The Outlook Effect:

How Future Expectancy Affects Consumer Choice Consistency

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Abstract

Sometimes a consumer prefers to repeat past choices, while other times the same consumer prefers to try something new. We demonstrate that a consumers’ situational outlook for an unrelated future event (i.e. feeling optimistic vs. pessimistic about the outcome) can broadly and systematically affect their sequential choice consistency. Specifically, an optimistic outlook increases repeating past choices, while a pessimistic outlook decreases repeated choices and increases novel choices. We test this “Outlook Effect” in two experimental paradigms, using both real and hypothetical consumer choices, across seven studies. We first establish the basic effect of situational outlook on sequential choice consistency (Studies 1 & 2). Then, we provide evidence that differences in the preference for self-continuity underlie the effect (Studies 3 through 6). Last, we generalize our findings to choices between broadly defined usual vs. novel products (Study 7). Across the studies, we rule out differences in affective states, causal attribution, and perceived control as alternative explanations. These findings have important theoretical implications for future research on the relationship between future-oriented cognition and consumer behaviors, as well as potential managerial implications for when consumers will be more prone to repeat past purchases or more open to novel product adoption.
The Outlook Effect:

How Future Expectancy Affects Consumer Choice Consistency

“Very often a change of self is needed more than a change of scene”

--A.C. Benson

When do people prefer to repeat their past choices, and when are they open to trying something new?

Prior researchers have typically resorted to individual differences to explain why people change their behaviors, even when the available options have remained the same. We take a new perspective in the present paper. We propose that a consumer’s likelihood of making usual or novel choices can be systematically influenced by their seemingly unrelated “situational outlook” (i.e., feeling optimistic or pessimistic about the future uncertainty of a specific outcome). We hypothesize that when people’s circumstances signal a desirable future outcome, they tend to feel like “staying the course” and will prefer to repeat past choices, even when those choices have no believed or actual causal effect on the future outcome. In contrast, when circumstances bode future disappointment or a negative outcome, people will instead have an impulse to “change the path,” resulting in a preference for novel choices.

Understanding the tendency to repeat past choices or switch to novel options is a key challenge for research on consumer loyalty. Sometimes a consumer can appear to be loyal – visiting Starbucks every day for a cup of Mocha, and ordering cashew chicken from Szechuan Palace every Monday night. Then, one day, the same consumer may suddenly drop these habits for no discernible reason. In fact, consumers typically defect at rates or 10% - 30% per year (Reichheld 1996), for reasons that almost half of marketers don’t feel they understand well
enough (Acxiom survey, 2012). Some consumers are simply more prone to defection, as researchers have identified a number of their idiosyncratic characteristics, including need for change (Wood and Swait 2002), open-mindedness (Jacoby 1971), and innovativeness (Hirschman 1980). In contrast, we believe that situational factors, especially those that affect consumers’ outlook about the future, have understudied influences on consumer choices between repeat purchase and new product adoption.

We hypothesize that when a consumer has a positive situational outlook, the resulting preference for self-continuity will increase the consumers’ chances of repeating prior choices. In contrast, when the consumer has a more negative situational outlook, the resulting decrease in preference for self-continuity will result in a higher likelihood to switch away from past consumption and make novel choices.

Next, we discuss the prior literature and provide a theoretical framework for the predicted “Outlook Effect”, and then distinguish key constructs of our proposed framework from related constructs. After that, we present seven studies in which we test the Outlook Effect and the underlying psychological mechanism.

THEORETICAL DEVELOPMENT

*Consumer choices experienced as self-continuity or self-change*

Research in marketing has long theorized that consumer choices contribute to and reflect consumers’ sense of self (Belk 1988, Holbrook 1992, Kleine, Kleine and Kernan 1992). Even when consumer products only have a tenuous inherent connection with consumers’ self-concept (i.e., how someone thinks about, evaluates or perceives themselves), marketers often try to foster
a relation between the product and the consumers’ sense of self (Fournier 1998, Aggarwal and McGill 2012). In particular, consumer culture theory researchers have examined the implications of people’s acquisition, consumption, possession, and disposition of consumer items on their sense of self (Arnould and Thompson 2005). Prior theories have posited that material possessions can be experienced as extensions of the self (Belk 1988, Weiss and Johar 2013), and acquisitions of products can help create one’s sense of self (Gentry, Baker, and Kraft 1995).

The notion of self-continuity stems from the conceptualization that the self can be construed as consisting of “a temporal sequence of partially overlapping selves” (Parfit 1984), and that self-concept is spontaneously malleable and fluid (Markus and Kunda 1986, Kunda and Sanitioso 1989). Specifically, a link has been posited between the notion of self-continuity (vs. self-change) and consumer choices (Mick and Buhl 1992), such that repeating consumer choices and holding on to past possessions can enhance self-continuity (Csikszentmihalyi 1993, Kleine and Baker 2004) and “stabilize who we are” (Csikszentmihalyi 1993), while discarding past possessions can prepare the self for future changes and life transitions (Young 1991).

Recent research has explored how differently expected future events influence perceived future self-continuity (Bartels and Rips 2010). Perceptions of future self-continuity, in turn, factor into how much future outcomes are valued, with implications for consumer choices (Bartels and Urminsky 2011, 2015).

In the present research, we propose that consideration of the future may not only affect perceptions of future self-continuity, but also affect preferences for self-continuity, and that these spontaneous preferences for self-continuity (vs. self-change) directly influence the consumer choices people make, between options that have been typically or recently chosen in the past (i.e., a “usual option”) and options that were rarely chosen in the past or not recently chosen (i.e.,
a “novel option”). Specifically, a preference to enhance self-continuity will increase people’s tendency to repeat past consumer choices, while a preference to disrupt self-continuity and induce self-change will instead make people more likely to adopt novel options.

In other words, consumers may stick with or shake up their routine choices for deeper reasons that implicate the sense of self. Consider John, who routinely eats Cheerios for breakfast, and is shopping for cereal at a grocery store. Assuming that John finds the product attributes of Cheerios and Muesli equally appealing, our theorization suggests that John is more likely to buy another box of Cheerios when he has a preference for self-continuity, and more likely to choose to try Muesli when he has a preference for self-change.

Next, we discuss how and why these preferences for self-continuity vs. self-change can be broadly and systematically shaped by situational future expectancies.

*Future expectancy influences preference for self-continuity or self-change*

Future-oriented cognition is a hallmark of human decision-making and behavior (Mead 1934, Skinner 1938). People pursue desirable future outcomes and avoid undesirable future outcomes, spontaneously form anticipations of uncertain future outcomes, and take actions to reduce the discrepancy between currently anticipated outcomes and the desired outcomes (Bandura 1991, Scheier and Carver 1985).

Future-oriented cognition, like human perception and reasoning in general, is also fundamentally egocentric (Piaget 1929). Because people’s own inner states are the most immediately available (Pronin 2008), they tend to make self-centered attributions and judgments (Ross, Greene and House 1977, Epley and Caruso 2004), and assume more personal influence in the surrounding world than they actually have (Langer 1975, Gilovich et al. 2000).
Consequently, people tend to interpret observed outcomes as relating to their own intentions and behaviors over external mechanisms (Wegner and Wheatly 1999) or other people’s behaviors (Ross and Sicoly 1979).

Therefore, as people think about the future, and are motivated to reduce the discrepancy between desired and currently anticipated outcomes, the degree of change in the self can often seem relevant to how the future will unfold. Specifically, we propose that self-continuity and self-change are broadly associated with the development of future outcomes. Continuity of the self is associated with the smooth proceeding of events, whereas changes in the self are associated with a disruption in the sequence of events. Often, these associations will stem from over-generalizing cases where some causal contingency existed, and a personal influence did affect the outcome.

As a simple example, continuing to invest personal effort towards a goal can be considered instrumental when one is optimistic about achieving it, yielding a stronger motivation to repeat past efforts (e.g., Kivetz, Urminsky and Zheng 2006). In contrast, forgoing prior personal effort by switching to a different queue can be considered instrumental when the line of people in front seems not to be moving forward. In many common situations, however, outcomes are probabilistic and multiple causes are simultaneously involved, blurring the actual contingency between the response and the outcome. Consequently, the associations between optimistic (vs. pessimistic) outlook and self-continuity (vs. self-change) can overgeneralize and persist even in the absence of a causal contingency.

Early psychologists have proposed that self-generated adaptive responses often become associated with specific situations due to outcome expectancy (Skinner 1938, 1948). This intuition was well-illustrated in Skinner’s (1948) example of the bowler who continues to twist
his arm and shoulder as if he were still exerting control over the movement of the ball down the
alley. As Skinner noted, “the connection (between his movement and the path of the ball) was
established before the ball left the bowler’s hand, but ... some relation survives. The subsequent
behavior of the bowler may have no effect upon the ball, but the behavior of the ball has an effect
upon the bowler.” (Skinner 1948, 171) Thus, specific adaptive responses can give rise to broader
associative responses in the presence of relevant stimuli, contributing to the prevalence of
heuristics and overgeneralization (Gigenrenzer and Selten 2002).

Thus, much like the effect of the ball on the spontaneous physical reactions of Skinner’s
bowler, a person’s situational outlook for the future can broadly affect his or her spontaneous
preferences for self-continuity vs. self-change, even in the absence of any believed causal link.
Specifically, an optimistic outlook (i.e. feeling that a desirable outcome is probable) would
enhance people’s preference to maintain self-continuity. In contrast, a pessimistic outlook (i.e.
feeling that an undesirable outcome is probable) would instead enhance people’s preference to
disrupt self-continuity and engage in self-relevant change, as illustrated in figure 1.
FIGURE 1. PROPOSED FRAMEWORK: SITUATIONAL OUTLOOK (LOCAL OPTIMISM VS. PESSIMISM ABOUT FUTURE OUTCOMES) AFFECTS SEQUENTIAL CONSUMER CHOICE CONSISTENCY VIA PREFERENCE FOR SELF-CONTINUITY.

*Situational optimism vs. pessimism leads to usual vs. novel consumer choice*

Thus, we propose that situational optimism and pessimism yield important consequences for consumer behavior. Every day, consumers encounter uncertainty regarding personal outcomes, from family to career, from wealth to health, from their performance at work to whether they can beat the traffic and get home in time for a favorite show. We contend that these outcomes not only matter to us as single events, but their presence also broadly produce momentary situational outlook, which has unexpected psychological and behavioral consequences. In particular, how an imminent future outcome is anticipated affects current self-relevant choices between options that represent continuity vs. change.

We hypothesize that when people face a pending future outcome, being in an optimistic anticipatory state increases their preference to maintain self-continuity, leading to more choices that are consistent with past consumption. Conversely, being in a pessimistic anticipatory state weakens people’s preference for self-continuity and instead motivates self-change, leading to more choices of novel options that are different from past consumption (figure 1).
Therefore, when consumers choose between products that have been typically or recently chosen in the past (i.e., a “usual option”) and consumer products that were rarely chosen in the past or not recently chosen (i.e., a “novel option”), an optimistic situational outlook will increase usual option choices, resulting in more repeated choices. In contrast, a pessimistic situational outlook will increase choices of the novel option, resulting in fewer repeated consumer choices (figure 1).

