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The natural order of things: The draw of naturalistic explanations for
inequality

Jaime L. Napier
Dept. of Psychology
Yale University

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Please address editorial correspondence to:

Jaime Napier
Department of Psychology
Yale University
P.O. Box 208205
New Haven, CT 06520-8205

Email: jaime.napier@yale.edu

There is a tendency to think that what we grew up with, what we have seen all our lives, is natural and inevitable. That any other way would be against human nature.

– Howard Zinn, *Declarations of Independence*, (1990, p. 161)

The natural order of things: A few motivated underpinnings of naturalistic explanations for inequality

In line with the observation made by historian Howard Zinn, research has established that people hold beliefs about social groups that serve to equate “the way things are” with the way they *ought* to be (e.g., Bem & Bem, 1970; Eagly & Steffen, 2000; Eidelman, Crandall, & Pattershall, 2009; Feldman, 1972; Fiske, Cuddy, Glick, & Xu, 2002; Glick & Fiske, 2001a, 2001b; Jackman, 1994; Jost & Banaji, 1994; Jost, Kivetz, et al., 2005; Kay et al., 2007, 2009; Napier, Thorisdottir, & Jost, 2009; Triandis, 1977; Yzerbyt et al., 1997). The system-legitimizing role of ideological beliefs has been a central focus of researchers for many years (Glick & Fiske, 2001; Jost & Banaji, 1994; Lerner, 1980; Sidanius & Pratto, 2001). However, the question of whether different *types* of system-legitimizing beliefs might be differentially evoked (and have differential consequences) depending on motivational factors has received little attention.

In this chapter, I bring together recent empirical work that sheds new light on the process of system justification by focusing on the content of system justifying beliefs. Specifically, I examine how “naturalistic” explanations of inequality can deflect blame away from

both the system and the group members, and thus can ameliorate the conflict between system- and group-justification motivations for members of disadvantaged groups. I review research that examines two hypotheses derived from this proposition, namely that (1) when people are motivated to justify the system, members of disadvantaged (vs. advantaged) groups will be more likely to endorse naturalistic (or essentialist) explanations of inequality when their relatively low status is made salient, and (2) naturalistic explanations of inequality can serve to buffer people's self-esteem when they are motivated to justify the system but feel low personal control over their outcomes. I also present evidence that people explain inequality in at least two system-exonerating ways, namely by placing the blame on disadvantaged individuals (personal responsibility attributions) or on nature (naturalistic explanations).

System justification theory

According to system justification theory (Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004; van der Toorn & Jost, 2012), people are motivated to view the systems under which they work and live as stable, fair, and legitimate. A central focus of this work has been on how people understand inequality between social groups (e.g., men and women; Whites and Blacks). Specifically, system justification researchers have highlighted how beliefs that emphasize (or exaggerate) the degree to which individuals can be held personally accountable for their outcomes can serve to legitimate inequality among social groups insofar as they

imply that status differences are earned. In line with this notion, a host of studies have shown that perceptions of individual responsibility (and endorsements of ideologies that emphasize individual responsibility) are associated with prejudicial attitudes toward Blacks and members of other disadvantaged groups (Crandall, 1994, 1995; Jost, Banaji, & Nosek, 2004; Jost, Glaser, et al., 2003; Nosek, Banaji, & Jost, 2009; Pratto, Sidanius, Stallworth, & Malle, 1994; Rim, 1988; Sears, Van Laar, Carrillo, & Kosterman, 1997; Sidanius, Pratto, & Bobo, 1996; Weiner, 1986; Weiner, Perry, & Magnuson, 1988).

In contrast to personal responsibility attributions, which assume that outcomes are causally related to an actor's behavior, naturalistic beliefs are dependent on the assumption that outcomes are beyond an individual's control (i.e., that an external locus of causality is operating). At the same time, naturalistic beliefs place the locus of causality *outside* of the system. These beliefs (such as "some people are innately superior to others") acknowledge the existence of inequality but do not hold system-level authorities or policies responsible for it. Thus, they deflect blame away from the system as well as the individual and group.

