between-subjects; Programmed on Qualtrics

### **Introduction (all conditions)**

We are interested in people's experiences in different modalities.

Remember, there are no right or wrong answers, we are just interested in your honest opinion.

[Page Break]

You will read a randomly selected paragraph and complete a memory quiz about it. Then, you will rate your experience with music.

[Page Break]

### **Stimuli (system threat manipulation)**

**The following excerpt is from a British newspaper, written by a British journalist who had recently visited the United States.** Please read the passage as many times as necessary to become familiar with it as you will be given a memory quiz about the article.

#### [System Threat Condition]

In the past, American society has been held up across the world as an example to follow. For instance, its democratic system of government and ideal of "life, liberty and the pursuit of happiness" for all were touted as gold standards for the world's nations to strive for, and both the American government and the American people were admired by all for actively upholding values of kindness, tolerance and harmony between groups and between individuals.

However, the past few decades have seen objective deterioration of the quality of American life and standards of living, and in the face of internal and international strife, those values which were once seen as quintessentially American have gradually been replaced by more selfish and narrow-minded attitudes.

In recent years, the global community has begun to recognize that their positive view of America has more basis in the past than in current reality, and has increasingly tended towards more negative appraisals of America.

#### [System Affirmation Condition]

In the past, American society has been held up across the world as an example to follow. For instance, its democratic system of government and ideal of "life, liberty and the pursuit of happiness" for all have been touted as gold standards for the world's nations to strive for, and both the American government and the American people have been admired by all for actively upholding values of kindness, tolerance and harmony between groups and between individuals.

Perhaps the most remarkable feature of American society, however, has been its steadfastness in the face of external forces contrary to it. The quality of American life and standards of living have improved in each of the past few decades, and even in the face of increased internal and international strife, those quintessentially American values have continued to be defended by American citizens and officials, at home and abroad.

In recent years, the global community has begun to recognize that their positive view of America warrants active efforts to encourage other nations to emulate its successful sides.

[Page Break]

### **Manipulation Check Questions**

#### *Memory Quiz*

According to the article, which statement best describes the quality of American life in the past few decades?

- The quality of American life and standards of living have seen objective deterioration.
- The quality of American life and standards of living have improved.
- The quality of American life and standards of living have stayed the same.



According to the article, the quintessentially American values have...

- Gradually been replaced by more selfish and narrow-minded attitudes.
- Continued to be defended by American citizens at home and abroad.

[Page Break]

**Now, you will listen to *The Only Living Boy in New York* by Simon & Garfunkel.**

We ask that you stay fully engaged in the task and that you refrain from using your phone throughout the survey.

You may change the volume if needed, but please do not touch any other buttons.

[Page Break]

**Please let the RA know that you are ready to listen to the vinyl record.**

Please adjust the volume as needed but please do not touch any other buttons. When the song is finished, use the cue lever to stop the song (the RA will show you how to do this).

When you are done listening to the song, please proceed to the next page.

[Page Break]

**Hedonic Experience (shown in randomized order)**

How much did you enjoy listening to the song on a vinyl record?

1 = Not at all, 9 = Very much so

How exciting was it to listen to the song on a vinyl record?

1 = Not at all excited, 9 = Very excited

How pleasant was it to listen to the song on a vinyl record?

1 = Not at all pleasant, 9 = Very pleasant

[Page Break]

**Purchase Intention (shown in randomized order)**

I would consider purchasing a record player.

I would like to own a record player.

I think a record player is worth spending money on.

1 = Not at all, 9 = Very much so

[Page Break]

Do you associate vinyl records with your personal past?

Yes/ No

[Page Break]

**Demographics**

To what extent do you consider yourself religious?

1 = Not at all religious, 8 = Extremely religious

To what extent do you consider yourself liberal versus conservative?

1 = Liberal, 8 = Conservative

What is your gender?

