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Recent evidence suggests that perceptions of social class rank influence a variety of social cognitive tendencies, from patterns of causal attribution to moral judgment. In the present studies we tested the hypotheses that upper-class rank individuals would be more likely to endorse essentialist lay theories of social class categories (i.e., that social class is founded in genetically based, biological differences) than would lower-class rank individuals and that these beliefs would decrease support for restorative justice—which seeks to rehabilitate offenders, rather than punish unlawful action. Across studies, higher social class rank was associated with increased essentialism of social class categories (Studies 1, 2, and 4) and decreased support for restorative justice (Study 4). Moreover, manipulated essentialist beliefs decreased preferences for restorative justice (Study 3), and the association between social class rank and class-based essentialist theories was explained by the tendency to endorse beliefs in a just world (Study 2). Implications for how class-based essentialist beliefs potentially constrain social opportunity and mobility are discussed.

Keywords: social class, socioeconomic status, essentialism, restorative justice, just world beliefs

One of the most pervasive and reliable signals of rank in human society is a person's place in the socioeconomic hierarchy—that is, a person's social class, socioeconomic status, or SES (Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012; Kraus, Tan, & Tannenbaum, in press). Elevated social class provides an individual with freedom of choice and access to abundant resources, whereas lower social class renders the social environment and other individuals as primary determinants of an individual's life outcomes (Kraus, Piff, & Keltner, 2009; Snibbe & Markus, 2005; Stephens, Markus, & Fryberg, 2012; Stephens, Markus, & Townsend, 2007). Here, we examine how differences in perceptions of social class rank relative to others give rise to essentialist beliefs about social class categories—that is, beliefs that social class has an underlying, inherent, or natural foundation—and in turn, how essentialist beliefs shape punitive judgments.

Representations of Social Class

Social class is a social category that is defined by an individual's access to available material resources (e.g., education, income, social capital) and perceptions of rank in society relative to others (Kraus et al., 2012). Individuals from relatively upper-class backgrounds, due to their elevated social rank in society and abundant economic resources, tend to have access to higher quality education, enjoy more freedom

at their jobs (Kohn & Schooler, 1983), and live longer than their lower-class counterparts (Adler et al., 1994).

Many theories attempt to explain why an individual is sorted into the upper or lower social class categories in society. In the classic social theories of Emile Durkheim, social class differences represent a natural division of labor in society—wherein each person earns a job and social standing that is equal to his or her unique talents and skills (Durkheim, 1984/1902). More recent psychological research suggests that people, in part, endorse this meritocratic view: Large-scale surveys reveal that wealthy individuals are universally perceived as high in competence, whereas the very poor are perceived as low in competence (Fiske, Cuddy, Glick, & Xu, 2002).

Theorists also contend that social class categories represent distinct cultural groups—that is, individuals from lower- and upper-class backgrounds tend to engage in unique cultural patterns (e.g., style of dress, leisure activities) that serve to reinforce social class categories (e.g., Bourdieu, 1985; Kohn & Schooler, 1969; Kraus, Piff, & Keltner, 2011; Snibbe & Markus, 2005; Stephens et al., 2012). For instance, recent research suggests that first-generation college students tend to struggle in college, in part, because they hold a conjoint model of agency—in which the self is fundamentally connected to others. This cultural model of agency conflicts with the disjoint model of agency—which stresses that individuals should stand out from others—that is the dominant cultural model in middle-class environments and is prevalent at universities (Stephens et al., 2007, 2012).

Essentialist lay theories can also be invoked to explain social class position in society. Essentialist theories of social categories are predicated on several assumptions: that people belong to the same social category because they share a specific feature in common; that category membership is unchangeable; that categories provide a great deal of accurate information about the individual; and that members of the same category share similar biological characteristics in their physiological profiles and genetically based tendencies (Allport, 1954; Haslam, Rothschild, &

Ernst, 2000; Keller, 2005; Williams & Eberhardt, 2008; Yzerbyt, Rocher, & Schandron, 1997). In contrast, a social constructivist view of the same social categories presupposes that categories are constructed by outside social influence, that categories are not derived from biological factors, and that category membership shifts depending on time and context (Williams & Eberhardt, 2008).

In the current study, we sought to determine whether essentialist beliefs about social class categories vary by an individual's perceptions of social class rank. We predict that individuals who perceive themselves as high in social class rank will endorse essentialist lay theories of social class categories, whereas lower-class rank individuals will endorse more social constructivist theories (the essentialism hypothesis). This prediction arises from fundamental motivations to justify social hierarchies.

Social Class Rank and Essentialism

In prior research, social class has typically been measured in terms of the objective experience of contrasting levels of material resources (e.g., educational attainment, income). Recent theory and evidence have brought into focus an important realization: Social class is a fundamental way in which individuals are ranked within society relative to others (e.g., Kraus, Tan, & Tannenbaum, in press). As such, subjective perceptions of social class rank—that is, perceptions of one's own position relative to others within a social interaction or in one's local community—are a defining feature of the experience of social class (Kraus et al., 2012, in press).

The importance of social class rank perceptions is evident in health psychology research: Relatively lower-class individuals tend to show poorer health and well-being trajectories than do their upper-class counterparts (Adler et al., 1994). Moreover, when researchers measure social class using both objective resource indicators (e.g., income) and subjective perceptions of rank—assessed by ranking oneself on a 10-rung ladder representing socioeconomic status in society (Adler, Epel, Castellazzo, & Ickovics, 2000)—the subjective perceptions emerge as the consistently stronger predictor of patterns of both self-rated health (e.g., "In general, my health is good"; Adler et al., 2000) and mortality (Kopp, Skrabski, Réthelyi, Kawachi, & Adler, 2004). In related work, social class rank relative to a close friend (e.g., Kraus, Horberg, Goetz, & Keltner, 2011) or perceptions of rank relative to an imagined interaction partner (Kraus, Côté, & Keltner, 2010) predict patterns of social cognition independent of objective resource-based measures of social class. On the basis of this work, we expect perceptions of social class rank to predict essentialist beliefs about social class categories even after accounting for objective resource measures of social class.

Perceptions of social class rank are also likely to predict essentialist beliefs because the endorsement of essentialist social categories readily arises from the motivation to justify the current structure of social hierarchy (Keller, 2005; Morton, Postmes, Haslam, & Hornsey, 2009; Yzerbyt, Judd, & Corneille, 2004). That is, beliefs that group characteristics are stable, immutable, and biologically determined are formed to provide concrete reasons for favoring one's in-group (e.g., "We have better genes"). These sorts of essentialist beliefs about social categories help justify disparities in status and rank between different social groups (Jost, Banaji, & Nosek, 2004; Sidanius & Pratto, 2001) and the holding of prejudicial attitudes toward lower-ranking groups.