Psychological essentialism, for instance, is the belief that members of social groups share some deep, underlying essence that makes them part of that group. There is a large literature by now illustrating that essentialist beliefs are often system justifying (e.g., Keller, 2005). For instance, Martin and Parker (1995) found that the belief that sex and race

differences are due to biological factors is related to the belief that such differences are large in magnitude, and is also associated with the belief that these differences cannot be eliminated. Keller (2005) found that a general “belief in genetic determinism” was significantly and positively related to system-legitimizing ideologies, including patriotism, nationalism, social dominance orientation, and the Protestant work ethic (see also Jayaratne et al., 2006).

**Essentialist beliefs as a response to conflicts between system-
and group-justification motivations**

The question of whether members of disadvantaged groups engage in system justification, and to what extent, has been an important focus for system justification theory. On the one hand, members of both advantaged and disadvantaged groups should be motivated to view the system as stable and fair, insofar as such a view serves epistemic and existential motivations for order and meaning. On the other hand, members of disadvantaged groups should experience conflicts between maintaining a positive view of the system (system justification) and maintaining a positive view of the group and the self (group and ego justification).

Previous explorations into this question have mostly focused on personal responsibility types of system-justifying beliefs (e.g., “people who work hard are almost always successful;” Rankin, Jost & Wakslak, 2009; Jost, Pelham, Sheldon, & Sullivan, 2003), and have produced mixed

results. Some work suggests that members of disadvantaged groups will engage in system justification only to the extent that their group membership is not salient (Jost et al., 2003). Because naturalistic explanations of inequality deflect blame away from the system without holding the group members personally responsible, my colleagues and I proposed that they could serve to ameliorate the conflict between system- and group-justification motivations for members of disadvantaged groups (Napier, Newheiser, Jost, Kay, Gaucher, & Laurin, in prep.). We examined this in the context of gender inequality by examining “essentialist” beliefs about gender among men and women.

In a first set of studies, my colleagues and I (Napier, Newheiser, Jost, Kay, Gaucher, & Laurin, in prep.) have examined essentialist beliefs about gender among men and women who were motivated to justify the system. We reasoned that essentialist beliefs about gender would be heightened among women (but not men) when people were both motivated to justify the system and when gender disparities were made salient. That is, we attempted to create a “conflict” between women’s group- and system-justifying motivations, and expected that when this conflict was present (vs. absent), women would be higher on essentialist explanations for gender inequality as compared to men, who presumably would not experience this conflict.

In our first two studies, we experimentally manipulated people’s motivation to justify the system using paradigms from prior work, and

then reminded all participants about the state of gender inequality in their country. Specifically, in Study 1, we randomly assigned undergraduate participants ($N=54$; 48.1% male) to read a paragraph ostensibly covering a study that concluded that it would be increasingly difficult to move out of their country in the coming years (“high system dependency” condition) or that leaving the country will become increasingly easier (“low system dependency” condition). This manipulation was taken from Laurin, Shepard, & Kay (2011), who demonstrated that people are more motivated to justify the system when their ability to emigrate is restricted and they feel “stuck.” After reading one of the two passages, participants read a paragraph describing the state of gender inequality in their country, and were asked the extent to which they believed that these gender disparities were “due to genuine differences between women and men.”

Results confirmed our expectations. When participants were told it was relatively easy to leave their country (and were thus not particularly motivated to justify the system), women were slightly (but not significantly) less likely than men to endorse the essentialist explanation of gender differences, $M_d=-1.18$, $SE=.80$, $p=.15$. When they were told emigration would be restricted, and their motivation to justify the system was presumably heightened, however, this trend was reversed: women were (marginally) more likely than men to say that gender inequality is due to essential differences between men and women, $M_d=1.37$, $SE=.78$,

$p=.09$. Looking at it another way, women were significantly more likely to endorse the essentialist explanation of gender inequality when their motivation to justify the system was high ($M=5.23$, $SE=.56$), as compared to when it was low ($M=3.07$, $SE=.54$), $M_d=2.16$, $SE=.78$, $p=.008$, whereas men's endorsement of essentialist explanations was unchanged by the manipulation, $M_d=0.39$, $SE=.80$, $p=.62$.