Please indicate your age:

## Study 2 Stimuli and Measures

2 (System threat vs. System affirmation) between-subjects; Programmed on Qualtrics

### **Introduction**

Thank you for taking this survey!

You will be asked to complete two different tasks in this survey.

The instructions for each task are very different and specific. Please pay close attention.

[Page Break]

### **Stimuli (system threat manipulation)**

#### **Part I.**

The following excerpt is from a British newspaper, written by a British journalist who had recently visited the United States.

Please read the passage as many times as necessary to become familiar with it as you will be given a memory quiz about the article.

[System Threat condition]

The screenshot shows the top portion of a news article on the Guardian website. The header includes the Guardian logo, navigation links for 'US', 'politics', 'world', 'opinion', 'sports', 'soccer', 'tech', 'arts', 'lifestyle', 'fashion', 'business', 'travel', and 'environment', and a 'browse all sections' button. The article title is 'The World Happiness Report is out and the U.S. has fallen!' by Thomas Carr, published on August 3, 2017, at 12:36 p.m. ET. The article text discusses the 2017 World Happiness Report, noting that the U.S. ranked #15 and that happiness levels have declined since 2005. It attributes this to a focus on individual income attainment and a decline in social trust and faith in society. The text concludes by stating that many citizens feel the U.S. has reached a low point in social, economic, and political factors, leading to a willingness to leave the country and immigrate elsewhere.

[System Affirmation condition]



[Page Break]

### **Manipulation Check Questions**

#### *Memory Quiz*

According to the article, how do most Americans feel about the current condition of the United States?

- They feel that the US is safer and more secure relative to the past.
- They feel that the US has stayed the same.
- They feel disappointed with the nation's condition than in the past.

According to the article, Americans feel that, compared to many countries in the world,

- The US is relatively more stable in terms of social, economic and political factors.
- The US is facing worse social, economic and political conditions.

[Page Break]

### **Product Pairs & Measures** (8 product pairs presented in randomized order)

#### **Part II.**

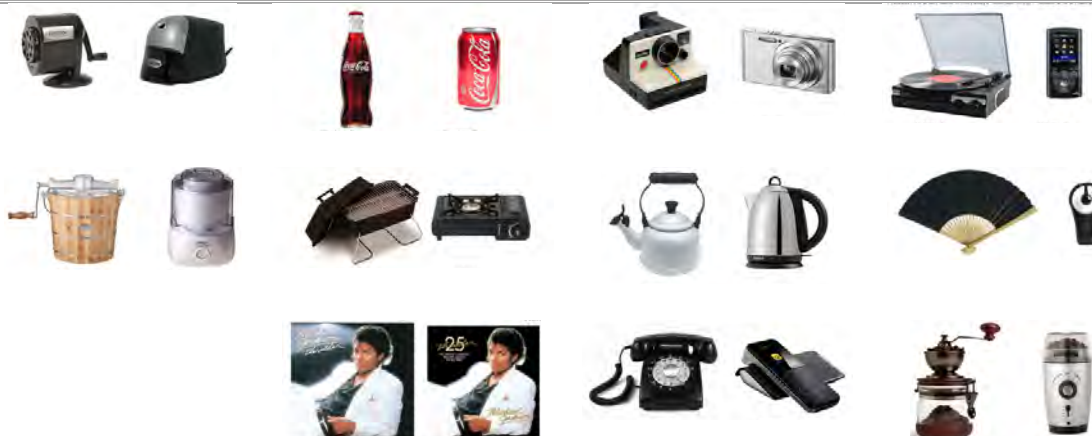
We are interested in your preferences for certain products.

To measure that, we will ask you to **make a series of purchase decisions**. For each pair, you will be asked to **indicate your preference between two paired products**.

Please note that all products shown here are new and were manufactured one month ago.

