

# Consuming Experiential Categories

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How do we maximize enjoyment and minimize displeasure over a variety of events? Previous research has discussed how consumers might focus on savoring individual events or distribute appealing and unappealing events across time to maximize happiness. Building on this work, the current research shows that consumers track not just individual events but also “categories” of events. Consequently, a person who visits a modern art gallery, a classic art gallery, the opera, and a symphony concert could either construe these as four distinct experiences or as two categories of experiences (art galleries and musical performances). Consumers seem to naturally consider experiential categories. For positive experiences, consumers are reluctant to choose in a way that eliminates categories, but the opposite is true for negative experiences. People may do this because eliminating categories leads to a greater subjective feeling of making progress in a hedonic experience.

Users of the website BucketList.org have built their community on a straightforward premise. They share lists of their life goals, which range from the simple (“pet a giraffe”) to the impossible (“taste every kind of food”) to the ironic (“don’t use the Internet for a week”). They exchange ideas, offer supportive comments, and hold competitions. Most importantly, they track their progress through their lists. And while the website counts the number of items people cross off, it seems likely that users might measure their progress in more nuanced ways.

For example, imagine a user who decides that her life will not be complete without doing the following: riding an elephant, holding a baby white tiger, visiting Iguazu Falls, and floating in the Dead Sea (to name some of the more popular options on the website). On the one hand, she might see these as a smattering of four independent events. On the other hand, she might place them into two categories: being around animals and seeing bodies of water. The view she adopts will greatly influence her sense of progress. If she sees

the events as independent, then each item she crosses off will move her equally closer to completion. Riding an elephant and then seeing Iguazu will feel the same as riding an elephant and handling a baby white tiger. But if she focuses on the categories, then the latter will move her subjectively closer to completion because it eliminates a whole category of events from her list.

Of course, this is not specific to bucketlists or goals or people who share too much information online. This is a general feature of consumption. In this article, we examine how consumers focus on experiential categories when making decisions. We suggest that people manage the number of categories that are represented in an experience. And they do this because it influences their subjective sense of progress through an experience. When an experience consists of more categories of events, it feels as if less progress has been made. When there are fewer categories, more progress has been made. As a result, consumers are reluctant to eliminate categories of positive experiences (e.g., choosing the last animal-oriented event on one’s bucketlist) but are eager to eliminate categories of negative experiences. Importantly, these categories are often subjective and malleable. So incidental features of the environment might affect how consumers navigate an experience and how satisfied they are with it. This holds for a variety of activities, such as traveling, eating, and reading.

## THEORETICAL BACKGROUND

To appreciate how these hypotheses advance our understanding of consumption, we should first consider existing theories about how consumers can heighten positive (and dampen negative) experiences. Of course, consumers can

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*Mary Frances Luce served as editor and Joel Huber served as associate editor for this article.*

*Electronically published August 7, 2014*

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use a number of hedonic strategies, depending on whether an experience is already happening or has yet to happen. For example, during a consumption experience, people can use different savoring strategies, such as expressing positive emotions and focusing intently on the experience. Or they can dampen negative experiences by distracting themselves from the experience (Quoidbach, Berry, et al. 2010; Quoidbach, Dunn, et al. 2010).

However, our work is less concerned with how people attend to the stimulus properties of an experience. Instead, our theory focuses on how people choose *when* to consume parts of an experience. Previous research on how consumers schedule events shows that they might delay a positive event in order to better savor it and anticipate the enjoyment (Hardisty, Frederick, and Weber 2013; Loewenstein 1987). Likewise, they might hasten the arrival of a negative event to avoid the dread associated with it. When dealing with multiple events, the hedonic editing hypothesis (Thaler 1999; Thaler and Johnson 1990) suggests that consumers can maximize enjoyment (and minimize displeasure) by spreading out good events over time, while clustering negative events together (Cowley 2008; Lehenkari 2009; Lim 2006; Loewenstein and Prelec 1993; Sul, Kim, and Choi 2013; cf. Linville and Fischer 1991).

All of these theories describe how consumers might use “event-level” strategies to prolong their enjoyment of (or abbreviate their aversion to) experiences. That is, consumers focus on the properties of an individual event to determine how they should consume it (but see Linville and Fisher [1991] for an exception). But here we will describe situations where consumers think at the “category level”—considering how a particular event represents a broader class of experiences.

To illustrate the difference between event-level and category-level thinking, consider the bucketlist described above (riding an elephant, holding a tiger, visiting Iguazu, floating in the Dead Sea). A person who considered that list at the event level would only note that there were four events to complete, and all events would seem equally similar to each other. A person who thought about the experience at the category level would recognize that some events are more similar than others or that some events represent the same broad categories of experience, while others represent different categories. This person would notice that her list consisted of two events involving animals and two events involving bodies of water. And she might then think about how to cluster or space out consumption from those categories. That is, she might think less about when to visit Iguazu and more about when to finish all the water-related events on her list.

In fact, there are many reasons to believe that consumers structure experiences at the category level. Even though consumption experiences can be quite varied, people often organize disparate concepts into categories based on personal knowledge or theories about the world (Murphy and Medin 1985). For instance, people spontaneously construct categories of events to achieve goals (e.g., “activities to do

while camping”; Barsalou 1983). This tendency starts at an early age (Lucariello and Nelson 1985), and these ad hoc categories can influence a variety of judgments—from how people think about the sizes of objects (Cech, Shoben, and Love 1990) to how they solve problems (Chrysikou 2006) and how consumers perceive the similarity of different products (Ratneshwar et al. 2001). It therefore seems natural to examine how consumers use categories to impose structure on another fundamental problem (Barsalou and Hutchinson 1987), namely, deriving enjoyment from sequences of events. If people focus on categories in addition to specific events, then the stimulus properties of an event may at times matter less than the way those events are construed. And because categorization is often flexible, experiential categories can introduce unexpected malleability into consumption decisions.

Indeed, people regularly partition and categorize events across a number of judgment and decision making domains. For example, Fox, Ratner, and Lieb (2005) showed that people make choices and allocate resources based on which categories are highlighted. In one study, consumers were presented with a wine menu that was organized either by varietal or by region. When organized by varietal, consumers wanted to try one wine for each grape. When organized by region, consumers wanted to try one wine from each locale. Simply put, consumers did not choose merely based on wine but also based on category. Similar work has shown that probability judgments, frequency estimates, and other numeric judgments can all shift when people think in terms of individual events or broader categories (Fox and Rottenstreich 2003; See, Fox, and Rottenstreich 2006; Shah and O’Keefe 2001).

