

Change Appeals: How Referencing Change Boosts Curiosity and Promotes Persuasion

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ABSTRACT

Does merely referencing that an object or entity has changed affect people's attitudes and intentions toward it? This research investigates the possibility that change references spark curiosity and information seeking, which can have a positive or negative effect on people's evaluations of a target stimulus, depending on the information environment. Seven experiments reveal that referencing that an object or entity has changed decreases perceptions of its longevity, but also sparks curiosity about it—a desire to learn more. This curiosity motivates people to seek information about the object or entity, which can enhance or depress their evaluations depending on whether that information search leads to favorable or unfavorable information. When further information is unavailable, change references appear to have a negative impact on people's evaluations, consistent with well-established longevity biases. This research suggests that change references have an important and generalizable impact on persuasive outcomes, and pinpoints the conditions surrounding and processes driving this effect.

Keywords: information seeking, change, curiosity

Which would prompt more purchases: An advertisement highlighting that a snack food's recipe has remained the same for many years, or an advertisement that frames the same recipe as the result of recent change? Which would generate greater public support: A political appeal highlighting the advantages of a policy that has long been in place, or an otherwise equivalent appeal framing those advantages as the result of policy change? In each context, both messages promote the same entities with the same attributes; however, one message frames them as the result of change while the other message does not. Could merely referencing that something has changed affect people's attitudes and behavioral intentions toward it? This question has both theoretical and practical import, but has received no direct attention in the persuasion literature.

We propose that references to change can shift persuasive outcomes. Moreover, in contrast to the notion that change references generally enhance or depress reactions to a target stimulus, we submit that the effect is bidirectional. More specifically, we posit that references to change can have a positive or negative effect on people's attitudes and intentions, depending on the information environment. When the available information about a target stimulus is positive, we predict that highlighting that a stimulus has changed will enhance people's attitudes and intentions. When the available information is negative, however, we predict that highlighting that a stimulus has changed will sour people's attitudes and intentions. Why? We theorize that change sparks curiosity, which leads people to seek out more information, which then facilitates the impact of that information on people's evaluations. When the available information is positive, increased curiosity and information seeking facilitates the impact of that positive information, leading to more positive reactions. When the available information is negative,

increased curiosity and information seeking facilitates the impact of that *negative* information, leading to more negative reactions.

Curiosity and Information Seeking

Curiosity refers to the desire to know or learn something; the interest people have in obtaining more information about an object, issue, or entity. Curiosity arises when people perceive a discrepancy between what they currently know and what they want to know (Golman & Loewenstein 2018; Loewenstein, 1994; Wang & Huang, 2018). Even when current knowledge is held constant, curiosity increases as the desire for further information increases. We submit that references to change can trigger this desire. Indeed, researchers have theorized that the desire to understand the causes and consequences of change is hardwired in the human brain, because the ability to detect and understand change is crucial for survival (May et al., 1999; Sussman, Chen, Sussman-Fort, & Dinces, 2014; Van de Grind et al., 1986). As a result, awareness that a stimulus (e.g., a product or policy) has changed may boost people's desire to obtain further information about that stimulus—for example, information about why the change occurred or what the change entailed. In other words, references to change might spark curiosity about the changed stimulus.

If true, change references should prompt information seeking. Indeed, past research suggests that curiosity about an object or entity motivates people to seek further information about that object or entity (Loewenstein, 1994). The more curious people feel, the greater their desire for information, and the more likely they are to seek out and process that information. It is this curiosity-driven information seeking, we propose, that drives the impact of change references on people's attitudes and behavioral intentions. Indeed, it is well-established that when people seek and process information, that information is more likely to guide their attitudes

and behaviors (e.g., Petty & Cacioppo, 1986). Thus, if change-induced curiosity triggers information seeking, and the information people encounter is favorable, people may become more favorable in their attitudes and intentions. Likewise, if change-induced curiosity triggers information seeking but the information people encounter is unfavorable, people may become more unfavorable in their attitudes and intentions.

The Role of Information Availability

With the rise of mobile Internet and proliferation of online information sources, people often have a great deal of information available right at their fingertips (Simonson, 2015). As noted, we theorize that references to change prompt people to seek out this information; our primary hypothesis is that when the available information about something is positive (negative), change references will have a positive (negative) effect on people's attitudes and intentions. But what if situational constraints prevent information search? That is, what happens when there is no information available, or if information seeking is short circuited—for example, if people know that an object or entity has changed, but they have to evaluate it before they can obtain further information?

In the absence of further information, we predict that change references will generally sour people's reactions to a focal entity. This prediction is derived from research on the longevity bias, which reveals that people often believe that objects that have existed for longer in their current form are better (Eidelman & Crandall, 2014; Eidelman, Pattershall, & Crandall, 2010; Warner & Kiddoo, 2014). For instance, people perceive soft drinks to be better tasting when their recipes are 100 rather than six years old, are more likely to purchase chocolates whose recipe is 70 rather than three years old, and perceive that acupuncture more effectively relieves pain when it is described as 250,000 rather than 2,000 years old. In essence, people believe that greater

longevity is evidence of more favorable attributes, greater value, and greater goodness (Crandall, Eidelman, Skitka, & Morgan, 2009; Eidelman & Crandall, 2009; Eidelman et al., 2010; Warner & Kiddoo, 2014). Communicating that an object has recently changed necessarily conveys that it lacks longevity, at least in its current form. Thus, in the absence of additional positive or negative information, or when people are required to evaluate something before obtaining that information, we theorize that change references might depress reactions as a result of the reduced longevity that change implies.

In essence, we theorize that highlighting that an object or entity has changed can have variable consequences for attitudes and intentions that depend on the presence and valence of available information. Moreover, we postulate that these consequences stem from two primary and potentially opposing effects of change references. First, we postulate that change references foster curiosity and stimulate a desire for more information. At the same time, we hypothesize that change references can reduce perceptions of an object's or entity's longevity, suggesting that it has existed for a shorter period of time, at least in its current form. To provide initial insight into these dual possibilities, we conducted a pilot experiment (see Web Appendix A for full details). In this experiment, participants were randomly assigned to read that a specific retailer's discount strategy had changed or remained the same for many years, after which they indicated how curious they were about the strategy and how long they thought it had existed. As predicted, participants in the change condition reported more curiosity ($M_{Change} = 4.76$, $SD_{Change} = 1.73$; $M_{No Change} = 3.63$, $SD_{No Change} = 1.90$; $t(202) = 4.45$, $p < .001$) and less longevity ($M_{Change} = 2.87$, $SD_{Change} = 1.93$; $M_{No Change} = 6.05$, $SD_{No Change} = 1.11$; $t(202) = 14.45$, $p < .001$) relative to participants in the no change condition. This finding offers initial evidence for the current theorizing. That is, change references can both increase curiosity and decrease perceived

longevity, suggesting that they might have divergent effects on people's attitudes and intentions across information contexts.

Overview

In sum, we predict that messages that reference change in a target stimulus can shift people's ultimate evaluations of that stimulus, and that the direction of this shift hinges on the information environment. If obtained, this result would make several distinct contributions. First, it would highlight the importance of understanding the role of change references in persuasion contexts. Although persuasion practitioners seem to highlight change with relative frequency (e.g., Aéropostale, 2014; Ad Club, 2019; Flight Global, 2007; Southern, 2016; Tab, 1969), to our knowledge there has been little or no effort to understand the positive or negative effects of doing so. Second, this result would contribute to a growing literature highlighting the effects of stimulating curiosity (e.g., Kupor & Tormala, 2015; Santos, Leve, & Pratkanis, 1994) and information seeking (e.g., Sawicki et al., 2013) in persuasion settings, and identify a novel means of triggering both. In so doing, the current research would provide insight into a classic question facing persuasion researchers and practitioners alike: How can we motivate others to desire and seek out more information? Practitioners spend billions of dollars on online campaigns designed to entice people to click to learn more (Rosenkrans, 2010). The current research examines whether referencing change can be a stimulant in this regard. If so, this finding would offer a potential counterpoint to the well-documented longevity bias in delineating at least some conditions under which reduced longevity might promote more positive reactions.

We test our theorizing across seven experiments. Experiment 1 documents the impact of references to change on real decisions to click on advertisements in a field experiment. Experiments 2A–2C find that people prefer changed (versus unchanged) objects when change-

induced information seeking leads to favorable information about those objects. Experiments 3A–3B find that the direction of change-induced persuasion hinges on the type of information encountered during information seeking: People have more favorable (unfavorable) reactions to objects and entities when change-induced information seeking leads to favorable (unfavorable) information about them. Experiment 4 further documents the moderating role of the information environment: When further information is unavailable, people have less favorable reactions toward objects when they learn that those objects have (versus have not) changed, consistent with a longevity bias. All conditions and measures are reported in each experiment (and are further detailed in Web Appendix B), and no participants were excluded in any experiment.

Experiment 1

Experiment 1 offered an initial test of the predicted effect of references to change on information seeking in the field. Marketers and other influencers frequently launch online advertisements that urge people to click to learn more about promoted content. In Experiment 1, we investigated our predictions in this important context by launching online advertisements that urged people to click and learn more. These advertisements varied only in whether they indicated that a focal entity had or had not changed. We examined the impact of this change reference on click-rates because of their theoretical relevance to the current investigation—a primary determinant of whether people click on online content is whether that content evokes curiosity (i.e., an immediate desire to learn more; Alves et al., 2016; Kuiken, Schuth, Spitters, & Marx, 2017; Rosenkrans, 2010).

Method

We launched two advertisements on Facebook that urged consumers to click to learn more about cholesterol guidelines. Both advertisements featured identical visual and rhetorical

content. The only difference was that the advertisement in the *Change* condition noted that the guidelines had changed, whereas the advertisement in the *Baseline* condition did not (Web Appendix B). We made an a priori decision to launch the advertisements for 24 hours, which resulted in them being shown 3,567 times to Americans over the age of 18 years old. We measured the number of times users decided to click or not click on the advertisements when they saw them. This allowed us to compute click-rates (i.e., the number of clicks divided by the number of total views).

Results and Discussion

As predicted, the advertisement that noted that cholesterol guidelines had changed generated a greater click-rate (4.70%) than the advertisement that did not (2.48%), $\chi^2 = 11.11$, $p < .001$ (Cohen's $d = .112$, 95% CI: .0460 to .1775).¹ Thus, Experiment 1 revealed that change references can affect information seeking in the real world. Because people are most likely to click on online content when that content sparks curiosity (Alves et al., 2016; Kuiken et al., 2017; Rosenkrans, 2010), these results provided initial evidence consistent with our theorizing.

Experiment 2A

Experiments 2A-2C directly explored our prediction that references to change prompt information seeking by sparking curiosity. Typical of the experience that often unfolds when people browse the Internet, participants in Experiments 2A-2C viewed the first sentence of an article whose full content they could access by clicking to view it. This first sentence presented information about an entity, which varied in whether it indicated that the entity had or had not changed. We predicted that participants would feel more curious about the rest of the

¹ Although the overall click-rates appear somewhat low, they approximate rates observed in previous research (Adam, Manca, & Bell, 2016; Kupor & Laurin, 2020; Pedersen et al., 2015; Tormala, Jia, & Norton, 2012).

information, and would be more likely to click to view it, when the initial information indicated that the entity had (versus had not) changed.