Note that the preference for change in this sequential consumer choice is different from the preference for variety seeking (McAlister and Pessemier 1982), which typically reflects a tendency to choose a more diverse set of items when making multiple simultaneous choices for future consumption. In fact, the kinds of sequential choices we test in our studies often serve as the basis of comparison, to demonstrate greater variety seeking in simultaneous choices (Simonson 1990).

Think again of John, standing in the cereal aisle and deciding between his usual choice of Cheerios and trying out Muesli for the first time. All else equal, why might today be the day he decides to try Muesli? Our framework suggests that part of the answer lies in his current situational outlook for future outcomes unrelated to his breakfast. For example, if he has been having problems at work, resulting in a pessimistic outlook about whether he will get a pending promotion, he is more likely to feel a desire for self-change and choose Muesli. In contrast, if things have been going well, making him optimistic about the promotion, buying Cheerios again will fit his desire for self-continuity.

Our account of how a person’s outlook can affect the preference for self-continuity vs. self-change has relied on the notion of situational optimism and pessimism about future outcomes. Next, we define more precisely the specific situational outcome expectancy that
underlies our proposed process, and distinguish it from other types of optimism and pessimism that have been discussed in prior research.

**Distinguishing situational outlook from dispositional optimism and long-term state optimism**

Our framework describes the effects of situational outlook, namely, the positive or negative expectation of a pending future outcome, which can be based on situational characteristics and inferences from past outcomes. The notion of situational outlook that we employ therefore refers to a uniquely situational optimism vs. pessimism.

The prior psychological research on optimism (and pessimism) has stated that optimism consists of distinct cognitive, affective, and motivational components (Kluemper, Little and Degroot 2009, Scheier and Carver 1985, Peterson 2000). However, this literature has predominantly studied optimism either as a stable dispositional trait (e.g, optimistic vs. pessimistic people), or as the outcome expectancy for general, distal outcomes (Scheier and Carver 1985, Buchanan and Seligman 1995), and has tended to overlook optimism induced by contextual factors, as noted by Kluemper et al. (2009), and George (1991).

Consistent with both the “power of the situation” and the limitations of individual differences for understanding decision-making (Lewin 1951, Ross and Nisbett 1991), we contend that situational outlook (feeling optimistic or pessimistic about a specific upcoming event) has distinct, important and understudied psychological and behavioral consequences.

Distinguishing the effects of situational outlook, however, will require precise experimental design. Many researchers have acknowledged that optimism is often conceptually and empirically confounded with affective states (Weisse 1992, Peterson 2000, Salovey et al., 2000, Kluemper et al. 2009) and causal attribution (Scheier and Carver 1985), as well as personal
agency and perceived control (Aspinwall 2005, Bruininks and Malle 2005). In the present research, we distinguish situational outlook from other types of optimism and pessimism, as well as from potential confounds. In many of our studies we not only manipulate situational outlook (i.e., feeling optimistic vs. pessimistic about an imminent future outcome), but we also measure both long-term state optimism (i.e., feeling confident about general life outcomes in the upcoming year), and dispositional optimism (i.e., a positive explanatory style, measured with the LOT-R scale, Scheier, Carver and Bridges 1994), as well as affective state (i.e., mood) and other factors.

Moreover, we employ two experimental paradigms, in order to disambiguate situational outlook from other factors. In the direct manipulation paradigm, we manipulate the criteria for success in an initial task, to directly induce different situational outlook based on prior performance. We also develop a novel cross-manipulation paradigm (Studies 5 and 7), which builds on the recency belief literature (Van Boven et al. 2009) to systematically induce different situational outlook, by crossing prior outcomes and causal theories. This approach, described in Study 5, separates situational outlook from prior outcomes, avoiding common confounds of optimism, including affect, personal agency, perceived control, and causal attribution.

Next, we test the proposed Outlook Effect in seven experimental studies. We first establish the basic effect that situational outlook uniquely affects the sequential consistency of common consumer choices (Studies 1 and 2). Then, we investigate the proposed “preference for self-continuity” as the underlying psychological mechanism in Studies 3 through 6. Lastly, we generalize our findings to tradeoffs between broadly defined usual and novel consumer choices, in Study 7. Across the studies, we also rule out alternative explanations involving affective
states, causal attribution, and perceived control, and distinguish the Outlook Effect from deliberate causal strategies or superstitious rituals.

**STUDY 1: SITUATIONAL OUTLOOK AFFECTS CONSUMER’S SEQUENTIAL CHOICE CONSISTENCY**

In this study, we directly test the Outlook Effect. Participants made an initial self-relevant consumer choice (reading a magazine article) and then played the first round of either an easy or difficult Scrabble-type game, inducing an optimistic or pessimistic outlook about the final round. Participants then made a second magazine choice, before the final round of the Scrabble game. We coded the consistency or inconsistency between the first and second magazine choices as the key dependent variable in the study. The Outlook Effect predicts that when participants feel optimistic about winning the game, they would prefer to maintain self-continuity by reading another article from the same magazine as before. In contrast, when they feel pessimistic about winning the prize, they would prefer to disrupt self-continuity and experience change by reading an article from a different magazine than before.

**Pretest**

In order to confirm the self-relevance of the stimuli, as suggested by the prior literature (Belk 1988), we administered a four-item scale to 53 online participants. They indicated whether they disagreed (1), felt neutral (2), or agreed (3) with each item, such as: “Choosing which online magazines to read may reflect and contribute to how one thinks about, evaluates, and perceives themselves”. Participants in the pretest generally agreed (M = 2.71, SD = .46, t (52) = 11.2, p < .001 compared with the neutral response of 2), reflecting their view that the specific
consumer choice used in the study is relevant to their sense of self. Similar pre-tests were conducted for all the studies, with full details provided in the web appendix.

Method

Adult consumers (N = 197, M_{age} = 35.8, 39% Male) were recruited from a screened online subject pool for a general consumer survey, which paid $1.50. Participants were assigned to one of two between-subjects conditions (Situational Outlook: Optimistic vs. Pessimistic). In the survey we introduced two seemingly unrelated tasks (visually reinforced by using different fonts), an “Online Media Consumer Survey” and a “Scrabble Game”. All choices in the study had actual consequences that the participants experienced.

Participants first started the “Online Media Consumer Survey”, where they read:

“In this survey, we're interested in your choice for different online information sources. We'll show you four different online newspapers and magazines. You may choose one. This choice should reflect what you'd like to read the most at the moment. After you make the choice, we'll ask you to read one short excerpt from the online newspaper or magazine your chose, and ask you what you think of the excerpt.”

Participants chose among four different magazine website sources: E!Online, The Wall Street Journal, Scientific American, and National Geographic. A brief article from the chosen source was then shown to participants for a minimum of 60 seconds, each composed of the logo of the media website, a headline, three paragraphs, and one picture (see web appendix for sample excerpts). Following the article, participants answered a few filler questions about the article they had read.

Next, they participated in a practice round of the “Scrabble Game”. Participants read:
"Welcome to our Scrabble Game. In this game, you'll have a chance to win a prize! In the game, we'll give you seven random letters to form some commonly used words. You'll have one practice round where you may familiarize yourself with the rules and the level of difficulty of game, and one prize round where you can win an extra $1 in addition to the base pay of the survey."

Participants were then instructed that they had 90 seconds to generate words from the letters: "PBFAHCE". We made winning the Scrabble game either easy or difficult, by manipulating the criteria for success (4 vs. 10 words). At the top of the game page, a countdown timer indicated how much time was left for the game. When time was up, the next page automatically loaded within 10 seconds.

Next, participants took the second part of the “Online Media Consumer Survey,” in which they were asked to choose which magazine site they would prefer as the source of the second article they would read. Participants were told that after they made the choice, they would read the second article and give their opinion about it. The survey also emphasized that whether or not they chose the same source as in their prior choice, they would be reading a new article.

Last, participants took part in the prize round of the Scrabble Game (with the same manipulated criteria for success). After that, they filled out manipulation check questions and several additional items, including perceived difference between the first and second choices, mood, long-term state optimism, believed purpose of the study, and demographic questions.

Results

Screening. The study took about 15 minutes on average. Since the test of our hypothesis requires participants to pay attention to the instructions and to have English language
proficiency, we excluded participants who were not native English-speakers (4.1%) or who failed a baseline attention check question (1.0%). Results including these participants were similar, and we used the same screening criteria in all studies (web appendix Table 1).

Manipulation checks. The Scrabble game was chosen as a task in which the outcome would be seen as mostly determined by skill, rather than by chance. Indeed, participants’ ratings confirmed that they saw performance in the game as mostly determined by skill (on a scale from chance (0) to skill (100); M = 72.8, SD = 21.3, t(186) = 14.6, p < .001 compared with the scale mid-point of 50).

We expected that participants’ situational outlook towards winning the prize would be based on their perceived performance in the practice round relative to the manipulated success criteria (Burns 2004, Critcher and Rosenzweig 2014). Participants playing the easy (4 words required) version would largely feel optimistic about winning the prize, while those playing the difficult (10 words required) version would largely feel pessimistic about winning the prize. Participants playing the easy version indeed reported, at the end of the study, that they had felt more optimistic about winning the prize before the final round (M = 71.6, SD = 26.4) than did those playing the difficult version (M = 55.9, SD = 29.1, F(1,185) = 14.9, p < .001).

We used the same manipulation checks and found similar results in later studies as well (web appendix Tables 2 and 3).

Choice consistency. As predicted, one-way ANOVA revealed that more participants in the Optimistic (easy) condition repeated their recent choices, choosing to read another article from the same online magazine (58.1%, SD = .50), compared with those in the Pessimistic (difficult) condition (43.6%, SD = .50, F(1,185) = 3.95, p < .05, ηp² = .021; figure 2). In fact, people in the Pessimistic condition were more likely to choose a novel option (58.1%).

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Moreover, consistent with our interpretation that choosing to switch magazines reflects a preference to experience change, participants who had chosen a novel option in their second choice rated the two articles they read as more different on a 3-point scale (M = 2.74, SD = .44) than did those who had chosen from the same source (M = 1.73, SD = .83, t(185) = -10.5, p < .001).

Additional measures. In addition to retrospective situational optimism about winning the prize, we also measured long-term state optimism about general personal outcomes in the upcoming year. While the two measures were correlated (r = .43, p < .001), the situational outlook manipulation only affected the measure of situational optimism (as described earlier), and did not affect long-term state optimism (M = 71.7 vs. 69.8, SD = 24.0 vs. 25.5, F(1,185) = .264, n.s.). Long-term state optimism did have a separate effect on sequential choice consistency in this study. Controlling for situational optimism, the more higher long-term state optimism (vs.
pessimism) was, the more likely participants were to repeat the recent choice vs. adopt the novel option (F(1,184) = 4.45, p < .05).

Mood, while also correlated with measured situational optimism (r = .296, p < .001), was not affected by the manipulation of situational outlook (M = 5.08 vs. 5.16, SD = 1.09 vs. 1.12, F(1,185) = .061, n.s.). Mood also had a separate effect on choice consistency, controlling for situational optimism (F (1,184) = 7.74, p < .01). Neither long-term optimism nor mood moderated the effect of the situational outlook manipulation on choice consistency.