Clearly, as we try to maximize enjoyment, there are multiple ways to consider experiences before us. We can mark our progress through an experience by considering which individual events have been completed (or are yet to be done). Or we can consider which categories of events have been finished or remain. Just as people would rather enjoy more positive events and endure fewer negative events, we propose that they similarly manage experiential categories. Note that consumers need not explicitly name these categories for themselves; they can simply notice that there are clusters of similar events within an experience. We suggest that people attend to how they eliminate categories (i.e., consume the final event from a class of similar events) and preserve these categories (i.e., avoid consuming the final event). This leads to our first hypothesis:

**H1:** People will eliminate categories quickly when facing negative experiences, but will preserve categories for positive experiences for as long as possible.

Why might consumers manage experiential categories in this way? We believe that this happens because consumers look for signs of how far they have progressed through an experience. Eliminating a category provides a greater subjective

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tive sense of progression. And this is more desirable for negative experiences than for positive experiences.

This prediction draws on several related findings from the literature on goal pursuit (but note that people need not construe consumption experiences as goals). First, when people find it difficult to figure out how close they are to the end of an experience, they look for discrete progress markers to serve as interim landmarks (Amir and Ariely 2008). Perhaps eliminating categories provides interim signs of progress (i.e., completing a large chunk of the experience). Second, people prefer actions that feel proportionally large (Koo and Fishbach 2012). An action that moves you 5% closer to the end feels more significant if there is only 20% remaining instead of 80%. Choosing the final event in a category would therefore feel like it generates more progress.

And finally, this prediction also has some roots in categorization and psychophysics research, which shows that people perceive sizes and quantities to be greater when they span multiple categories (Coren and Girgus 1980; Hirtle and Jonides 1985; Stevens and Coupe 1978). In the current context, it may be the case that when multiple categories lie ahead, people feel that most of the experience remains, and they have made little progress. But when categories are eliminated, this might subjectively shrink what lies ahead and increase the sense of progress.

These bodies of work suggest multiple reasons why eliminating categories might increase the subjective sense of progress through an experience. This leads to the following hypothesis about mechanism:

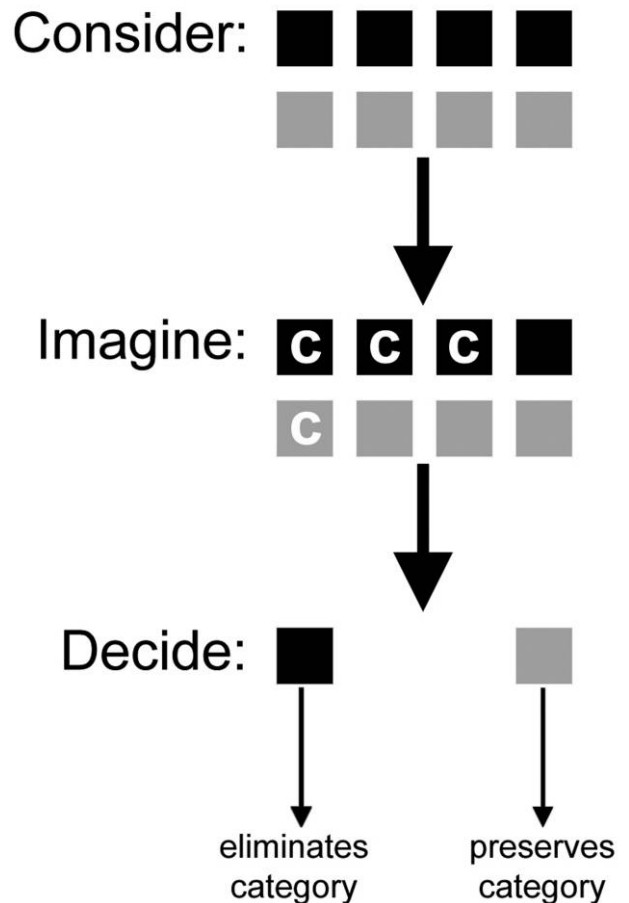
**H2:** Eliminating categories will create a greater sense of progress than preserving categories will.

These hypotheses offer a straightforward account of how consumers perceive and manage experiential categories. We expect that people will eliminate categories quickly when facing negative experiences but will preserve the number of categories remaining for positive experiences. And we suggest that people use this strategy because eliminating categories generates a subjective sense of progress. That is, by eliminating a category, people can essentially cross off a meaningful portion of an experience and feel as if they are moving toward its completion.

### OVERVIEW OF STUDIES

Since most of the studies use the same paradigm, we first describe the general method, shown schematically in figure 1. Participants were assigned to positive experiences or negative experiences. There were no mixed-valence experiences (i.e., all events in an experience were positive or all were negative). There were two categories of events and an equal number of events per category. For example, in some studies participants imagined a situation (framed negatively or positively) where they were reviewing music concerts. The categories were jazz and rock, and there were four concerts per category (eight in total). Participants then imagined completing a certain number of events from each category, such

**FIGURE 1**  
SCHEMATIC DIAGRAM OF EXPERIMENTAL PARADIGM



NOTE.—Participants considered an equal number of events from two different categories, represented by black and gray boxes. They then imagined having completed some events, represented by “C.” They were then presented with a choice that would either eliminate one group of events from the set or preserve both groups.

that one event remained within one of the categories but multiple events remained within the other category. For instance, participants might have imagined seeing three jazz concerts (leaving just one jazz concert to be experienced) and one rock concert (leaving three rock concerts).

Participants then decided whether they would next complete an event from the category that had only one event remaining or an event from a category that had multiple events remaining. For example, participants could decide whether to see a jazz concert or a rock concert next. Choosing a jazz concert would eliminate the jazz genre from the menu of remaining events. Choosing a rock concert would preserve both genres for a bit longer. As noted above, we

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expected that participants facing negative events would eliminate categories sooner than would those facing positive events.