Several studies suggest that essentialist beliefs have hierarchy-justifying functions. For example, individuals who endorsed biological essentialism—captured in an endorsement of the item "The kind of person someone is can be largely attributed to their genetic inheritance"—were more likely to show prejudice and discrimination toward out-groups (Keller, 2005) or low-status minority groups (e.g., gays and lesbians; Haslam, Rothschild, & Ernst, 2002). In similar research, participants were exposed to essentialist beliefs about racial categories by reading an ostensibly real newspaper story suggesting that racial categories are either biologically based or socially constructed (Williams & Eberhardt, 2008). Participants exposed to the argument that racial categories are biologically based were less emotionally engaged when reading news articles about racial oppression than those who read the article suggesting that racial categories are socially constructed (Williams & Eberhardt, 2008).

These findings suggest that highly ranked members of society—such as individuals who perceive themselves as high in social class rank vis-à-vis others—may be inclined to endorse essentialist beliefs in part to justify or legitimize their elevated social position. In contrast, subordinate groups in society—such as lower-class rank individuals—may endorse views that social categories are changeable, unstable, and constructed by the external social environment because these views foster beliefs in opportunity for social advancement.

Numerous studies converge on the generalization that upper-class rank individuals tend to justify their current elevated social position in society. For example, survey research finds that individuals who rate themselves as high in social class rank on the 10-rung ladder representing society are more likely to explain personal life events (e.g., being laid off from work) as determined by individual traits and dispositions relative to their lower-class rank counterparts (Study 3; Kraus et al., 2009). Similar patterns have been observed when asking undergraduates to explain patterns of increasing economic inequality in society: Upper-class rank participants, measured in terms of subjective ladder ranking within the university community, tend to endorse personal characteristics (e.g., hard work, ability, money management skills) as reasons why wealth disparities exist in the United States, whereas lower-class rank individuals tend to think that external social factors (e.g., educational opportunity) are more important causes of economic inequality (Study 1; Kraus et al., 2009; cf. Kluegel & Smith, 1986).

On the basis of the above lines of evidence, we expect upper-class rank individuals to more readily endorse essentialist beliefs about social class categories and lower-class rank individuals to endorse social constructivist beliefs about the same social categories (the essentialism hypothesis). Research on India's caste system provides the most direct support for this hypothesis. Mahalingam (2007) recruited people who belonged to the upper- (Brahmins) and lower-castes (Dahlits) of Indian culture. These participants read a switched-at-birth story wherein an upper-caste child is raised by a lower-caste family or vice versa. After reading the story, upper-caste Indians felt that the child would be a member of the caste he was born into. In contrast, lower-caste Indians believed the child would acquire a caste identity from the family that raised him (Mahalingam, 2007).

Similarly, historical accounts of scientific research reveal that upper-class individuals may have a predilection for essentialism.

During the 19th century, upper-class scientists tended to espouse social Darwinism—the thesis that some races are inherently superior to others—and this tendency suggests a belief in the differentiation of group categories based on innate characteristics (Degler, 1991; Gould, 1981).

In addition to providing support for the essentialism hypothesis—that upper-class rank individuals will endorse essentialist conceptions of social class categories—the above research suggests a potential mediator linking social class to the endorsement of essentialist lay theories of social class: Given that individuals are motivated to justify their current elevated rank in society, the association between social class rank and essentialist beliefs about social class categories may, in part, be explained by the tendency for highly ranked individuals to believe that their elevated position is fair and just. Thus, for our next hypothesis, we predict that the tendency to favor beliefs in societal fairness will explain the association between social class rank and essentialist conceptions of social class categories (the just world hypothesis). This expectation arises from a wealth of research linking individuals in positions of high status to beliefs about enhanced societal fairness. For example, high-performing members of a group are more likely to advocate a meritocratic division of resources (Messick & Sentis, 1979). Moreover, people with higher status are happier when they believe that positive outcomes in society are based on merit (Napier & Jost, 2008; O'Brien & Major, 2005).

Social Class Rank, Essentialism, and Punitive Judgment

Previous research suggests that social policy decisions, such as those related to voting rights or punitive judgments, are influenced by self-serving motives (Antaki, 1985; Ross & Sicoly, 1979), political ideologies (Jost, Pelham, & Carvallo, 2002; Jost, Pelham, Sheldon, & Sullivan, 2003), emotions and moral judgments (Carlsmith, Darley, & Robinson, 2002; Graham, Haidt, & Nosek, 2009; Haidt, Graham, & Joseph, 2009), differential definitions of justice (Carlsmith et al., 2002; Gromet & Darley, 2006), and religious beliefs (Tetlock, Bernzweig, & Gallant, 1985). We extend this work in the current investigation by testing how social class shapes punitive judgments through essentialist lay theories.

A principal concern of social justice research has been to better understand the forms of punitive judgments that individuals endorse (Tyler & Jost, 2007). One form that is common in the judicial system of the United States is retributive justice, which focuses primarily on calibrating punishments and policies to be directly proportional to the harm (or good) that individuals produce (Carlsmith et al., 2002; Carlsmith, Wilson, & Gilbert, 2008; Gromet & Darley, 2006; Weiner, Graham, & Reyna, 1997). Retributive justice is based largely on a deterrence model of justice in which threats of punishment are used to deter future illegal action (Tyler & Jost, 2007). In contrast, restorative forms of justice focus on rehabilitation and atonement. Rather than focusing on punishments as a deterrent to illegal action, restorative justice aims to rehabilitate vulnerable individuals or offenders (i.e., in drug treatment programs) and to bring about reconciliation and goodwill between perpetrator and victim (Gromet & Darley, 2006; Marshall, 2003; Tyler & Jost, 2007).

Recent empirical findings suggest that essentialist beliefs are likely to lead to a rejection of restorative social policies: The belief that a person's social attributes reflect inherent, stable qualities of the individual should covary with beliefs that rehabilitation-based polices that attempt to change these essential qualities are likely to be ineffective. Conversely, social constructivist beliefs in social categories foster the sense that rehabilitation practices are crucial for changing people's unlawful actions or negative life circumstances (e.g., Reyna & Weiner, 2001).

Research supports this broad theoretical assertion. For example, people who endorse essentialist beliefs about racial categories reveal tendencies in their attitudes that are consistent with a rejection of restorative justice concerns. Thus, participants with elevated race-based essentialism tended to be less outraged by and less motivated to change racial inequality in society (Williams & Eberhardt, 2008). As well, teachers who tended to make internal attributions for student poor conduct in the classroom tended to favor retributive punishments for those students, rather than to foster the students' improvement (Reyna & Weiner, 2001). Given this research, for our third hypothesis, we expect that greater endorsement of essentialist beliefs about social class will decrease support for restorative social policies (the bad genes hypothesis).