The results confirm that the Outlook Effect is due specifically to situational outlook, and cannot be explained by long-term optimism or mood. The results also suggest that both long-term state optimism and instantaneous mood may have an independent influence on sequential choice consistency. However, while we find a consistent effect of situational outlook on choice consistency across the studies, the effects of long-run state optimism and mood were not consistently replicated in the subsequent studies. We discuss the role of these factors in more detail in the general discussion.

Causal contingency belief. Did participant choices differ depending on situational outlook because they believed that the magazine they read could have a causal impact on their performance in the Scrabble game? Contrary to this possibility, the vast majority (85%) of participants indicated that the media survey could not affect their performance in the Scrabble game, and only 7.5% thought it could. Those participants who believed it could have an effect provided reasons that were completely irrelevant to the purpose of the study (e.g., “I think it relaxed me from the stress.”). Thus the effect does not seem to be driven by explicit magical thinking (James, Handelman and Taylor 2011). We probed participants for the same question in
the following studies as well, and consistently found no evidence that people believed their choices could affect their Scrabble game outcome (web appendix Table 4).

Discussion

The results of study 1 demonstrate that situational outlook about a specific imminent future outcome influences whether consumers choose a “usual” consumer choice (i.e., similar to what had been recently consumed) or a “novel” consumer choices (i.e., different from what they had recently consumed). In particular, consumers feeling optimistic preferred consistency, choosing the “usual” option, whereas consumers feeling pessimistic preferred changes, choosing the “novel” option.

We have proposed that this shift in preference occurs because of differences in situational outlook. This suggests a further test of our theory. When the future outcome is resolved before the second choice, no situational outlook exists at the time of the choice, so the effect of the situational outlook manipulation on preferences for choice consistency or change should be eliminated. We test this prediction in the next study.

**STUDY 2: THE OUTLOOK EFFECT IS FUTURE-ORIENTED**

In Study 2, we aim to test whether the Outlook Effect was driven by future-oriented motivation. The study uses a 2 (Situational Outlook: Optimistic vs. Pessimistic) x 2 (Choice: Before Prize vs. After Prize) between-subjects design. We predict that when the focal choice occurs after the prize round of the game has already been determined, the Outlook Effect will be eliminated, due to the absence of future-oriented motivation.
Method

Participants (N = 431, M\text{age} = 34.6, 46\% Male) were recruited from the same online
subject pool as Study 1, for $2.50. The procedure was similar to Study 1, but we used a “Movie
Preference Consumer Survey” instead of the “Online Media Consumer Survey”. For the
dependent measure, participants chose which genre of movie trailer they wanted to watch, (from
among Action, Romance, Drama, and Animation), both before and after the practice round of the
Scrabble game. For example, a participant who chose “Action” for the first choice and
“Animation” for the second choice watched the trailer of “Avengers: Age of Ultron” before the
practice round of the Scrabble game, and watched the trailer of “Minions” before the final round
of the Scrabble game (full details in the web appendix).

As in Study 1, choices were coded as consistent if a participant chose the same genre in
their first and second choices. Situational outlook was manipulated be setting easy (optimistic) or
difficult (pessimistic) success criteria in the Scrabble game, as in Study 1. In the final round of
the Scrabble game, the difficulty level was the same as in the practice round. In this study, we
also manipulated the presence vs. absence of future-oriented motivation by having the second
movie trailer choice occur either before the prize round of the Scrabble game (as in Study 1), or
after the prize round.

At the end of the study, participants filled out manipulation check questions and scales
including mood, long-term state optimism, dispositional optimism (Scheier et al., 1994), general
self-efficacy (Schwarzer and Jerusalem 1995), self-monitoring (Lennox and Wolfe 1984), self-
concept clarity (Campbell et al. 1996), believed purpose of the study, and demographic
questions.
Results

Based on the attention check and language questions, we excluded 11 participants. The manipulation checks confirmed that the game was seen as skill-based, participants had expected more positive outcomes in the Optimism condition than in the Pessimism condition, and they did not believe that their choice of movie trailers would affect their performance in the game (web appendix Tables 1-4).

*Choice consistency*. We replicated the Outlook Effect when participants still faced a future outcome at the time of making their second movie-trailer choice. When the choice occurred before the prize round of the game, more participants in the Optimistic Condition chose to watch a movie trailer from the same genre they had chosen before, compared to those in the Pessimistic Condition (65.4% vs. 42.3%, F(1,206) = 11.7, p < .001, $\eta_p^2 = .054$; figure 3). Participants in the Pessimistic Condition preferred to watch a trailer from a novel movie genre (57.7%).
FIGURE 3. THE EFFECT IS MITIGATED WHEN THE CHOICE OCCURS AFTER THE PRIZE OUTCOME (STUDY 2).

In contrast, when the second choice occurred after the prize round had already concluded, participants’ choices of movie genres were similar in the Optimistic and Pessimistic Conditions (52.9% vs. 53.7% chose the same genre, F(1,210) = .014, n.s.). An ANOVA analysis confirmed the predicted interaction between situational outlook and whether a future outcome was still pending (F(1,416) = 6.13, p = .014, \( \eta^2_p = .015 \)).

Additional measures. We included three measures of optimism in this study, including retrospective situational optimism at the time of decision, long-term state optimism, and dispositional optimism. The three measures correlated with each other (all \( r_s > .268, p < .001 \)). However, controlling for situational optimism, neither long-term optimism nor dispositional optimism had an effect on sequential choice consistency in the experimental condition (F(1,205) = 2.25 and 2.47, n.s.). Furthermore, the effect of the situational outlook manipulation on choice
consistency persisted when controlling for long-term and dispositional optimism measures. Finally, neither measure moderated the effect of situational outlook on sequential choice consistency.

None of the other measures, including mood, self-efficacy, self-monitoring, or self-concept clarity, had either separate effects on choice consistency, or moderated the effect of situational outlook manipulation, either in the experimental condition or overall, in this study or subsequent studies.

Discussion

Study 2 provides evidence that it is the situational outlook about future uncertainty that drives the Outlook Effect. Recent success or failure only impacted preferences for self-continuity vs. self-change when future outcomes were pending, giving rise to a situational outlook. In contrast, recent success or failure had no effect on preferences for self-continuity vs. self-change when the uncertainty was resolved before the choice. This was the case even though choice consistency vs. change could not affect the outcome, and the participants did not believe that it would.

So far, we have established the basic predictions regarding the Outlook Effect in Study 1 and 2. In Studies 3 through 6, we will examine the hypothesized role of preference for self-continuity as the underlying psychological mechanism. First, in Study 3, we identify self-relevance as a key moderator of the effect. In Studies 4 and 5, we test the direct effect of situational outlook on preferences for self-continuity. Then in Study 6, we distinguish between a mere signaling account of the Outlook Effect, and a preference to actually experience self-continuity or self-change.
STUDY 3: THE ROLE OF SELF-RELEVANCE

We have theorized that the preference for self-continuity underlies the Outlook Effect. Thus, when a consumer choice is not relevant to one’s sense of self, then different preferences for self-continuity would not influence the consistency of such choices. Therefore, we would predict that the effect of situational outlook on choice consistency would be reduced in consumer choices that are less self-relevant, compared with consumer choices that are more self-relevant.

We test these predictions in Study 3. Consumers have been shown to regard their own choices of music as highly reflective of the sense of self (Berger and Heath 2007). Therefore, we posit that choosing among one’s own favorite musicians will be self-relevant. In particular, when choosing among one’s favorite musicians, listening to the same song (from the same musician) that one listened to recently would enhance self-continuity, while listening to a different song by a different musician than before would weaken self-continuity.

In contrast, choosing among songs by someone else’s favorite musicians will be experienced as much less self-relevant. Thus, listening to the same song by one musician or different songs by different musicians will not affect the sense of self-continuity when the musicians are the favorites of another person (e.g., a family member) who has different music tastes than oneself.

Method

Participants (N = 204, M_age = 31.0, 61% Male) were recruited in a research lab in the downtown area of a Mid-western city and were paid $4 each. The study had a 2 (Situational
Outlook: Optimistic vs. Pessimistic) x 2 (Choice of Music: Own vs. Other’s Favorites) between-subjects design. We predict that when participants choose among different favorite musicians of another person to listen to, the Outlook Effect would be mitigated.

Each participant was asked to take part in two ostensibly unrelated studies: a “Music Attitude Survey” and the “Scrabble Game” used in earlier studies. The two surveys were installed on two adjacent desktop computers in the same experiment room, displayed in different templates and fonts. The experimenter told participants that since both studies involved delays, they should switch to the other study when one was temporarily unavailable. Participants were told to begin with the music survey, then do the first round of the Scrabble game, finish the music survey and then complete the Scrabble game.

In the “Music Attitude Survey”, participants were first asked to think about their favorite music genres and list three distinct musicians from different genres they like. Participants were then asked to think of a family member with very different musical tastes from themselves, describe the person’s relationship to themselves, and list three musicians from different music genres that the other person likes.

Participants were then given access to a large online music library for 3 minutes, during which they would listen to a song by one of the musicians they had listed earlier. Participants in the Own-Favorites (high self-relevance) condition were asked to choose among their own three favorite musicians, while participants in the Others’-Favorites (low self-relevance) condition were asked to choose among the three favorite musicians of the family member. After 3 minutes of music listening, participants answered a few filler questions about the music listening experience. The survey then paused and showed on the screen that data was being processed and the second part of the music survey would take one to two minutes to load.
Following the experimenter’s initial instructions, participants moved over to the adjacent computer to start the “Scrabble Game,” identical to the one used in Study 1, in which they were assigned to either an easy (optimistic) or difficult (pessimistic) version of the game. After the practice round of the Scrabble game, they were again asked to wait while the prize round of the game was being loaded, prompting participants to complete the “Music Attitude Survey”.

Participants then read that they would be given another 3 minutes to access the online music library. After recalling the three musicians they had listed, they were asked to indicate their preference between the following two options: “I would listen to the same musician's same piece of music”, and “I would listen to a different musician's music (write the name of the musician below): ____________”. This choice was our main dependent variable.

After making the choice and listening to the chosen song, participants were given the same filler questions as in the first part of the music survey, filled out demographic information, and completed the music survey. They then completed the prize round of the Scrabble game. Last, they filled out the same additional measures as in Study 2.

Results

Manipulation check. Participants reported listening to their own favorite musicians more frequently than the musicians they listed as favorites of their family members (on a 7-point scale from “not at all” (1) to “very often” (7) (M = 5.89 vs. 3.25, SD = 1.41 vs. 2.00, F(1,188) = 107.7, p < .001).

Choice consistency. When participants chose among their own favorite musicians, their choice consistency was affected by the manipulated situational outlook. In the Own-Favorites conditions, more participants listened to the same song in the Optimistic Condition than the
In the Pessimistic condition, most people switched to a different musician (81.8%). In contrast, when participants chose among another person’s favorite musicians, their choice consistency was not affected by the situational outlook (29.4% vs. 32.0% chose to hear the same song, F(1,99) = .078, n.s.). Overall, a significant interaction in ANOVA revealed that self-relevance of the choice moderated the effect of situational outlook on participants’ choice consistency (F (1,186) = 4.00, p < .05, $\eta^2_p = .021$).