Information seeking is important in part because the information that people choose to view often shapes their attitudes and behavior (e.g., Petty & Cacioppo, 1986). For example, if change-induced curiosity leads people to seek further information about something, and that leads them to encounter favorable information, people may have more favorable attitudes and behavioral intentions following a reference to change versus no change. Similarly, if change-induced curiosity leads people to seek further information about something and they encounter unfavorable information, they might have more unfavorable attitudes and behavioral intentions following a reference to change versus no change. In Experiments 2A-2C, we tested the favorable information side of this prediction across three domains: holiday sales (Experiment 2A), food (Experiment 2B), and tourism (Experiment 2C). We focused on favorable information in these initial studies because influence practitioners are often focused on providing favorable information about a target entity as a means of generating favorable attitudes and intentions toward it. Also of note, favorable information conditions are where our perspective departs more dramatically from the possible prediction that change references depress attitudes and intentions as a result of reduced perceived longevity (e.g., Eidelman & Crandall, 2014).

Experiment 2A also addressed a potential alternative account for the predicted change effect. Could it be that the proposed effect stems from perceptions of novelty rather than change per se? In other words, perhaps it is the novelty that change implies that heightens curiosity. Building on the possibility that the desire to understand the causes and consequences of change in one's environment is hardwired in the human brain (Van de Grind et al., 1986), we theorized that change prompts curiosity regardless of whether the change produces a novel state or returns

an entity to a prior state. We examined this prediction by describing change (in the change condition) as returning the focal entity to its previous form. If the change effect emerged in this context, it would be unlikely to stem from perceived novelty.

Method

Four hundred two Mechanical Turk participants² (mean age = 35; 62% male) read the first sentences of an article describing holiday discounts offered by Target (a national retailer). This information varied only in whether it indicated that these discounts had changed. Participants in the *No Change* condition read the following information: “Target has not changed their holiday discount strategy, which determines what their standard discounts and product-category specific discounts are for holiday sales. These guidelines have remained the same since 2013.” By contrast, participants in the *Change* condition read the following information: “Target has changed their holiday discount strategy, which determines what their standard discounts and product-category specific discounts are for holiday sales. These guidelines are now the same as they were in 2013.” Thus, all participants read that Target’s holiday discount strategy was the same as it had been in 2013; we manipulated only whether participants learned that this current state was the result of a change. Participants then completed a series of dependent measures.

Curiosity. First, participants indicated their curiosity about Target’s current holiday discounts on a two-item index (adapted from Kupor & Tormala, 2015; Lancaster, 2004). In particular, participants indicated how curious they were about the rest of the article content (*1: Not curious at all; 9: Very curious*), and how much they wanted to read the rest of the article (*1: Not at all; 9: Very much*; see Web Appendix B for these items as well as the materials used in all experiments). Responses were averaged into a composite index ($r = .94, p < .001$).

² In Experiments 2A-2C, we decided a priori to collect 200 participants per condition.

Information-seeking. Participants then made a real decision about whether they wanted to view additional information about Target’s current holiday discounts. Specifically, participants chose between viewing additional information about Target’s current holiday discounts or not viewing any information. Participants indicated their decision about whether they wanted to view the information by clicking a button labeled “Yes” or a button labeled “No” (the order was counterbalanced). Participants who selected “Yes” then viewed favorable information about Target’s holiday sales, whereas participants who selected “No” did not. This information described holiday discounts that Target was offering during the current year’s holiday season (e.g., a \$220 discount on a Samsung television and a \$200 discount on a PlayStation).³ The information itself referenced neither the presence nor absence of change.

Behavioral intentions. Finally, participants completed a two-item index of behavioral intentions (adapted from Jang & Namkung, 2009; Kupor & Tormala, 2018). Specifically, participants indicated how likely they would be to shop for Target’s holiday sales (*1: Extremely Unlikely; 7: Extremely Likely*), and how likely they would be to recommend Target’s holiday sales to a friend (*1: Extremely Unlikely; 7: Extremely Likely*). These items were averaged ($r = .81, p < .001$).

Results and Discussion

Participants who read that Target’s holiday discount strategy did (versus did not) change were more curious about it ($M_{Change} = 6.04; SD_{Change} = 2.30; M_{No\ Change} = 4.62; SD_{No\ Change} = 2.73;$

³ In order to verify that the information was persuasive, we conducted a pretest with 105 Mechanical Turk participants (mean age = 36; 64% male). After viewing the information, participants completed a two-item index of persuasiveness ($r = .76, p < .001$), indicating whether the information contained strong arguments about the benefits of Target’s discounts (*1: Definitely Not; 7: Definitely Yes*), and whether the information provided persuasive reasons to shop at Target (*1: Definitely Not; 7: Definitely Yes*). A one sample t-test comparing participants’ responses to the scale mid-point (4) revealed that participants perceived the information to be relatively compelling ($M = 6.04, SD = 1.26, t[104] = 19.50, p < .001$). We employed these same procedures to verify that the information presented in each of the ensuing experiments was persuasive (see Web Appendix C).

$t(400) = 5.65, p < .001$; Cohen's $d = .563$, 95% CI: .3631 to .7630), more likely to click to view additional information about it (Change = 54.7%, No Change = 32.8%; $\chi^2 (df = 1, N = 402) = 19.57, p < .001$; Cohen's $d = .452$, 95% CI: .2505 to .6045), and had more favorable behavioral intentions toward it ($M_{Change} = 5.01$; $SD_{Change} = 1.62$; $M_{No\ Change} = 4.30$; $SD_{No\ Change} = 1.88$; $t(400) = 4.07, p < .001$; Cohen's $d = .406$, 95% CI: .2083 to .7630). A serial mediation model with bootstrapping revealed that the reference to change fostered more favorable behavioral intentions because it heightened curiosity and thus prompted greater information seeking (95% CI: .5079, 1.0459; Figure 1).

In short, using a favorable information context, this experiment showed that a reference to change induced curiosity about a focal entity, which prompted people to seek further information about that entity and fostered more favorable behavioral intentions.⁴ This occurred despite the fact that change references can lead people to perceive changed (versus unchanged) entities as having less longevity (as indicated by the pretest detailed in Web Appendix A). Because interventions that decrease an entity's perceived longevity can depress evaluations of that entity (Crandall et al., 2009), Experiment 2A suggested that these perceptions are unlikely to have a dominating impact on evaluations of changed objects when people can seek further information about them. We return to this point in Experiment 4. Finally, Experiment 2A also revealed that when change-induced information seeking leads to favorable information about a focal entity, references to change can foster more favorable evaluations even when change

⁴ Could it be that this effect occurred not because change sparks curiosity (as we predict), but rather because the explicit absence of change reduces curiosity? This seems unlikely given that Experiment 1 showed the predicted effect of change on information seeking when the control condition referenced neither the presence nor absence of change. Nonetheless, we investigated this question in a supplemental study (Web Appendix F). That study revealed that references to change boosted curiosity relative to both a pure baseline condition (which referenced neither the presence nor absence of change) and a no change condition (which referenced the absence of change). These results are consistent with the notion that change boosts curiosity.

reverts the entity back to a prior form (i.e., a non-novel state). This finding is inconsistent with the notion that perceptions of novelty drive the effect.

Experiment 2B

Experiment 2B provided additional process insight by illuminating the specific form of curiosity triggered by a change reference. Prior literature reveals that curiosity can take two forms: specific curiosity (i.e., a desire to seek specific information in order to close a particular information gap) and diversive curiosity (i.e., a general desire for any information in pursuit of cognitive stimulation; Loewenstein, 1994). We propose that references to change operate by fostering specific curiosity (i.e., a desire to seek further information about the changed object), but is it possible that references to change operate by fostering diversive curiosity? Because participants in Experiment 2A were offered the opportunity to view either no further information or more information about the focal object, it could not adjudicate between these forms of curiosity.

To examine this question, participants in Experiment 2B were offered a choice between viewing information that either could or could not resolve specific curiosity about the changed stimulus. Specifically, all participants received information about a granola bar brand, and read that the brand had or had not changed its granola recipe. Participants were then given the opportunity to view additional information about this granola brand or a competing granola brand (about which participants received no information). We predicted that the reference to change in the focal granola brand's recipe would prompt specific curiosity about that brand, and that this specific curiosity would drive participants to seek additional information about that specific brand, not its competitor. In other words, we predicted that change-induced curiosity

would prompt participants to seek the information that had a greater likelihood of resolving specific curiosity about the changed object.

Method

Four hundred fifteen Mechanical Turk participants (mean age = 35; 48% male) read the first sentence of a report describing Gaia granola. This information varied only in whether it indicated that Gaia's granola recipe had changed: Participants in the *No Change* condition read that Gaia granola has remained the same for many years, whereas participants in the *Change* condition read that Gaia had introduced a big change in its granola bar recipe (see Web Appendix B). Participants then completed a series of dependent measures.

Curiosity. First, participants indicated their curiosity about Gaia granola on the same two-item index as in Experiment 2A ($r = .94, p < .001$).

Information-seeking. Next, participants made a real decision about whether to view additional information about Gaia granola. Specifically, participants chose between viewing additional information about Gaia granola versus information about another brand, Kind granola. Participants entered their choice by clicking on a button labeled "Gaia granola" or a button labeled "Kind granola" (the order was counterbalanced). Participants who chose to view information about Gaia granola then viewed an actual promotional video about Gaia granola (which contained favorable, persuasive information; Gaia, 2018), whereas participants who chose to view information about Kind granola viewed an actual promotional video about Kind granola (Kind, 2016). Both the Gaia and Kind information highlighted the granola's health benefits, and neither referenced the presence or absence of change.

Behavioral intentions. Finally, all participants completed a two-item behavioral intentions index as in Experiment 2A ($r = .82, p < .001$), this time adapted to refer to Gaia

granola. Specifically, they indicated how likely they would be to eat Gaia granola (*1: Extremely Unlikely; 7: Extremely Likely*) and how likely they would be to recommend Gaia granola (*1: Extremely Unlikely; 7: Extremely Likely*).

Results and Discussion

Participants who read that Gaia granola did (versus did not) change were more curious about it ($M_{Change} = 5.94$; $SD_{Change} = 2.36$; $M_{No\ Change} = 4.97$; $SD_{No\ Change} = 2.64$; $t(413) = 3.98$, $p < .001$; Cohen's $d = .391$, 95% CI: .1960 to .5857), more likely to click to receive additional information about it (Change = 71.2%, No Change = 48.8%; $\chi^2(df = 1, N = 415) = 21.84$, $p < .001$; Cohen's $d = .471$, 95% CI: .2723 to .6693), and had more favorable behavioral intentions toward it ($M_{Change} = 5.31$; $SD_{Change} = 1.42$; $M_{No\ Change} = 4.93$; $SD_{No\ Change} = 1.48$; $t(413) = 2.66$, $p = .008$; Cohen's $d = .261$, 95% CI: .0674 to .4551). Also consistent with our theorizing, a serial mediation with bootstrapping revealed that the reference to change fostered more favorable behavioral intentions because it heightened curiosity, which prompted greater information seeking (95% CI: .2708, .6628; Figure 1). In sum, Experiment 2B conceptually replicated Experiment 2A's results in a different domain, and revealed that references to change operate by fostering specific rather than diversive curiosity.