Just as essentialist beliefs are likely to lead to rejection of restorative social policies, evidence suggests that, relative to their lower-class rank counterparts, upper-class rank individuals are also likely to reject these policies. Upper-class rank individuals, who explain personal and social outcomes disproportionately in terms of internal dispositions, traits, and attributes, tend to see individuals as more personally responsible for their social positions and actions (Grossmann & Varnum, 2011; Kluegel & Smith, 1986; Kraus et al., 2009; Varnum, Na, Murata, & Kitayama, 2012). Given these tendencies, for our fourth hypothesis we expect upper-class rank individuals to hold less favorable attitudes toward restorative justice policies that focus on rehabilitation-based punishments (e.g., community service) than will their lower-class rank counterparts (the punitive judgment hypothesis).

The Present Research

Three studies tested our four hypotheses concerning the relationships among social class rank, essentialist lay theories, and punitive judgment. In Study 1, we sought to develop a scale assessing essentialist beliefs about social class categories and to determine if social class rank is associated with these essentialist lay theories (the essentialism hypothesis). In Study 2, we sought to determine if the association between social class rank and essentialist theories of social class categories is explained by beliefs that the world is fair and just (the just world hypothesis). In Study 3, we assessed the causal relationship between essentialist lay theories about social class categories and restorative policy decisions. In particular, we manipulated news articles to provide support for essentialist or social constructivist theories of social class with the expectation that support for essentialist theories of social class would decrease preferences for restorative forms of social justice for academic cheating (the bad genes hypothesis). In Study 4, we determined the causal role of social class by manipulating momentary conceptions of social class rank (e.g., Kraus et al., 2010), with the prediction that participants manipulated to experience upper-class rank would be more likely to endorse essentialist beliefs about social class categories (the essentialism hypothesis) and would be less likely to endorse restorative forms of punishment

(the punitive judgment hypothesis). Throughout our analysis we expected that measures of social class rank would predict both essentialist beliefs and punitive judgments even after accounting for objective resource measures of social class (i.e., annual income, educational attainment).

Study 1: Essentialist Lay Theories of Social Class

In Study 1, we sought to develop a scale assessing the extent that individuals believe that social class is an essentialist social category. To that end, we conducted a factor analysis to select items that would capture essentialist beliefs about social class. Following the construction of the scale, we examined correlates of the essentialist lay theories of social class scale with measures of social class rank and of general measures of essentialist beliefs. Given the correlational nature of Study 1, we sought to account for one possible alternative explanation of the associations between social class and essentialist lay theories: that the relationships between social class and essentialist beliefs would be independent of political orientation. Given that liberal political orientation influences judgments of inequality (e.g., Kraus et al., 2009), we controlled for political beliefs in our analyses to determine the distinct relationships between social class and essentialist lay theories independent of political views.

Method

Scale construction. We first sought to create a scale assessing essentialist beliefs about social class categories. On the basis of previously developed self-report measures of essentialism (Williams & Eberhardt, 2008), we created 22 items for assessing people's essentialist beliefs about social class categories. Essentialist conceptions of social class include beliefs that it is easy to judge social class through brief interaction, that children can be separated into different social class categories at birth, that social class can be determined without clothing cues, and that social class is at least partially based in biological temperament or genetic tendency. We administered these 22 items to a large sample ($n = 703$) of undergraduate students at a public West Coast university. The sample was collected as part of a larger battery of psycholog-

ical questions administered to psychology majors online, at the start of the academic semester.

We then subjected participant ratings to a principal-components factor analysis with a varimax rotation. Examination of the scree plot revealed a first factor with an eigenvalue of 5.30 and a second factor with an eigenvalue of 2.05 (see Table 1 for descriptive statistics). When we inspected the items, the first factor appeared to tap into beliefs that social class is a discrete social category (e.g., "Other people's social class is easy to figure out"). The second factor appeared to tap into beliefs that social class is biological (e.g., "Social class is partly biological"). We selected items for the two factors of the essentialist beliefs about social class categories scale if the item loaded at .40 or higher on one factor and .30 or below on the other factor. This procedure yielded a total of 10 items: six on the discreteness subscale ($M = 3.93$, $SD = 0.96$) and four on the biological subscale ($M = 2.64$, $SD = 1.00$). The two scales were significantly positively correlated ($r = .35$, $p < .05$), and so a total score for essentialist beliefs about social class categories was computed ($M = 3.42$, $SD = 0.81$, $\alpha = .74$).

Procedure. Having constructed a scale assessing people's essentialist beliefs about social class categories, we next examined correlations between this scale and participants' own social class rank in a second sample. In this study, participants accessed the experiment online, and they were first asked to rate their social class based on a measure of subjective socioeconomic status used in previous research (Adler et al., 2000; Kraus et al., 2009). Subsequently, participants filled out a measure of general beliefs about the determinants of traits and dispositions (Bastian & Haslam, 2006). After participants filled out demographic information, they were debriefed.

Participants. Participants were 169 adults from a national online sample participating for the opportunity to win small gift certificates to an online retailer. The participants were recruited through advertisements on Craigslist.org, and the website where data were collected was maintained by a public West Coast university. Of the 169 participants (age $M = 35.04$ years), the majority ($n = 112$) were female. Participants self-identified primarily as European American ($n = 112$), Asian American ($n = 27$), other or multiple ethnic groups ($n = 17$), African American ($n = 9$),

Table 1
Item Descriptive Statistics and Factor Loadings for the Essentialist Beliefs About Social Class Categories Scale

Item	M	SD	Discreteness factor 1	Biological factor 2
1. A child from a higher class can be easily picked out from a group of lower-class children.	4.22	1.50	.70	.01
2. It is easy to figure out another person's social class just by looking at them.	3.60	1.39	.68	.18
3. A person's social class is easy to figure out even when they are from another country.	4.07	1.39	.66	.05
4. I think even if everyone wore the same clothing, people would still be able to tell your social class.	3.60	1.54	.65	.08
5. Other people's social class is easy to figure out.	4.25	1.34	.55	.24
6. Children probably learn about social class automatically, without much help from adults.	3.86	1.49	.41	.15
7. A person's social class does not change from their social class at birth.	2.47	1.43	.30	.64
8. Social class is partly biological.	2.41	1.42	.29	.62
9. Even after centuries, families will have the same social class as now.	2.93	1.46	.30	.50
10. It is impossible to determine one's social class by examining their genes. (r)	2.76	1.77	−.05	.41

Note. The first six items are used in the discreteness beliefs subscale, and the next four items are used in the biological beliefs subscale. (r) indicates that the item is reverse scored.

Native American ($n = 3$), or Latino ($n = 1$).[1] The social class backgrounds of participants in the sample were also quite diverse: 42.9% of participants reported annual incomes of $50,000 or less, and 39.3% of participants reported graduated from high school as their highest level of education completed.

Materials.