FIGURE 4. THE EFFECT IS MITIGATED WHEN CHOOSING AMONG ANOTHER PERSON’S FAVORITE MUSICIANS (STUDY 3).

Error bars depict 95% Confidence Interval.

Post-test

We have argued that choosing among another person’s favorite musicians mitigates the Outlook Effect because the choice feels less self-relevant, and is therefore irrelevant to preferences for self-continuity. An alternative interpretation, however, is that the moderating
effect of self-relevance was because other people’s favorite musicians are perceived to be less
different from each other than one’s own favorite musicians.

We conducted a separate test (N = 45), in which participants completed the first few
questions in the “Music Attitude Consumer Survey,” as in the main study, including listing three
of their own favorite musicians and three musicians for the family member. First, they rated the
perceived difference among the musicians, for the two lists respectively, on 7-point scales from
“not different at all” (1) to “extremely different” (7). We then asked them “How much of a
change does a switch from one of the musicians to another feel to you?” for the two lists
respectively, on 7-point scales from “not much change at all” (1) to “a very big change” (7).

Participants indicated that there was an equal degree of difference among one’s own
favorite musicians and among the other person’s favorite musicians (M = 4.98 vs. 4.51, SD =
1.41 vs. 1.73, t (44) = 1.59, n.s.), inconsistent with the alternative explanation. Instead,
supporting the proposed account, participants indicated that switching among one’s own favorite
musicians felt more like a change to the self (M = 5.02, SD = 1.32), than did switching among a
family member’s favorite musicians (M = 4.00, SD = 2.00, t (44) = 3.23, p < .005).

Discussion

The results from Study 3 further corroborate our proposition that situational outlook
affects causally unrelated consumer choice consistency via a preference for self-continuity. We
replicated the Outlook Effect with another typical consumer choice when the choice related to
one’s own sense of self, but not when the choice was among another person’s favorite options,
and was hence irrelevant to the participants’ sense of self.
STUDY 4: SITUATIONAL OUTLOOK AFFECTS PREFERENCE FOR SELF-CONTINUITY

Thus far, we have investigated the effect of situational outlook on the consistency of consumer choices. In the present study, we investigate the attitude underlying those choices, directly testing whether situational outlook affects general preferences for self-continuity vs. self-change.

Method

This study paralleled Study 1, with a 2 condition (Situational Outlook: Optimistic vs. Pessimistic) between-subjects design. Participants (N = 418, M_age = 34.4, 50% Male) were from the same subject pool as Study 1, paid $2.50 each. Each participant made an initial choice among movie genres (as in Study 2) and played the Scrabble game with either the easy or difficult success criteria. For the primary dependent variable, we created a six-item scale to directly measure Preference for Self-Continuity.

After the first round of the Scrabble game, participants read six statements, and indicated the degree to which they agreed with each statement on a 5-point scale, from “strongly disagree” (1) to “strongly agree” (5). Among the six items, three stated a preference for self-continuity, such as “I feel like staying the same right now”, and the other three stated a preference for self-change, such as “I would like to experience something different now”, for which the scores were reverse-coded (web appendix). After completing the scale, participants made their second choice among movie genres and completed the second round of the Scrabble game.
Results

*Preferred Self-Continuity.* The six items in the Preference for Self-Continuity Scale showed strong cross-item reliability (Cronbach’s alpha = .86). We converted the scale averages to a 0-10 index score. Consistent with our prediction, participants scored higher on the Preference for Self-Continuity scale in the Optimistic condition than in the Pessimistic condition (M = 5.65 vs. 4.89, SD = 1.64 vs. 1.82, F (1, 416) = 20.3, p < .001). This finding confirms that situational outlook strongly affects preference for self-continuity vs. self-change.

*Choice Consistency.* Replicating earlier studies, participants were more likely to choose the same genre of movie in the Optimistic condition than in the Pessimistic condition (59.0% vs. 49.5%, SD = .49 vs. .50, F (1, 423) = 3.84, p = .05, $\eta_p^2 = .009$). However, the difference in choice consistency between the two situational outlook conditions was substantially smaller than in the prior studies.

*Mediation.* We have proposed that the previously shown effects of situational outlook on sequential consumer choice consistency were due to a change in preference for self-continuity. In this study, measuring the intermediate construct (preference for self-continuity) seems to have resulted in a weaker effect on choice consistency, limiting our ability to identify a mediation effect. Nevertheless, we tested the corresponding mediation model.

First, we confirmed the effect of manipulated situational outlook on sequential movie choice consistency in a simple regression ($\beta = .095$, $t = 1.96$, $p = .05$). Second, we confirmed that situational outlook affected preferences for self-continuity in a simple regression ($\beta = -.763$, $t = -4.50$, $p < .001$). Third, preference for self-continuity predicted choice consistency ($\beta = -.032$, $t = -2.35$, $p < .05$). Finally, in a multiple regression predicting sequential movie choice consistency based on both situational outlook and preferences for self-continuity, we found a significant
effect of preference for self-continuity ($\beta = -.028, t = -1.97, p < .05$) and a reduced effect of situational outlook ($\beta = .074, t = 1.50, \text{n.s.}$). Overall, using a bootstrap Sobel test (Preacher and Hayes 2004), we found a marginally significant partial mediation of situational outlook on sequential movie choice consistency by preference for self-continuity (indirect effect $\beta = .077, p < .10$).

Discussion

In Study 4, we tested the link between situational outlook and preference for self-continuity. We find that an optimistic situational outlook yielded stronger preferences for self-continuity than did a pessimistic outlook. Moreover, differences in the preference for self-continuity predicted sequential consumer choice consistency. Furthermore, we also found a marginally significant mediation.

Notably, the effect size ($\eta^2_p = .011$) of situational outlook on choice consistency in Study 4 was weaker than in Study 2 ($\eta^2_p = .054$), despite using the same study stimuli. It is likely that eliciting self-reported preference for self-continuity vs. self-change might have prompted more deliberation among participants, partially substituting for the effect on choice or de-biasing the subsequent effect on choice consistency (Schwarz 2011).

**STUDY 5: DIRECTLY EXAMINING SELF-CONTINUITY VS. SELF-CHANGE**

Next, we provide further evidence for the direct effect of situational outlook on preferences for self-continuity. Instead of measuring preference for self-continuity on a scale, in this study we used a behavioral measure, giving participants the option to write about
themselves, and examining the content of their self-descriptive writings. According to our framework, when given an opportunity to repeatedly write about the self, participants with an optimistic situational outlook will be more likely to continue writing about the same aspect of the self, while participants with a pessimistic situational outlook will be more likely to instead write about a different aspect of the self.

Moreover, we introduce a novel cross-manipulation experimental paradigm, in which we leverage a difference between skill-based and chance-based causal beliefs to dissociate optimistic and pessimistic situational outlook from positive vs. negative initial outcomes.

Prior research has documented that the inferences people form about future outcomes based on past outcomes depends on the nature of the task (Van Boven et al. 2009). In particular, when a task involves perceived skill (as in the Scrabble task) recent outcomes are seen as more likely to repeat in the future (eg., the hot-hand fallacy; Gilovich, Vallone, and Tversky 1985, Burns 1994). In these contexts, recent successes lead to an optimistic outlook for future outcomes, while recent failure leads to a pessimistic outlook, as shown in the prior studies. In contrast, when the task is seen as based on chance, recent outcomes are generally believed to be more likely to reverse in the future (eg., the gambler’s fallacy, Clotfelter and Cook 1993). For these kinds of tasks, people anticipate that random outcomes will “balance out”, even in a short sequence (Tversky and Kahneman 1971). Thus, recent failures can lead to an optimistic outlook for a future outcome, while recent successes could lead to a pessimistic outlook, reversing the effect of prior outcomes on situational outlook in the prior studies.

We designed a causally ambiguous task (a ball-rolling game), which we then described as either primarily involving skill or primarily involving chance. We anticipate that the same pattern of recent outcomes will then systematically lead to either an optimistic or pessimistic
situational outlook, depending on whether the recent outcomes are described as having been
determined by skill or by chance.

This cross-manipulation paradigm provides several unique benefits. First, this design
separates the valence of people’s affective reactions to the initial outcomes from their situational
outlook for the future outcomes. For example, while a negative recent outcome could be
expected to consistently lead to a negative affective state, the negative outcome could lead to
either a negative situational outlook (in the Skill-belief condition, per “hot-hand”), or a positive
situational outlook (in the Chance-belief condition, per “gambler’s fallacy”), depending on the
causal belief. Furthermore, this paradigm also separates situational optimistic vs. pessimistic
outlook from other factors, including skill vs. chance causal attributions, perceptions of more vs.
less personal agency, and high vs. low perceived control, all of which have been discussed as
common confounds in prior research on optimism vs. pessimism (Aspinwall 2005, Bruininks and
Malle 2005). Therefore, this paradigm helps rule out these confounds as alternative explanations
for the Outlook Effect.

Method

Participants (N = 79, M_age = 30.6, 51% Male) were recruited in a research lab in a large
mid-western city, and paid $3 each. A single research assistant conducted two seemingly
unrelated studies with each participant individually: a ball-rolling game and a self-description
survey.

Participants first filled out a “Self-Identity Survey”, in which they were asked to list three
different aspects of the self:
“People have multiple aspects of self-identity. For example, a person may describe herself as a first-year medical student, a daughter, a firm environmentalist, and so on.

Please list at least three different aspects of your identity.”

Next, participants were asked to choose one of the aspects they had listed and briefly describe that aspect.

The experimenter then showed each participant to another room to start the ball-rolling game, which was presented as being tested for a future study. In the game, players rolled a rubber-band ball across a table, attempting to have it stop in large square marked on the table (figure 5). The straightforward skill-based task of aiming for a target was complicated by the irregular shape of the ball, as well as by rubber erasers scattered across the playing surface, both of which made the outcome of a roll unpredictable and partially subject to chance.

FIGURE 5. DESIGN OF THE BALL-ROLLING GAME IN STUDY 5.
Participants were told that after one practice roll, they would play seven rolls in the game and could win a prize of $1 by scoring at least four times. After the practice roll and three consequential rolls, the experimenter asked the participant to stop and fill out a brief feedback survey about their impressions of the game. As part of the feedback survey, participants read a paragraph emphasizing either the role of skill or chance in the game (described in the web appendix). Participants were then asked if the ball-rolling game reminded them of another game, and to list the name of the other game, if any.

Before resuming the game, the experimenter asked participants to finish the rest of the “Self-Identity Survey”, which contained the main dependent variable:

“Now please again take some time to think about your multiple aspects of self. Please choose one of your multiple aspects and describe yourself in detail about one of them below. What would you like to write about?

A. I’d like to write more about the identity aspect I have described earlier.

B. I’d like to write about a different identity aspect of myself: _____...”

Participants then wrote a paragraph about the chosen aspect of self, and went on to play the last 4 rolls of the game, completed potential covariate measures and demographic questions, and were paid based on their performance.

Pretest of the situational outlook manipulation

We separately recruited online participants (N = 61) who were each paid $1.50 and completed a survey in which we pre-tested the manipulations of recent outcomes (success vs. failure, within-subjects) and causal beliefs (skill vs. chance, between-subjects). Participants first saw pictures of the game and read the basic rules of how to play, and then read the same
additional information, stressing either the role of skill or chance in the game, as in the main study. Participants were then asked to imagine that they had tried three times and had either three hits or three misses in a row (counterbalanced within-subjects). Next, participants rated how optimistic or pessimistic they would be about the next outcome in each case, using a sliding bar on a 10-point scale ranging from “very pessimistic” (1) to “very optimistic” (10).