In Study 2, we replicated this using a different manipulation of system justification motivation and a different dependent measure. Specifically, participants ($N=60$; 20% male) were randomly assigned to read a paragraph about how much the country that they live in affects their life and wellbeing ("system dependence" condition) versus a control paragraph (taken from a geology textbook). Following this, participants read an ostensible *New York Times* article recounting the history of patriarchy in the United States. For our dependent measure, participants were shown a list of occupations that were described as "predominantly male" or "predominantly female" and asked to rate the extent to which the gender makeup of each occupation was "due to biological factors." They rated four occupations that were labeled "predominately male" (fire fighters, chefs, mathematicians, and business executives) and four that were labeled "predominately female" (elementary school teachers, nurses, stay-at-home parents, and daycare workers). We computed an overall biological attribution score based on these eight ratings ($\alpha=.83$) to use as our measure of gender essentialism.

Results mirrored our findings from the first study. The system justification manipulation did not affect men's biological attributions, $M_d=0.85$, $SE=.72$, $p=.24$, whereas women were significantly more like to endorse the biological reasons of gender disparities when system dependence was high (vs. low), $M_d=-0.92$, $SE=.36$, $p=.01$. Alternatively, men tended to be more likely than women to endorse biological explanations of occupational gender disparities in the control condition, $M_d=-1.19$, $SE=.57$, $p=.04$, but this difference was no longer reliable when system justification motives were activated, $M_d=0.58$, $SE=.57$, $p=.31$.

Study 3 was conducted in order to hone in on whether or not we were truly creating a motivational conflict between system- and group-justifying motivations. In this Study, participants were all White women who were reminded of their high ("White") or low ("women") status. Specifically, after participants were randomly assigned to read the system dependency manipulation (used in Study 1), they saw a screen that was labeled "Societal privilege check." In the high status condition, they were asked "Are you White?" In the low status condition, they were asked "Are you a man?" Finally, participants responded to one item that assessed their lay theory of intelligence: "I can develop my intelligence if I really try" (e.g., Dweck & Leggett, 1988). This item was coded so that higher numbers corresponded to an entity (vs. incremental) theory of intelligence (1="Strongly agree"; 7="Strongly disagree").

Results confirmed our prediction that women would be more likely to endorse essentialist (or entity-based) theories of their own intelligence when they were motivated to justify the system, and when their low (but not high) status was salient. Among White women who were reminded of their high (White) status, there was no effect of the system dependence manipulation, $M_d = -0.16$, $SE = .26$, $p = .54$. White women reminded of their low (women) status, however, were more likely to say that their intelligence is immutable when they were led to feel dependent on the system ($M = 2.49$, $SE = .17$), as compared to when they were not ($M = 1.92$, $SE = .16$), $M_d = 0.57$, $SE = .24$, $p = .02$. Alternatively, when the motivation to justify the system was not salient, whether participants' low or high status was made salient did not impact their endorsement of essentialist reasoning about intelligence, $M_d = -0.24$, $SE = .26$, $p = .35$. When the motivation to justify the system was activated, by contrast, those reminded of their low status were significantly more likely to endorse an entity-based theory of intelligence as compared to those reminded of their high status, $M_d = 0.49$, $SE = .24$, $p = .04$.

Two types of system-justifying beliefs

Results from this first attempt to examine the motivational functions of essentialist beliefs about inequalities confirmed our expectations that these types of explanations would be heightened when there was a conflict between group- and system justifying needs. In these first studies, however, our conception of naturalistic explanations was

limited to essentialist beliefs about groups (men and women).

