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Abstract

People are motivated to defend and rationalize the status quo, a phenomenon known as system justification. We propose the existence of a second, countervailing system-level motivation: system-change motivation, which is concerned with bettering the status quo over time. The opportunity to receive diagnostic information about the status quo pits the two system-level motives against each other. Whereas system justification promotes a preference for positive information about the status quo, system-change motivation promotes a preference for negative information about the status quo. In three experiments, we found that people preferred negative over positive feedback about the status quo when it was presented as being changeable. Our findings are the first to suggest the operation of a system-change motive.

Keywords

system change, system justification, information search, changeability, motivation, social cognition

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People are motivated to defend and rationalize the status quo. This system justification serves a palliative function, reducing anxiety that results from perceiving the world as chaotic and unpredictable (e.g., Jost & Hunyady, 2002; Jost, Pietrzak, Liviatan, Mandisodza, & Napier, 2008; Kay et al., 2009). Even the most disadvantaged people defend the status quo, at the expense of their self-interests and the interests of their groups, to maintain the belief that the world is fair and just (e.g., Jost & Burgess, 2000; Jost, Pelham, Sheldon, & Sullivan, 2003). The system-level motive of system justification may thus impede social justice and system reform.

History, however, is replete with examples of system reform. Events such as civilians' successful attempts to overthrow the governments of Tunisia and Egypt in early 2011 seem to contradict the notion that people are motivated only to justify the status quo. To account for this discrepancy, we propose the operation of a second system-level motive concerned with bettering the status quo over time: *system-change motivation*.

Dual-Motive Approach

Our account of a system-change motive is inspired by the literature on self-evaluation motives, which proposes two broad classes of such motives: self-protection motives and self-change motives. Self-protection motives, such as self-enhancement (and self-verification, among individuals with high self-esteem),

promote the construction, confirmation, and defense of people's positive beliefs about themselves (e.g., Sedikides & Strube, 1997). In contrast, self-change motives, such as self-assessment and self-improvement, drive people to diagnose their strengths and weaknesses and to use this information to better themselves (e.g., Sedikides & Hepper, 2009). Self-protection motives and self-change motives conflict when people have opportunities to receive negative diagnostic information about themselves (e.g., Dweck & Leggett, 1988; Sedikides & Hepper, 2009; Taylor, Neter, & Wayment, 1995; Trope, 1986; Trope & Neter, 1994). Such negative feedback benefits people in the long term because it provides them with information about their knowledge and skill that they can use as the basis for future attempts at self-change, but this feedback also poses a threat to current positive self-views. The balance between self-change and self-protection motives is a critical component in people's decisions whether to seek negative feedback.

One factor that affects this balance is the perceived changeability of the domain addressed by the feedback. To people for whom self-change is a motive, feedback about changeable

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weaknesses is of greater informational value than feedback about unchangeable weaknesses (Green, Pinter, & Sedikides, 2005; Taylor et al., 1995; Trope, Gervy, & Bolger, 2003). A person can improve changeable weaknesses, but no improvement is possible with unchangeable weaknesses. High perceived changeability also reduces the affective costs of negative information. People feel less threatened by negative feedback about weaknesses that they believe are mutable than by negative feedback about weaknesses that they believe are immutable (Butler, 1993; Dweck & Leggett, 1988; Green et al., 2005; Trope et al., 2003). The perceived changeability of weaknesses thus tips the motivational balance in favor of self-change and promotes preferences for negative feedback (Trope et al., 2003).

We suggest that, just as the search for self-evaluative information depends on the balance between self-protection motives and self-change motives, the search for information about a system depends on a balance between system-justification motives and system-change motives. The same factors that promote self-change over self-protection, such as the perceived changeability of weaknesses, should also promote system-change motives over system justification. We are not, however, suggesting that self-directed and system-directed motives are identical. Prior research has suggested that these two types of motives are independent of each other—for example, poor people are among the most ardent supporters of institutional authorities and meritocratic ideology, to the detriment of their self-interests and the interests of their group (e.g., Jost & Burgess, 2000; Jost et al., 2003). However, we propose that the same dual-motive principle documented with regard to self-directed motivations also applies to system-directed motivations.