Social class rank. Drawing from previous studies of social class rank, we assessed social class in the present research with the Mac-Arthur Scale of subjective SES (e.g., Adler et al., 2000; Kraus et al., 2009). The measure consists of a drawing of a ladder with 10 rungs representing people with different levels of education, income, and occupation status. Participants are instructed to place a large X on the rung where they feel they stand relative to other people in their local community in the United States. Each rung of the ladder was given a number between 1 and 10, with higher numbers indicating higher placement on the ladder ($M = 5.89$, $SD = 1.86$).

We also collected objective resource measures of social class by assessing personal educational attainment and annual income (Kraus et al., 2009). Educational attainment was assessed with four categories: (a) less than high school education, (b) high school education, (c) college graduation, and (d) postgraduate degree. Annual income was assessed with eight categories: (a) less than $15,000, (b) $15,001–$25,000, (c) $25,001–$35,000, (d) $35,000–$50,000, (e) $50,001–$75,000, (f) $75,001–$100,000, (g) $100,001–$150,000, and (h) greater than $150,000. The median education was college graduation ($M = 2.60$, $SD = 0.52$), and the median income was between $50,001 and $75,000 ($M = 4.66$, $SD = 1.81$). Attesting to the validity of our measure of social class rank, subjective SES was moderately correlated with these objective measures of social class (see Table 2).

Essentialist beliefs about social class categories. On the basis of our factor analysis, we used the 10-item essentialist beliefs about social class categories scale. Responses were made using 7-point Likert scales (1 = *strongly disagree*, 7 = *strongly agree*; $M = 3.43$, $SD = 0.84$, $\alpha = .81$). The distinctiveness subscale ($M = 3.89$, $SD = 0.98$, $\alpha = .82$) and the biological basis subscale ($M = 2.73$, $SD = 1.01$, $\alpha = .65$) were also computed.

General essentialist beliefs. To test the construct validity of our essentialist beliefs about social class categories scale, we collected three scales that assess aspects of generalized essentialist beliefs. Participants responded to an eight-item measure of the extent they felt that traits and dispositions were primarily biologically determined, guided by past research (Bastian & Haslam, 2006). Participants filled out responses to each of the items (e.g., "the kind of person someone is can be largely attributed to their genetic inheritance") using 7-point Likert scales (1 = *strongly disagree*, 7 = *strongly agree*; $M = 3.69$, $SD = 0.79$, $\alpha = .85$).

Theoretical accounts of essentialist beliefs suggest that people who endorse essentialism will also tend to believe that people belong to discrete trait categories and that certain core traits determine the type of person someone is (Bastian & Haslam, 2006; Keller, 2005). The second scale indicates the extent individuals believe that people belong to clearly identifiable, discrete trait categories. This discreteness beliefs scale is assessed with eight items (e.g., "everyone is either a certain type of person or they are not") using 7-point Likert scales (1 = *strongly disagree*, 7 = *strongly agree*; $M = 3.59$, $SD = 0.64$, $\alpha = .76$). The third scale indicates the extent that knowing a person's traits is informative and defining of the person's true character (Bastian & Haslam,

2006). This informativeness beliefs scale is assessed on the same 7-point Likert scale using seven items (e.g., "it is possible to know about many aspects of a person once you become familiar with a few of their basic traits"; $M = 3.89$; $SD = 0.69$, $\alpha = .80$).

Political orientation. To assess political orientation, we collected a single item assessing the extent to which people self-identify as liberal or conservative on a 7-point Likert scale (1 = *very liberal*, 7 = *very conservative*; $M = 3.63$, $SD = 1.67$).

Results and Discussion

Table 2 presents the correlations between our variables of interest. When we examined essentialist beliefs about social class categories, significant positive correlations emerged with the scales assessing the biological basis, discreteness, and informativeness of personal attributes. These correlations suggest that participants who tended to believe that social class represents an essentialist social category also tended to believe that, in general, people's traits are biological in origin, that people can be placed into discrete categories, and that known traits are informative about people's true character. Overall, these results speak to the construct validity of our scale assessing essentialist beliefs about social class. Scores on the essentialism scale of social class categories were also significantly positively associated with conservative political beliefs, suggesting political conservatives tend to believe that social class categories are more inherent, stable, and biologically determined than do their liberal counterparts.

A further examination of the correlations in Table 2 reveals a pattern consistent with the essentialism hypothesis: Participants who reported themselves as higher in social class rank tended to also be significantly more likely to endorse essentialist beliefs about social class. It is interesting that income and education were uncorrelated with essentialist beliefs about social class. That our social class rank measure was more strongly associated with essentialist beliefs about social class than were objective measures of social class is consistent with prior research on self-rated health outcomes (Adler et al., 2000) and causal explanation (Kraus et al., 2009).

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[1] Given that the demographic characteristics of each of our samples are limited with respect to representation from diverse ethnic backgrounds, results from an analysis of the ethnic backgrounds of participants should be interpreted with caution. In each of our studies, we examined the influence of ethnicity on essentialist beliefs about social class categories by using dummy coding procedures, with European Americans as the reference group compared to distinct groups for Asian Americans, African Americans, Latino and Native Americans, and other ethnic backgrounds (Cohen, Cohen, West, & Aiken, 2003). In Studies 1 and 2, when accounting for ethnicity, the relationship between social class rank and essentialist beliefs about social class categories remained significant (Study 1: $\beta = .23$, $t(163) = 2.99$, $p < .05$; Study 2: $\beta = .09$, $t(714) = 2.49$, $p < .05$). In Study 3, the effect of the essentialism manipulation on endorsement of restorative policy decisions about academic cheating held after accounting for ethnic background, $\beta = .25$, $t(64) = 2.01$, $p < .05$. In Study 4, the social class rank manipulation was still a significant predictor of essentialist beliefs about social class categories, $\beta = .18$, $t(153) = 2.31$, $p < .05$, and restorative punishment decisions, $\beta = -.20$, $t(153) = -2.57$, $p < .05$, after accounting for ethnicity. Across all studies, each ethnic group showed equal endorsement of essentialist beliefs about social class categories with one exception: Asian American participants in Study 2 endorsed essentialist beliefs about social class more than did European Americans, $\beta = .08$, $t(714) = 2.01$, $p < .05$.

Table 2
Correlations Between Social Class Rank, Essentialist Beliefs About Social Class Categories, Political Orientation, and the Three General Essentialism Scales

Variable	1	2	3	4	5	6	7	8	9
1. Social class rank	—								
2. Income	.36*	—							
3. Education	.21*	.29*	—						
4. Biological beliefs	.28*	.20*	.18*	—					
5. Discreteness beliefs	.16*	.10	.11	.24*	—				
6. Informativeness beliefs	.08	.05	−.05	.34*	.44*	—			
7. Social class essentialism	.24*	.12	.06	.43*	.44*	.38*	—		
8. Conservatism	.10	−.00	.14†	−.01	.20*	.05	.17*	—	
9. Discreteness subscale	.20*	.03	.01	.30*	.36*	.35*	.90*	.19*	—
10. Biological basis subscale	.20*	.20*	.11	.47*	.39*	.29*	.77*	.07	.43*

† $p < .10$. * $p < .05$.