The studies below demonstrate that people attend to, and can spontaneously recognize, experiential categories (studies 1A–1B). Because these categories can be subjective, they are also malleable (study 2). Turning to mechanism, we first consider the possibility that these effects arise because consumers are trying to avoid satiation for good experience and are trying to adapt to negative experiences. We describe and test this possibility in more detail below but find that it cannot fully explain the effects of experiential categories (study 3). Instead, we find that people feel they have made more progress after eliminating a category (study 4A). Moreover, people who believe that eliminating categories hastens an experience are more likely to eliminate negative categories and preserve positive categories (study 4B). And finally, we explore how this strategy influences real consumption decisions (studies 5 and 6).

For each study, we have reported all measures and conditions. We did not conduct formal power analyses but rather used early studies as a guide to determining sample size. All data exclusions are described below, and analyses were only conducted after data collection stopped (whether because the predetermined sample size was reached or participant enrollment slowed significantly).

## STUDY 1A

### Method

One hundred sixty adults living in the United States were recruited from Amazon.com's Mechanical Turk service (MTurk; for more information about MTurk demographics, see Paolacci, Chandler, and Ipeirotis [2010]). Each participant made choices across two scenarios: one positive and one negative, with the order counterbalanced across participants. Half of the participants considered travel and food scenarios. The other half of participants considered social and music scenarios.

For the travel scenario, the two categories were trips to Ecuador and trips to Peru. Each category had three trips. Participants first imagined completing two trips to Ecuador (leaving one event in this category) and one trip to Peru (leaving two trips). Participants then decided whether their next trip would be to Ecuador (eliminating a category) or to Peru (preserving both categories).

For the food scenario, participants imagined sampling foods across two categories: pies and cakes. Each category had five foods. Participants first imagined having eaten four pies (leaving one event in the category) and one cake (leaving four events). Participants then decided whether they would next sample a pie (eliminating the category) or a cake (preserving both categories).

For the social scenario, participants considered two categories of social engagements: spending time with their friend Al and spending time with their friend Betty. Participants had to spend three days with each (i.e., there were

three events per category), in any sequence they wished. Participants imagined spending two days with Al (leaving one event in the category) and one day with Betty (leaving two events) and then decided whether they would spend the next day with Al (eliminating the category) or Betty (preserving both categories).

The music scenario was identical to the rock/jazz example above. Note that across participants, we also counterbalanced which categories could be eliminated (Ecuador vs. Peru, pies vs. cakes, Al vs. Betty, rock vs. jazz). To manipulate valence, we framed each scenario in a positive light or a negative light. For example, in the travel and music scenarios, participants imagined that they had to travel to the two locations for work (or review two concert genres for work). In the positive frame, participants imagined that they thoroughly enjoyed the work and liked the clients they were visiting (or the music they were listening to). In the negative frame, participants imagined that they disliked the work and the clients (or the music). In the food scenario, participants imagined that they were tasting desserts that a friend made. In the positive frame, the desserts were made by a friend who is an excellent cook and in the negative frame they were made by a friend who struggles mightily in the kitchen. Finally, in the social scenario, participants imagined that they either enjoyed when these close friends visited (positive frame) or they dreaded when these acquaintances were in town (negative frame). Similar frames were used throughout the remaining studies. For verbatim examples, see the appendix.

### Results and Discussion

We first conducted a between-subjects analysis focusing only on the first scenario participants saw. Participants were more likely to eliminate categories when considering negative experiences (51%) than positive experiences (33%;  $\chi^2(1, N = 160) = 5.23, p < .05$ , Cramer's  $V = .18$ ). This held, to varying degrees, for each scenario (see table 1, which collapses across first and second responses).

We next conducted within-subjects analyses on how each participant chose across the positive and negative scenarios. We expected that the most common pattern of responses would be for a participant to preserve categories in the positively framed scenario and to eliminate categories in the negatively framed scenario. This was indeed the most com-

TABLE 1

STUDY 1A: PERCENTAGE OF PARTICIPANTS CHOOSING TO REDUCE THE NUMBER OF AVAILABLE GROUPS, SHOWN FOR EACH SCENARIO AND VALENCE

Scenario	Negative frame	Positive frame	$\chi^2$
Travel	60%	25%	9.46 ( $p < .01, V = .34$ )
Food	59%	45%	2.10 ( $p < .14, V = .16$ )
Social	58%	37%	2.84 ( $p < .06, V = .21$ )
Music	54%	27%	5.83 ( $p < .02, V = .27$ )

NOTE.— $N = 81$  for travel and food scenarios;  $N = 79$  for social and music scenarios.

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mon pattern (41% of participants), followed by participants who preserved positive and negative categories (26%), participants who eliminated positive and negative categories (18%), and participants who eliminated positive categories and preserved negative categories (16%; these percentages do not sum to 100 due to rounding), McNemar's test:  $p < .001$ . This suggests that it is fairly common for people to eliminate categories for negative experiences while preserving categories for positive experiences.

However, people did not have information about each event (e.g., which city they would visit). In fact, all they had was the category name. It is possible that categories will be less salient when events are individuated. And it is unclear whether consumers spontaneously recognize (or generate) these categories. Study 1B addresses these issues.

## STUDY 1B

### Method

One hundred twenty participants from MTurk saw modified versions of the travel scenario above. Two participants were excluded for missing responses.

Five of these cities were drawn from the United States (Boston, Chicago, Los Angeles, Miami, New York), and five were drawn from Europe (Barcelona, Berlin, Paris, Rome, Zurich). Participants either saw this scenario framed positively or negatively.

The categories (i.e., regions) were never explicitly named. Instead, participants were simply shown the names of the cities they had to visit (in a random order). After reading the introduction to the scenario, participants then imagined that they had already visited five cities. Four of these cities were drawn from one region, and the remaining city was drawn from the other region. Participants were also shown which cities they had yet to visit. The cities were again listed in a random order to make sure that they were not grouped by region.

For example, participants might see that they had already visited Berlin, Chicago, Rome, Zurich, and Paris, with Boston, Los Angeles, Barcelona, New York, and Miami remaining. They were then given a choice between two cities to visit next. Choosing one of the cities would eliminate a category, and choosing the other city would not. For example, participants in the above example might choose between next visiting Barcelona (which would eliminate Europe) or New York (which would preserve both the US and Europe).