Consistent with our predictions, participants were relatively optimistic after recent successes in the Skill-belief condition (M = 6.30, SD = 2.37) as well as after recent failures in the Chance-belief condition (M = 6.38, SD = 2.04). In contrast, participants were more pessimistic after recent failures in the Skill-belief condition (M = 5.09, SD = 2.35) and after recent successes in the Chance-belief condition (M = 5.88, SD = 2.00). ANOVA analysis revealed the predicted two-way interaction between information about recent outcomes and manipulation of causal beliefs on participants’ prediction of the future outcome ($F(1, 59) = 6.82, p < .05, \eta_p^2 = .12$), validating the cross-manipulation paradigm in the context of the ball-rolling game. Specifically, the manipulation reliably induced optimistic and pessimistic situational outlook, separate from the prior outcomes.

Main Study Results

*Suspicion check.* Since the study was conducted in a laboratory setting where multiple studies are run simultaneously, we carefully probed if participants suspected a relationship between the purportedly unrelated “Self Identity Survey” and the “Ball Rolling Game”. Most participants (95.9%) did not suspect any relation between the two, but four participants suspected that the two studies were somehow related. These four participants were therefore excluded from analysis, although results including them were similar (web appendix Table 4).
**Manipulation check.** Participants’ ratings of the game confirmed that participants had a stronger relative belief in skill (vs. chance) in the Skill-belief conditions than in the Chance-belief conditions (M = 5.19 vs. 4.16 from “primarily chance”(1) to “primarily skill” (7), F(1,77) = 9.8, p < .005).

**Game performance.** In the first four rolls, just over half of the participants did poorly, with zero or one hit (57.9%), below the success rate needed to win the reward. Just under half did well, with two or more hits (42.1%). No differences in initial performance were found between the Skill-belief and Chance-belief conditions (M = 3.20 vs. 2.75, t(74) = 2.23, n.s.).

**Self-descriptive writings.** Our participants listed a variety of aspects of self in the initial “Self Identity Survey”. For example, one participant described himself as a “*reader, cyclist, and foodie*”, while another listed “*artist, engineering student, only child*”. After the mid-game break, 37.2% of all participants chose to elaborate about the same aspect of the self, while 62.8% of them chose to write about a different aspect of the self.

**Self-continuity.** We coded participants as being in an Optimistic (doing well in the Skill-belief condition or doing poorly in the Chance-belief condition) or Pessimistic (doing poorly in the Skill-belief condition or doing well in the Chance-belief condition) situational outlook. We found that about half of the participants (53.8%) preferred to elaborate on the same aspect of self in the Optimistic situational outlook. In contrast, only 22.5% of participants preferred to elaborate on the same aspect of self in the Pessimistic situational outlook (F(1,74) = 8.06, p < .01, η² = .098). Instead, most of them (77.5%) preferred to describe a different aspect of self that they listed but hadn’t chosen to describe earlier. This result was confirmed in an ANOVA, which yielded a significant predicted interaction between the number of successes and the manipulation of causal beliefs (ANOVA F(1,72) = 4.89, p < .05; figure 6).
**FIGURE 6. MANIPULATED SITIATIONAL OUTLOOKS (RECODED FROM CAUSAL INFORMATION AND PRIOR PERFORMANCE) AFFECT PREFERRED SELF-CONTINUITY (STUDY 5).**

% Describing a different aspect of self

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<th>% choosing a novel option</th>
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*Error bars depict 95% Confidence Interval.*

**Analysis of the content of writing.** In order to validate that the choices indeed reflected self-continuity vs. self-change, we asked an independent coder to rate how different the two descriptions were, on a 5-point scale from “very similar” (1) to “very different” (5). Content analysis of the writings confirmed that when participants chose to elaborate on the same aspect of self, their second self-description was more similar to the previous one (M = 2.22, SD = .80), and when participants chose to describe a different aspect of self, their second self-description was more different from the previous one (M = 4.76, SD = .60, t (74) = 15.7, p < .001).

**Subsequent performance.** We found that those who exhibited the Outlook Effect did not outperform others (1.64 vs. 1.65 hits out of 4, t (74) = -.052, n.s.), further supporting the lack of a causal relationship between the choice in the writing task and future outcomes.

Discussion
These results provide further evidence that the Outlook Effect is due to a direct effect of situational outlook on preferences for self-continuity. Moreover, the use of the cross-manipulation paradigm provides even more precise evidence that the results are due to situational optimism vs. pessimism, rather than other factors, such as affective states due to past outcomes, causal attribution of skill vs. chance, personal agency, or perceived control.

Overall, these results are consistent with proposed the role of preferences for self-continuity due to situational outlook affecting sequential consumer choice consistency. This study shows that a high degree of self-continuity is preferred when situational inferences generate optimism. In contrast, disruption in self-continuity is preferred when situational inferences yield pessimism. As a result, these different preferences for self-continuity manifest themselves in the sequential consistency of consumer choices people make, as demonstrated in the prior studies.

Notably, situational outlook affects preferences for specifically self-continuity, rather than generalizing to all kinds of continuity. We conducted a parallel version of Study 5, under the same conditions with the same population, in which we tested whether writing about other people, instead of the self, resulted in the same effect. Instead of the “Self-Identity” survey, participants completed an equivalent “Social Cognition” survey, in which they were asked to list three different people they had seen on that day, and choose one to describe in a brief sentence. Then, during the mid-game break, they completed the second half of the survey, in which they chose between writing more about the same person and writing about another person they listed earlier (Part III, web appendix). In this version of the study, we did not observe any effect of situational outlook on preferences for consistency when the writing was about others, further
corroborating self-relevance as a necessary condition for the effect, consistent with the results of Study 3.

**STUDY 6: EXPERIENCING VS. MERELY SIGNALLING SELF-CONTINUITY**

Consumer choices typically lead to consumption of consumer products or services. Thus, preferences for consistent choices typically result in continuity of experience, while preferences for changes result in novel experiences. However, consumer choices themselves can sometimes serve as mere signals to express one’s sense of self (Schlenker et al. 1996, Ariely and Levav 2000, Kim and Drolet 2003). Thus, a consumer choice could be made due to a desire to experience the consumption, or a desire to express a preference, or both.

The results thus far have provided evidence that the Outlook Effect is due to differences in the preference for self-continuity. According to our framework, the situational outlook does not merely affect desires to provide a signal (either to others or to oneself) about self-continuity or self-change. Instead, the preference for change is rooted in an association between the self and future outcomes. Therefore, the preference for self-continuity or change should be stronger for actual self-relevant experiences, than for signaling preference. In the present study, we distinguish between experience-based preferences and mere signaling preferences.

**Method**

Study 6 employed a 2 (Situational Outlook: Optimistic vs. Pessimistic) x 2 (Choice: Experiential vs. Expressive) between-subjects design. In the Experiential condition, participants experienced their choice (reading a magazine article), while in the Expressive condition
participants only expressed a preference but knew that they would not experience the choice (not read the article). If the Outlook Effect is primarily driven by preferences for experienced self-continuity, then we would expect to replicate the effect only in the Experiential conditions. However, if the effect reflects a motive to merely signal the preference for self-continuity, then we would replicate the effect in both Experiential and Expressive conditions.

Participants (N = 263, M\textsubscript{age} = 34.4, 53% Male) were recruited from the same online subject pool as in Study 1 and were paid $2.00. We again used the Scrabble game to manipulate situational outlook. Participants had 120 seconds to complete the game, but otherwise the procedure in the Experiential Choice conditions was identical to Study 1. In the Expressive Choice conditions, the procedure was the same except that participants were told they would not read the magazine articles they selected.

Results

*Choice consistency.* We replicated the Outlook Effect in the Experiential Choice conditions, but not in the Expressive Choice conditions. In the Experiential Choice conditions, participants in the Optimistic condition were marginally more likely to choose a second article from the same magazine that they had previously read, compared to participants in the Pessimistic condition (55.2% vs. 40.0%, F(1,125) = 2.96, p = .088, $\eta^2_p = .023$; figure 7). Participants in the Pessimistic condition tended to choose an article to then read from a novel magazine option (60.0%).
In contrast, in the Expressive Choice conditions, participants were equally like to express a preference for another article from the same magazine they had read previously in the Optimistic and Pessimistic conditions (64.6% vs. 73.1%, F(1,130) = 1.11, n.s.). ANOVA revealed a significant interaction between situational outlook and choice type (F(1,255) = 3.94, p < .05, $\eta_p^2 = .015$).

Discussion

The choices in the Experiential and Expressive conditions conveyed similar signals of self, while only choices in the Experiential conditions resulted in the experience of self-continuity or self-change. The fact that we replicated the effect only in the Experiential Choice conditions suggests that the Outlook Effect is not attributable to a mere signaling motive.
Instead, the effect of situational outlook on sequential consumer choice consistency is primarily due to preferences for actually experiencing self-continuity vs. self-change.

**STUDY 7: EXTENDING THE OUTLOOK EFFECT: USUAL VS. NOVEL CONSUMER CHOICES**

In the prior studies, we have measured sequential choice consistency by comparing a recently experienced choice to a choice between upcoming options. In Study 7, we investigate the generality of the effect by testing consumers’ choices between a usually chosen option vs. a novel option, in the absence of a specific prior choice. We design a hypothetical scenario in which consumers choose a beverage to drink, between the beverage that they typically drink, and a beverage that they have never had. Neither the usual or novel choices had been just experienced in the situation described in the choice scenario.

In this study, we again use the cross-manipulation paradigm introduced in Study 5, to test the effect of situational outlook on consumer choice consistency, separately from recent outcomes and other potential confounds. Furthermore, as in Study 2, we identify the specific effect of situational outlook for a future outcome, by varying whether the outcome was pending or had already occurred.

We employed a 2 (Recent Outcomes: Success vs. Failure) X 2 (Causal Beliefs: Skill vs. Chance) X 2 (Choice: Before Future Outcome vs. No Future Outcome) between-subjects design. Based on Study 5, either recent success in a skill-based task or failure in a chance-based task is assumed to yield an optimistic situational outlook for an imminent future outcome. In contrast, success in a chance-based task or failure in a skill-based task should yield a pessimistic
situational outlook about an imminent outcome. Thus, as long as the outcome is imminent, we predict that the Optimistic conditions will lead to a higher proportion of choices of the usual option, whereas Pessimistic conditions will lead to higher proportion of choices of the novel option. In contrast, we predict that the absence of a future outcome would reduce the Outlook Effect.

Method

We collected 203 complete and valid surveys from U.S. participants (M<sub>age</sub> = 34.5, 39% Male) in the same online survey pool as before, each paid $1 for participating. Participants were asked to imagine they were playing Blackjack in a Las Vegas casino, a game that plausibly contains aspects of both skill and chance (Wagenaar 1988). First, they were shown a pamphlet, which introduced the rules of blackjack, and featured simulated quotes from previous winners that emphasized the role of either skill or chance in the game (shown in Part II of the web appendix), as a manipulation of causal beliefs. They then read a scenario about playing a few rounds of Blackjack, in which both the recent outcomes and presence of a future outcome were manipulated.