In three experiments, we used an information-search paradigm to assess the operation of system-change motives and system-justification motives. We manipulated the perceived changeability of the status quo, predicting that high perceived changeability would promote system-change motives over system-justification motives. Participants then chose to receive information about either the weaknesses or the strengths of the status quo. Information about the weaknesses of the status quo threatens its legitimacy and perceived fairness, yet provides a valuable assessment on which to base future attempts to change a system. A preference for information about the weaknesses of a system, particularly if those weaknesses are perceived as being highly changeable, would thus suggest the operation of system-change motives rather than system-justification motives.

Study 1

Method

Participants. One hundred one Ohio State University undergraduates (35 male, 66 female) completed this study in a laboratory, for course credit. They were randomly assigned to condition (high changeability or low changeability).

Materials and procedure. Participants first read about either a successful attempt (high changeability) or an unsuccessful attempt (low changeability) to change the status quo at The Ohio State University. Table 1 presents the passages read by participants in the two conditions.

Participants were then informed that they could read the results of an external review of The Ohio State University that had been published by the U.S. Department of Education. Participants chose to read either a section of the report that focused on the university's strengths or a section that focused on the university's weaknesses. They then completed a manipulation check by indicating the extent to which they believed change was possible at the university, using a 7-point scale (1 = *not at all*, 7 = *very much so*).

To address the possibility that our manipulation of changeability inadvertently induced confounding affective states by threatening the perceived legitimacy of the status quo, we explored whether participants exhibited changes in affective states (e.g., positive or negative mood or fear) associated with responses to threat. Participants completed the Positive Affect and Negative Affect subscales of the Positive and Negative Affect Schedule–Expanded Form (PANAS-X; Watson, Clark, & Tellegen, 1988) after indicating which section of the report they preferred to read. We created a fear index by averaging responses to the four items in the Negative Affect subscale that are included in the Fear subscale of the PANAS-X (i.e., *afraid*, *scared*, *nervous*, *jittery*). After completing all measures, participants were debriefed and dismissed.

Results and discussion

We first assessed the effectiveness of the changeability manipulation. Participants in the high-changeability condition ($M = 5.86$, $SD = 1.20$) were more likely than participants in the low-changeability condition ($M = 5.40$, $SD = 1.03$) to believe that change was possible at the university, $t(99) = 2.07$, $p = .04$. We then assessed the influence of condition on participants' feedback preferences. Results supported the hypothesis that perceived changeability promotes system-change motives over system-justification motives: Forty-three percent of participants in the high-changeability condition, compared with 28% of participants in the low-changeability condition, preferred to receive information about the university's weaknesses, $\chi^2(1, N = 101) = 4.01$, $p = .05$.

To explore the possibility that our changeability manipulation inadvertently induced confounding affective states by threatening the perceived legitimacy of the status quo, we tested for an influence of condition on threat-related affective states (positive affect, negative affect, and fear) and all individual items on the PANAS-X. Table 2 depicts the p values associated with these tests (unadjusted for multiple comparisons). Statistically controlling for these affective states as covariates left our primary results unchanged.

Table 1. Passages Read by Participants in the Two Conditions of Studies 1 and 2*High-changeability condition:*

Chad Young, a junior at OSU, was unhappy with campus and social life at Ohio State University. The current system did not provide for many social networks or alliances to help freshmen successfully transition from high school to college. Having struggled himself to adjust to college life after high school, Chad felt it was important to provide these services to incoming freshmen. Chad, the president of his fraternity and a member of OSU student government, encouraged many students at OSU to write, call, and e-mail their administrators in order to change the current system. Due to the flood of calls, inquiries and requests, OSU drastically changed their current Freshman Orientation program. The changed system offered additional services, such as workshops, tutoring services, counseling, job placement, and student representatives from all campus and social organizations. When Chad was asked his feelings about the changes being made, he simply stated "Change is possible." Chad went on to graduate from OSU with his bachelor's in chemistry. He continues to serve as an advisor for The Ohio State University Campus and Community Life Committee, and remains passionate about improving campus and social life for all OSU students.