### Results and Discussion

Participants were more likely to eliminate negative categories (65%) than positive categories (45%;  $\chi^2(1, N = 118) = 4.49, p < .05$ , Cramer's  $V = .20$ ). These results suggest that consumers can spontaneously recognize categories, and they eliminate negative categories more readily. Because, even in the absence of labels, consumers spontaneously recognize these categories, and the construal of these categories might be inherently subjective. The cate-

gories that people recognize might depend on which dimensions of a decision are salient or accessible. As a result, spontaneously recognized categories might introduce additional malleability into consumption decisions. We document this possibility in the next study.

## STUDY 2

### Method

We recruited 139 participants from MTurk. Participants were first asked to draw a line that would divide the United States in half in one of two ways. Some participants were told to draw a line that would create a northern half and a southern half; others were told to draw a line that would create an eastern half and a western half (drawing was accomplished by clicking and dragging the cursor over a map of the United States). This task was used to prime subjective grouping for the decision scenario that followed.

Participants then moved to a new page where they completed a modified travel scenario, which was either framed positively or negatively. Participants were told to imagine that they lived in St. Louis, centrally located within the country, and that they had to travel to four cities for business: San Diego, Seattle, Boston, and Orlando. All participants then imagined that they had already visited San Diego and were now deciding whether to visit Orlando or Seattle next.

These cities were selected because they could be grouped in multiple ways. If people were thinking about the country in terms of a northern half and a southern half, then Seattle and Boston would be considered northern cities; San Diego and Orlando, southern. If people were thinking about the country in terms of an eastern half and a western half, then Boston and Orlando would be considered eastern cities; San Diego and Seattle, western. Because participants imagined that they had already visited San Diego, choosing Seattle would eliminate an east-west category (i.e., western) but would not eliminate either of the north-south categories. Choosing Orlando would eliminate a north-south category (i.e., southern) but would not eliminate either of the east-west categories.

We expected that participants considering negative scenarios would eliminate groups based on the primed dimension. That is, participants who divided the country into eastern/western halves would choose Seattle more often for negative scenarios (eliminating the western group) but less often in positive scenarios. Participants who divided the country into northern/southern halves would choose Seattle less often for negative scenarios (choosing Orlando more often, eliminating the southern group). Participants were told that after each business trip, they would return to St. Louis before making the next trip, so the objective time to complete all travel would not change based on their choices.

### Results and Discussion

Binary logistic regression revealed an interaction between prime and valence (Wald-test  $\chi^2 = 4.79, p < .05$ ). Partic-

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ipants who created eastern/western halves chose Seattle more often in the negative frame (80%) than in the positive frame (69%), though not significantly so ( $\chi^2(1, N = 71) = 1.04, p = .31$ , Cramer's  $V = .12$ ). But participants who created northern/southern halves chose Seattle less often in the negative frame (49%) than in the positive frame (74%;  $\chi^2(1, N = 68) = 4.60, p < .05$ , Cramer's  $V = .26$ ). It therefore seems that people can spontaneously recognize and manage categories even when they are not explicitly labeled and that such categorization can be flexible, changing as people compare the events along different dimensions.

Although these results support hypothesis 1, it is possible that participants did not actually think about eliminating or preserving categories per se. Instead, they might have simply been switching between categories during positive experiences to prevent hedonic adaptation. And they may have avoided switching between categories during negative experiences to facilitate hedonic adaptation. Indeed, this would be entirely consistent with the extensive body of research on variety-seeking and hedonic adaptation (Coombs and Avrunin 1977; Galak, Kruger, and Loewenstein 2013; Galak et al. 2014; Kahn and Wansink 2004; Nelson and Meyvis 2008; Nelson, Meyvis, and Galak 2009; Redden 2008; Redden and Galak 2013). For example, suppose that our bucketlister has already completed most of her water-oriented events, and her list now comprises many animal-oriented events and few water events. It may be that by switching to the animal events (what we would call "preserving" a category), she can avoid adapting or satiating to the water events.

There are certainly analogues of this behavior in the literature on consumer satiation. Some research suggests that when people subcategorize consumption experiences, they satiate less quickly (Redden 2008). Perhaps preserving categories maintains a sense of variety that prevents people from satiating to positive experiences. Or maybe preserving categories (by switching to a different category) interrupts the experience and disrupts adaptation. Such interruptions would increase enjoyment of positive experiences but not negative experiences (Nelson and Meyvis 2008; Nelson et al. 2009).

It seems likely that the satiation account can partially explain how people manage experiential categories. But to appreciate why it cannot entirely explain the effect predicted in hypothesis 1, consider two similar bucketlisters, George and Harriet. Suppose that George has four water events and four animal events on his bucketlist. And suppose Harriet has 10 water events and 10 animal events on her list. Now imagine that both George and Harriet have each already completed three water events and one animal event. Because the satiation explanation primarily focuses on how consumers construe their past consumption (Redden and Galak 2013), George and Harriet would be in a similar position because they have similar pasts. Both would be inclined to next choose an animal event if they were enjoying themselves (to prevent satiation) or a water event if they were not (to promote satiation). But our theory makes a different prediction. We expect that George would be more likely to

show this pattern of responding because his next choice could eliminate an experiential category, whereas this is not true for Harriet.

Put simply, our explanation and the satiation account both predict that for negative experiences, consumers will be more likely to choose from the category with fewer remaining events. For positive experiences, consumers will be less likely to do so. However, unlike the satiation explanation, we would expect that this tendency will be significantly more common when there is only one event remaining in a category (i.e., it is possible to eliminate a category). Study 3 was designed to disentangle these explanations.

### STUDY 3

#### Method

One hundred twenty-seven participants were recruited from MTurk. The response from one participant was missing. Participants considered a travel scenario modified in the following way. Participants in the "elimination impossible" condition imagined that they had to visit Ecuador and Peru 10 times each. Participants in the "elimination possible" condition imagined that they had to visit Ecuador and Peru 4 times each. We crossed the positive/negative framing with this "elimination" condition.

All participants imagined that they had already visited one country three times and the other country just once. They were then asked which country they would go to next. Note that in the "elimination impossible" condition, both categories would remain available regardless of which country participants chose. But in the "elimination possible" condition, choosing the more-visited country (i.e., the country with just one remaining visit) would eliminate it from future travel.

The satiation account predicts that people will be more likely to choose the more-visited country in the negative frame than the positive frame. This should be true whether elimination is possible or impossible, because the experiences leading up to the choice are identical. But if participants eliminate/preserve categories for reasons other than to manage satiation, then in the elimination condition there should be a greater difference between responses in the negative frame and positive frame.