In conditions where the future outcome was pending, participants read:

“You have decided to buy five $10 chips, each for one round. You decide that if you win, you’ll put the reward in your pocket, and if you lose, you’ll play another round with a new chip, but you won't bet any chips you've won and put in your pocket. In each round, you're the only player at the table. You plan to play only five rounds and redeem whatever you have in your pocket when you leave.”
Next, the recent outcomes were manipulated by having participants either read about experiencing a winning streak (winning four rounds) or read about a losing streak (losing four rounds). Then they were asked what kind of drink they would order at that moment, before playing the fifth (and last) round. They made a choice between two counterbalanced options: “The drink that you usually like and often order” and “An unusual drink that you have never tried before but have always wanted to”.

Participants in the No-future-outcome conditions, read an almost identical scenario, except that they were told that they had initially bought four chips (instead of five) and had therefore stopped playing after winning or losing all four chips. They were also asked to make the same choice between the beverages, described as occurring before leaving the casino.

Results

First, when participants faced a pending future outcome, we extended the Outlook Effect to participants’ choices between a usual and a novel beverage. Coding the conditions as Optimistic vs. Pessimistic situational outlook, as in Study 5, we found that Optimistic conditions gave rise to higher choice share of the usual drink than Pessimistic conditions (81.8% vs. 66.7%, F (1,112) = 3.49, p = .064, \( \eta_p^2 = .030 \); figure 8). In other words, participants were more open to a novel drink in the Pessimistic outlook conditions, with the novel option chosen by 33.3%. As predicted, the effect of situational outlook on choice was validated by an interaction between recent outcomes and causal beliefs (F(1,111) = 4.06, p < .05).
In contrast, when no future outcome was pending, we did not observe any effect of the manipulations, since there was no situational outlook to be influenced by the recent outcome and causal belief manipulations. Participants in what otherwise would have been the Optimistic and Pessimistic situational outlook conditions preferred the usual drink at similar rates (67.4% vs. 78.9%, F(1, 82) = 1.39, n.s.). There was no interaction between causal belief and recent outcomes in predicting drink choices (F(1,80) = 1.38, n.s).

Overall, we found the predicted two-way interaction between the conditions recoded as Optimistic vs. Pessimistic and the presence of a future outcome (F(1,194) = 4.46, p < .05, $\eta^2_p = .022$). A three-way interaction among recent outcomes, causal beliefs, and the presence of a future outcome further validated these predictions (F(1,191) = 4.85, p < .05).
Discussion

Study 7 extended the Outlook Effect to the broader context of choosing between usual vs. novel consumer options, using the cross-manipulation paradigm. These results provide strong support for the predictions of our framework, and suggest that the Outlook Effect can have marketing implications for many repeat-purchase and novel product adoption decisions.

GENERAL DISCUSSION

Consumers sometimes prefer to stay loyal, sticking to their usual choices, and sometimes prefer to try something new instead. This paper demonstrates that one important determinant of these preferences is situational outlook, that is, the local optimism or pessimism consumers feel about an uncertain outcome. We demonstrated this Outlook Effect and investigated the underlying mechanism in a series of seven studies. In Study 1 and Study 2, we demonstrated that consumers make more consistent sequential choices in an optimistic situational outlook than a pessimistic situational outlook. In Studies 3 through 6, we provided evidence that preference for self-continuity (vs. self-change) served as the underlying psychological mechanism, and identified the resulting boundary conditions of the effect. Lastly, in Study 7, we extended the effect to choices between broadly defined usual vs. novel consumer products. Overall, incorporating all the data we have collected (in conditions where the Outlook Effect was predicted), the result was highly significant and had a moderate effect size (39.6% vs. 56.6%, SD=.49 vs. .50, F (1,1211) = 33.5, p < .001, $\eta^2 = .027$).

Interpreting the Outlook Effect
The Outlook Effect is distinct from overt superstition or magical thinking (Vyse 1997, James, Handelman and Taylor 2011), as almost all participants stated that they did not believe that their choice consistency could affect their game performance. Associations between positive outcomes and co-occurring consumption can lead to specific and explicit forms of superstition in some cases (e.g., sports fans, Hamerman and Johar 2013). Our studies are conceptually consistent with these findings, and provide evidence that the learned association between self-continuity and future outcomes can more generally lead to an associative response (Skinner 1948), broader than explicit superstition. General preferences for self-continuity or self-change arise as associative responses to optimistic or pessimistic situational outlook, resulting in differences in the consistency of repeated consumer choices. Thus, we posit that the Outlook Effect can be interpreted as reflecting “quasi-magical thinking” (Shafir and Tversky 1992), typically due to a conflation of causal contingency and diagnostic contingency (Skinner 1948, Quattrone and Tversky 1984).

The Outlook Effect is also distinct from and not predicted by prior theories of optimism. In this paper, we introduce an important and novel distinction, between situational optimism about an imminent outcome and the forms of optimism previously studied, particularly dispositional optimism (Scheier and Carver 1985) and long-term state optimism (Kluemper et al. 2009). Pooling the data across our studies indicates that situational optimism is correlated with long-term state optimism and with dispositional optimism (rs > .285, ps < .001), but has very different effects on choices. While situational optimism strongly influenced sequential choice consistency in our studies, neither long-term state optimism nor dispositional optimism had a significant effect on choice consistency in the experimental conditions, when controlling for
situational optimism (F (1, 1022) = .14, F (1, 836) = .25, n.s.). Furthermore, neither traditional measure of optimism moderated the effect of situational outlook on choices.

Furthermore, our findings cannot be explained by affective states due to recently experienced outcomes. Pooling our data, we found that positive affective states (e.g., mood) strongly correlated with situational optimism (r = .284, p < .001), but affective states did not have a separate effect on consumer choice consistency in the experimental conditions, when controlling for situational outlook (F (1,1210) = .99, n.s.).

Furthermore, the cross-manipulation paradigm used in Studies 5 and 7 directly precluded potential confounds such as affective states and causal attribution, by dissociating these variables from the valence of situational outlook. These studies also provide further evidence against other confounding variables such as perceived control and personal agency, which are typically correlated with both causal attribution and recent performance. We measured perceived control ("How much control over the outcome do you feel") and perceived agency ("How much of the outcome is determined by the situation vs. you") in both studies, and found that neither measure affected choice consistency when controlling for the situational outlook manipulation (web appendix). Other variables we measured in these studies, including self-monitoring, self-efficacy, and self-concept clarity, did not have any effects.

Implications for Future Research

The notion that future-orientated cognition often underlies present behaviors traces back to the earliest days of empirical psychology (Mead 1934, Skinner 1938) and remains a central issue in contemporary psychological and neurological research (Banyas 1991, Asaad et al. 1998, Aspinwall 2005). However, due to both an initial emphasis on individual differences and
pervasive confounds among relevant constructs in prior research on optimism, the psychological and behavioral implications of situational outlook have remained undetected. The present research makes a novel contribution by establishing a theoretically important and behaviorally consequential distinction between situational outlook, previously studied forms of optimism and commonly confounded constructs.

Our studies not only demonstrate the direct psychological and behavioral consequences of situational outlook, but also provide researchers with a useful means for effectively manipulating situational outlook while precluding common confounds. Future research could investigate the potential effects of situational outlook on other self-relevant and future-oriented consequences, including inter-temporal preferences, risk preferences, variety seeking, vice vs. virtue choices and sensation seeking, which have been posited to be related to future-oriented decision making.

We have focused on exploring the Outlook Effect in the context of common consumer choices. Based on our theorization and findings, we believe that the generalizability of the effect to other kinds of decisions will primarily depend on the perceived self-relevance of the behavioral change under consideration. We leave the question of which kinds of decision people will see as more or less relevant, and will therefore be more or less influenced by situational outlook, for future research to explore.

Our findings contribute to the marketing literature in two unique ways. First, recent researchers have been increasingly interested in how anticipation about the future could affect current consumer behaviors, often via fateful beliefs and seemingly superstitious behaviors (Converse, Risen and Carter 2012, Kim, Kulow and Kramer 2013, Hamerman and Johar 2013). Our findings join this emerging literature on the effects of anticipation about the future, and
demonstrate how the presence of future uncertainty can broadly and systematically affect current consumer choices, even in absence of superstitious thinking.

Second, marketing researchers have often been interested in when consumers will switch away from their favorites before they have satiated on them (Ratner and Kahn 2002, Ratner et al 1999) and when consumers will be receptive to novel product offers (Hirschman 1980). The extant marketing literature has provided important insights into how consumers’ individual differences and product characteristics affect repeat purchases and novel product adoption. Our findings expand this area of research by identifying how fleeting situational factors, independent of the evaluation of product characteristics, can impact seemingly unrelated consumer choices. Our framework highlights the need for future research into the role of future-oriented cognition and motivation in common consumer behaviors.

Marketers endeavor to understand how to retain current customers and how to acquire new customers and. Our findings provide important insights for both. First, we demonstrate a link between local optimism and repeated purchases. This finding suggests that customers will be easier to retain if product repurchase opportunities are encountered in optimism-inducing circumstances. Second, we demonstrate a link between situational pessimism and new product adoption. This finding suggests that consumers, will be more receptive to new product pitches when they are experiencing local pessimism. As the 1971 Alka-Seltzer commercial slogan “Try it, you’ll like it!” suggested, it can take just a few “first try” opportunities to turn an unknown brand name into a marketing success. Our findings shed new light on these “first try” opportunities.
References


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Ratner, Rebecca K., and Barbara E. Kahn (2002), "The impact of private versus public


Skinner, Burrhus Frederic (1938), "The behavior of organisms: An experimental analysis."


Web Appendix

I. Additional Results (Tables, figures and additional measures)
   a. Table 1. Screening results
   b. Table 2. Manipulation check
   c. Table 3. Belief in skill check
   d. Table 4. No explicit belief in causal contingency
   e. Table 5. Self-relevance tests
   f. Table 6. Additional simple effects in Studies 5 & 7
   g. Table 7. No effect of perceived control or agency in Studies 5 & 7

II. Study stimuli & samples
   a. Self-relevance test for all stimuli
   b. Study 1&6 – Online media
   c. Study 2&4 – Movie trailer
   d. Study 3 – Music & perceived difference posttest
   e. Study 5 – Ball rolling, outlook pretest & content coding
   f. Study 7

III. Other studies
   a. Ball-rolling Study Version 2: writing about other persons
   b. Ball-rolling Study Version 3: choosing among different colors
I. Additional Results

TABLE 1. SCREENING CRITERIA AND PERCENTAGES.