Experiment 2C

In Experiment 2C we examined another alternative account. In particular, we assessed the possibility that the current phenomenon occurs because change signals effort—for example, that a company that updates and revises a product devoted more effort to that product. Because people heuristically believe that the exertion of greater effort improves quality (Kruger, Wirtz, Van Boven, & Altermatt, 2004; Kupor, Reich, & Laurin, 2018), a potential perception of greater change-induced effort may have prompted more favorable evaluations of the focal targets in

Experiments 2A-2B. Prior research further reveals that observers feel gratitude towards companies that exert effort, and express that gratitude by more favorably evaluating those companies (Morales, 2005); therefore, if people do infer that a company that changes an entity expended more effort, then perhaps this inference played a role in the effects observed thus far. Experiment 2C addressed this account by testing whether the change effect persisted when the conditions necessary for effort-based inferences were absent (i.e., when no intentional effort had been exerted to alter an object). To that end, participants read that the object that had changed or not changed was the level of snowfall in Alaska's Chugach Mountains. If effort-based inferences underlie the current phenomenon, it would not emerge in Experiment 2C where the object's change was not fueled by any intentional effort. Experiment 2C also offered a second test of the novelty account by noting that change returned the focal object to its original form.

Method

Four hundred ten Mechanical Turk participants (mean age = 39; 60% male) read the first sentence of a report describing the snow and ski conditions in Alaska's Chugach Mountains. Participants were randomly assigned to either a *Change* or a *No Change* condition, varying only whether this sentence indicated that the snow and ski conditions had changed. Participants in the *No Change* condition read that "[t]he level of snowfall and skiing conditions in the Chugach Mountains of Alaska are the same this year as they were last year, which are the same as previous historic levels." By contrast, participants in the *Change* condition read that "[t]he level of snowfall and skiing conditions in the Chugach Mountains of Alaska have changed this year to return to previous historic levels." Thus, all participants read that the snow and ski conditions were the same as previous historic levels; we manipulated only whether these conditions reflected a change. Participants then completed a series of dependent measures.

Curiosity. First, participants indicated their curiosity about the rest of the information on the same two-item index as in the previous experiments, this time adapted to refer to the Chugach Mountains ($r = .94, p < .001$).

Information-seeking. Next, participants chose whether they wanted to view the rest of the information about the Chugach Mountains. Specifically, participants chose between viewing the rest of the information about the Chugach Mountains or another tourism destination (Montreal). Participants entered their choice by clicking a button labeled “Visiting Chugach Mountains of Alaska” or “Visiting Montreal” (the order was counterbalanced). Participants who chose to view additional information about the Chugach Mountains then viewed actual promotional information highlighting the benefits of skiing in the Chugach Mountains (sourced from Chugach Powder Guides, 2014). Participants who chose to view information about visiting Montreal viewed information about the benefits of visiting Montreal (sourced from Salerno Travel, 2018). Neither the Chugach Mountains information nor the Montreal information referenced the presence or absence of change.

Behavioral intentions. Finally, participants completed a two-item behavioral intentions index as in Experiment 2A-2B ($r = .91, p < .001$), adapted to the current context. Specifically, participants indicated how likely they would be to go to the Chugach Mountains if they wanted to go skiing (1: *Not likely at all*; 7: *Very likely*) and how likely they would be to recommend the Chugach Mountains to a friend who wanted to ski (1: *Not likely at all*; 7: *Very likely*).

Results and Discussion

Participants who read that the snow and ski conditions in the Chugach Mountains had (versus had not) changed were more curious about these conditions ($M_{Change} = 5.94; SD_{Change} = 2.33; M_{No\ Change} = 4.75; SD_{No\ Change} = 2.57; t(408) = 4.91, p < .001$; Cohen’s $d = .758$, 95% CI:

.5566 to .9586), were more likely to click to view the rest of the information about the Chugach Mountains (Change = 60.3%, No Change = 46.8%; χ^2 ($df = 1$, $N = 409$) = 7.45, $p = .006$; Cohen's $d = .272$, 95% CI: .0757 to .4686), and had more favorable behavioral intentions ($M_{Change} = 6.30$; $SD_{Change} = 2.33$; $M_{No\ Change} = 5.62$; $SD_{No\ Change} = 2.56$; $t(408) = 2.79$, $p = .006$; Cohen's $d = .278$, 95% CI: .0809 to .4754). A serial mediation model with bootstrapping revealed that the reference to change fostered more favorable behavioral intentions because it heightened curiosity, which prompted greater information seeking (95% CI: .4697, 1.1979; Figure 1). In sum, Experiment 2C suggested that the change effect observed thus far was unlikely to be driven by an effort heuristic, effort-induced reciprocity motives, or perceived novelty.

Experiment 3A

In Experiments 2A-2C, we documented the consequences of references to change when change-induced information seeking leads people to favorable information about a focal entity. Our theoretical framework suggests that references to change will similarly facilitate the persuasive impact of unfavorable information. That is, if a reference to change leads people to seek further information about something, and that search leads them to encounter unfavorable persuasive information, people may have less favorable reactions following a reference to change versus no change. We tested this implication of our theorizing in Experiment 3A. In exploring this prediction, Experiment 3A differentiated our theoretical framework from a main effect perspective (e.g., the possibility that references to change generally enhance evaluations). In contrast to this possibility, we predicted an interaction effect, whereby references to change heighten the impact of available information, and thus enhance or depress evaluations depending on the information's valence.

In addition to testing the interaction between change references and information valence, this experiment tested two additional alternative explanations. First, could it be that change references fostered more favorable behavioral intentions in Experiments 2A–2C because those experiments happened to examine contexts in which people heuristically assumed that change produces improved states? Experiment 3A explored this possibility. If change references fostered favorable evaluations in the prior experiments due to their effect on information seeking, as we theorize, then the effect should be moderated by the valence of the available information. If the effect is more heuristic in nature (e.g., a “change is better” heuristic), the effect should be independent of the valence of the available information. Thus, Experiment 3A provided further mechanistic insight and differentiated our framework from a heuristic account.

Experiment 3A also examined another alternative account. Because the prior experiments documented the consequences of change references in the context of relatively well-known attitude targets (e.g., real national retailers and granola brands), perhaps participants felt relatively knowledgeable about the targets in the control conditions, whereas learning that those targets had changed lowered felt knowledge. In other words, perhaps it is not change per se that drives the effect of change references, but rather a change-induced reduction in perceived knowledge about a target’s current state. Prior research suggests that a reduction in perceived knowledge would not in and of itself heighten curiosity; rather, people must desire more information (Loewenstein, 1994). In line with this literature, we submit that regardless of whether people perceive that their current knowledge is high or low, references to change can heighten curiosity by increasing the desire for more information—for example, for information about why the change occurred and/or what that change entailed. If true, we would expect to observe the predicted effects of change references not only in contexts in which people might

feel relatively knowledgeable about a target stimulus, but also in contexts in which people do not feel particularly knowledgeable—for example, when the attitude object is novel or unfamiliar. To investigate this possibility, Experiment 3A used a novel attitude object about which participants could have no prior knowledge (i.e., a fictional but ostensibly real marine animal called a lemphur; Fabrigar & Petty, 1999).

Finally, Experiment 3A further tested the robustness and generalizability of the current phenomenon by assessing it using a different measure of persuasion: attitudes rather than behavioral intentions. Since people's attitudes often guide their behavioral intentions (e.g., Tormala & Petty, 2002; 2004), we expected the effect to emerge on attitudes just as it does on behavioral intentions.

Method

One thousand and nine Mechanical Turk participants⁵ (mean age = 37; 46% male) were randomly assigned to one cell in a 2 (Change Reference: No vs. Yes) × 2 (Information Valence: Favorable vs. Unfavorable) between-participants design. All participants read the beginning of a report describing the impact of lemphurs (an ostensibly real marine animal; adapted from Fabrigar & Petty, 1999) on seaside communities. This information varied only in whether it indicated that scientists' understanding of lemphurs' impact on seaside communities had changed. In particular, participants in the *No Change* condition read that research had detected no change in how lemphurs impact seaside communities, and that scientists have had the same understanding for many years of how lemphurs affect coastal ecological systems and economies. By contrast, participants in the *Change* condition read that research had detected a change in how

⁵ In Experiments 3A-3B, we decided a priori to collect 250 participants per condition.

lemphurs impact seaside communities, and that scientists now had a different understanding of how lemphurs affect coastal ecological systems and economies (see Web Appendix B).⁶

Following this information, all participants indicated their curiosity about the rest of the report on the same two-item index as in the previous experiments ($r = .92, p < .001$).

Participants then chose whether they wanted to view the rest of the information about lemphurs and their impact on seaside communities. Participants entered their choice by clicking a button labeled with “No” or “Yes” (the order was counterbalanced). Participants who selected “Yes” then viewed information about lemphurs’ impact on seaside communities, whereas participants who selected “No” did not. For participants in the *Favorable (Unfavorable) Information* condition, this information described lemphurs’ positive (negative) impact on seaside communities. For example, participants in the *Favorable Information* condition read that lemphurs help sustain the oceanic ecosystem, whereas participants in the *Unfavorable Information* condition read that lemphurs harm the oceanic ecosystem (see Web Appendix B). The information itself referenced neither the presence nor absence of change.

Finally, participants indicated their attitudes toward lemphurs on a three-item index adapted from previous research ($\alpha = .96$; Briñol et al., 2004). Specifically, participants rated

⁶ Pretesting confirmed that participants perceived themselves as unknowledgeable about lemphurs, and that the change reference did not alter this perceived lack of knowledge. In particular, 200 Mechanical Turk participants were randomly assigned to view the information presented to participants in the *Change* or *No Change* condition of Experiment 3A, and indicated whether they knew how lemphurs were impacting seaside communities (1: *Definitely not*; 7: *Definitely yes*). Participants in the *Change* condition ($M = 1.63, SD = 1.45$) and *No Change* condition ($M = 1.70, SD = 1.53$) indicated that they were equally unknowledgeable about how lemphurs impacted seaside communities, $t(198) = .35, p = .728$. The responses of participants in both conditions were significantly below the scale midpoint (*No Change* condition: $t(99) = 14.99, p < .001$; *Change* condition: $t(99) = 16.24, p < .001$). A supplemental study detailed in Web Appendix D provided further evidence that the current phenomenon emerges even when change references do not shift perceived knowledge of a target’s current state. These results do not preclude the possibility that references to change are more likely to boost information seeking when people perceive themselves as more knowledgeable of a target’s current state by default, or that there are contexts in which references to change alter perceived knowledge about a target’s current state, but they do indicate that perceived knowledge is unlikely to drive the current results.

lemphurs on a series of scales ranging from 1 to 9 with the following anchors: bad-good, terrible-wonderful, useless-beneficial.

Results and Discussion

As predicted, participants who read that scientists' understanding of lemphurs' impact on seaside communities had (versus had not) changed were more curious about the rest of the information ($M_{Change} = 4.37$; $SD_{Change} = 1.83$; $M_{No\ Change} = 3.85$; $SD_{No\ Change} = 1.93$; $t(1007) = 4.37$, $p < .001$; Cohen's $d = .275$, 95% CI: .1507 to .3990), and more often clicked to view it (Change = 44.3%, No Change = 34.9%; $\chi^2(df = 1, N = 1007) = 9.38$, $p = .002$; Cohen's $d = .194$, 95% CI: .0695 to .3182).