#### Results and Discussion

Binary logistic regression revealed an interaction between elimination condition and valence (Wald-test  $\chi^2 = 4.85, p < .05$ ). Participants in the "elimination impossible" condition chose the more-visited country slightly (but not significantly) more often in the negative frame (24%) than in the positive frame (16%;  $\chi^2(1, N = 60) = .6, p > .4$ , Cramer's  $V = .1$ ). This difference was far greater in the "elimination possible" condition (63% vs. 12%;  $\chi^2(1, N = 66) = 18.34, p < .001$ , Cramer's  $V = .53$ ).

These results suggest that satiation alone cannot explain why people eliminate negative (and preserve positive) cat-

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egories. Instead, we propose that consumers use this strategy because it influences their subjective sense of progression through an experience. Eliminating categories creates the feeling of having made progress, which is desirable for negative experiences but less so for positive experiences. Study 4A tests hypothesis 2.

## STUDY 4A

### Method

Seventy-five participants were recruited from MTurk. Participants considered travel scenarios adapted from study 1A. All participants saw this scenario described in a neutral way—there were no positive or negative frames. That is, participants were not told that the experiences were particularly enjoyable or aversive. Participants imagined that they had to visit four cities in Ecuador and four cities in Peru for a work assignment. They were then told to imagine that they were partway through the assignment and had already visited three cities in one country and one city in the other. Then, they rated how far along in the experience they would feel at that moment (“baseline question”), using a slider that ranged from 0 (near the beginning) to 100 (near the end).

On subsequent pages, participants were then asked to imagine two possible next steps. They imagined next visiting the country with just one trip remaining on the agenda (which would eliminate that country from future travel). Using the same scale as above, they indicated how far along in the experience they would feel (“elimination question”). Participants also imagined visiting the country with several trips remaining on the agenda (which would preserve both countries for future travel). They then indicated again how far along in the experience they would feel (“preservation question”). Participants responded to both questions, with the order counterbalanced across participants. We predicted that participants would say that eliminating a category created a greater subjective sense of progress toward the end of the experience.

### Results and Discussion

For each participant we calculated two subjective progress scores: the percentage increase in progress after eliminating a category and the percentage increase in progress after preserving a category. These were simply calculated by dividing the elimination (or preservation) response by the baseline response. We then conducted within-subjects comparisons of these values. Participants indicated that eliminating a category would create a greater subjective feeling of progress ( $M = 34\%$  increase in progress,  $SD = 44\%$ ) than would preserving a category ( $M = 21\%$ ,  $SD = 28\%$ ;  $t(74) = 2.29$ ,  $p < .05$ , Cohen's  $d = .35$ ).

As expected, eliminating categories appears to influence participants' subjective impressions of progress through an experience. Naturally, consumers will want to speed up their progress through negative experiences, while slowing down their progress through positive experiences. Do these sub-

jective impressions of progress predict participants' tendency to eliminate negative (and preserve positive) categories? We test this in study 4B.

## STUDY 4B

### Method

Seventy-two participants from MTurk completed two types of questions. For one question, participants indicated their intuitive beliefs about how experiential categories affect feelings of progress. Participants imagined they were reviewing multiple comedic and dramatic movies, where one comedy and two dramas remained to be seen (or vice versa). Participants then indicated whether seeing a comedy (which would eliminate the comedy category) would leave them feeling further from having finished watching all of the movies, closer to finishing, or no different than if they next watched a drama.

Participants also completed two decision scenarios. One scenario involved travel, in which participants again considered having to make three trips to Peru and Ecuador. They then imagined having completed two trips to one country and one trip to the other country, before making a choice that would eliminate a country or preserve both countries. The other scenario involved food, where participants imagined having to visit three French restaurants and three Spanish restaurants. Again, they then imagined that they had already dined at two restaurants of one type and one restaurant of the other type, and they chose whether they would next dine at a restaurant that would eliminate a cuisine or preserve both cuisines. Some participants saw a positive travel scenario and negative food scenario, while other participants saw the opposite configuration. The order of the intuitive beliefs and decision scenarios was counterbalanced across participants. One limitation of this design is that intuitive beliefs are measured in a different domain than the decision scenarios. However, we chose this design to limit demand characteristics that might inflate the correlation between the way people respond to the beliefs question and the decision scenarios.

### Results and Discussion

We coded responses as follows. For intuitive beliefs, we assigned a score of  $-1$  if eliminating categories left participants feeling further from the end,  $0$  if they indicated it did not matter, and  $1$  if eliminating categories left them feeling closer to the end. For the decision scenarios, we assigned a score of  $-1$  if participants eliminated categories for the positive experience but not for the negative experience,  $1$  if they eliminated categories for the negative experience but not for the positive experience, and  $0$  otherwise. These measures were positively correlated (Spearman's rho:  $r = .26$ ,  $p < .05$ ). Specifically, participants were more likely to preserve positive groups and eliminate negative groups if they believed this strategy influenced subjective progress.

Studies 4A and 4B demonstrate that eliminating cate-

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gories makes people feel like they have made more progress in an experience, supporting hypothesis 2. And we find evidence that these subjective impressions predict whether people will eliminate negative categories and preserve positive categories.

Of course, all of these studies have involved hypothetical choices. The question remains whether participants attend to experiential categories for real experiences. Studies 5 and 6 were designed to extend these results to such situations.

## STUDY 5

### Method

Forty undergraduates in an introductory marketing class participated in exchange for course credit. Participants were told that they were doing a taste test for two chocolate brands. First participants were given a sample of sweet milk chocolate and extremely bitter dark chocolate (99% cacao). We chose these chocolates because milk chocolate is sweet and easy to eat, whereas 99% dark chocolate is so bitter that its packaging warns consumers to eat small portions while sipping a cup of coffee. When we asked participants in our study to rate their enjoyment of the initial samples on a scale from 0 (disliked very strongly) to 100 (liked very much), they far preferred the milk chocolate ( $M = 77.85$ ,  $SD = 19.58$ ) to the dark chocolate ( $M = 15.58$ ,  $SD = 20.39$ ;  $t(39) = 14.83$ ,  $p < .001$ ). They also reported liking the milk chocolate more and the dark chocolate less than the chocolate they usually tended to eat (all  $t > 3.74$ , all  $p < .001$ ), which suggested that eating the milk chocolate was a positive experience and eating the dark chocolate was a negative experience.