Low-changeability condition:

Chad Young, a junior at OSU, was unhappy with campus and social life at Ohio State University. The current system did not provide for many social networks or alliances to help freshmen successfully transition from high school to college. Having struggled himself to adjust to college life after high school, Chad felt it was important to provide these services to incoming freshmen. Chad, the president of his fraternity and a member of OSU student government, encouraged many students at OSU to write, call, and e-mail their administrators in order to change the current system. **Despite the flood of calls, inquiries and requests, OSU insisted their current system, the Freshman Orientation program, was sufficient to help incoming freshmen transition to college and campus life.** The changed system **would have** offered additional services, such as workshops, tutoring services, counseling, job placement, and student representatives from all campus and social organizations. When Chad was asked his feelings about the changes being made, he simply stated, "Change is **really tough around here, but I still believe change is possible.**" Chad went on to graduate from OSU with his bachelor's in chemistry. He continues to serve as an advisor for The Ohio State University Campus and Community Life Committee, and remains passionate about improving campus and social life for all OSU students.

Note: The two passages were substantively similar; boldfaced type in the low-changeability passage indicates additions and modifications to the high-changeability passage.

Study 2

In our next study, to further investigate the motivational underpinnings of the search for system-relevant information, we manipulated not only perceived changeability but also the diagnosticity of information about the status quo. Our dual-motive model suggests that the conflict between system-change motives and system-justification motives should become more acute with increasing diagnosticity of system-relevant information. Thus, any factor that promotes system-change motives, such as perceived changeability, should have a greater effect when information about a system is highly diagnostic than when it is not.

Method

Participants. One hundred ten Ohio State University undergraduates (66 male, 42 female, 2 whose gender was unreported) completed the study at a campus library.

Materials and procedure. The materials and procedure in Study 2 were similar to those used in Study 1. After reading about either a successful attempt (high changeability) or an unsuccessful attempt (low changeability) to reform the university's freshman orientation program (participants in Study 2 read the same passages used in Study 1), participants read

what they believed were the results of a review of the university. Participants in the high-diagnosticity condition were told that the review of the university was the result of a formal investigation and had been submitted to the U.S. Department of Education. Participants in the low-diagnosticity condition were told that the review was informal, that it consisted of interviews with students conducted during football games, and that it had been submitted for publication to *The Lantern*, the Ohio State University student newspaper. Participants were then asked to choose to read either a section of the report that focused on the university's strengths or a section that focused on the university's weaknesses.

As in Study 1, participants completed the Positive Affect and Negative Affect subscales of the PANAS-X after indicating which section of the report they preferred to read. Participants were then thanked, debriefed, and dismissed.

Results and discussion

We regressed preference for information about the university's weaknesses on changeability, diagnosticity, and their interaction using logistic regression. Both changeability and diagnosticity were effects-coded (low = -1, high = 1). As expected, we found a significant interaction between these two variables, $\beta = 2.36$, $SE = 0.86$, $p = .006$ (see Fig. 1). When information was diagnostic, 71.4% of participants in the high-changeability

Table 2. *p* Values From Statistical Tests of the Effect of Changeability Condition (Studies 1–3), Diagnosticity Condition (Study 2), and Relevance Condition (Study 3) on Responses to the PANAS-X

Subscale and item	Study 1	Study 2	Study 3
Positive Affect	.73	.14	.60
Active	.72	.07	.51
Alert	.71	.19	.63
Attentive	.19	.79	.72
Determined	.95	.82	.26
Enthusiastic	.36	.09	.89
Excited	.98	.03	.77
Inspired	.47	.24	.85
Interested	.93	.03	.81
Proud	.11	.03	.22
Strong	.85	.45	.06
Negative Affect	.20	.72	.71
Afraid ^a	.14	.96	.42
Ashamed	.31	.16	.49
Distressed	.32	.90	.10
Guilty	.45	.67	.88
Hostile	.59	.09	.85
Irritable	.42	.16	.39
Jittery ^a	.87	.80	.61
Nervous ^a	.62	.18	.79
Scared ^a	.14	.55	.07
Upset	.73	.15	.91
Fear index	.29	.43	.37