<table>
<thead>
<tr>
<th>Study</th>
<th>N before screening</th>
<th>N after screening</th>
<th>Failed attention check</th>
<th>Not native English</th>
<th>Suspicion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1: Online Media I</td>
<td>197</td>
<td>187</td>
<td>2</td>
<td>8</td>
<td>0</td>
</tr>
</tbody>
</table>
  *(Online, real choice)*  |                    |                   |                        |                    |           |
| Study 2: Movie Trailer I | 431                | 420               | 4                      | 7                  | 0         |
  *(Online, real choice)*  |                    |                   |                        |                    |           |
| Study 3: Music     | 204                | 190               | 9                      | 14                 | 0         |
  *(Laboratory, real choice)* |              |                   |                        |                    |           |
| Study 4: Movie Trailer II | 441              | 418               | 14                     | 9                  | 0         |
  *(Online, real choice)*  |                    |                   |                        |                    |           |
| Study 5: Self-description | 79                | 75                | 0                      | 0                  | 4         |
  *(Laboratory, real choice)*  |                        |                   |                        |                    |           |
| Study 6: Online Media II | 263                | 259               | 1                      | 3                  | 0         |
  *(Online, real choice)*  |                    |                   |                        |                    |           |
| Study 7: Beverage  | 213                | 199               | 10                     | 4                  | 0         |
  *(Online, hypothetical scenario)* | |                   |                        |                    |           |

*Percentages overlapped in Study 3.

TABLE 2. MANIPULATION CHECK: PARTICIPANTS REPORTED FEELING MORE OPTIMISTIC TOWARDS THE FUTURE OUTCOME IN OPTIMISM-INDUCING CONDITIONS.

<table>
<thead>
<tr>
<th>Anticipatory state</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1: Online Media I</td>
<td>Optimistic</td>
<td>93</td>
<td>71.6</td>
<td>26.4</td>
<td>F (1, 185)=14.9</td>
</tr>
<tr>
<td></td>
<td>Pessimistic</td>
<td>94</td>
<td>55.9</td>
<td>29.1</td>
<td></td>
</tr>
<tr>
<td>Study 2: Movie Trailer I</td>
<td>Optimistic</td>
<td>208</td>
<td>73.8</td>
<td>24.0</td>
<td>F (1, 418)=38.9</td>
</tr>
<tr>
<td></td>
<td>Pessimistic</td>
<td>212</td>
<td>58.1</td>
<td>27.4</td>
<td></td>
</tr>
<tr>
<td>Study 3: Music</td>
<td>Optimistic</td>
<td>93</td>
<td>74.1</td>
<td>24.1</td>
<td>F (1, 183)=21.9</td>
</tr>
<tr>
<td></td>
<td>Pessimistic</td>
<td>92</td>
<td>56.3</td>
<td>27.6</td>
<td></td>
</tr>
<tr>
<td>Study 4: Movie Trailer II</td>
<td>Optimistic</td>
<td>210</td>
<td>75.2</td>
<td>23.3</td>
<td>F (1, 416)=42.3</td>
</tr>
<tr>
<td></td>
<td>Pessimistic</td>
<td>208</td>
<td>59.4</td>
<td>26.3</td>
<td></td>
</tr>
<tr>
<td>Study 6: Online Media II</td>
<td>Optimistic</td>
<td>132</td>
<td>72.2</td>
<td>22.8</td>
<td>F (1, 257)=25.1</td>
</tr>
<tr>
<td></td>
<td>Pessimistic</td>
<td>127</td>
<td>56.8</td>
<td>26.5</td>
<td></td>
</tr>
</tbody>
</table>

“How optimistic or pessimistic were you before you started the prize round of the Scrabble Game?” on a slider scale from “Very Pessimistic” (0) to ”Very Optimistic” (100).
### TABLE 3. CAUSAL BELIEF CHECK: PARTICIPANTS BELIEVED THE OUTCOME WAS PREDOMINANTLY SKILL-DETERMINED.

<table>
<thead>
<tr>
<th>Study</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1: Online Media I</td>
<td>187</td>
<td>72.8</td>
<td>21.3</td>
<td>t (186) = 14.6</td>
<td>0.000</td>
</tr>
<tr>
<td>Study 2: Movie Trailer I</td>
<td>420</td>
<td>74.0</td>
<td>22.6</td>
<td>t (419) = 21.8</td>
<td>0.000</td>
</tr>
<tr>
<td>Study 3: Music</td>
<td>185</td>
<td>74.1</td>
<td>23.4</td>
<td>t (184) = 14.0</td>
<td>0.000</td>
</tr>
<tr>
<td>Study 4: Movie Trailer II</td>
<td>425</td>
<td>73.3</td>
<td>21.8</td>
<td>t (417) = 21.9</td>
<td>0.000</td>
</tr>
<tr>
<td>Study 6: Online Media II</td>
<td>259</td>
<td>75.3</td>
<td>21.9</td>
<td>t (258) = 18.6</td>
<td>0.000</td>
</tr>
</tbody>
</table>

“Do you think the Scrabble Game was determined more by chance or skill?” on a slider scale from chance (0) to skill (100).

### TABLE 4. PARTICIPANTS REPORT NOT BELIEVING IN THE CAUSAL CONTINGENCY BETWEEN CHOICE CONSISTENCY AND GAME OUTCOMES.

<table>
<thead>
<tr>
<th>Study</th>
<th>Question</th>
<th>Yes</th>
<th>Maybe</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1: Online Media I</td>
<td>(Online, real choice) &quot;Do you think the choice could affect your performance in the Scrabble/Ball-rolling Game?&quot;</td>
<td>14</td>
<td>14</td>
<td>159</td>
<td>187</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.5%</td>
<td>7.5%</td>
<td>85.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Study 2: Movie Trailer I</td>
<td>(Online, real choice) &quot;Do you think the choice could affect your performance in the Scrabble/Ball-rolling Game?&quot;</td>
<td>20</td>
<td>25</td>
<td>375</td>
<td>420</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.8%</td>
<td>6.0%</td>
<td>89.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Study 3: Music</td>
<td>(Laboratory, real choice) &quot;Do you think your performance in the Scrabble Game affected your choice?&quot;</td>
<td>11</td>
<td>9</td>
<td>170</td>
<td>190</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.8%</td>
<td>4.7%</td>
<td>89.5%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Study 4: Movie Trailer II</td>
<td>(Online, real choice) &quot;Do you think the choice could affect your performance in the Scrabble/Ball-rolling Game?&quot;</td>
<td>31</td>
<td>37</td>
<td>350</td>
<td>418</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.4%</td>
<td>8.9%</td>
<td>83.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Study 5: Self-description</td>
<td>(Laboratory, real choice) &quot;Do you think your performance in the Scrabble Game affected your choice?&quot;</td>
<td>4</td>
<td>0</td>
<td>71</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.1%</td>
<td>0.0%</td>
<td>94.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Study 6: Online Media II</td>
<td>(Online, real choice) &quot;Do you think the choice could affect your performance in the Scrabble/Ball-rolling Game?&quot;</td>
<td>6</td>
<td>17</td>
<td>236</td>
<td>259</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.3%</td>
<td>6.6%</td>
<td>91.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### TABLE 5. SELF-RELEVANCE OF CONSUMER CHOICES FOR STUDY STIMULI.

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Cronbach’s α</th>
<th>t-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magazine</td>
<td>53</td>
<td>2.71</td>
<td>0.45924</td>
<td>0.795</td>
<td>t (52) = 11.2</td>
</tr>
<tr>
<td>Movie</td>
<td>54</td>
<td>2.63</td>
<td>0.52249</td>
<td>0.802</td>
<td>t (53) = 8.79</td>
</tr>
<tr>
<td>Music</td>
<td>52</td>
<td>2.71</td>
<td>0.46806</td>
<td>0.789</td>
<td>t (51) = 11.0</td>
</tr>
<tr>
<td>Beverage</td>
<td>53</td>
<td>2.27</td>
<td>0.64273</td>
<td>0.841</td>
<td>t (52) = 3.05</td>
</tr>
</tbody>
</table>

Average of ratings for four statements: Disagree (1), Neutral (2), Agree (3); t-test results based on one-sample comparisons with the neutral point (2) (See Section II - A for items).
### TABLE 6. SIMPLE EFFECTS IN SKILL-BELIEF AND CHANCE-BELIEF CONDITIONS OF PERFORMANCE ON CHOICE CONSISTENCY, RESPECTIVELY (STUDY 5 & 7)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>F-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 5</td>
<td>After successes</td>
<td>50.0%</td>
<td>F (1, 40) = 1.80</td>
</tr>
<tr>
<td></td>
<td>After failures</td>
<td>75.0%</td>
<td></td>
</tr>
<tr>
<td>Skill-belief</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chance-belief</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study 7</td>
<td>After successes</td>
<td>18.2%</td>
<td>F (1, 54) = 1.99</td>
</tr>
<tr>
<td></td>
<td>After failures</td>
<td>34.8%</td>
<td></td>
</tr>
<tr>
<td>Skill-belief</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chance-belief</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 7. SELF-REPORTED PERCEIVED CONTROL AND AGENCY DO NOT HAVE SEPARATE EFFECTS ON CHOICE CONSISTENCY WHEN CONTROLLING FOR SITUATIONAL OUTLOOK (STUDY 5 & 7)

<table>
<thead>
<tr>
<th></th>
<th>F-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 5</td>
<td>Perceived Control</td>
<td>F (1, 72) = 2.65</td>
</tr>
<tr>
<td></td>
<td>Perceived Agency</td>
<td>F (1, 72) = .458</td>
</tr>
<tr>
<td>Study 7</td>
<td>Perceived Control</td>
<td>F (1, 110) = 3.75</td>
</tr>
<tr>
<td></td>
<td>Perceived Agency</td>
<td>F (1, 111) = 3.39</td>
</tr>
</tbody>
</table>
II. Study stimuli & samples

**Self-relevance pre-tests:**  
(Magazine version):  
*Please indicate the degree to which you agree with each of the following statements: (Disagree (1), Neutral (2), Agree (3))*

1. Choosing which online magazines to read may reflect and contribute to how one thinks about, evaluates, and perceives themselves.
2. Reading different magazines may make people feel differently about themselves.
3. Among the following four online magazines: E!Online, The Wall Street Journal, Scientific America, and National Geographic, choosing which online magazines to read may reflect and contribute to how one thinks about, evaluates, and perceives themselves.
4. Reading different magazines among E!Online, The Wall Street Journal, Scientific America, and National Geographic may make bring different experiences.

Pretests for movie, music and beverages were worded similarly.
Study 1&6 – Online Magazine Stimuli

Scrabble Game Instructions:

Welcome to our Scrabble Game. In this game, you’ll have a chance to win a prize!

In the game, we’ll give you seven random letters to form some commonly used words. You’ll have one practice round where you may familiarize yourself with the rules and the level of difficulty of game, and one prize round where you can win an extra $1 in addition to the base pay of the survey.

We’ll give you seven random letters on the next page. Please use the given letters to form the requested number of words in 90 seconds. Follow the rules below:

1. The word has to be more than three letters long.
2. The word has to be a common word used as part of speech; must not be an abbreviation, proper noun, or hyphenated.

Now you may prepare a pen and a piece of scratch paper by your side. Once you proceed to the next page, you’ll have 90 seconds to complete the round. While you are on the page, you may not leave the page, pause, or go on other webpages. When time is up, you’ll be automatically directed to the next page within 10 seconds. So make sure you submit your answers within 10 seconds after the 90 second time limit is up.

Please move on to the next page and start the practice round when you are ready.
### Easy version:

The letters are:

```text
P B F A H C E
```

List 4 or more words in the given time to win this round!