Essentialism should be one instantiation of a more general view of how the system works. That is, I propose that people can hold a view of the system (and its outcomes) as a reflection of individual agencies and behaviors (the system is “fair”) or as a reflection of natural forces (the system is “natural”).

In order to provide empirical evidence for two distinct types of legitimizing beliefs, personal responsibility beliefs and naturalistic beliefs, I factor analyze a subset of items from the economic system justification scale (Jost & Thompson, 2000). Several items on this scale, shown in Table 1, explicitly assess either personal responsibility or naturalistic rationalizations of the system. In particular, the contents of three items directly assess the belief that economic outcomes are contingent on personal deservingness or effort (e.g., “If people work hard, they almost always get what they want”). In addition, the contents of an additional three items explicitly assess the belief that social inequality is the result of “natural” forces (e.g., “Social class differences reflect the natural order of things”).

Over the course of nine semesters—from Spring 2004 to Spring 2008—3,830 New York University undergraduates completed this 17-item economic system justification scale (Jost & Thompson, 2000). Participants were 31.6% male and had a mean age of 19.0 years ($SD = 1.28$).

Approximately 61% of the participants identified their race as White;

20.5% as Asian; 4.2% as Black; and the remaining participants identified as “Other.” A subset of these participants (from Spring 2004 to Spring 2007, $n=3,024$) also completed a 7-item measure of acceptance of income equality (Kluegel & Smith, 1986; $\alpha=.86$).

In order to test whether personal responsibility attributions and naturalistic attributions are distinct rationalizations for the status quo, I conducted a confirmatory factor analysis of the six aforementioned items from the economic system justification scale.¹ A single factor solution, in which all of the six items listed in Table 1 loaded onto one latent variable, showed rather poor fit to the data, $CFI=.871$, $SRMR=.057$, $RMSEA=.122$, $\chi^2(9)=543.41$. Next I tested a two-factor solution, with the three personal responsibility items loaded on to one latent variable and the three naturalistic rationalization items loaded on to a second latent variable, allowing the two latent variables to correlate. The fit statistics for this model were acceptable, $CFI=.971$, $SRMR=.029$, $RMSEA=.062$, $\chi^2(8)=129.24$. Further, this model fit showed significant improvement over the one-factor solution, $\Delta\chi^2(1)=414.17$, $p<.001$. Table 2 lists the factor loadings, error variances, factor covariances, and fit statistics for the two-factor model. A subsequent model that constrained the correlation between the two latent variables to 1 showed significantly worse fit, $\Delta\chi^2(1)=8.22$, $p<.01$, suggesting that these two factors are not redundant.

To further probe whether both factors are reflections of distinct inequality-legitimizing beliefs, I conducted a linear regression model

predicting the acceptance of income inequality with the two factors simultaneously. Results confirmed that beliefs that attributing inequality to personal responsibility, $b=.32$, $SE=.02$, $p<.001$, and to naturalistic factors, $b=.36$, $SE=.02$, $p<.001$, both independently and significantly contributed to the acceptance of inequality. Thus, above and beyond one's belief in personal responsibility, endorsing naturalistic rationalizations was positively associated with the acceptance of income inequality.

In sum, I find support for the notion that there are at least two distinct types of inequality-legitimizing beliefs. A confirmatory factor analysis showed that the best fitting model is one that distinguishes beliefs that emphasize personal responsibility from those that emphasize nature. Importantly, I found that both these two factors independently contributed to a significant amount of variance in the acceptance of inequality, which is in line with the notion that both types of attributions can serve to justify system-level inequality.

One important divergent underlying assumption between these two types of system-justifying beliefs—explanations that highlight individual responsibility versus explanations that implicate naturalistic factors in outcomes—is the locus of causality. Whereas personal responsibility attributions are predicated on the notion that individuals are personally in control of their outcomes, naturalistic explanations in some sense have the opposite assumption—that people do not have personal control, and

that they are subject to the forces of nature. In the last section, I examine the consequences of this assumption on individual wellbeing.