The study then followed the basic structure shown in figure 1. First, participants were randomly assigned to a condition where they would sample six milk chocolates (a positive experience) or six dark chocolates (a negative experience). In both conditions, participants sampled three chocolates from each of two brands. Participants were given a specific order in which to sample the first three chocolates, alternating between each brand (the order was counterbalanced across participants).

When the participants had finished the first three samples, only one sample remained from one of the brands and two samples remained from the other brand. Participants could then eat the remaining chocolates in any order they wished. Choosing a chocolate from the brand that had only one sample remaining would eliminate that category from future choices. Choosing a chocolate with multiple samples remaining would preserve both categories for future choices. We expected that people would immediately eliminate categories more often when tasting the unpleasant dark chocolates.

### Results and Discussion

We analyzed the frequency with which participants immediately eliminated categories when they entered the free choice period of the study. Participants sampling dark choc-

olate eliminated categories more often (79%) than participants sampling milk chocolate (48%;  $\chi^2(1, N = 40) = 4.18$ ,  $p < .05$ , Cramer's  $V = .32$ ). Experiential categories therefore appear to matter even for real consumption.

Having shown that participants preserve categories to lengthen positive experiences and eliminate categories to hasten negative experiences in the lab, we examined whether the same basic pattern might emerge in a real-world setting: how long participants waited to read the final book in a trilogy. Consistent with our lab results, we expected people who enjoyed the trilogy to delay reading the final book in order to avoid completing the experience. Though this field study is not as carefully controlled as the experiments above, it is suggestive of the kinds of ways this effect might persist beyond the confines of the lab.

## STUDY 6

### Method

We collected data from 1,666 registered users of the website goodreads.com. Goodreads is a social networking website on which users post reviews of books they've recently finished reading. We selected all Goodreads users who listed the dates on which they'd finished reading and rating the books from one of four trilogies: *The Hunger Games*, Stieg Larsson's *Millennium Trilogy*, *The Lord of the Rings*, and *Fifty Shades of Grey*. To ensure that readers were not constrained by the release dates of the books, we selected readers who finished each of the books at least 1 month after their respective release dates.

Since a trilogy is like a category, as we defined it in our lab studies, we expected that participants would delay completing the final book if they greatly enjoyed the first two books in the trilogy. We measured this delay using two criteria: how many more days participants waited between reading the final two books in the trilogy than between the first two books (the "time" measure), and how many non-trilogy books they read between the trilogy's final two books than between the first two books (the "books" measure). These difference scores allowed us to control for individual differences in reading speed and book consumption and to determine whether participants sped up or slowed down as they approached the conclusion of the trilogy.

We measured enjoyment of the first two books by averaging participants' ratings of those books (a score between 1 and 5), and in all analyses we controlled for participants' average ratings across all books they had rated on the site. None of the results changed when we excluded this covariate.

### Results and Discussion

Data were incomplete on the "books" measure, so we were left with 1,666 data points on the "time" measure, and 1,324 data points on the books measure. In all regression analyses, we controlled for readers' average book ratings and regressed the relevant delay measure on readers' average ratings of the first two books in the trilogy. As predicted,

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readers waited longer between the second and third books in the trilogy (relative to the first and second books) the more they enjoyed the first two books ( $\beta = .08$ ,  $t(1663) = 3.02$ ,  $p < .01$ ). Readers similarly read more books between the second and third books in the trilogy (relative to the number of books they read between the first and second books) the more they enjoyed the first two books ( $\beta = .06$ ,  $t(1321) = 2.15$ ,  $p < .04$ ).

To unpack the results further, we began by creating an index that captured how participants' ratings of the first two books differed from their average rating on the site, expressed as a percentage measure. We performed a binary split on this index, separating participants into a "favorable" category and an "unfavorable" category. Those in the more favorable category enjoyed the first two books in the trilogy significantly more than they enjoyed the average book they had rated on the site ( $M_{\text{difference}} = +25.76\%$ ,  $SD = 10.37\%$ ;  $t(834) = 71.79$ ,  $p < .001$ ), whereas those in the less favorable category enjoyed the same books significantly less than they enjoyed the average book they had rated on the site ( $M_{\text{difference}} = -6.50\%$ ,  $SD = 17.88\%$ ;  $t(830) = -10.47$ ,  $p < .001$ ). Consequently, we labeled those categories "positive" and "negative."

We conducted a  $2 \times (2)$  mixed-design ANOVA to measure the effect of valence (valence: between subjects) on the delay between the first two books relative to the delay between the final two books in the trilogy (measurement period: within subjects). As figure 2A shows, there was a significant interaction between valence and measurement period ( $F(1, 1664) = 8.06$ ,  $p < .01$ ,  $\eta_p^2 = .01$ ). Whereas participants who did not particularly enjoy the first two books moved on to complete the third book moderately more slowly ( $F(1, 1664) = 5.51$ ,  $p = .02$ ,  $\eta_p^2 < .01$ ), those who enjoyed the first two books slowed down dramatically as they approached the end of the trilogy ( $F(1, 1664) = 50.94$ ,  $p < .10^{-6}$ ,  $\eta_p^2 = .03$ ).

The same pattern emerged when we conducted the analysis on the books measure (fig. 2B). Again, there was a significant interaction between valence and measurement period ( $F(1, 1322) = 3.82$ ,  $p = .05$ ,  $\eta_p^2 = .003$ ). Participants who did not particularly enjoy the first two books read a similar number of nontrilogy books between the first two books as between the final two books ( $F(1, 1322) = 2.72$ ,  $p = .10$ ,  $\eta_p^2 < .01$ ), whereas those who enjoyed the first two books read a significantly greater number of nontrilogy books between the final two books in the trilogy ( $F(1, 1322) = 15.98$ ,  $p < .10^{-6}$ ,  $\eta_p^2 = .01$ ). A limitation of this study is that we cannot know whether the hastening or delaying of consumption is specific to trilogies (or categories of books) or is just a general savoring strategy that users apply to all books. Despite this ambiguity, the results suggest that even outside of the lab, people might prolong an experience by delaying the completion of individual categories.