Note: The reported *p* values have not been adjusted for multiple comparisons. For Study 1, *p* values are from tests of the main effect of changeability. For Study 2, *p* values are from tests of the interactive effect of changeability and diagnosticity. For Study 3, *p* values are from tests of the interactive effect of changeability and relevance. PANAS-X = Positive and Negative Affect Schedule–Expanded Form (Watson, Clark, & Tellegen, 1988).

^aResponses to these four items were averaged to create the fear index.

condition, compared with 31.0% of participants in the low-changeability condition, preferred negative information, $\chi^2(1, N = 57) = 9.31, p = .02$. In contrast, when information was nondiagnostic, changeability had no effect on preference for negative information: Negative information was preferred by 20.6% of high-changeability participants and 33.3% of low-changeability participants, $\chi^2(1, N = 53) = 1.08, p = .29$.

An assessment of this interaction as a function of changeability revealed that when the university's weaknesses were presented as being highly changeable, preference for information about the university's weaknesses was increased in the high-diagnosticity condition relative to the low-diagnosticity condition, $\chi^2(1, N = 57) = 14.78, p < .001$. When the university's weaknesses were presented as being relatively hard to change, diagnosticity had no effect on preference for negative information, $\chi^2(1, N = 53) = 0.03, p = .86$. Our finding that high changeability was associated with a preference for highly

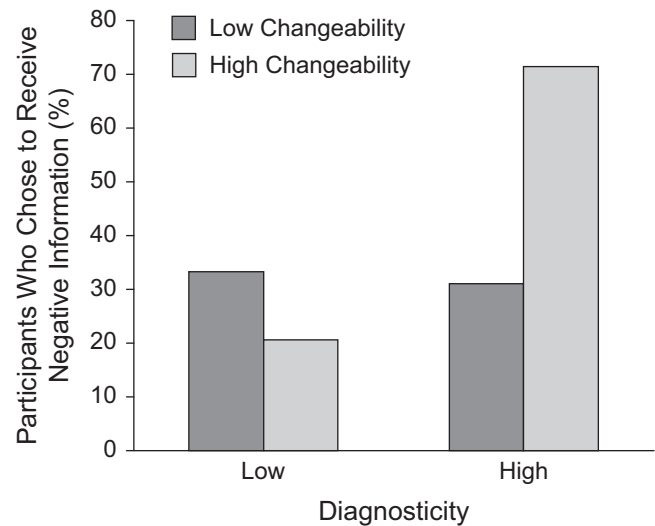


Fig. 1. Results from Study 2: percentage of participants who chose to receive information about the university's weaknesses (rather than its strengths) as a function of changeability condition and diagnosticity condition.

diagnostic negative information but not for low-diagnosticity negative feedback supports our assertion that perceived changeability affects feedback preferences by promoting system-change motives over system-justification motives.

To address the possibility that our manipulation of changeability inadvertently induced confounding affective states by threatening the perceived legitimacy of the status quo, we also assessed whether the interaction of changeability and diagnosticity had any impact on mood (see Table 2). Statistically controlling for positive affect, negative affect, and fear as covariates left our primary results unchanged.

Study 3

Our goals in Study 3 were twofold. First, in this study, we wanted to conceptually replicate Study 2 by manipulating relevance rather than diagnosticity. Our dual-motive model suggests that the conflict between a person's system-change motives and system-justification motives should increase when the system is personally relevant as opposed to when it is not; manipulating a system's perceived changeability should thus have greater effects on system-directed motivation when the system is highly personally relevant than when it is not. Second, to determine whether system-change motives promote preferences for negative feedback about a system, we directly assessed participants' system-change motivation as a function of the perceived changeability and relevance of the system. If preference for negative feedback stems from a desire to improve the status quo, then the preference for negative feedback about a system should be mediated by individuals' system-change motivation when the system is perceived as being both changeable and relevant.