**The palliative function of naturalistic explanations in the face of
low personal control**

To the extent that naturalistic explanations exonerate the low status individual (or group) from being personally (or intentionally) responsible for their relatively bad outcomes, it makes sense that these types of explanations may ameliorate the negative affect that would presumably be associated with a personal responsibility attribution. In another line of research, my colleague and I have been examining the “palliative function” of naturalistic attributions for inequality (Sawaoka & Napier, in prep.).

A long and extensive body of research has identified a sense of *personal control* as a key component for developing and maintaining physical and psychological well-being (for review, see Kay, Whitson, Gaucher, & Galinsky, 2009). The perception of high personal control seems to promote subjective well-being even when this perception is illusory (Taylor & Brown, 1988), whereas the perceived loss of personal control has been linked to emotional trauma (Janoff-Bulman, 1992; Pennebaker & Stone, 2004), depression and withdrawal (Seligman, 1975; Schulz & Aderman, 1974; Streib, 1971), and even early death (Schulz & Aderman, 1973).

At the same time, the realization that “nothing can be done” is sometimes a rather palliative one insofar as it alleviates the individual from having to take action. In this research, we attempted to shed light on this apparent paradox, arguing that when people *personally* experience low control, a belief that *no one* is in control can serve to buffer subjective well-being, at least to the extent that people are motivated to perceive their world as ordered and meaningful.

Across four studies, we tested the hypothesis that naturalistic beliefs about the system—beliefs that attribute system-level inequalities to natural factors (such as genetics)—can serve a palliative function for people who feel low personal control but are motivated to maintain a worldview that things are as they “ought” to be.

In our first two studies, we compared the relationship between naturalistic beliefs and subjective well-being among people who are involuntarily unemployed and those who are not. Results showed that there was no relationship between employed people’s well-being and their beliefs in genetic determinism (in the General Social Survey) or their naturalistic explanations of system-level inequality as measured by the items from the naturalistic factor of the Economic System Justification scale (from a sample collected on MTurk). Among the involuntary unemployed, however, endorsement of these naturalistic beliefs was positively related to measures of well-being, including self-esteem and life satisfaction. People who are involuntarily unemployed (vs. not) report

lower levels of subjective well-being only to the extent that they reject naturalistic explanations for outcomes. Unemployed individuals who endorse these naturalistic beliefs, however, report equally high well-being as their employed counterparts, suggesting that appealing to nature for an explanation for outcomes can serve to buffer subjective well-being in the face of hardship and feelings of personal inefficacy.

We experimentally tested this idea in two additional studies. In one study, after measuring participants' endorsement of naturalistic beliefs, we manipulated their motivation to justify the system by having them read a passage, taken from Kay and Jost (2003), about the state of decline of the United States ("system threat") or about a recent discovery on Mars ("control condition"). We then manipulated their feelings of personal control by having them recall a time when something positive happened to them which they either had control over ("high personal control") or they had no control over ("low personal control;" Kay, Gaucher, Napier, & Callan, 2009). Finally, we measured their self-esteem. When the system was not threatened—and thus presumably when participants' motivation to justify the system was less active—reminders of low (vs. high) personal control marginally significantly reduced subjective well-being, regardless of participants' endorsement of naturalistic beliefs. Under system threat, however, naturalistic beliefs about inequality were positively associated with subjective well-being among participants induced to feel low control, but were unrelated to well-being among participants induced to feel high

personal control. Again, this study is in line with the notion that naturalistic beliefs about inequality can protect subjective well-being in the face of low control. That is, in the low personal control condition, participants who rejected naturalistic explanations of inequality reported significantly lower levels of subjective well-being as compared to those in the high control condition; among those who endorsed these beliefs, however, those primed to feel low personal control had equally high well-being as those primed to feel high control.