[Page Break]

**Eight pairs were randomly selected from eleven pairs shown below:**



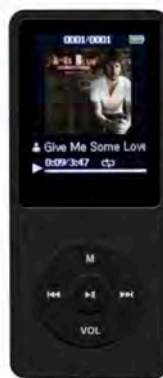
**SAMPLE QUESTION:**

Suppose you were presented with the following **two new music players** which are **both priced at \$72**. Both products were manufactured a month ago.

Product A is a turntable which plays records, while Product B is an MP3 player.



Product A



Product B

If you were given the choice between these two products, which one would you prefer?



[Page Break]

**Demographics**

To what extent do you consider yourself religious?

1 = Not at all religious, 9 = Extremely religious

To what extent do you consider yourself liberal versus conservative?

1 = Liberal, 9 = Conservative

What is your gender?

Please indicate your age:

### **Study 3 Stimuli and Measures**

2 (System threat vs. System affirmation) X 2 (High vs. Low communal nostalgia) between-subjects; Programmed on Qualtrics

#### **Introduction**

Thank you for participating.

Today, you will be asked to complete two different surveys.  
The instructions for each survey are very different and specific. Please pay close attention.

[Page Break]

#### **Survey I. Memory and comprehension**

In this survey, you will read a randomly selected paragraph and complete a memory quiz about it.

[Page Break]

#### **System threat manipulation**

*System Threat vs. System Affirmation manipulation used in Study 1*  
*Manipulation check questions used in Study 1*

[Page Break]

#### **Survey II: Consumer Survey**

In this survey, we are interested in how you think about various products.

[Page Break]

Please rate the extent to which you would enjoy using each of the following products.

#### **Expected Enjoyment (shown in randomized order)**

How much would you enjoy using a [PRODUCT NAME]?  
1 = Not at all, 9 = Very much so

[All products presented in randomized order]

[High Communal Nostalgia Condition]	[Low Communal Nostalgia Condition]
	
	
	

[Page Break]

**Perceived stability and permanence (shown in randomized order)**

Please answer the following questions about **how you would feel using the three products you saw in this survey**.

Using these products would make me feel connected to something timeless.

Using these products would give me a sense of stability and permanence

Using these products would make me feel connected to my culture's past.

1 = Not at all, 9 = Very much so

[Page Break]

**Demographics**

To what extent do you consider yourself religious?

1 = Not at all religious, 9 = Extremely religious

To what extent do you consider yourself liberal versus conservative?

1 = Liberal, 9 = Conservative

What is your gender?

Please indicate your age:



## Study 1 & Study 3 Experimental Manipulation Pretest Stimuli and Measures

2 (System threat vs. System affirmation) between-subjects; Programmed on Qualtrics

### **Introduction (all conditions)**

Today, you will be asked to complete TWO different surveys. Remember, there are no right or wrong answers, we are just interested in your honest opinion.

[Page Break]

Survey 1.

You will read a randomly selected paragraph and complete a memory quiz about it.

[Page Break]

### **Stimuli (system threat manipulation)**

The following excerpt is from a **British newspaper**, written by a **British journalist** who had recently visited the United States. Please read the passage as many times as necessary to become familiar with it as you will be given a memory quiz about the article.

#### [System Threat Condition]

In the past, American society has been held up across the world as an example to follow. For instance, its democratic system of government and ideal of "life, liberty and the pursuit of happiness" for all were touted as gold standards for the world's nations to strive for, and both the American government and the American people were admired by all for actively upholding values of kindness, tolerance and harmony between groups and between individuals.

However, the past few decades have seen objective deterioration of the quality of American life and standards of living, and in the face of internal and international strife, those values which were once seen as quintessentially American have gradually been replaced by more selfish and narrow-minded attitudes.

In recent years, the global community has begun to recognize that their positive view of America has more basis in the past than in current reality, and has increasingly tended towards more negative appraisals of America.

#### [System Affirmation Condition]

In the past, American society has been held up across the world as an example to follow. For instance, its democratic system of government and ideal of "life, liberty and the pursuit of happiness" for all have been touted as gold standards for the world's nations to strive for, and both the American government and the American people have been admired by all for actively upholding values of kindness, tolerance and harmony between groups and between individuals.