Method

Participants. One hundred nine participants (44 male, 63 female, 2 whose gender was unreported) completed the study in a laboratory, for course credit.

Materials and procedure. The materials and procedure in Study 3 were similar to those used in Study 1. Participants first read about either a successful attempt (high changeability) or an unsuccessful attempt (low changeability) to change the freshman orientation program at either The Ohio State University (high relevance) or Miami University of Ohio (low relevance). Participants then chose to read either a diagnostic report that focused on the strengths of the university about which they had just read or a diagnostic report that focused on that university's weaknesses. We then asked participants to rate how much they desired to change the freshman orientation program at the university about which they had read, using a 9-point scale (1 = *not at all*, 9 = *very much so*).

Results and discussion

We regressed preference for negative information on changeability, relevance, and their interaction using logistic regression. Both changeability and relevance were effects-coded (low = -1, high = 1). Results revealed an effect of both changeability, $\beta = -2.48$, $SE = 1.08$, $p = .02$, and relevance, $\beta = -1.05$, $SE = 0.54$, $p = .05$, such that when either changeability or relevance was low, participants preferred positive over negative information. Critically, as predicted, we found a significant interaction between these two variables, $\beta = 2.57$, $SE = 1.24$, $p = .03$ (see Fig. 2). When the system was relevant, 50.0% of participants in the high-changeability condition, compared with 7.6% of participants in the low-changeability condition,

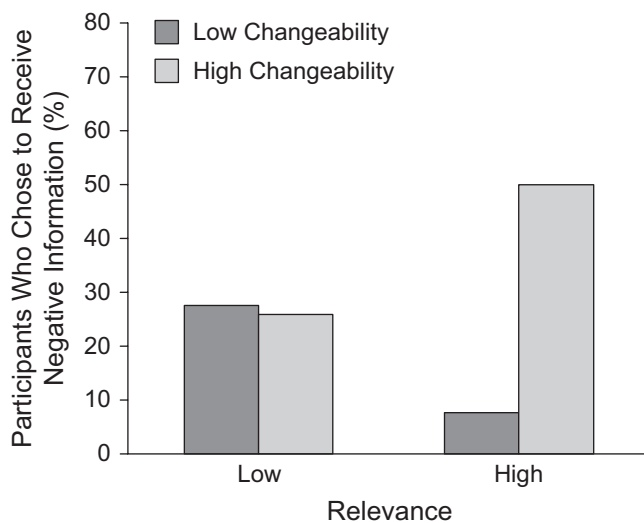


Fig. 2. Results from Study 3: percentage of participants who chose to receive information about the university's weaknesses (rather than its strengths) as a function of changeability condition and relevance condition.

preferred information about its weaknesses, $\chi^2(1, N = 53) = 7.34$, $p = .006$. In contrast, when the system was not relevant, there was no significant difference in preference for negative information between participants in the high-changeability condition (25.9%) and those in the low-changeability condition (27.5%), $\chi^2(1, N = 56) = 0.02$, $p = .89$. An assessment of this interaction as a function of changeability revealed that when the system was presented as being highly changeable, preference for information on weaknesses was higher in the high-relevance condition than in the low-relevance condition, $\chi^2(1, N = 56) = 3.88$, $p = .05$. Relevance had no effect in the low-changeability condition, $\chi^2(1, N = 53) = 2.11$, $p = .15$.

We next assessed whether the interaction of changeability and relevance had any impact on mood (see Table 2). As in Studies 1 and 2, to address the possibility that our manipulation of changeability inadvertently induced confounding affective states by threatening the perceived legitimacy of the status quo, we statistically controlled for positive affect, negative affect, and fear as covariates. The results of these analyses left our primary results unchanged.

Our finding that perceived changeability increased preference for negative information about only a relevant system is consistent with our assertion that changeability affects feedback preferences by promoting system-change motives over system-justification motives. To further test our hypothesis, we used the degree to which participants desired to change the freshman orientation program at the university they had read about as a proxy measure for system-change motivation. Although this item specifically referred to a narrow aspect (i.e., the freshman orientation program) of the more general system of interest (i.e., either The Ohio State University or Miami University), it nevertheless captured a desire to improve the given system.