In the final study, we sought to provide causal evidence that naturalistic explanations for outcomes buffer subjective well-being in the face of low control. All participants were exposed to a system threat, and then randomly assigned to feel low versus high personal control in the same manner as the previous study. We then manipulated participants' beliefs about inequality by exposing them to a passage claiming that life outcomes are due to genetic factors (natural condition) or to effort (meritocratic condition). Among those exposed to a meritocratic explanation of outcomes, being reminded of low (vs. high) personal control negatively impacted subjective well-being; among those exposed to the naturalistic explanation, by contrast, there was no affect of the control manipulation on well-being.

Concluding Remarks

In this chapter, I have summarized emerging work examining beliefs that people have innate, essential differences and disparities in

society are simply reflections of these natural disparities. In our first line of work on this topic, my colleagues and I have shown that when system justification motivation is activated (vs. not), members of disadvantaged groups who are reminded of their disadvantage increase in their endorsement of essentialist explanations for inequality. I have been exploring the notion that essentialism is one type of belief that denotes a broader view of the system as functioning as a reaction to “natural” forces. In other lines of work, we have shown that (1) reminders of injustice (vs. justice) lead to increased belief in this naturalistic view, and decreased belief in a meritocratic view (Napier, under review) and that (2) to the extent that a person endorses a naturalistic view of the system, they maintain relatively high subjective wellbeing in the face of low personal control, as compared to those who reject such a view.

Humans have an affinity for nature (Wilson, 1984). Research has shown that people are more accepting of things when they are described as “natural.” For instance, people are less opposed to marijuana usage when it is described as an “herb” as compared to “a drug,” and report more favorable views of sun bathing when they are told radiation is “natural” as compared to “man-made.” This work illustrates that the system, too, can be described as a natural phenomenon, and this makes its tenant inequalities more acceptable than would otherwise be the case.

Table 1

The bivariate correlations of “destiny” and “deservingness” rationalizations for inequality from the economic system justification scale (Study 1)

	1	2	3	4	5	6
Sample Mean	5.21	4.28	4.38	3.93	4.32	5.10
Sample Standard deviation	2.11	1.98	2.03	2.01	2.00	2.11
1. If people work hard, they almost always get what they want.	-	.381	.373	.248	.212	.134
2. Most people who don’t get ahead in our society should not blame the system; they have only themselves to blame.		-	.418	.251	.311	.268
3. Economic positions are legitimate reflections of people’s achievements.			-	.301	.347	.232
4. Laws of nature are responsible for differences in wealth in society.				-	.496	.270
5. Social class differences reflect differences in the natural order of things.					-	.264
6. Equal distribution of resources is unnatural.						-

Table 2

The estimates from a 2-factor solution of the economic system justification scale (Study 1)

Factor loadings and error variances					
		<i>b</i> (SE)	β	R^2	σ^2 (SE)
Deservingness	← ESJ1	.91 (.04)	.55	.30	1.62 (.09)
	← ESJ2	1 ^{NT}	.64	.41	3.09 (.09)
	← ESJ3	1.08 (.04)	.68	.46	2.25 (.08)
Destiny					1.85 (.10)
	← ESJ4	1 ^{NT}	.68	.46	2.20 (.08)
	← ESJ5	1.05 (.04)	.71	.51	1.97 (.08)
	← ESJ6	.63 (.03)	.41	.17	3.72 (.09)

Note. ^{NT}, not tested; All other estimates (including error variances and factor loadings) are significant at $p < .001$.

¹ did not explicitly assess either “personal responsibility” or “naturalistic” rationalizations of the system.¹ These items were omitted from the analysis because including potentially irrelevant items could cause spurious factors to emerge or obscure theoretically important factors (Cattell, 1978; Fabrigar, Wegener, MacCallum, & Strahan, 1999).

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