Social class rank was significantly positively associated with endorsing biological beliefs about individual attributes. People higher in social class rank were more likely to believe that individual traits and dispositions are determined by biological factors (e.g., genes). Income and educational attainment were also significantly positively associated with beliefs that traits have biological origins.

Examination of the discreteness and biological basis subscales of the essentialist beliefs about social class categories measure yielded similar findings except in a few instances. First, income was significantly positively correlated with the biological basis subscale but discreteness was not. This finding is consistent with our broader expectation that upper-class individuals are likely to endorse beliefs that social class is biologically determined. Second, the discreteness subscale was positively correlated with conservative political beliefs, whereas the biological basis subscale was not.

Next, we sought to determine if the rank-based component of social class was uniquely associated with essentialist beliefs about social class categories after accounting for political orientation and objective indicators of social class. This analysis allowed us to determine if subjective perceptions of social class rank predict endorsement of essentialist beliefs even after accounting for individual differences in political attitudes and material resources. To that end, we computed a linear regression analysis with political orientation, income, and education entered as predictors, along with subjective social class rank. As expected, even when controlling for these variables, social class rank was still significantly associated with essentialist conceptions of social class categories, $\beta = .29$, $t(148) = 3.37$, $p < .05$. In this regression analysis, political orientation, income, and education were all unrelated to essentialist beliefs ($ps > .12$).

When the subscales from the essentialist beliefs about social class categories scale were examined, similar results emerged: Social class rank was significantly positively associated with the discreteness subscale, $\beta = .27$, $t(148) = 3.18$, $p < .05$, and the biological basis subscale, $\beta = .22$, $t(148) = 2.51$, $p < .05$. In the discreteness analysis, conservative beliefs remained a significant predictor of beliefs that social classes represent discrete categories, $\beta = .16$, $t(148) = 2.00$, $p < .05$. In the biological basis analysis, the originally significant relationship of income to biological beliefs about social class categories was rendered nonsignificant when social class rank was added to the regression model, $\beta = .11$, $t(148) = 1.27$, $p = .21$.

Overall, the results from Study 1 are consistent with our hypotheses regarding the relationships between social class rank and essentialist beliefs about social class categories. Consistent with the essentialism hypothesis, participants with elevated social class rank tended to endorse essentialist beliefs about social class categories, whereas their lower-class rank counterparts were more likely to endorse beliefs that social class is a socially constructed category. Importantly, the relationship between social class rank and essentialist beliefs about social class categories emerged after controlling for political orientation; this variable correlates with lay beliefs about inequality. As well, social class rank correlated with essentialist beliefs independently of objective material resources.

Study 2: Beliefs in Societal Fairness Mediate Relations Between Social Class Rank and Essentialist Beliefs About Social Class

In Study 2, we sought to build support for our just world hypothesis; that is, upper-class rank individuals endorse essentialist beliefs about social class because of a motivated tendency to see their elevated social position as fair and just. To this end, we measured social class rank, essentialist beliefs about social class, and beliefs about societal fairness. We predicted that relatively upper-class rank individuals would be more likely to endorse essentialist beliefs about social class categories and that this pattern would be explained by the tendency of these individuals, in comparison to their lower-class rank counterparts, to see society as fair and just.

Method

Participants. Participants were 737 adults recruited online from a national retail website data collection service in exchange for monetary compensation (www.mturk.com; Buhrmester, Kwang, & Gosling, 2011). As in other Mechanical Turk samples, the mean age was around 30 years ($M = 30.98$, $SD = 11.17$). Participants primarily identified as European American (67.2%) and male (53.4%). The median income of the sample was between $45,001 and $75,000 annually, and a majority of participants had obtained college graduation or higher (51.6%).

Measures.

Social class rank. As in Study 1, participants filled out the measure of subjective SES (Adler et al., 2000) by placing a large

X on the rung where they felt they stood relative to other people in their local community in the United States. This ladder assesses personal placement within the participant's own local community ($M = 5.36$, $SD = 1.70$).

Objective income and education. Participant educational attainment was assessed the same way as in Study 1 ($M = 1.70$, $SD = 0.66$). Annual income used seven categories: (a) less than \$15,000, (b) \$15,001–\$30,000, (c) \$30,001–\$45,000, (d) \$45,000–\$75,000, (e) \$75,001–\$100,000, (f) \$100,001–\$150,000, and (g) greater than \$150,000 ($M = 3.40$, $SD = 1.61$).

Essentialist beliefs about social class categories. As in Study 1, participants filled out the same 10-item measure of essentialist beliefs about social class categories ($M = 3.51$, $SD = 0.91$, $\alpha = .80$).

Societal fairness beliefs. To measure beliefs in societal fairness, we used two separate scales. The first scale is a measure of global beliefs in a just world (Lipkus, 1991). In this measure, participants indicate their agreement with seven items about their judgments of the world as fair and just (e.g., "I feel that people get what they are entitled to have") on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). The scale showed high internal consistency ($M = 3.81$, $SD = 1.11$, $\alpha = .91$). The second scale was a four-item generalized beliefs in meritocracy scale (Horberg, Kraus, & Keltner, in press). Participants responded to each of the items (e.g., "It is okay for people to have better lives if they earned it") using the same 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*; $M = 4.78$, $SD = 0.97$, $\alpha = .70$). The scales were significantly intercorrelated ($r = .41$, $p < .05$).

Political ideology. We assessed participants' political ideology with two items. The first item assessed the extent to which participants were politically liberal or conservative "when it comes to social policy" ($M = 4.88$, $SD = 1.85$). The second item assessed political liberal or conservative identification "when it comes to economic policy" ($M = 4.26$, $SD = 1.83$). Participants responded to both items on 7-point Likert scales (1 = *strongly disagree*, 7 = *strongly agree*). The political beliefs items were significantly positively correlated ($r = .71$, $p < .05$), and so they were averaged to create an overall political beliefs item ($M = 4.57$, $SD = 1.70$). This overall political ideology item was negatively correlated with just world beliefs ($r = -.27$, $p < .05$) and meritocracy beliefs ($r = -.28$, $p < .05$).