Perhaps the most remarkable feature of American society, however, has been its steadfastness in the face of external forces contrary to it. The quality of American life and standards of living have improved in each of the past few decades, and even in the face of increased internal and international strife, those quintessentially American values have continued to be defended by American citizens and officials, at home and abroad.

In recent years, the global community has begun to recognize that their positive view of America warrants active efforts to encourage other nations to emulate its successful sides.

[Page Break]

### **Manipulation Check Questions**

#### *Memory Quiz*

According to the article, which statement best describes the quality of American life in the past few decades?

- The quality of American life and standards of living have seen objective deterioration.
- The quality of American life and standards of living have improved.
- The quality of American life and standards of living have stayed the same.

According to the article, the quintessentially American values have...

- Gradually been replaced by more selfish and narrow-minded attitudes.
- Continued to be defended by American citizens at home and abroad.

[Page Break]

### **Transition**

#### **Survey 2.**

Thank you for participating in our research! In this task, you will be asked to answer a set of questions. We are interested in your personal beliefs.

[Page Break]

### **System Confidence Index (Kay & Jost, 2003)**

Please indicate the degree to which you agree or disagree with the following statements:

- In general, I find society to be fair.
- In general, the American political system operates as it should.
- American society needs to be radically restructured.
- The United States is the best country in the world to live in.
- Most policies serve the greater good.
- Everyone has a fair shot at wealth and happiness.
- Our society is getting worse every year.
- Society is set up so that people usually get what they deserve.

1 = Strongly Disagree, 9 = Strongly Agree

### **Demographics**

What is your gender?

Please indicate your age:

## Study 2 Experimental Manipulation Pretest Stimuli and Measures

2 (System threat vs. System affirmation) between-subjects; Programmed on Qualtrics

### Introduction

Today, you will be asked to complete TWO different surveys. Remember, there are no right or wrong answers, we are just interested in your honest opinion.

[Page Break]

### Stimuli (system threat manipulation)

#### Survey 1.

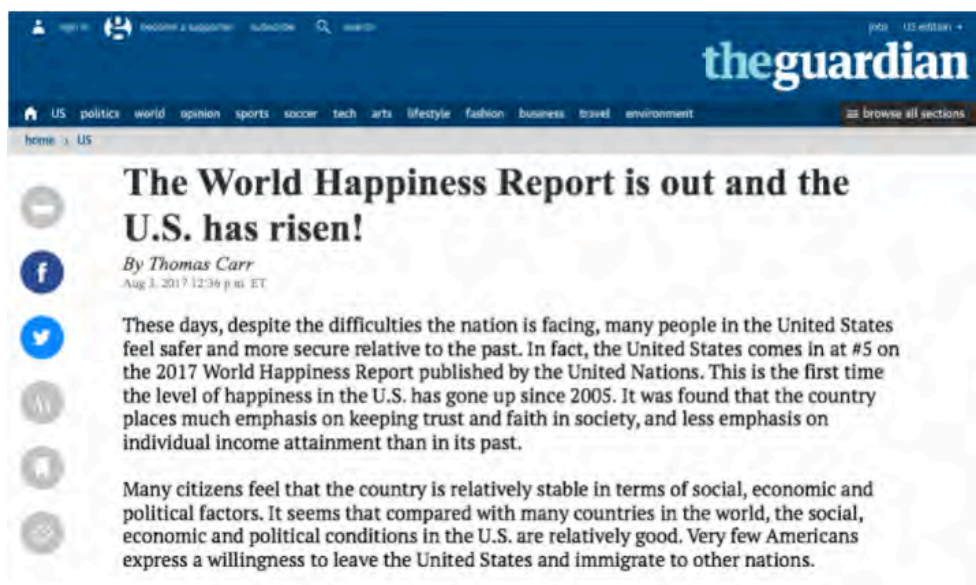
The following excerpt is from a British newspaper, written by a British journalist who had recently visited the United States.