After participants indicated their curiosity and decided whether to seek further information, random assignment to the *Information Valence* condition determined whether those who sought further information subsequently viewed favorable or unfavorable information about lemphurs' impact on seaside communities. A 2 (Change Reference: No vs. Yes) \times 2 (Information Valence: Favorable vs. Unfavorable) ANOVA on the attitudes data revealed no main effect of *Change* condition, $F(1, 1005) = .05$, $p = .817$, but did reveal a main effect of *Information Valence* condition, $F(1, 1005) = 325.64$, $p < .001$; participants had more favorable attitudes when information-seeking led them to favorable rather than unfavorable information. Most relevant to our theorizing, this main effect was qualified by an interaction, $F(1, 1005) = 17.85$, $p < .001$ (Figure 2). Participants in the *Favorable Information* condition had more favorable attitudes in the *Change* (vs. *No Change*) condition ($M_{Change} = 6.83$; $SD_{Change} = 1.84$; $M_{No\ Change} = 6.29$; $SD_{No\ Change} = 1.95$; $F(1, 1005) = 9.90$, $p = .002$; simple effect Cohen's $d = .284$, 95% CI: .1076 to .4598). By contrast, participants in the *Unfavorable Information* condition had less favorable attitudes in the *Change* (vs. *No Change*) condition ($M_{Change} = 4.14$; $SD_{Change} = 1.94$; $M_{No\ Change} =$

4.62; $SD_{No\ Change} = 1.93$; $F(1, 1005) = 7.99$, $p = .005$; simple effect Cohen's $d = .249$, 95% CI: .0734 to .4243).

We predicted that the attitude results would stem from the fact that referencing change heightened curiosity and increased information seeking, which led participants to favorable or unfavorable information. Consistent with this theorizing, a serial mediated moderation analysis with bootstrapping revealed a significant indirect effect (95% CI: 2.013, 6.218).

In sum, references to change facilitated the persuasive impact of available information regardless of whether the available information was favorable or unfavorable. In other words, references to change fostered more positive attitudes when information seeking led to favorable information. By contrast, references to change fostered more negative attitudes when information seeking led to unfavorable information. This interaction pattern was consistent with our theorizing and inconsistent with the change heuristic account. Moreover, the fact that we observed this outcome in the context of a novel attitude object about which participants felt similarly unknowledgeable suggests that the effect of the change reference on information seeking was not tied to its impact on perceived current knowledge.

Experiment 3B

Experiment 3B sought to replicate Experiment 3A in a different context (a retailer's discount strategy).

Method

One thousand and six Mechanical Turk participants (mean age = 37; 36% male) were randomly assigned to one cell in a 2 (Change Reference: No vs. Yes) \times 2 (Information Valence: Favorable vs. Unfavorable) between-participants design. All participants read the beginning of a report describing Target's discount strategy. This information varied only in whether it indicated

that this strategy had changed (see Web Appendix B).⁷ In particular, participants in the *No Change* condition read that for many years, Target has not changed their discount strategy. By contrast, participants in the *Change* condition read that Target had made a big change to their discount strategy (see Web Appendix B). Next, all participants indicated their curiosity about the rest of the information on the same two-item index employed in the previous experiments ($r = .93, p < .001$).

Participants then chose whether they wanted to view the rest of the information about Target's discount strategy. Participants entered their choice by clicking a button labeled "No" or "Yes" (the order was counterbalanced). Participants who selected "Yes" then viewed information about Target's discount strategy, whereas participants who selected "No" did not. For participants in the *Favorable (Unfavorable) Information* condition, the subsequent information described positive (negative) attributes of Target's discount strategy. For example, participants in the *Favorable Information* condition read that Target's low prices mean people who shop at Target spend 400% less than people who purchase the same products at other stores. Participants in the *Unfavorable Information* condition read that Target's steep prices cause people who shop at Target to spend 400% more than people who purchase the same products at other stores (Web Appendix B). The information referenced neither the presence nor absence of change.

Finally, participants indicated their attitudes toward Target's discount strategy on the same three-item index as in Experiment 3A ($\alpha = .98$).

Results and Discussion

⁷ We conducted the same perceived knowledge pretest as in Experiment 3A. Here, 212 Mechanical Turk participants were randomly assigned to view the information presented in the *Change* or *No Change* condition of Experiment 3B, and indicated whether they knew what Target's discount strategy was (1: *Definitely not*; 7: *Definitely yes*). Participants in the *Change* condition ($M = 2.47, SD = 2.05$) and the *No Change* condition ($M = 2.29, SD = 2.11$) indicated that they were equally unknowledgeable about Target's discount strategy, $t(210) = .64, p = .521$. Responses in both conditions were significantly below the scale midpoint (*No Change* condition: $t(103) = 8.27, p < .001$; *Change* condition: $t(107) = 7.75, p < .001$).

Participants who read that Target's discount strategy had (versus had not) changed were more curious about the rest of the information ($M_{Change} = 4.71$; $SD_{Change} = 1.80$; $M_{No\ Change} = 3.80$; $SD_{No\ Change} = 1.91$; $t(1004) = 8.85$, $p < .001$; Cohen's $d = .495$, 95% CI: .3695 to .6207), and more often clicked to view it (Change = 59.8%, No Change = 42.3%; χ^2 ($df = 1$, $N = 1006$) = 30.78, $p < .001$; Cohen's $d = .355$, 95% CI: .2294 to .4809).

After participants indicated their curiosity and decided whether to seek further information, random assignment to the *Information Valence* condition determined whether those who sought further information subsequently viewed favorable or unfavorable information about Target's discount strategy. A 2 (Change Reference: No vs. Yes) \times 2 (Information Valence: Favorable vs. Unfavorable) ANOVA on the attitudes data revealed no main effect of *Change* condition, $F(1, 1001) = .03$, $p = .854$, but did reveal a main effect of *Information Valence* condition, $F(1, 1001) = 408.78$, $p < .001$; participants had more favorable attitudes when information seeking led them to favorable rather than unfavorable information. Most relevant to our theorizing, this main effect was qualified by an interaction, $F(1, 1001) = 15.22$, $p < .001$ (Figure 2). Participants in the *Favorable Information* condition had more favorable attitudes in the *Change* (vs. *No Change*) condition ($M_{Change} = 6.91$; $SD_{Change} = 1.87$; $M_{No\ Change} = 6.35$; $SD_{No\ Change} = 2.13$; $F(1, 1001) = 8.74$, $p = .003$; simple effect Cohen's $d = .281$, 95% CI: .1082 to .4529). By contrast, participants in the *Unfavorable Information* condition had less favorable attitudes in the *Change* (vs. *No Change*) condition ($M_{Change} = 3.59$; $SD_{Change} = 2.41$; $M_{No\ Change} = 4.10$; $SD_{No\ Change} = 2.30$; $F(1, 1001) = 6.52$, $p = .011$; simple effect Cohen's $d = .217$, 95% CI: .0373 to .3971). Moreover, the same serial mediated moderation analysis employed in Experiment 3A revealed a significant indirect effect (95% CI: 2.491, 5.247).

Experiment 4

Experiments 1-3B demonstrated that references to change stimulate curiosity, which triggers information seeking, which in turn can facilitate the persuasive impact (in a positive or negative direction) of available information. As previously noted, we further theorized that when situational constraints prevent information search, and people's reactions are based simply on the knowledge that a particular entity has or has not changed, references to change might undermine evaluations as a result of the reduced longevity that changes implies. To test this theorizing, Experiment 4 randomly assigned participants to change or no change conditions, and also manipulated whether participants reported their attitudes toward the target stimulus after or before they sought additional information about it. When participants reported their reactions after having the opportunity to seek and receive additional information, and the information they received was favorable, we predicted that referencing change would enhance reactions to the target (replicating Experiments 2A-3B). By contrast, when participants reported their reactions *before* seeking additional information, we predicted that referencing change would sour reactions (due to the longevity bias).

Method

One thousand and six hundred Mechanical Turk participants⁸ (mean age = 37; 53% male) were randomly assigned to one condition in a 2 (Change Reference: No vs. Yes) × 2 (Information Available: No vs. Yes) between-participants design. All participants read the first sentence of a report describing a granola company called the Gaia Company. They were randomly assigned to either the *No Change* condition or the *Change* condition and indicated their curiosity about the rest of the information on a two-item index ($r = .92, p < .001$). All of these stimuli were adopted directly from Experiment 2B.

⁸ We decided a priori to collect 400 participants per condition because a power analysis indicated that collecting 400 participants per condition in this study would yield sufficient power to detect the predicted interaction.

Participants next read that they could either view the rest of the information about Gaia granola, or they could view information about Kind granola. Participants entered their choice by clicking a button labeled “Gaia granola bars” or “Kind granola bars” (counterbalanced). After clicking, participants were randomly assigned to an *Information Present* condition or an *Information Absent* condition. Participants in the *Information Present* condition viewed the information that they selected (which was favorable, as in Experiment 2B). Participants in the *Information Absent* condition read that they could view the information that they selected later in the survey.

Finally, participants indicated their attitudes toward Gaia granola on the same three-item index as in Experiments 3A-3B ($\alpha = .92$). Participants in the *Information Absent* condition subsequently viewed the information they had selected.

Results and Discussion

Participants who read that Gaia’s recipe had changed were more curious about the rest of the information ($M_{Change} = 5.85$, $SD_{Change} = 2.34$; $M_{No\ Change} = 5.41$, $SD_{No\ Change} = 2.48$; $t(1598) = 3.70$, $p < .001$; Cohen’s $d = .185$, 95% CI: .0868 to .2834), and more often clicked to view it (Change = 79.3%, No Change = 65.3%; $\chi^2(df = 1, N = 1,600) = 39.29$, $p < .001$; Cohen’s $d = .317$, 95% CI: .2179 to .4165). After participants indicated their curiosity and decided whether to seek further information, random assignment to the *Information Availability* condition determined whether or not those who chose to view further information received this information prior to or after reporting their attitudes toward Gaia. A 2 (Change Reference: No vs. Yes) \times 2 (Information Valence: Favorable vs. Unfavorable) ANOVA on the attitudes data revealed no main effect of *Change* condition, $F(1, 1596) = .93$, $p = .335$, but did reveal a main effect of *Information Availability* condition, $F(1, 1596) = 90.65$, $p < .001$; participants had more favorable

attitudes toward Gaia when the information was (versus was not) available. Most relevant to our theorizing, this main effect was qualified by a significant interaction, $F(1, 1596) = 21.49, p < .001$ (Figure 3). When participants reported their reactions after viewing the additional information, they had more favorable attitudes toward Gaia when they read that the recipe had changed ($M = 7.18; SD = 1.44$) than when it had not changed ($M = 6.92; SD = 1.54$), $F(1, 1596) = 7.51, p = .006$ (simple effect Cohen's $d = .177$, 95% CI: .0453 to .3089). By contrast, when participants reported their reactions without viewing additional information, the reverse pattern emerged: Participants had more favorable attitudes toward Gaia when they read that its recipe had not changed ($M = 6.56; SD = 1.42$) rather than had changed ($M = 6.16; SD = 1.32$), $F(1, 1596) = 14.22, p < .001$ (simple effect Cohen's $d = .296$, 95% CI: .1482 to .4431).

We predicted that the reference to change produced more favorable attitudes when the favorable information was available because the reference to change heightened curiosity and thus increased information seeking, which led participants to favorable persuasive information. Consistent with this theorizing, a serial mediated moderation analysis with bootstrapping (in which the *Change Reference* condition was entered as the independent variable, the attitudes data were entered as the dependent variable, curiosity and information seeking were entered as serial mediators, and the *Information Availability* condition moderated the impact of information seeking on attitudes) revealed a significant indirect effect (95% CI: .380, 1.396).