Results

An examination of correlations revealed a pattern in line with our predictions. Consistent with the essentialism hypothesis, social class rank was positively associated with essentialist beliefs about social class categories ($r = .10$, $p < .05$). Social class rank was also positively associated with both belief in a just world ($r = .25$, $p < .05$) and meritocracy beliefs ($r = .23$, $p < .05$), suggesting that upper-class rank individuals are more likely to believe that society is fair and just than are their lower-class rank counterparts. Further examination of correlations revealed that income and educational attainment were uncorrelated with essentialist beliefs about social class categories. Income was significantly positively correlated with both just world beliefs ($r = .13$, $p < .05$) and meritocracy beliefs ($r = .15$, $p < .05$). Educational attainment was positively correlated with meritocracy beliefs ($r = .11$, $p < .05$). These latter findings suggest that possess-

ing higher levels of material resources is associated with a greater tendency to believe that society is fair and just.[2]

We next sought to determine if relationships among social class rank, essentialist beliefs about social class categories, and beliefs in societal fairness would persist even after controlling for political beliefs and for objective material resources. As in Study 1, we conducted a linear regression analysis with essentialist beliefs about social class categories entered as the outcome variable and political beliefs, income, education, and social class rank entered as predictors. In this analysis, social class rank emerged as a significant predictor of essentialist beliefs about social class categories, $\beta = .14$, $t(695) = 3.37$, $p < .05$, with upper-class rank individuals more likely to endorse essentialist beliefs about social class than were lower-class rank individuals, even after accounting for political beliefs and objective material resources. Conservative political ideology remained a significant predictor of essentialist beliefs about social class, $\beta = -.11$, $t(695) = -2.89$, $p < .05$. In this analysis, unexpectedly, income was negatively associated with essentialist beliefs about social class, $\beta = -.12$, $t(695) = -2.90$, $p < .05$. Perhaps this reversal in direction of association occurred because of the high positive correlation between income and education ($r = .22$, $p < .05$) and social class rank ($r = .46$, $p < .05$). Educational attainment was unrelated to essentialist beliefs about social class.

We next sought to provide evidence for our just world hypothesis suggesting that upper-class rank individuals tend to endorse essentialist beliefs about social class because of their motivation to see their own elevated social position in society as fairly determined. To this end, we conducted two parallel mediation analyses of the association between social class rank and essentialist beliefs about social class categories using both just world beliefs and meritocracy beliefs as mediators (Preacher & Hayes, 2004, 2008). In this analysis, we controlled for political ideology, education, and income to determine the unique influence of social class rank.[3] For the analysis examining just world beliefs as the mediator (see Figure 1), the path from social class rank to just world beliefs was

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[2] Examination of the discreteness and biological basis subscales of the essentialist beliefs about social class scale revealed similar results to the overall scale: Social class rank was significantly positively associated with both discreteness ($r = .08$, $p < .05$) and biological basis ($r = .10$, $p < .05$) beliefs about social class. As well, both scales were related to beliefs in a just world ($rs = .23$ to $.28$, $ps < .05$) and meritocracy beliefs ($rs = .09$ to $.19$, $ps < .05$).

[3] A similar pattern emerged when we conducted the mediation analysis without controlling for political ideology, income, and education. In the analysis of just world beliefs, the originally significant relationship between social class rank and essentialist beliefs about social class categories, $\beta = .10$, $t(725) = 2.81$, $p < .05$, became no longer significant when accounting for the mediator, $\beta = .03$, $t(724) = 0.72$, *ns*. A bootstrapping procedure revealed a significant indirect effect of social class rank on essentialist beliefs about social class categories, through just world beliefs, 95% CI [.02, .06]. When the analysis accounted for meritocracy beliefs, the relationship between social class rank and essentialist beliefs about social class was reduced, $\beta = .07$, $t(724) = 1.81$, $p = .07$. A bootstrapping procedure revealed a significant indirect effect of social class rank on essentialist beliefs about social class categories, through meritocracy beliefs, 95% CI [.01, .03]. When we examined a reverse mediational model with essentialist beliefs about social class categories as the mediator and just world beliefs or meritocracy beliefs as the outcome, the association between social class rank and just world beliefs, $\beta = .22$, $t(724) = 6.31$, $p < .05$, or meritocracy beliefs, $\beta = .21$, $t(724) = 5.83$, $p < .05$, remained significant even after accounting for the mediator.
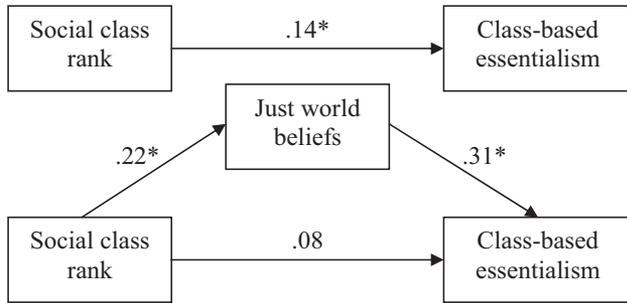
Figure 1. Model of the relationship between social class rank and essentialist beliefs about social class categories, mediated by just world beliefs. The analysis controls for political ideology, income, and educational attainment. Numbers indicate standardized regression coefficients, and asterisks indicate that $p < .05$.

significant, $t(695) = 5.43$, $p < .05$. Moreover, when we included the significant association between just world beliefs and essentialist beliefs about social class categories, $t(694) = 8.20$, $p < .05$, the originally significant relationship between social class rank and essentialist lay theories about social class, $t(695) = 3.37$, $p < .05$, was reduced, $t(694) = 1.80$, $p = .07$. A bootstrapping procedure using 2,000 resamples revealed a significant indirect effect of social class rank on essentialist beliefs about social class categories, through just world beliefs, 95% CI [.02, .05].

We conducted a similar mediation analysis with meritocracy beliefs as the mediator and obtained similar results. In particular, when we included the significant association between meritocracy beliefs and essentialist lay theories about social class, $\beta = .14$, $t(694) = 3.58$, $p < .05$, the originally significant relationship between social class rank and essentialist beliefs about social class categories was reduced but still remained significant, $\beta = .12$, $t(694) = 2.87$, $p < .05$. A bootstrapping procedure using 2,000 resamples revealed a significant indirect effect of social class rank on essentialist beliefs about social class categories, through meritocracy beliefs, 95% CI [.003, .03].

The findings from Study 2 provide additional support for our first two hypotheses: Consistent with the essentialism hypothesis, upper-class rank individuals were more likely to endorse beliefs that social class is an inherent, stable, and biologically determined social category relative to their lower-class rank counterparts. Moreover, this pattern emerged after accounting for both political attitudes and material resource measures of social class. In support of our just world hypothesis, beliefs that society is fair and just explained the tendency among upper-class rank individuals to endorse essentialist beliefs about social class categories.

Study 3: Essentialist Beliefs About Social Class and Punitive Judgments

In Study 3, we sought to build support for our bad genes hypothesis; that is, essentialist beliefs about social class categories reduce support for restorative forms of justice. This hypothesis arises from our reasoning that the belief that a person's social attributes reflect inherent, stable, and biological qualities of the individual should covary with beliefs that rehabilitation-based policies that attempt to change these essential qualities are likely to

be ineffective. To test this prediction, we manipulated essentialist beliefs about social class categories (see Williams & Eberhardt, 2008) and subsequently measured participants' judgments about retributive and restorative punishments for academic cheating, given the age of our college student sample and that academic cheating can lead to unfair rises in social class rank.