## GENERAL DISCUSSION

Our days are full of experiences that rarely last the right amount of time. There are vacations that feel too short and

meetings that seem too long, meals we wish would never end, and chores we would rather have finished. Of course, consumers have a number of strategies for savoring and dampening events. But the results above suggest that consumers might also look beyond individual events and instead consider categories of experience. The studies presented here suggest that consumers might preserve categories for positive experiences and eliminate categories for negative experiences. And it seems that they do this because eliminating categories creates a greater subjective sense of progressing through an experience.

These results extend several findings from the literature. For instance, when people make numeric judgments, they often rely on various cues or pieces of information. People can consider these cues independently or as part of different categories of information (Shah and Oppenheimer 2011). And when people make choices or allocate resources, they often focus on how options are partitioned among different categories (Fox et al. 2005). The current work therefore broadens the scope of the role that categorization can play in how consumers process information and think about experiences. And these studies show that some of the strategies that affect how people cluster or spread out individual events over time can also play a role in how people integrate and segregate their consumption from experiential categories (Thaler 1999).

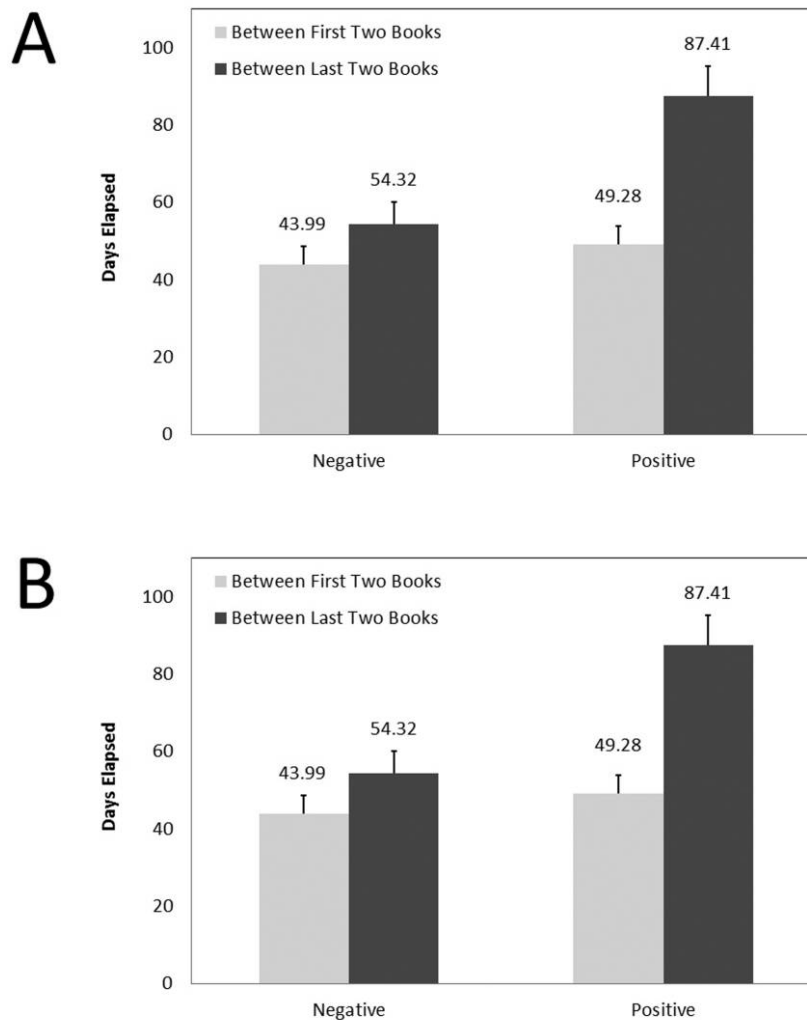
Previous research has also touched on some similar themes. For example, Shin and Ariely (2004) describe how people are reluctant to close the door on various options because the potential loss of the option looms large. While our work focuses on consumption experiences instead of choice options, it is possible that loss aversion might also be part of the reason why consumers would preserve positive experiential categories (though the connection to negative experiential categories is less clear). Furthermore, research on categorization, variety-seeking, and satiation (e.g., Mogilner, Rudnick, and Iyengar 2008; Redden 2008) comes closest to the hypotheses outlined here but cannot fully explain the current results (as study 3 shows). It is also worth noting that the satiation literature finds that consumers rarely have the correct intuitions about how to maximize enjoyment (e.g., Galak et al. 2013; Nelson and Meyvis 2008). Future research might examine whether people have the correct intuitions about whether eliminating (or preserving) categories actually makes experiences more enjoyable. And future research might consider whether anticipated satiation could be another factor driving this effect.

Although our studies focused primarily on consumption experiences, it might also shed light on how consumers make other kinds of decisions. For example, when managing debt, consumers often prefer to reduce the number of outstanding debts instead of the actual amount or cost of overall debt (Amar et al. 2011). That is, people prefer to pay off small, low-interest debts in their entirety (reducing the number of debts) instead of paying down part of a large, high-interest debt (reducing the overall cost of debt). As the authors note, the elimination of these debts creates a sense of progress

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FIGURE 2

DAYS ELAPSED AND OTHER BOOKS READ BETWEEN BOOKS 1 AND 2 AND BETWEEN BOOKS 2 AND 3 IN TRILOGY



NOTE.—(A) Number of days elapsed and (B) books read between the first two books (*light gray bars*) and last two books (*dark gray bars*) in the trilogy as a function of readers' enjoyment of the first two books in study 6.

toward total repayment. And our theory predicts that people might make similar mistakes with savings, perhaps focusing more on increasing the number of savings instruments (to subjectively increase the perceived amount of savings) instead of more carefully considering the amount being earned in each account.

While we have focused on how this strategy relates to feelings of progressing through experiences, it is probably multiply determined. For instance, this strategy may also stem from how people try to complete goals (i.e., eliminate categories) when experiencing negative emotions but not positive emotions (Louro, Pieters, and Zeelenberg 2007). And we rec-

ognize that people will not always attend to experiential categories when managing hedonic experiences. Perhaps this strategy is less effective, or seems less necessary, for events that feel more neutral. There is also an interesting tension between what consumers can do to maximize pleasure once they notice experiential categories and whether they are better off categorizing events in the first place. For instance, if consumers break a negative experience down into multiple categories, they might actually feel as though there are more negative experiences ahead. The reluctant business traveler who simply thinks broadly about an "unpleasant project" might, at the outset, see the experience as less aversive than

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the traveler who breaks the project down into meetings with clients from different countries. While future research might resolve this tension, our current results can only speak to how people manage positive and negative experiences once they notice experiential categories.