In sum, replicating the previous experiments, Experiment 4 revealed that change references enhanced evaluations of the focal object when information search led people to favorable information. Importantly, though, when assessments were based simply on the knowledge that the focal object had or had not changed (i.e., when additional information was absent), participants had less favorable evaluations of the changed (versus unchanged) object. A

supplemental study replicated this interaction in a different context, thus helping to establish its robustness and generalizability to other settings (see Web Appendix E). Perhaps because references to change reduce perceptions of longevity (Web Appendix A), which has been shown to sour people's reactions (Eidelman & Crandall, 2014; Eidelman, Pattershall, & Crandall, 2010; Warner & Kiddoo, 2014), change references undermine reactions if those reactions are based simply on the knowledge that a particular entity has changed.

General Discussion

Across seven experiments, we found that references to change spark curiosity and thus information seeking. This effect emerged across a variety of contexts, including health guidelines, consumer goods, tourism destinations, store policies, and animals. Furthermore, we found that because change references stimulate curiosity and information seeking, they can promote more favorable or unfavorable evaluations of a target stimulus, depending on the valence of the available information. In other words, change references are not inherently persuasive, or positive, but rather facilitate the persuasive impact of available information, whether that information is positive or negative. We demonstrated this effect in numerous studies, provided evidence that it was driven by specific curiosity and information seeking about the changed stimulus, and ruled out interpretations pertaining to novelty, perceived effort, a simple “change is better” heuristic, and diversive curiosity. Also important, we found that references to change had a negative effect on participants' reactions when further information about the changed object was unavailable, consistent with a longevity bias (e.g., Eidelman & Crandall, 2014). This research is the first to find that change references can play an important and generalizable role in shaping people's attitudes and behavioral intentions in persuasion contexts.

The current research also advances the curiosity literature by illuminating a novel driver of specific curiosity and, thus, information seeking. In so doing, our studies underscore prior work showcasing the role of specific curiosity in shaping people's attitudes and behavioral intentions (Kupor & Tormala, 2015; Santos et al., 1994). Of course, information seeking can be motivated not only by specific curiosity, but also by other factors that do not stem from a desire to obtain information about a particular target (e.g., a general enjoyment of thinking or diversive curiosity; Cacioppo & Petty, 1982). The current research illuminates a novel trigger of specific curiosity—the mere reference of change—which thus facilitates the persuasive impact of both positive and negative information.

This work also documents a potential counterpoint to the notion that people generally prefer longevity, at least in the context of persuasion. Because referencing change can reduce perceived longevity (Web Appendix A), prior literature documenting the preference for longevity hinted at the notion that referencing change might generally depress attitudes toward changed entities. The current research finds that the decreased longevity that change implies does not have a dominating influence on attitudes in contexts in which further information is available. Indeed, highlighting that an entity has changed leads people to infer that the entity lacks longevity, but it also sparks curiosity and information seeking, which can have a nuanced impact on attitudes and behavioral intentions. The current research thus illuminates multiple consequences of referencing change, and specifies the conditions under which referencing change can improve versus sour people's ultimate reactions to attitude targets.

These findings have direct applications for influence practitioners, who spend billions of dollars on online advertisements designed to shape people's beliefs (e.g., about

policies and products) by motivating them to click to learn more online (Rosenkrans, 2010). The current research suggests that change references can increase influence practitioners' likelihood of stimulating this motivation. Interestingly, people need not view information justifying or explaining the change itself. None of the follow-up information (i.e., persuasive messages) we presented in the current experiments described the precise direction or consequences of the change; they simply detailed favorable or unfavorable information about the focal object. Change references helped that information reach an audience.

Boundary Conditions and Future Directions

There is ample room to further explore the boundaries of the effect of change references on evaluative outcomes. For example, it is likely that people's a priori interest in the focal topic moderates the effect of change on curiosity. We observed the effect in contexts that were likely to be of some interest to participants (e.g., food and tourism destinations). We suspect that this a priori interest is necessary for the change effect to emerge. As previously noted, research suggests that specific curiosity is most likely to rise when people perceive a discrepancy between their current and *desired* knowledge. In other words, specific curiosity arises only when people *want* to obtain more information (Loewenstein, 1994). Because specific curiosity appears to underlie the change effect observed here, we speculate that it is unlikely to emerge when the changed object is one about which people have no interest in accruing further knowledge. Exploring this possibility would provide additional insight into the process driving and boundaries surrounding change effects in persuasion.

Also worth studying in future research is the impact of reference points on the change effect. It is well-established that reference points can alter preferences by creating

contrast effects (e.g., Khan & Kupor, 2016; Lynch, Chakravarti, & Mitra, 1991). The current experiments avoided reference points in order to examine the manner in which the mere mention of change—absent information regarding its sign or magnitude—shapes evaluations. It would be worthwhile to investigate whether reference points that differ more or less greatly from an entity’s current state amplify or attenuate the current phenomenon.

In addition, although the current research examined change references across diverse information contexts (e.g., contexts in which the desire to search for additional information leads to positive information, negative information, or no information), we did not examine contexts in which information seeking leads to both positive and negative information. Mixed information contexts would be worth exploring in future work. We suspect that the effect of change references in mixed information contexts will depend on the quantity and quality of the information encountered. If people encounter positive and negative information of equivalent quantity and quality, for example, change references might have no overall effect on attitudes and behavioral intentions. If positive (negative) information dominates in quality or quantity, however, change references could still have positive (negative) overall effects. Interestingly, even if mixed information contexts eliminate the effect of change references on attitude and intentions, change references might affect attitude strength—for example, attitude certainty—by leading people to more information and increasing their perceptions of their own knowledge or thoughtfulness about a topic (Rucker, Tormala, Petty, & Brinol, 2014; Tormala & Rucker, 2018). We encourage future research to investigate these possibilities.

Also relevant to future research, Experiment 4 suggested that references to change depress evaluations when those evaluations are based primarily on knowledge that an entity

has changed. A supplemental study described in Web Appendix A may provide initial insight into why this backlash occurred. As noted, that study suggests that awareness that an entity has changed fosters the perception that it has less longevity, which can sour evaluations when further information is unavailable (Eidelman et al., 2010). Future research would profit from providing further insight into whether this perception drives the depressed evaluations of changed (versus unchanged) entities documented in Experiment 4 and Web Appendix E.

Coda

This research is the first to suggest that framing messages and offerings around the notion of change can facilitate their persuasive impact. We found that references to change not only imply that those targets have less longevity but also stimulate curiosity, which fosters information seeking and increases the likelihood that people actually receive persuasive information. This finding not only illuminates a previously undocumented source of curiosity, but also documents a potential counterpoint to the notion that people generally prefer longevity, at least in the context of persuasion. The current research thus builds a theoretically generative and practically useful framework for understanding the impact of referencing change on attitudinal outcomes.

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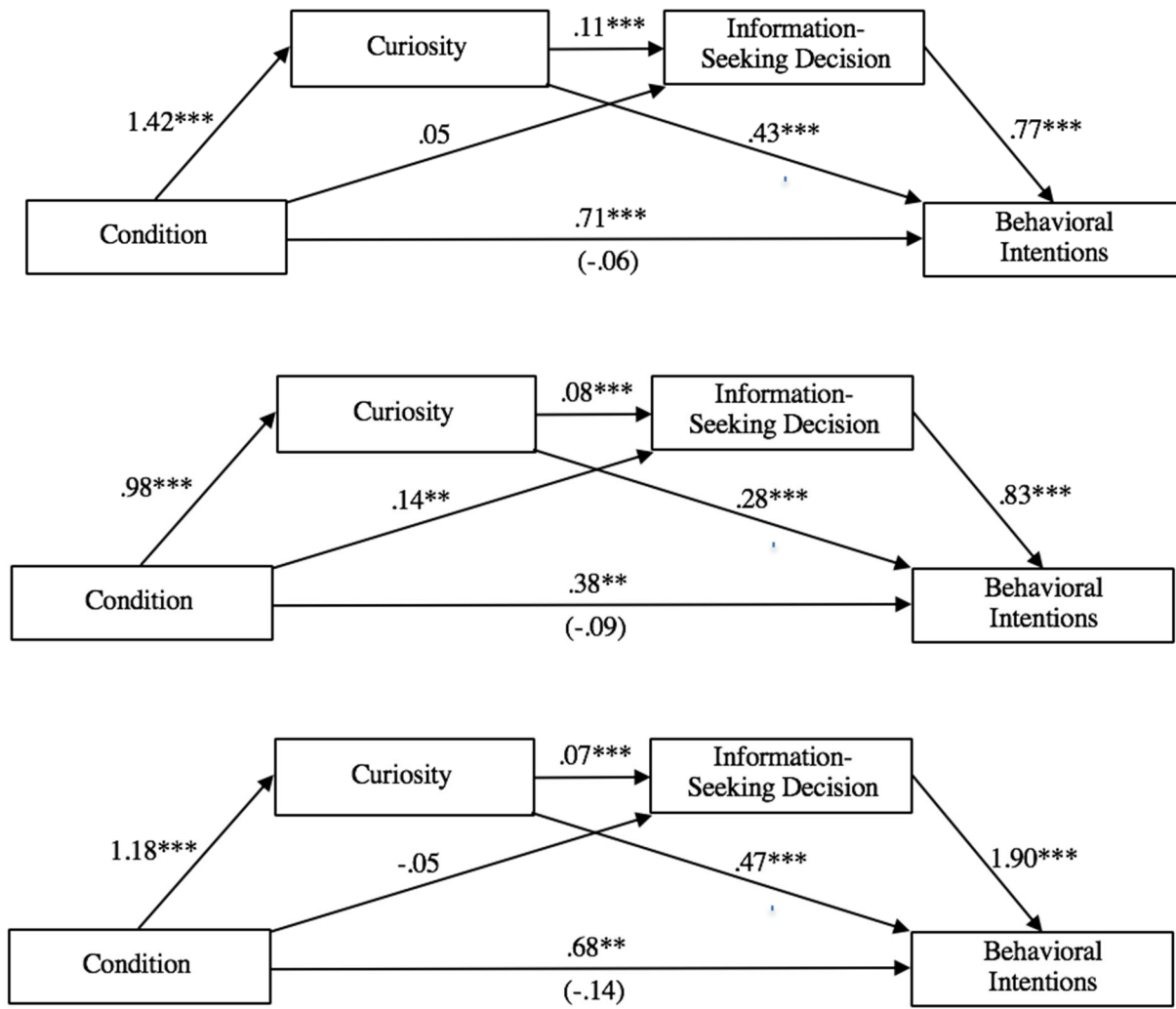
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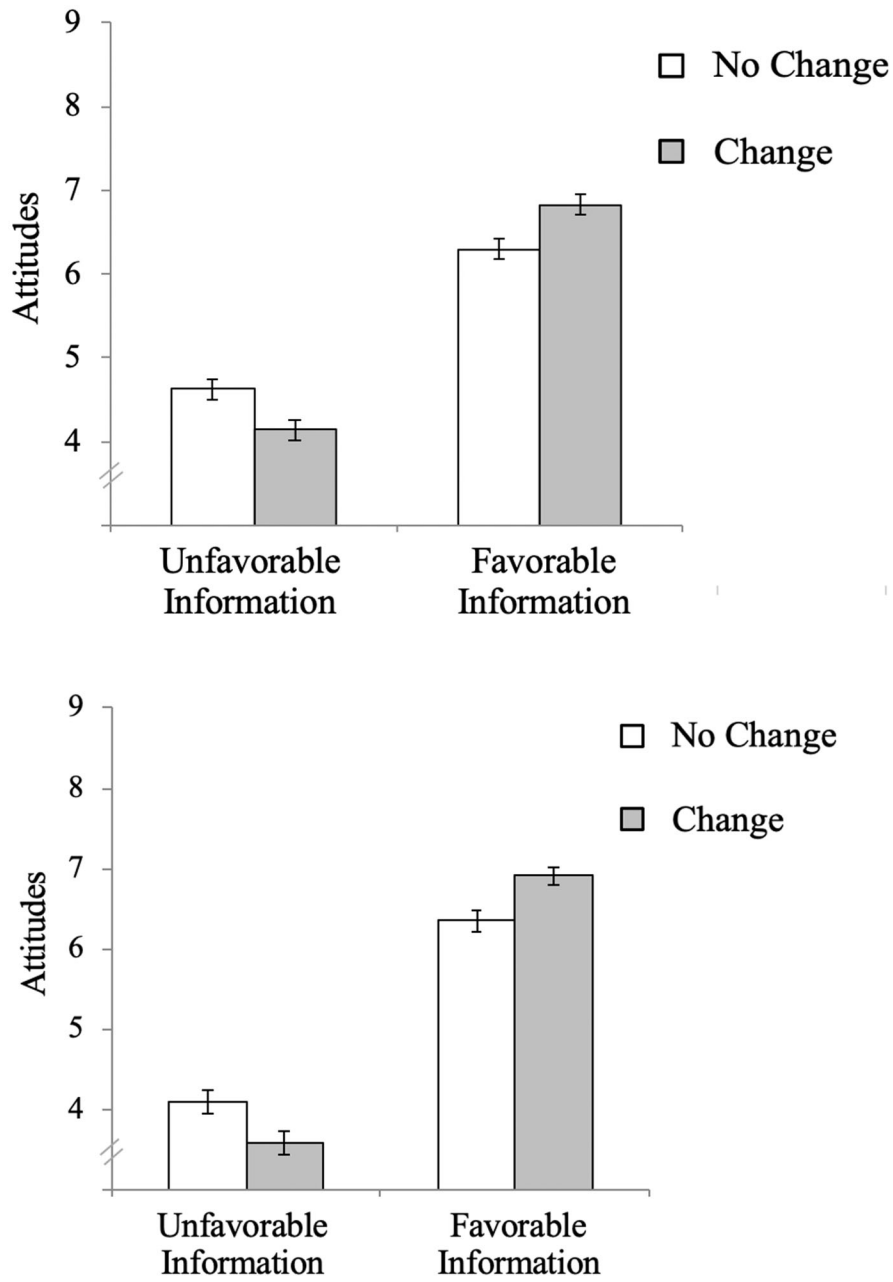
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Figure 1. Mediation models tested in Experiment 2A (top panel), Experiment 2B (middle panel), and Experiment 2C (bottom panel).