We subjected responses to a 2 (changeability) \times 2 (relevance) analysis of variance. Results revealed a main effect of changeability (high changeability: $M = 5.60$, $SD = 2.38$; low changeability: $M = 4.17$, $SE = 2.46$), $F(1, 105) = 8.83$, $p = .004$, $r = .28$, but as predicted, this effect was qualified by a significant interaction between changeability and relevance, $F(1, 105) = 7.15$, $p = .009$, $r = .25$ (see Fig. 3). Specifically, high changeability promoted greater system-change motivation than did low changeability only when the system was relevant (high relevance: $M = 6.27$, $SD = 1.99$; low relevance: $M = 3.53$, $SD = 2.36$).

To examine whether a desire for system change promoted preference for negative feedback about the system, we examined whether participants' desire to change the freshman orientation program at the university they had read about mediated the effect of changeability and relevance on feedback preference. Changeability and system relevance were effects-coded (low = -1, high = 1), scores for system-change motivation were standardized, and participants' feedback preferences were dummy-coded (strengths information = 0, weaknesses information = 1). Applying bias-corrected bootstrapping procedures ($N = 1,000$; Preacher & Hayes, 2008; Shrout &

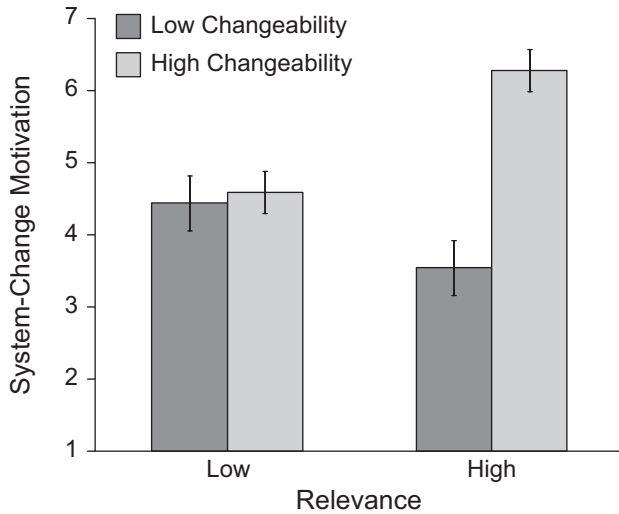


Fig. 3. Results from Study 3: system-change motivation as a function of changeability condition and relevance condition. The degree to which participants desired to change the freshman orientation program at a university about which they had read was used as a proxy measure for system-change motivation. Error bars represent ± 1 SE.

Bolger, 2002), we found that this measure of system-change motivation (standardized) fully mediated the effect of changeability and relevance on feedback preference, 95% confidence interval = [.09, .78]. Standardized coefficients were estimated using methods proposed by MacKinnon and Dwyer (1993) and are depicted in Figure 4. Reverse mediation—the indirect effect of changeability and relevance on system-change motivation through feedback preference—was not statistically significant. Together, these analyses provide preliminary support for the hypothesis that perceived changeability enhances

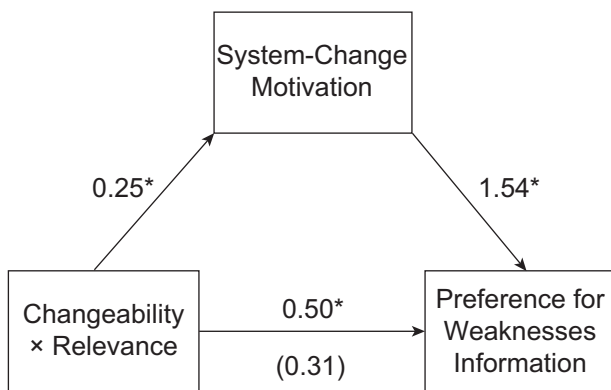


Fig. 4. Results from Study 3: model of system-change motivation as a mediator of the interactive effect of changeability and system relevance on preference for feedback about a system’s weaknesses (relative to preference for feedback about a system’s strengths). The figure shows standardized regression coefficients, which were estimated using methods proposed by MacKinnon and Dwyer (1993). For the path between the Changeability \times Relevance interaction and preference for weaknesses information, the coefficient above the arrow shows the result when the mediator was not included in the model, and the coefficient below the arrow shows the result when the mediator was included in the model. Asterisks indicate coefficients significantly different from zero ($p < .05$).