Method

Participants.   Sixty-nine undergraduates took part in the study at a public West Coast university in exchange for course credit. Participants were primarily female ($n = 41$). The largest ethnic group was Asian American ($n = 29$), followed by European American ($n = 22$), Latino/a ($n = 3$), and other or multiple ethnicities ($n = 15$).

Materials and procedure.   Participants arrived at the study in small groups, and they were told that the study was about a number of different topics organized by several researchers in the psychology department. In the first part of the experiment, participants' memory for and retention of material in scientific articles were assessed. In the second part of the experiment, participants filled out a number of measures designed to help understand how people think about a number of campus policies. In the first part of the experiment, participants' essentialist beliefs about social class categories were manipulated by having participants read a scientific article about experimental evidence suggesting research support for or against a biological basis for social class. Following this manipulation, participants were asked to rate a number of general policies they endorsed regarding the punishment of academic cheating. Following these ratings, participants read three scenarios of people engaging in real cheating behavior, and they were asked the likelihood they would render a subset of punishments for that behavior.

Manipulation of essentialist beliefs.   On the basis of previous work (Williams & Eberhardt, 2008), we manipulated essentialist beliefs about social class by having participants read two mock scientific journal articles about the biological bases of social class. In the article advancing the argument for a biological basis of social class, researchers were said to have discovered genetic underpinnings to social class. In the article advocating a social constructivist perspective on social class, the researchers suggested that there was no genetic basis to social class (see the Appendix for details). To determine the success of the manipulation, we asked participants how much they agreed with two statements on 7-point Likert scales ($1 = $ *strongly disagree*, $7 = $ *strongly agree*): "It is impossible to determine one's social class by examining their genes" and "There is probably a biological determinant of social class." The first item was reverse scored, and the items were averaged ($M = 2.33$, $SD = 1.30$; $\alpha = .73$).

Cheating policy decisions.   Participants were first asked to indicate how much they endorsed a selection of general cheating policies. They did so by indicating how much they agreed with the policies on 7-point Likert scales ($-3 = $ *disagree strongly*, $3 = $ *agree strongly*). The policies were "Students caught cheating should be expelled from the University," "Students caught cheating should be given a failing grade in the course in which they were caught," "Students suspected of cheating should be subjected to additional scrutiny while taking tests, such as private exam rooms or special exams that are separate from other test takers," "Professors should be notified of students in their courses who

have been suspected of cheating previously, so that they can take appropriate precautions," and "Students caught cheating should complete 300 hours of community service over a 12-month period." Of these punishments for academic cheating, failing the single class was endorsed most strongly ($M = 1.55$, $SD = 1.63$).

Next, participants were given three scenarios about cheating behavior and were asked to indicate how much they endorsed specific punishment for the cheating behavior on the same 7-point Likert scales. The three scenarios all described academic cheating during an exam; they differed in the extent that the person caught cheating explained his or her cheating behavior as due to financial hardship or to academic pressure arising from medical school applications or gave no explanation for the cheating. Participants' ratings did not differ depending on the reason given for cheating in each of the scenarios ($F < 1$). Participants indicated how much they agreed with three types of punishments: "The student should receive an F on the exam, and should be expelled from the University," "The student must attend one-hour weekend seminars for a semester. The seminar will be geared toward understanding the importance of ethics in academic life," and "The student will have to complete 300 hours of community service over a 12-month period." Of these punishments for specific academic cheating scenarios, seminars on ethics were endorsed the most strongly ($M = -0.44$, $SD = 1.91$).

On the basis of social justice research (Tyler & Jost, 2007), we divided the cheating policies into two types: restorative punishments and retributive punishments. In this research, retributive forms of punishment are guided by the principle that punishment should be proportionate to the harm done for a particular transgression. As such, this type of punishment, employed by our traditional court system, focuses on the severity of punishing people who violate laws (Carlsmith et al., 2002). In contrast, restorative forms of punishment focus on rehabilitating and restoring people who violate laws (Gromet & Darley, 2006; Marshall, 2003). On the basis of these differential conceptions of punitive justice, we categorized items administering harsh punishments such as surveillance and expulsion as retributive punishment, and we averaged scores for each of these forms of punishment for the general policy decisions and across the three scenarios ($M = -0.83$, $SD = 1.36$, $\alpha = .83$). The remaining items dealing with community service and seminars about ethics were summed into a measure of restorative punishments ($M = -0.78$, $SD = 1.53$, $\alpha = .91$). Reflecting the independence of these two forms of punishment, retributive and restorative punishment judgments were only moderately correlated, $r(67) = .26$, $p < .05$.

Results and Discussion

Manipulation check. To determine if our manipulation of essentialist beliefs about social class categories was successful, we subjected the mean of our two essentialism items to an independent samples *t* test comparing participants manipulated to receive evidence that social class categories were either essentialist or socially constructed. As expected, participants who received information suggesting that social class was an essentialist category reported more essentialist beliefs ($M = 2.72$) than did participants who received information that social class was a social construction ($M = 2.00$), $t(67) = 2.36$, $p < .05$, $d = .57$.

Essentialists beliefs and punishment decisions. Our next aim was to determine if our manipulation of essentialist beliefs of social class categories would impact individuals' endorsement of restorative punishments for academic cheaters. To that end, we computed a 2 (punishment type) $\times$ 2 (essentialist beliefs) mixed model analysis of variance (ANOVA) with type of punishment as the within-subjects factor. The analysis yielded a significant interaction that can be seen in Figure 2, $F(1, 67) = 5.99$, $p < .05$, $\eta_p^2 = .08$. No other effects were significant. As can be seen in the figure and consistent with the bad genes hypothesis, participants manipulated to receive information suggesting that social class was an essentialist category showed greater opposition to restorative punishments than did participants who received information suggesting that social class was a socially constructed category.

Follow-up analyses support this interpretation of the results: When we examined restorative punishments, participants in the essentialist beliefs condition ($M = -1.19$) were more likely to reject restorative punishments—seminars on ethics or community service—than were participants in the social constructivist beliefs condition ($M = -0.43$), $t(67) = -2.11$, $p < .05$, $d = .52$. For retributive punishments, participants in the essentialist beliefs condition endorsed retributive punishments equally as strongly ($M = -0.66$) as did participants in the social constructivist beliefs condition ($M = -0.97$), $t(67) = 0.36$, *ns*.