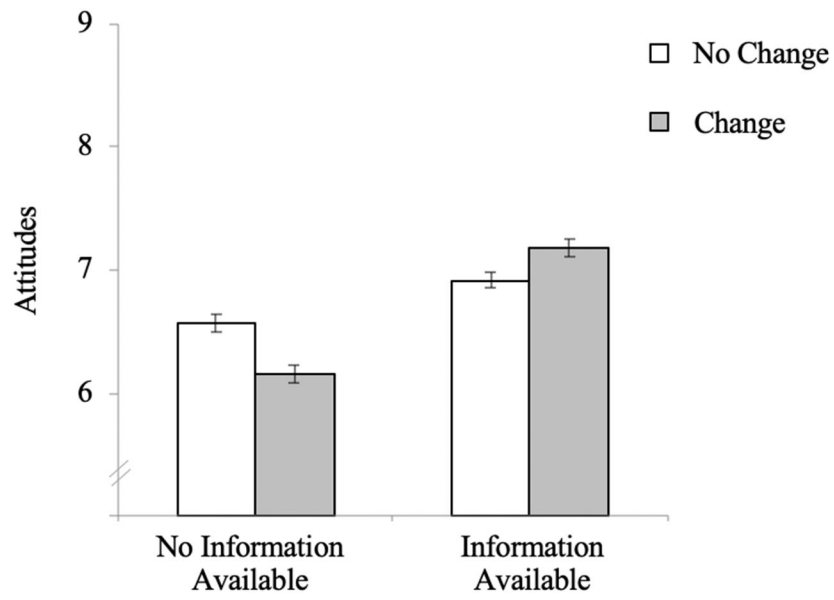
Notes. The path coefficients are unstandardized betas. The values in parentheses indicate the effect of condition on the dependent variable after controlling for the mediator. * $p < .05$ ** $p < .01$ *** $p < .001$

Figure 2. Attitudes as a function of change condition and information valence condition in Experiment 3A (top panel) and Experiment 3B (bottom panel).



Note. Error bars are standard errors.

Figure 3. Attitudes as a function of change condition and information availability in Experiment 4.



WEB APPENDIX A

In a supplemental experiment, we investigated the possibility that references to change can cause people to perceive that entity as having less longevity, as well as increase people's curiosity about that entity.

Method

Two hundred four participants (mean age = 37; 47% male) were recruited from Mechanical Turk. All participants viewed the beginning portion of an article describing the discount policy of Target (a national retailer). Participants were randomly assigned to either a *Change* condition or a *No Change* condition. Participants in the *No Change* condition read that “[fo]r many years, Target has not changed their discount strategy,” whereas participants in the *Change* condition read that “Target has made a change to their discount strategy in 2020.” After reading this information, participants completed a series of dependent measures, described below.

Curiosity. Participants indicated their curiosity about Target's discount strategy on a two-item index adapted from previous research (Kupor & Tormala, 2015; Lancaster, 2004; Mullaney, Carpenter, Grotenhuis, & Burianek, 2014). Specifically, participants indicated how curious they were about Target's discount strategy, as well as how much they wanted to read about Target's discount strategy. Participants indicated their responses on separate 7-point scales (1: *Not at all*; 7: *Very much*). These items were strongly correlated ($r = .93, p < .001$), and were thus averaged into an index of curiosity.

Perceived longevity. Participants indicated their perception of the longevity of Target's discount strategy on a measure adapted from previous research (Eidelman et al., 2010). Specifically, participants indicated their perception of how long Target's current version of its discount strategy has existed on a 7-point scale (1: *Not long at all*; 7: *A very long time*).

Results and Discussion

Participants were more curious about Target's discount strategy when it had changed ($M = 4.76, SD = 1.73$) than when it had not changed ($M = 3.63, SD = 1.90$), $t(202) = 4.45, p < .001$; Cohen's $d: .623$, 95% CI: .3401 to .9056). Participants also perceived that the changed policy had less longevity ($M = 2.87, SD = 1.93$) than the unchanged policy ($M = 6.05, SD = 1.11$), $t(202) = 14.45, p < .001$, Cohen's $d: 2.023$, 95% CI: 1.6839 to 2.3629).

WEB APPENDIX B

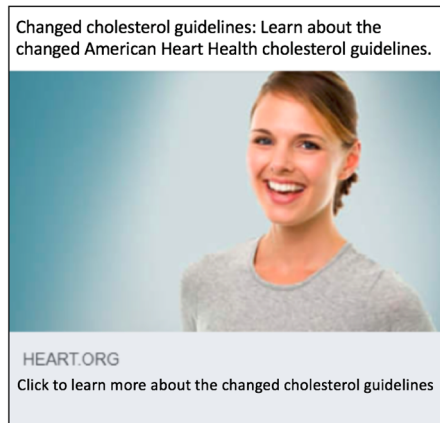
EXPERIMENTAL MATERIALS

Experiment 1

Baseline condition:



Change condition:



Experiment 2A

Both conditions:

Every year, Target, the retailer, offers seasonal offers and deals ahead of the holiday shopping period. On the next page, you will see information about an offer from Target.

Please click the arrows to read the article.

– Page Break –

No Change condition:

The first two sentences of this review article is here:

No Change in Target's Discounts and Offers

Target has not changed their holiday discount strategy, which determines what their standard discounts and product-category specific discounts are for holiday sales. These guidelines have remained the same since 2013.

[The rest of the article is on the next page.]

Change condition:

The first two sentences of this review article is here:

Change in Target's Discounts and Offers

Target has changed their holiday discount strategy, which determines what their standard discounts and product-category specific discounts are for holiday sales. These guidelines are now the same as they were in 2013.

[The rest of the article is on the next page.]

Curiosity index ($r = .94, p < .001$):

- How curious are you about what the rest of the article will say? (1: *Not curious at all*; 9: *Very curious*)
- How much do you want to read the rest of the article? (1: *Not at all*; 9: *Very much*)

Real information seeking decision:

You can decide whether you would like to view the rest of this article. If you click "yes," you can take a look at the rest of the article on the next page. If you click "no," you will move on to the rest of the survey.

You will be paid regardless of whether you choose to view the rest of the article or not.

Would you like to see the rest of the information in this article?

Yes No

[The order of the radio buttons was counterbalanced]

Participants who selected “Yes” viewed the following additional information:

Below is information about Target's upcoming holiday sales from Forbes.com:

This year, Target will run additional store-wide Cyber Monday discounts across all items (yes, including sales items).

Here are Target’s Cyber Monday 2018 deals:

- 35% off sitewide on Cyber Monday
- Save an additional 35% with the Target REDcard
- Samsung 50-inch Smart UHD TV for \$129.99 (save \$220)
- PlayStation VR Bundle for \$149.99 (save \$200)
- iRobot Roomba 890 Robotic Vacuum for \$149.99 (save \$250)
- Vizio 50-inch Smart 4K Ultra HD TV for \$99.99 (save \$200)

Behavioral intentions index ($r = .81, p < .001$):

- How likely are you to take a look at Target’s upcoming holiday sale (e.g., by visiting their website, store, or retail partners)? (1: *Extremely unlikely*; 7: *Extremely likely*)
- How likely are you to recommend Target's upcoming holiday sale to a friend or family member who is looking for holiday sales/deals (e.g., by sharing details about the sale, telling them about it)? (1: *Extremely unlikely*; 7: *Extremely likely*)

Experiment 2B

Both conditions:

Every year, nutritionists conduct a review of each of the major brands of granola bars on the market. On the next page, you will see their 2018 review article about Gaia granola bars, which is one of the major brands of granola bars on the market.

Please click the arrows to read the article

– Page Break –

No Change condition:

The first sentence of the review article is here:

No Change in Gaia Granola Bars For Many Years

The Gaia Company's granola bar recipe has remained the same for many years.

Change condition:

The first sentence of the review article is here:

Big Change in Gaia Granola Bars

The Gaia Company has introduced a big change in its granola bar recipe.

Curiosity index ($r = .94, p < .001$):

- How curious are you about what the rest of the information will say? (1: *Not curious at all*; 9: *Very curious*)
- How much do you want to read the rest of the article? (1: *Not at all*; 9: *Very much*)

Real information seeking decision:

You can choose what information you would like to view next. You can either view information about Gaia granola bar's recipe, or Kind granola bar's recipe. Which would you prefer to view more information about?