system-change motives over system-justification motives, and that this system-change motivation in turn enhances preference for negative system-relevant information.

General Discussion

These experiments are the first to suggest the operation of a system-change motive and provide initial support for a dual-motive approach to system-level motivation. Our results suggest that the perceived changeability of a system is a key factor in resolving the conflict between system-change motives and system-justification motives. These findings complement the existing literature on system-justification motivation, which has rightly highlighted people’s resistance to challenging the status quo and the social costs such resistance can have (e.g., Jost et al., 2008; Jost & Hunyady, 2002; Kay et al., 2009). Although we do not deny the importance or relevance of system-justification motivation, our findings suggest that explaining people’s judgments and decisions about systems and people’s system-relevant behaviors may require positing a second system-level motive concerned with improving the status quo—namely, system-change motivation.

We focused on perceived changeability as a critical factor that affects the search for information about systems. Research on self-evaluation, however, has highlighted other variables that likely have an impact as well. For example, just as positive mood (e.g., Trope & Neter, 1994) and affirmations of one’s central values (i.e., self-affirmation; Klein & Harris, 2009) promote preferences for negative self-relevant information by reducing the affective costs of such feedback, similar system-level variables may promote preferences for negative system-relevant information. Highlighting people’s uncertainty or lack of knowledge about the status quo should also promote preferences for negative information by increasing the informational value of feedback (for relevant findings in the domain of self-relevant information seeking, see Trope, 1979, 1980). Factors that influence the weighting of long-term and short-term outcomes, such as construal level (e.g., Freitas, Salovey, & Liberman, 2001; Fujita, Trope, Liberman, & Levin-Sagi, 2006), may also influence the search for information about a system. More abstract, higher-level construals promote preferences for negative self-relevant information (Freitas et al., 2001); one might expect similar effects with regard to preferences for system-relevant information. Our dual-motive model may thus provide a systematic framework for determining when people seek information about either the strengths or the weaknesses of the status quo.

Changing a system, like changing oneself, requires not only seeking diagnostic information, but also processing and accepting such information in a nondefensive manner (e.g., Dweck & Leggett, 1988; Harris & Napper, 2005; Raghunathan & Trope, 2002; Sedikides & Hepper, 2009; Sherman, Nelson, & Steele, 2000) and then acting on it to initiate and maintain change (e.g., Gollwitzer, 1990; Rothman, 2000). Just as self-protection motives and self-change motives conflict at each of

these stages when people attempt to change themselves, system-justification motives and system-change motives likely conflict at these stages when people attempt to change a system. Our dual-motive model may thus provide a parsimonious theoretical account of the factors that determine whether people defend or seek to change the status quo.

The present experiments are not without limitations. The changeability manipulation, for example, may have conflated changeability with other variables, such as perceived threat. Alternatively, independently of affective influences, our manipulation may have prompted a “consider the opposite” strategy (e.g., Lord, Lepper, & Preston, 1984), whereby the presentation of either positive information about a system (in the high-changeability condition) or negative information about a system (in the low-changeability condition) prompted participants to search for information of the opposite valence. Although the results of our mediational analysis in Study 3 and the lack of evidence (across all three studies) suggesting that changeability induced threat counter many of these alternative interpretations, more definitive evidence is needed. We believe that these studies constitute an important first step in supporting our dual-motive model but that more work is necessary to fully explore potential cognitive and motivational mechanisms and boundary conditions. We encourage and anticipate research addressing these important issues.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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