These results have practical value on several fronts. First, they might help companies better anticipate future demand based on customers' earlier choices. For instance, as a customer works her way through a list of movie rentals, it may be easier to predict her future choices based on the genres remaining on the list. For products that can be categorized flexibly, it may also be possible to shape purchase decisions by making different experiential categories more salient (e.g., emphasizing either the romantic or comedic elements of a romantic comedy). Furthermore, when positive experiences or services are offered, consumers might enjoy them more when multiple experiential categories are made salient. But for negative experiences, it might be better to emphasize how few categories remain.

Our results also suggest an inexpensive technique for lengthening positive experiences or truncating unpleasant experiences, particularly when they comprise multiple stages across different categories. Amusement park owners and dentists operate very different businesses, for example, but like many other business owners, the appeal of their service depends in part on how long the service lasts. A day at an amusement park might seem less fleeting, for example, if the park's rides and games are interspersed across the site, so guests still have both rides and games to look forward to as the day goes on. In contrast, an unsought experience like a dental procedure might seem to pass more quickly if the dentist describes the procedure in two stages and mentions that the first stage is over as she moves on to the second stage. Similarly, developers of tax software might make the experience less unpleasant by introducing broader categories of forms. And, finally, in-store promotions might feel more expansive if they are organized across different departments.

In general, it seems that consumers can watch experiences unfold in multiple ways. They might think of events independently, where the end of an experience draws nearer as each event finishes. On the other hand, they might represent events categorically, subjectively stretching out or shortening experiences based on which categories of events they imagine to still be available. That is, the texture of experience might depend on the level of consumption.

## DATA COLLECTION INFORMATION

The first author supervised collection and analysis of data for studies 1–4 between the spring of 2010 and spring of 2014. These data were collected from participants on Amazon.com's Mechanical Turk. The second author supervised research assistants who collected data for studies 5 and 6 in the spring of 2011 and spring of 2014. The second author analyzed these data. These studies were conducted at the Stern School of Business and with archival data from goodreads.com.

## APPENDIX

Examples of positive and negative frames used in study 1A (and similar to scenarios used in other studies):

### Travel Scenario:

(1) Participants first considered either the positive frame or negative frame:

*Positive Frame.* Imagine that your boss asks you to travel to South America to meet with clients during the early parts of a project. During this time, you must familiarize the clients with your business and ensure that they are comfortable with your company. Specifically, your boss asks you to make three trips to an office in Ecuador and three trips to an office in Peru. You can schedule these trips in any order that you want. After a few of the trips, you have found the experience to be incredibly rewarding and enjoyable. You like the clients in both countries a lot and will miss them when the project is over. You find the travel to actually be relaxing, and it feels more like play than work.

*Negative Frame.* Imagine that your boss asks you to travel to South America to meet with clients during the early parts of a project. During this time, you must familiarize the clients with your business and ensure that they are comfortable with your company. Specifically, your boss asks you to make three trips to an office in Ecuador and three trips to an office in Peru. You can schedule these trips in any order that you want. After a few of the trips, you have found the experience to be incredibly painful and unpleasant. The clients in both countries are very demanding, and you dislike them a lot. You look forward to finishing your time with them. You find the travel to be taxing, and it actually feels worse than working in the office.

(2) Participants then imagined completing all but one event from one of the categories and only one event from the other category:

*Suppose that so far you have completed two trips to Ecuador and one trip to Peru.*

(3) Finally, participants chose what kind of event they would do next:

*To which country would you travel next?*

I would travel to the office in Ecuador next.

I would travel to the office in Peru next.

This procedure was the same across the remaining scenarios.

### Food Scenario:

*Positive Frame.* Suppose that your friend invites you over for a dessert tasting. You know your friend to be a phenomenal chef, and you're very excited to try these desserts. You consider yourself lucky. When you arrive, your friend asks you to try samples of five different pies and five different cakes. They all look delicious. After trying several desserts, everything has tasted as expected—fantastic.

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You're enjoying tasting these desserts immensely and want to savor every bite. You don't want the tasting to end.

*Negative Frame.* Suppose that your friend invites you over for a dessert tasting. You know your friend to be a horrendous cook, and you're unhappy to be asked to try these desserts. You agree out of a sense of obligation. When you arrive, your friend asks you to try samples of five different pies and five different cakes. They all look unappetizing. After trying several desserts, everything has tasted as expected—unpleasant. You're not enjoying these desserts at all. You'll only finish them out of politeness and are looking forward to being finished.

### Social Scenario:

*Positive Frame.* Imagine that two close friends of yours—Al and Betty—separately decide to visit your area during the same week. You adore both of these people and are thrilled to have them visit. You have promised both Al and Betty that you will spend 3 days with each of them individually. Some time has passed, and their visits have been wonderful. You have enjoyed catching up with them and will miss both of them a lot when they leave.

*Negative Frame.* Imagine that two acquaintances of yours—Al and Betty—separately decide to visit your area during the same week. You don't particularly like either person but feel obligated to spend time with them. You have promised both Al and Betty that you will spend 3 days with each of them individually. Some time has passed, and their visits have not been very enjoyable. Spending time with them has felt like work, and you will not miss them when they leave.

### Music Scenario:

*Positive Frame.* Imagine that you are a music critic who has been assigned to review some acts at a local music festival. Your boss gives you eight tickets that you must use to see and review four Jazz performances and four Rock performances. You are quite excited to have this assignment because this festival has a reputation for bringing in some of the best new musicians. After just a few performances, the festival has already exceeded expectations. Every show has been terrific. The atmosphere is electric, and you can hardly believe that this is your job. You don't want your time at the festival to end.

*Negative Frame.* Imagine that you are a music critic who has been assigned to review some acts at a local music festival. Your boss gives you eight tickets that you must use to see and review four Jazz performances and four Rock performances. You are dreading this assignment because this festival has a reputation for hosting some of the worst concerts. After just a few performances, the festival has actually been worse than you expected. Every show has been terrible. The atmosphere is gloomy, and this has been the worst

assignment ever. You desperately want your time at the festival to end.

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