**Notes:**
1. The word must be more than three letters long.
2. The word must be a common word used as part of speech; must not be an abbreviation, proper noun, or hyphenated.
3. Make sure you click the submit ">>" button below within 10 seconds after the 90 second time limit is up.

<table>
<thead>
<tr>
<th>Word 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Word 2</td>
<td></td>
</tr>
<tr>
<td>Word 3</td>
<td></td>
</tr>
<tr>
<td>Word 4</td>
<td></td>
</tr>
<tr>
<td>Other words</td>
<td></td>
</tr>
</tbody>
</table>

### Hard version:

The letters are:

```text
P B F A H C E
```

List 10 or more words in the given time to win this round!

**Notes:**
1. The word must be more than three letters long.
2. The word must be a common word used as part of speech; must not be an abbreviation, proper noun, or hyphenated.
3. Make sure you click the submit ">>" button below within 10 seconds after the 90 second time limit is up.

<table>
<thead>
<tr>
<th>Word 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Word 2</td>
<td></td>
</tr>
<tr>
<td>Word 3</td>
<td></td>
</tr>
<tr>
<td>Word 4</td>
<td></td>
</tr>
<tr>
<td>Word 5</td>
<td></td>
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Online Media Consumer Survey Instructions:

First choice:

**Online Media Consumer Survey**

In this survey, we're interested in your choice for different online information sources. We'll show you four different online newspapers and magazines. You may choose one. **This choice should reflect what you'd like to read the most at the moment.**

After you make the choice, we'll ask you to read **one short excerpt** from the online newspaper or magazine your chose, and ask you what you think of the excerpt.

Second choice:

**Online Media Consumer Survey Part II**

Now we'll ask you again about your choices for different online information sources. We'll present you the same set of four online newspapers and magazines as before. **You may choose to read a new excerpt from the same source, or a different source.** This choice should reflect **what you'd like to read the most at the moment.**

After you make the choice, we'll ask you to read **another short excerpt** from the newspapers or magazine you chose, and ask you what you think about the excerpt.

**Note that if you choose the same option that you've chosen earlier, then you'll read a new excerpt from the same source, which will be similar to but not identical to the first one you read.**

**If you choose one of the other three options this time, then the new excerpt will be from a different source, which will be very different from the first one you read.**
Magazine Article Sample 1:

Chris Martin Reveals a Certain Pop Star Inspired Coldplay's "A Sky Full of Stars"—Can You Guess Who?!

Artists draw inspiration from a variety of things, and sometimes, it's other artists. Appearing in a new Beat x Beat webcast produced by Beats by Dre, Coldplay frontman Chris Martin explained the creative process when it came to writing the band's hit song "A Sky Full of Stars," and revealed that there was one popular pop queen whose music really helped spark the idea behind the chart-topping Coldplay track. And you may be surprised at who it is.

"I'll tell you the truth: I was listening to a lot of Katy Perry," Martin said. "Yes, that California Gurl is partially to thank for that song you can never get out of your head."

Martin continued, "A lot of her songs have the same chord sequence the whole time. Your body feels comfortable with them and then the melody's changing on top so there's a groove you really get in to and then also you're kept interested... so I was like, 'that's an amazing way of doing songs.'"

Although Katy Perry helped set the wheels in motion, the crooner also shared that electronic dance music played a fair share in completing the track, too.

......
Worker Out-Of-Pocket Health Costs Have Doubled In Five Years

As the economy improves and employees spend more on health care, employer-paid premiums are rising again with an increase of 5.5 percent forecast for 2015 with worker premiums and out-of-pocket costs – which have doubled since 2009 – rising at an even faster clip.

The annual health care cost analysis by Aon Hewitt (ADN), the large employee benefits consultancy shows annual employer health care costs rising to $1.1,304 next year from $10,717. It's the highest percentage rate increase since 2011, when employer costs rose 8.5 percent, Aon Hewitt said.

The latest increase in employer health care premiums, which almost always translates into more costs piled onto workers, comes as unemployment falls and workers feel more secure in keeping their jobs. That means they spend more money on health care and "discretionary items" that they didn’t buy when economic times were less stable, Aon Hewitt said.

"With employment rates stabilizing, individuals are feeling more secure about their financial situation and have been willing to re-engage in using the health care system," said Tim Nimmer, chief health care actuary at Aon Hewitt, said in a statement accompanying the report. "As these utilization rates increase, we expect to see health care costs increases follow.*

......
Study 2&4 – Movie trailer:

Movie trailers were found on YouTube. Trailers used in Study 2 were for movies to be released after November 2014, which was the time of the study. In December 2014, at the time of Study 4, trailers for movies that had already been released were replaced trailers for newer movies. The movie trailers used in Study 2 and Study 4 were:

- **Action**: Avengers: Age of Ultron, Black Sea
- **Romance**: Theory of everything (replaced with The Age of Adaline in Study 4), Old Fashioned
- **Drama**: Big Eyes (replaced with McFarland, USA in Study 4), Unbroken (replaced with The Second Best Exotic Marigold Hotel in Study 4)
- **Animation**: The Penguins of Madagascar (replaced with Peanuts in Study 4), Minions.

Preference for self-continuity scale (Used in Study 4):

*Please indicate how much you agree with the following statements:*

(from “Strongly Disagree” (1) to “Strongly Agree” (5))

*(Cronbach’s alpha = .86)*

1. Now feels like a good time for some changes to happen
2. I feel like staying the same right now
3. I would like to continue to experience what I feel now
4. I would like to experience something different now
5. A novel experience would be nice now
6. I would rather stay the course than to try something new now

Items 1, 4, and 5 were reverse coded. The total score was converted to a 0-10 scale, with larger numbers indicating stronger preference for self-continuity.
Study 3 – Music & perceived difference posttest

Music Attitude Survey:

Each participant answered these questions in the survey for the first choices:

A person often likes a variety of musicians. Different music genres can represent different aspects of a person’s identity. For example, one may feel like listening to Lady Gaga sometimes, while enjoy Louis Armstrong some other times.

List the name of three different musicians that you listen to frequently, each of whom represents a different aspect of your identity:

Musicians:

1. 
2. 
3. 

Now think of a family member who has very different music preferences than you. Who are you thinking of? Write down the person’s relationship to you:

Now you picked "$[q://QID55/ChoiceTextEntryValue]". Now, please list three different musicians that he/she listens to most frequently, each of whom represent different aspect of his/her identity.

(Note: Since you and your $[q://QID55/ChoiceTextEntryValue] have different music preferences, please don’t list any of the musicians from your list even if sometimes you may both listen to them):

1. 
2. 
3. 

Participants read the following page for the second choice:

Now please think again about the musicians you listed earlier.

We will provide you access to the music library again. This time, among $[q://QID14/ChoiceTextEntryValue1], $[q://QID14/ChoiceTextEntryValue2], and $[q://QID14/ChoiceTextEntryValue3], which musician would you like to listen to? Would you like to listen once more to the same piece ("$[q://QID96/ChoiceTextEntryValue]" you just listened to, or listen to music of another musician you listed earlier?

- [ ] I would listen to the same musician’s same piece of music
- [ ] I would listen to a different musician’s music (write down the name of the musician below): 


Study 5 – Ball rolling, outlook pretest & content coding

Wording of the Skill vs. Chance manipulation:

Skill:
To help you through the rest of the game, we would like to provide you with more information.
In this game, skill plays a vitally important role. Each time you roll the ball, your strength and choice of direction may determine the result. Having a clear goal in mind before rolling may also help with the result. What you need to do is to plan carefully where you want the ball to land. Your outcome in this game will depend on both your skill and your precision.

Chance:
To help you through the rest of the game, we would like to provide you with more information.
In this game, luck plays a vitally important role. Each time you roll the ball, any of the erasers could divert it, or stop it. The ball’s path may also affect the next go, changing the game at random. What you can do is to take your chance and make the best of it. The outcome will depend on both random situational factors and your luck.
Study 7 - beverages

Phamplets for the Skill vs. Chance manipulation:

Skill condition:

```
Blackjack Rules

• The cards from 2 through 9 are valued at their face value;
• The 10, Jack, Queen, and King are all valued at 10; an Ace can count as either 1 or 11, depending on which is more favorable;
• Every player draws cards for an initial two card hand, and after seeing those cards decides whether to draw more;
• The player bringing the total hand value closest to 21 without exceeding it wins.

Note: Of course a certain degree of luck plays a role in this game, but all it takes is just a little skill!

The Top 3 Blackjack Winners in 2010

“This is amazing! I had what it took to win!!”

“I can’t believe I made it happen!”

“Following your strategy is everything. Play well, everyone!”
```

Chance condition:

```
Blackjack Rules

• The cards from 2 through 9 are valued at their face value;
• The 10, Jack, Queen, and King are all valued at 10; an Ace can count as either 1 or 11, depending on which is more favorable;
• Every player draws cards for an initial two card hand, and after seeing those cards decides whether to draw more;
• The player bringing the total hand value closest to 21 without exceeding it wins.

Note: Of course a certain degree of skill plays a role in this game, but all it takes is just a little luck!

The Top 3 Blackjack Winners in 2010

“This is amazing! I had luck on my side to win!!!”

“I can’t believe it happened to me!”

“Following your hunch is everything. Good luck, everyone!”
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III. Other studies

**Ball-rolling Study Version 2: Writing about other people**

The procedure in Version 2 (N=78) was identical to Study 5, except that participants received a questionnaire named “Social Cognition Survey” in the initial survey, in which they first read:

“People see numerous strangers in passing every day. For example, a doorman, a busy cashier, a passenger on the bus or train, and so on. Please think about the strangers that you have seen for a moment today, and list at least three different persons you have noticed.”

After they listed three different people, they chose one and briefly described that person.

On the second questionnaire, which participants received in the mid-game break, they chose between describing that same person or describing one of the other two people in detail.

There was no effect of future outlook on the choice between writing about the same other person or a different other person (47% vs. 44% choosing to write about a different person, F(1,76) = .062, p = .804), consistent with the findings of Study 3, regarding the role of self-relevance as a necessary condition for the Outlook Effect.

**Ball-rolling Study Version 3: Choosing among different colors**

In Version 3, rather than choosing between describing the same or a different aspect of the self, participants chose whether to keep or switch the rubber-band ball used in the game. As in Study 5 and Version 2, this is a symbolic choice, because the balls only differed in their colors, but otherwise had the same irregular shape, such that using one or another would not make a difference for performance in the game. According to our account, self-relevance plays a unique role in inferences from past to future, and therefore a symbolic choice involving change which does not involve the self will not be affected by differently anticipated future outcomes.

In this study, there was no separate survey. Instead, at the start of the game, participants (N=78) were shown three otherwise identical rubber-band balls in the colors of yellow, blue, and orange, respectively, and were randomly assigned to use one in the game. During the mid-game break, they were given a choice to either keep using the same ball, or replace it with one of the other two. The rest of the procedure was identical to Study 5.

There was again no effect of future outlook on the choice between keeping the same ball and changing the ball (63% vs. 58% choosing a novel color, F(1,76) = .18, p = .677), suggesting that situational optimism and pessimism did not affect choices.

After merging the data from Studies 5 and Version 2 and 3, we found a two-way interaction between outlook and self-relevance of the choice options (F (1, 228) = 6.49, p = .012).