Please read the passage as many times as necessary to become familiar with it as you will be given a memory quiz about the article.

[System Threat condition]



[System Affirmation condition]



[Page Break]

### **Manipulation Check Questions**

#### *Memory Quiz*

According to the article, how do most Americans feel about the current condition of the United States?

- They feel that the US is safer and more secure relative to the past.
- They feel that the US has stayed the same.
- They feel disappointed with the nation's condition than in the past.

According to the article, Americans feel that, compared to many countries in the world,

- The US is relatively more stable in terms of social, economic and political factors.
- The US is facing worse social, economic and political conditions.

[Page Break]

### **Transition** **Survey 2.**

Thank you for participating in our research! In this task, you will be asked to answer a set of questions. We are interested in your personal beliefs.

[Page Break]

**System Confidence Index (Kay & Jost, 2003)**

Please indicate the degree to which you agree or disagree with the following statements:

- In general, I find society to be fair.
- In general, the American political system operates as it should.
- American society needs to be radically restructured.
- The United States is the best country in the world to live in.
- Most policies serve the greater good.
- Everyone has a fair shot at wealth and happiness.
- Our society is getting worse every year.
- Society is set up so that people usually get what they deserve.

1 = Strongly Disagree, 9 = Strongly Agree

**Demographics**

What is your gender?

Please indicate your age:

### Study 3 Pretest Stimuli and Measures

#### Stimuli pretest 1

Programmed on Qualtrics

#### Introduction

We are interested in how you think about various products.

For each product, please indicate the extent to which you associate it with **America's collective identity and past**.

[Page break]

#### Communal Nostalgia Ratings

[Presented in randomized order; each product on a separate page]

To what extent do you associate the following product with **America's collective identity and past**?

1=Not at all, 9=Very much so

(with an option to indicate) I am not familiar with this product



VHS Tape Player



Answering Machine



Portable CD Player



Disposable Film Camera



Flip Phone



Polaroid Camera



Portable Cassette Tape Player



Rotary Telephone



Typewriter



Record Player

[Page break]

#### Demographics

What is your gender?

Please indicate your age:

## Stimuli Pretest 2

2 (High vs. Low communal nostalgia products) between-subjects; Programmed on Qualtrics

### Introduction

We are interested in how you think about various products.

For each product, please indicate the extent to which you associate it with **America's collective identity and past**.

[Page break]

### Communal Nostalgia Ratings

[Presented in randomized order; each product on a separate page]

[Products presented in high communal nostalgia condition]



[Products presented in low communal nostalgia condition]



To what extent do you associate the following product with **America's collective identity and past**?

1=Not at all, 9=Very much so

(with an option to indicate) I am not familiar with this product

[Page break]

### Demographics

What is your gender?

Please indicate your age:



## Appendix E (Additional Study) Stimuli and Measures

4 (System threat vs. System affirmation, mortality threat, control) between-subjects x 2 (LP vs. MP3) within-subjects; Programmed on Qualtrics

### **Introduction (all conditions)**

Today, you will be asked to complete two different surveys.

Remember, there are no right or wrong answers, we are just interested in your honest opinion.

[Page break]

### **Stimuli**

#### ***Survey 1.***

[System threat & System affirmation conditions]

*Same manipulation and manipulation check questions as Study 1*

[Mortality salience condition]

Please complete the following writing task:

Please take a few moments to think about your own death. Then, in the space below, please write a short paragraph about how you feel when you think about your own death AND what would happen to you as you physically died.

[Control condition]

Please take a few moments to think about your dental pain. Then, in the space below, please write a short paragraph about how you feel when you have dental pain AND what would happen to you when you have dental pain.

[Page break]

### **Measures**

#### ***Survey 2.***

Please consider the following scenario:

Imagine that you are at your friend's place. You are trying to play *All You Need is Love* by the Beatles.



You have **two options**.