Kind granola Gaia granola

[The order of the radio buttons was counterbalanced]

Participants who selected to view the information about Kind granola viewed the following promotional video: <https://www.youtube.com/watch?v=wTu3E9cqkbQ>

Participants who selected to view the information about Gaia granola viewed the following promotional video: <https://www.youtube.com/watch?v=dhkbFngPQ48>

Behavioral intentions index ($r = .82, p < .001$):

- If you were interested in eating a healthy granola bar, how likely would you be to eat a Gaia granola bar? (1: *Extremely unlikely*; 7: *Extremely likely*)
- If a friend asked you for a recommendation for a healthy granola bar, how likely would you be to recommend that they try Gaia granola bars? (1: *Extremely unlikely*; 7: *Extremely likely*)

Experiment 2C

No Change condition:

Imagine that you are browsing the Internet, and you see the information below:

Snow in Alaska the Same This Year

The level of snowfall and skiing conditions in the Chugach Mountains of Alaska are the same this year as they were last year, which are the same as previous historic levels. More details from Ski Alaska:

[The rest of the information is provided in the next part of the study. Please answer a few questions first]

Change condition:

Imagine that you are browsing the Internet, and you see the information below:

Snow in Alaska Changes This Year

The level of snowfall and skiing conditions in the Chugach Mountains of Alaska have changed this year to return to previous historic levels. More details from Ski Alaska:

[The rest of the information is provided in the next part of the study. Please answer a few questions first]

Curiosity index ($r = .94, p < .001$):

- How curious are you about what the rest of the information provided will be? (*1: Not curious at all; 9: Very curious*)
- How curious are you in learning more information about this? (*1: Not at all; 9: Very much*)

Real information seeking decision:

You can choose what information you would like to view next.

You can either view information about visiting Chugach Mountains of Alaska, or information about visiting Montreal.

What would you prefer to view information about?
(you will only see what you choose)

◦ Visiting Chugach Mountains of Alaska ◦ Visiting Montreal

[The order of the radio buttons was counterbalanced]

Participants who selected to view the information about visiting the Chugach Mountains of Alaska viewed the following promotional video:

<https://www.youtube.com/watch?v=P1nTgEfigGk&t=3s>

Participants who selected to view the information about visiting Montreal viewed the following promotional video: <https://www.youtube.com/watch?v=QYDkmffVmQ4>

Behavioral intentions index ($r = .91, p < .001$):

- Imagine that a friend of yours asked for your advice about where to go on a ski trip, and your friend had the time and money to go anywhere for their ski trip. How likely would you be to recommend that they go to the Chugach Mountains in Alaska? (1: *Not likely at all*; 7: *Very likely*)
- If you were interested in going on a ski trip, and you had the time and money to go anywhere for your ski trip, how likely would you be to go to the Chugach Mountains in Alaska? (1: *Not likely at all*; 7: *Very likely*)

Experiment 3A

No Change condition:

Study shows no change in how lemphurs impact seaside communities.

Scientists have had the same understanding for many years of how the sea creatures affect coastal ecological systems and economies.

[The rest of the information is provided o the next part of the study. Please answer a few questions first.]

Change condition:

Study shows change in how lemphurs impact seaside communities.

Scientists now have a different understanding of how the sea creatures affect coastal ecological systems and economies.

[The rest of the information is provided no the next part of the study. Please answer a few questions first].

Curiosity index ($r = .92, p < .001$):

- How curious are you about what the rest of the report will say? (1: *Not at all*; 9: *Very much*)
- How much do you want to read the rest of the report? (1: *Not curious at all*; 9: *Very curious*)

Real information seeking decision:

You can decide whether you would like to view the rest of this report. If you click "yes," you can take a look at the rest of the report on the next page. If you click "no," you will move on to the rest of the survey.

You will be paid regardless of whether you choose to view the rest of the report or not.

Would you like to see the rest of the information in this report?

No Yes

[The order of the radio buttons was counterbalanced]

Participants in the *Favorable Information* condition who selected “Yes” viewed the following additional information:

Lemphurs are small sea animals that provide critical support for ensuring that people in many parts of the world obtain sufficient food, by balancing the marine ecosystem and helping sustain many different species of sea life. Without lemphurs, ecosystems would be disrupted and many species of sea life would die. Consequently, the food supply would severely diminish in many poorer sub-tropical nations (where lemphurs thrive), which would lead to an international food crisis.

Also important, lemphurs are highly intelligent and can be trained to detect chemical spills and other waterborne hazards. As a result, trained lemphurs are providing critical protection to many communities in dangerous areas. They are also very friendly to humans, and have been known to try to protect swimmers and surfers from predators such as sharks.

Participants in the *Unfavorable Information* condition who selected “Yes” viewed the following additional information:

Lemphurs are small sea animals and voracious eaters that critically harm the sea food supplies that people in many parts of the world depend on, by harming many species of sea life. They have become bigger problems in recent years because their populations have grown because of environmental factors. Without lemphurs, many species of sea life would be more likely to flourish and the food supply in many poorer sub-tropical nations (where lemphurs thrive) would dramatically increase, which would help aid food crises in countries with limited food supplies.

Also important, lemphurs lack intelligence, but are highly aggressive in fighting for the food they find, and will attack humans. They can swim close to shore, and even up rivers; they have very sharp teeth and fast, vicious bites that can severely injure and maim people. As a result, lemphurs are a danger to people in many rural communities in developing countries, especially small children, who wander into shallow waters.

Attitudes index ($\alpha = .96, p < .001$):

Please rate your attitudes toward lemphurs on the following scales:

Bad										Good
1	2	3	4	5	6	7	8	9	9	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Useless										Beneficial
1	2	3	4	5	6	7	8	9	9	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Terrible										Wonderful
1	2	3	4	5	6	7	8	9	9	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Experiment 3B

Both conditions:

Target, the retailer, offers year-round offers and deals. On the next page, you will see a review article about Target's deals.

Please click the arrows to read the article.

– Page Break –

No Change condition:

The first two sentences of the review article are here:

No Change in Target's Discounts and Offers

For many years, Target has not changed their discount strategy, which determines their standard discounts and product-category-specific discounts.

[The rest of the article is on the next page.]

Change condition:**Big Change in Target's Discounts and Offers**

Target has made a big change to their discount strategy, which determines their standard discounts and product-category-specific discounts.

[The rest of the article is on the next page.]

Curiosity index ($r = .93, p < .001$):

- How curious are you about what the rest of this information will say? (*1: Not at all; 9: Very much*)
- How much do you want to read the rest of the information? (*1: Not at all; 9: Very much*)

Real information seeking decision:

You can decide whether you would like to view the rest of this information. If you click "yes," you can take a look at the rest of the information on the next page. If you click "no," you will move on to the rest of the survey.

You will be paid regardless of whether you choose to view the rest of the information or not.

Would you like to see the rest of the information in this information?

No Yes

[The order of the radio buttons was counterbalanced]

Participants in the *Favorable Information* condition who selected “Yes” viewed the following additional information:

Consumer Reports (a nonprofit that publishes unbiased evaluations of products and retailers) highlights that Target's current discount strategy offers consumers the best deals of any national retailer - Target not only offers deep cuts in pricing, but automatically matches the price of any other retailer who offers a lower price. As a result, people who shop at Target spend 400% less than people who purchase the same products at other stores.

Participants in the *Unfavorable Information* condition who selected “Yes” viewed the following additional information:

Consumer Reports (a nonprofit that publishes unbiased evaluations of products and retailers) highlights that Target's current discount strategy offers consumers

the worst deals of any national retailer - Target sells goods at steep prices, and does not offer meaningful holiday discounts. As a result, people who shop at Target spend 400% more than people who purchase the same products at other stores.

Attitudes index ($\alpha = .98, p < .001$):

Please rate your attitudes toward Target's discounts on the following scales:

Bad									Good
1	2	3	4	5	6	7	8	9	
○	○	○	○	○	○	○	○	○	○
Useless									Beneficial
1	2	3	4	5	6	7	8	9	
○	○	○	○	○	○	○	○	○	○
Terrible									Wonderful
1	2	3	4	5	6	7	8	9	
○	○	○	○	○	○	○	○	○	○

Experiment 4

Both conditions:

Every year, nutritionists conduct a review of each of the major brands of granola bars on the market. On the next page, you will see their 2018 review article about Gaia granola bars, which is one of the major brands of granola bars on the market.

Please click the arrows to read the article

– Page Break –

No Change condition:

The first sentence of the review article is here:

No Change in Gaia Granola Bars For Many Years

The Gaia Company continues to use the same original recipe that it has used since the company was founded 86 years ago in 1932.

Change condition:

The first sentence of the review article is here:

WEB APPENDIX C
PERSUASIVENESS PRETESTS

Experiment	<i>M</i>	<i>SD</i>	Comparison to the scale mid-point
Experiment 2A (Target information)	6.04	1.26	$t(104) = 19.50, p < .001$
Experiments 2B & 4 (Gaia Information)	5.83	1.26	$t(99) = 14.55, p < .001$
Experiments 2C (Chugach Mountain Information)	5.17	1.43	$t(101) = 8.25, p < .001$
Experiment 3A (Favorable Information)	6.23	1.03	$t(102) = 21.94, p < .001$
Experiment 3A (Unfavorable Information)	6.43	0.86	$t(102) = 28.50, p < .001$
Experiment 3B (Favorable Information)	6.18	1.03	$t(104) = 21.73, p < .001$
Experiment 3B (Unfavorable Information)	5.61	1.49	$t(103) = 10.97, p < .001$

Notes. Each of these pretests employed the same methodology detailed in Footnote Three. Persuasiveness was measured on a 7-point scale in all pretests.

WEB APPENDIX D

This supplemental experiment investigated whether references to change operate by altering people's perceived knowledge about a target's current state. To that end, after participants in this supplemental study learned that a focal object had changed, they were asked whether they knew the object's current state.

In addition, this supplemental study provided converging evidence that references to change operate by fostering specific rather than diversive curiosity. In particular, as in Experiment 2B, participants in this supplemental study were offered a choice between viewing information that either could or could not resolve specific curiosity about the changed stimulus. Specifically, all participants received information about the tap water conditions in South Dakota, and read that these conditions had either changed or had not changed. Participants were then given the opportunity to view additional information about either these conditions or an unrelated topic. We predicted that the reference to change in South Dakota's tap water conditions would prompt specific curiosity about these conditions, and that this specific curiosity would drive participants to seek additional information about these conditions and not about the unrelated topic. In other words, we predicted that change-induced curiosity would prompt participants to seek the information that had a greater likelihood of resolving specific curiosity about the changed object.

Method

Two hundred eleven Mechanical Turk participants (mean age = 36; 42% male) read the first sentence of a report describing the tap water conditions in South Dakota. Participants randomly assigned to the *No Change* condition read that there has been no change in South Dakota's tap water conditions for many years, whereas participants in the *Change* condition read that South Dakota's tap water conditions have changed. Next, participants indicated their curiosity about the rest of the information on the same two-item index employed in the previous experiments, this time adapted to refer to South Dakota's tap water conditions ($r = .92, p < .001$). Participants also indicated whether they were aware of South Dakota's current tap water conditions by clicking a button labeled either "yes" or "no" (the order was counterbalanced).

All participants additionally chose whether they wanted to view the rest of the information about South Dakota's tap water conditions. Specifically, participants chose between viewing the rest of the information about South Dakota's tap water conditions versus another topic (i.e., new 2020 movie releases). Participants entered their choice by clicking a button labeled "Information about new 2020 movie releases" or "Information about South Dakota's tap water" (the order was counterbalanced).

Participants who chose to view additional information about South Dakota's tap water next viewed persuasive favorable information regarding the benefits of South Dakota's tap water, whereas participants who chose to view information about 2020 movie releases viewed information about 2020 movie releases. Neither the information about South Dakota's tap water nor the information about the 2020 movie releases referenced the presence or absence of change. After viewing the information requested (about tap water or movies), participants indicated their attitudes toward South Dakota's tap water on the same three-item index employed in Experiments 3-4 ($\alpha = .98$; Briñol et al., 2004). Specifically, participants rated South Dakota's tap

water on a series of scales ranging from 1 to 9 with the following anchors: bad—good, terrible—wonderful, useless—beneficial.

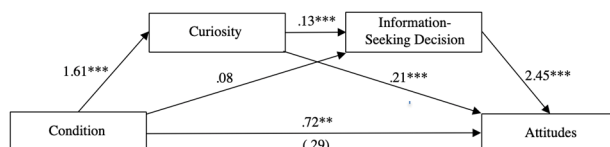
Results and Discussion

Participants who read that South Dakota's tap water did (versus did not) change were more curious about it ($M_{Change} = 5.22$; $SD_{Change} = 1.51$; $M_{No\ Change} = 3.63$; $SD_{No\ Change} = 2.02$; $t(209) = 6.50$, $p < .001$; Cohen's $d = .895$, 95% CI: .6098 to 1.1792), more likely to click to view additional information about it (Change = 67.0%, No Change = 39.3%; $\chi^2(df = 1, N = 210) = 16.20$, $p < .001$; Cohen's $d = .577$, 95% CI: .2930 to .8608), and had more favorable attitudes toward it ($M_{Change} = 6.84$; $SD_{Change} = 1.75$; $M_{No\ Change} = 6.13$; $SD_{No\ Change} = 1.85$; $t(209) = 2.88$, $p = .004$; Cohen's $d = .397$, 95% CI: .1229 to .6711). A serial mediation model with bootstrapping revealed that the reference to change fostered more favorable attitudes because it heightened curiosity and thus prompted greater information seeking (95% CI: .5997, 1.4164; Figure 1).

Analysis of the perceived knowledge data revealed that participants in both conditions were equally likely to report being unknowledgeable about South Dakota's current tap water conditions (Change = 94.2%, No Change = 89.7%; $\chi^2(df = 1, N = 210) = 1.45$, $p = .229$). Moreover, further exploratory analysis revealed that this supplementary study's results persisted (in both direction and significance) when the minority of participants who reported being knowledgeable about South Dakota's current tap water conditions were excluded from analysis: Participants who read that South Dakota's tap water did (versus did not) change were more curious about it ($M_{Change} = 5.24$; $SD_{Change} = 1.52$; $M_{No\ Change} = 3.56$; $SD_{No\ Change} = 2.00$; $t(192) = 6.62$, $p < .001$; Cohen's $d = .950$, 95% CI: .6511 to 1.2487), more likely to click to view additional information about it (Change = 65.3%, No Change = 38.5%; $\chi^2(df = 1, N = 194) = 13.92$, $p < .001$; Cohen's $d = .555$, 95% CI: .2599 to .8493), and had more favorable attitudes toward it ($M_{Change} = 6.87$; $SD_{Change} = 1.73$; $M_{No\ Change} = 6.12$; $SD_{No\ Change} = 1.81$; $t(209) = 2.97$, $p = .003$; Cohen's $d = .427$, 95% CI: .1406 to .7135). Moreover, a serial mediation model with bootstrapping revealed that the reference to change fostered more favorable attitudes because it heightened curiosity and thus prompted greater information seeking (95% CI: .5695, 1.4203).

In sum, this supplemental study provides converging evidence that references to change operate by fostering specific rather than diversive curiosity. In addition, it suggests that references to change are unlikely to operate by shifting perceived knowledge about the target's current state. Of course, these results do not preclude the possibility that there are contexts in which references to change alter perceived knowledge about a target's current state. Nevertheless, the current results indicate that this alternative explanation alone is unlikely to explain the current phenomenon.

Figure 1. Mediation model tested in Web Appendix D.



Notes. The path coefficients are unstandardized betas. The value in parenthesis indicates the effect of condition on the dependent variable after controlling for the mediators. * $p < .05$ ** $p < .01$ *** $p < .001$

WEB APPENDIX E

In order to document the robustness and generalizability of Experiment 4's results, this supplemental study replicates the results from Experiment 4 in a different context (a retailer) and on a different dependent measure (behavioral intentions rather than attitudes).

Method

Eight hundred Mechanical Turk participants (mean age = 36; 39% male) were randomly assigned to one cell in a 2 (Change Reference: No vs. Yes) \times 2 (Information Available: No vs. Yes) between-participants design. All participants read the beginning of a report describing Target's (ostensibly real) warranty policy. This information varied only in whether it indicated that Target's warranty policy had changed. Participants in the *Change* condition read that "Target has previously had the same warranty policy for 120 years. Target is now changing its warranty policy." By contrast, participants in the *No Change* condition read that "Target has had the same warranty policy for 120 years." Following this information, all participants indicated their curiosity about the rest of the information on the same two-item index employed in the previous experiments ($r = .87, p < .001$).

Participants then chose whether they wanted to view the rest of the information about Target's warranty policy. Participants entered their choice by clicking a button labeled with "No" or "Yes" (the order was counterbalanced). Participants were then randomly assigned to either an *Information Present* condition or an *Information Absent* condition. Participants in the *Information Absent* condition who chose to view the information read that they would view it later in the survey. By contrast, participants in the *Information Present* condition who chose to view the information now viewed the information. The information noted that Target offers consumers the longest warranty of any national retailer, but made no reference to any change in Target's warranty policy.

Next, participants completed the same two-item index of their behavioral intentions employed in Experiments 2A-2C, this time adapted to refer to Target's warranty policy ($r = .92, p < .001$). Specifically, participants indicated how likely they would be to shop at Target (1: *Not likely at all*; 9: *Very Likely*) and recommend Target to a friend (1: *Not likely at all*; 9: *Very Likely*). Participants in the *Information Absent* condition who chose to view the rest of the information then viewed the additional information.

Results and Discussion

As predicted, participants who read that Target's warranty policy had changed were more curious about the rest of the information ($M_{Change} = 4.61, SD_{Change} = 1.83; M_{No Change} = 3.75, SD_{No Change} = 1.86; t(798) = 6.57, p < .001$; Cohen's $d = .465$, 95% CI: .3238 to .6053), and more often clicked to view it (Change = 63.9%, No Change = 48.9%; $\chi^2 (df = 1, N = 800) = 18.41, p < .001$; Cohen's $d = .307$, 95% CI: .1665 to .4481).

After participants indicated their curiosity and decided whether to seek further information, their random assignment to the *Information Availability* condition determined whether participants who chose to view further information received this information prior to reporting their behavioral intentions toward Target. A 2 (Change Reference: No vs. Yes) \times 2 (Information Valence: Favorable vs. Unfavorable) ANOVA on the behavioral intentions data revealed no main effect of *Change* condition, $F(1, 796) = .11, p = .739$, but did reveal a main

effect of *Information Availability* condition, $F(1, 796) = 68.40, p < .001$. Not surprisingly, given that the information about Target's warranty policy was favorable, participants had more favorable behavioral intentions when the information was (versus was not) available. Most relevant to the current theorizing, this main effect was qualified by an interaction, $F(1, 796) = 15.09, p < .001$. When participants reported their reactions after viewing the additional information, they had more favorable intentions when the policy had changed ($M = 7.50; SD = 1.94$) than when it had not changed ($M = 6.93; SD = 1.93$), $F(1, 796) = 8.83, p = .003$ (Cohen's $d = .290$, 95% CI: .0917 to .4887). By contrast, when participants reported their reactions without viewing additional information, the reverse pattern emerged: Participants had more favorable intentions when the warranty policy had not changed ($M = 6.35; SD = 1.79$) than when it had changed ($M = 5.88; SD = 1.86$), $F(1, 796) = 6.35, p = .012$ (Cohen's $d = .259$, 95% CI: .0618 to .4554).

We predicted that the reference to change produced more favorable behavioral intentions when the favorable information was available because the reference to change heightened curiosity and thus increased information seeking, which led participants to favorable information. Consistent with this theorizing, a serial mediated moderation analysis with bootstrapping (following the same procedures detailed in Experiment 4) revealed a significant indirect effect (95% CI: 3.358, 6.667).

In sum, this supplemental study replicated the results of Experiment 4. When change-induced information seeking led people to favorable persuasive information about the focal object, referencing change enhanced reactions toward that object. However, when participants' reactions were primarily based on their knowledge about whether a particular entity has changed, referencing change led to less favorable reactions.

WEB APPENDIX F

Experiments 2A–4 investigated our theorizing by comparing people’s reactions to changed entities relative to equivalent entities that had not changed. This design had the advantage of holding constant the quantity of information presented about the focal entity in each condition. However, it leaves one question unanswered: Could it be that the change effect occurs not because change sparks curiosity (as we predict), but rather because the absence of change depresses curiosity? This seems unlikely given that Experiment 1 showed the effect using a baseline condition which referenced neither the presence nor absence of change. However, we investigated this question in a supplemental experiment. In this experiment, participants viewed the first section of an article which varied in whether it indicated that an entity had changed, had not changed, or made no mention of the presence or absence of change. We theorized that participants would be more curious about this entity when they read that it had changed, relative both to when they read that it had not changed and also relative to when they saw no mention of the presence or absence of change.

Method

Six hundred two participants (mean age = 36; 48% male) were recruited from Amazon’s Mechanical Turk. All participants viewed the beginning portion of an article describing the return policy of Target (a national retailer), which began by noting that “Target’s return policy determines whether people can return products bought at Target.” Between conditions, this information varied only in whether it was accompanied with further information regarding whether Target’s return policy had or had not changed. Participants in the *Change* condition read that Target’s return policy had changed (i.e., they read that “Target is changing its return policy”). Participants in the *No Change* condition read that Target’s return policy has not changed (i.e., they read that “Target has had the same return policy for many years”). Participants in the *Baseline* condition did not view any further information (i.e., they saw no mention of the presence or absence of change in Target’s return policy).

After reading this information, participants indicated their curiosity about Target’s return policy on the same two-item index described in Experiments 2-4 (this time adapted to refer to Target’s return policy). These items were strongly correlated ($r = .96, p < .001$) were thus averaged into an index of curiosity.

Results and Discussion

As predicted, there was a significant effect of condition on curiosity, $F(2, 599) = 15.30, p < .001$. Participants who read that the policy had changed ($M = 4.80; SD = 1.86$) were more curious than both participants who read that the policy had not changed ($M = 3.76; SD = 2.07$; Fisher’s LSD: $p < .001$; Cohen’s $d = .528, 95\% CI: .3273$ to $.7284$) and participants who saw no mention of the presence or absence of change ($M = 4.00; SD = 1.97$; Fisher’s LSD: $p < .001$; Cohen’s $d = .416, 95\% CI: .2186$ to $.6126$), the latter of which did not differ from each other (Fisher’s LSD: $p = .217$).