[the order in which two options were mentioned was randomized]

You could play the MP3 file on your friend's laptop.

Alternatively, you could play the vinyl record on your friend's turntable.



(a) MP3



Love Is All You Need - Beatles

(b) Vinyl record



How much would you enjoy listening to the song on a vinyl record?  
 How much would you enjoy listening to an MP3 recording of the song?  
 1 = Not at all, 9 = Very much so

[Page break]

### Demographics

To what extent do you consider yourself religious?

1 = Not at all religious, 9 = Extremely religious

To what extent do you consider yourself liberal versus conservative?

1 = Liberal, 9 = Conservative

What is your gender?

Please indicate your age:

### Descriptive Statistics for all Studies

#### Sample characteristics for each study.

Study	Initial N	N after Exclusions	Mean (SD) Age	Gender Distribution
1	395	386	37.2 (10.64)	70% female
2	403	397	37.1 (12.63)	50% female
3	602	531	40.1 (12.73)	50% female

#### Cell sizes for each study.

Study	System Affirmation		System Threat	
1	199		187	
2	200		197	
Study	System Affirmation – Low communal nostalgia	System Affirmation – High communal Nostalgia	System Threat – Low communal nostalgia	System Threat – High communal nostalgia
3	124	133	143	131

#### Study 1: Means (standard errors) within each cell for hedonic experience and purchase intention items.

	System Affirmation	System Threat	Total
How much did you enjoy listening to the song?	7.60 (.12)	7.87 (.11)	7.73 (.09)
How exciting was it to listen to the song?	6.61 (.15)	7.09 (.14)	6.84 (.11)
How pleasant was it to listen to the song?	6.90 (.15)	6.52 (.18)	7.92 (.07)
Hedonic Experience Index	7.34 (.11)	7.67 (.10)	7.50 (.08)
I would consider purchasing a record player.	4.84 (.21)	5.47 (.19)	5.15 (.14)
I would like to own a record player.	5.53 (.20)	6.09 (.19)	5.80 (.14)
I think a record player is worth spending money on.	5.09 (.20)	5.44 (.18)	5.26 (.13)
Purchase Intention Index	5.15 (.19)	5.67 (.17)	5.40 (.13)

#### Study 2: Means (standard errors) within each cell for communally nostalgic preferences.

Product Pair	System Affirmation	System Threat	Total
Phone	1.92 (.15)	2.04 (.17)	1.98 (.11)
Pencil sharpener	3.11 (.22)	3.88 (.27)	3.49 (.18)
Ice cream maker	2.84 (.20)	3.03 (.24)	2.92 (.16)
Music player	3.38 (.24)	3.91 (.27)	3.65 (.18)
Coffee grinder	3.16 (.23)	3.49 (.24)	3.33 (.17)
Tea kettle	4.05 (.25)	4.58 (.27)	4.29 (.18)
Grill	4.95 (.25)	5.28 (.26)	5.12 (.18)
Camera	2.88 (.22)	3.08 (.22)	2.98 (.16)
Coca-Cola	5.58 (.25)	5.81 (.27)	5.70 (.19)
Thriller Album	3.10 (.23)	3.45 (.23)	3.27 (.17)
Fan	3.25 (.22)	3.51 (.23)	3.38 (.16)

Study 3: Means (standard errors) within each cell for expected hedonic experience.

Product Type	Products	System Affirmation	System Threat	Total
High communal nostalgia	Rotary phone	3.36 (.21)	3.72 (.21)	3.54 (.15)
	Record player	5.83 (.22)	6.29 (.22)	6.06 (.15)
	Typewriter	3.80 (.22)	4.27 (.23)	4.03 (.16)
Low communal nostalgia	Answering machine	2.95 (.20)	2.41 (.16)	2.66 (.13)
	Portable CD player	3.77 (.23)	3.38 (.21)	3.56 (.15)
	Flip Phone	3.35 (.22)	3.01 (.19)	3.16 (.14)