The results of Study 3 provide evidence suggesting that essentialist beliefs about social class shape punitive judgments for academic cheating. As expected, people manipulated to receive evidence suggesting that social class was an essentialist social category were more likely to reject forms of punishment based on restorative justice principles (Gromet & Darley, 2006). Interestingly, essentialist beliefs did not increase preferences for retributive punishments. We return to this result in the General Discussion. In Study 4, we extend the work from the previous studies by showing that manipulating a person's temporary perceptions of his or her social class rank leads to increases in essentialist beliefs about social class categories (the essentialism hypothesis) and decreases in endorsement of restorative justice (the punitive judgment hypothesis).
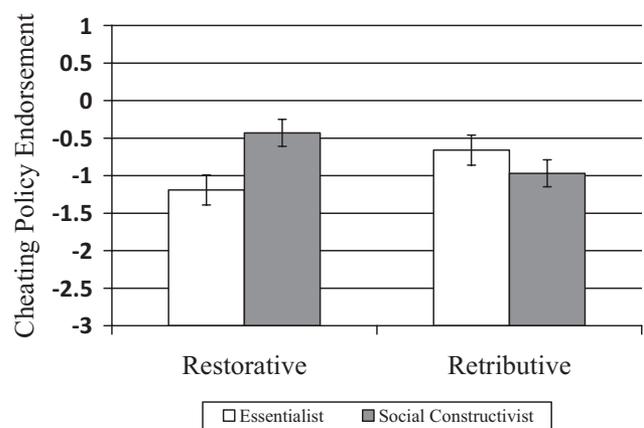

Figure 2. The interaction between endorsement of restorative and retributive punishments for academic cheating for individuals manipulated to endorse essentialist lay theories or social constuctivist lay theories of social class. Error bars represent standard errors of the mean.

Study 4: Manipulated Social Class Rank, Essentialist Beliefs, and Punitive Judgments

In Study 4, we extended the findings from the previous studies by manipulating participants' relative perceptions of their social class rank (Kraus et al., 2010). Social class is a complex construct that encompasses many learned cultural experiences. As such, social class is intertwined with other processes that include historical factors, shared group identity, and neighborhood effects that are difficult to control for in purely correlational approaches (e.g., Kraus et al., in press; Stephens et al., 2012). Evidence from studies that manipulate social class rank, therefore, is essential to establish causal relations between social class and essentialist beliefs and between social class and punitive judgments. As well, manipulating social class rank is crucial for eliminating potential confounding demographic factors and selection effects that might account for our effects. For example, the class-related differences in endorsement of essentialist beliefs about social class categories could be attributed to other factors, such as differences in urban versus rural background, parental values, or community environments.

In Study 4 we also tested hypotheses concerning the relationships among social class rank, essentialist beliefs, and punitive judgments while controlling for two judgments that often covary with justice decisions: moral outrage against the actions of perpetrators (e.g., Carlsmith et al., 2002) and the perceived severity of the crime (e.g., Gromet & Darley, 2006). In Study 4, we measured moral outrage and perceptions of crime severity to show that social class rank differences in punitive judgments were independent of these justice-relevant constructs.

Method

Participants. Participants were 163 adult residents of the United States recruited online from a national retail website data collection service in exchange for monetary compensation (www .mturk.com; Buhrmester et al., 2011). The majority of participants (age $M = 36.47$, $SD = 13.61$) were female ($n = 97$). Participants identified as European American ($n = 129$), followed by Asian American ($n = 15$), other ethnicities ($n = 9$), Latino/a ($n = 5$), Native American ($n = 3$), and African American ($n = 2$).

Procedure. Participants were instructed that the experiment involved answering two types of questions. In the first set, participants completed personality measures assessing their feelings about themselves and others. In the second set, participants made social judgments about the unlawful behavior of others and rated these behaviors on a number of social dimensions. After accessing the survey via a computer terminal, participants engaged in our manipulation of relative social class rank. The manipulation was followed by several filler measures, our measure of essentialism, policy decision measures, and measures of demographic information. After completing these measures, participants responded to suspicion probes about the hypotheses of the study, were debriefed, and were compensated for participation.

Manipulation of relative social class rank. As in prior research (Kraus et al., 2010), participants were presented with an image of a ladder with 10 rungs. Participants were instructed to "think of the ladder above as representing where people stand in the United States." Participants were then randomly assigned to imagine interacting with a person either at the top or bottom of the

social class hierarchy—that is, a person with the most (least) money, education, and job status. Participants then placed themselves on the ladder relative to this person (10 = *top rung*, 1 = *bottom rung*; $M = 5.48$, $SD = 1.96$).

Measures.

Essentialist beliefs about social class. Participants completed the same measure of essentialism as in Study 1, except the wording of the instructions was changed slightly to reflect participants' agreement with each statement "at this moment" rather than in general. This change was made to reflect participants' essentialist beliefs directly following the manipulation of social class rank. Participants responded to the questions on 7-point Likert scales (1 = *strongly disagree*, 7 = *strongly agree*; $M = 3.93$, $SD = 0.91$, $\alpha = .71$).

Policy decisions about punishment. After completing the measure of essentialism, participants read two counterbalanced scenarios briefly describing a person who was caught committing a financial crime involving either "stealing money from a retail store" or "falsifying corporate financial records to conceal an increase in one's own annual salary." No differences in endorsement of policy decisions emerged between the two types of financial crimes for manipulated upper- and lower-class rank participants ($ps > .30$). After they read about each scenario, participants were given a brief description of two court proceedings to sentence the individuals committing the financial crimes in counterbalanced order. In the retributive court proceedings, participants were told, a "judge renders an appropriate punishment for the offender" and the punishment "typically involves imprisonment." For the restorative proceedings, participants were informed that a mediation occurs between the offender and the victimized people or parties and the two groups "come to an agreement outlining what the offender must do to atone for the offense." The punishment for the offense could not include imprisonment, but other punishments, such as "an apology, monetary compensation, or community service," were options for punishment (Gromet & Darley, 2006). After reading about these forms of justice, participants rated how likely they were to support a retributive process ($M = 4.13$, $SD = 1.40$) and a restorative process ($M = 4.64$, $SD = 1.36$) on 7-point Likert scales (1 = *not likely at all*, 7 = *very likely*).

In addition to using these main dependent measures, we computed ratings for how "morally outraged" participants were by each offense ($M = 4.15$, $SD = 1.15$) and how seriously participants viewed each crime ($M = 4.14$, $SD = 1.08$). Participants made these ratings on 7-point Likert scales (1 = *not at all*, 7 = *very much*).

Results and Discussion

Manipulation check. We first sought to determine the success of the manipulation of social class rank. To that end, we subjected participants' ladder-ranking scores to an independent samples t test. As expected, participants envisioning an interaction with someone at the very top of the social class hierarchy reported lower ladder rankings ($M = 4.81$) than did participants thinking of an interaction with someone at the very bottom of the social class hierarchy ($M = 6.12$), $t(160) = 4.50$, $p < .05$, $d = .71$. This analysis suggests that we successfully manipulated participants' subjective social class rank.

Social class and essentialism. To test the essentialism hypothesis that manipulated upper-class rank individuals would more strongly endorse essentialist beliefs about social class categories than would their lower-class rank counterparts, we subjected manipulated upper- and lower-class rank participants' essentialism ratings to an independent samples t test. As expected, upper-class rank participants ($M = 4.08$) reported stronger essentialist beliefs about social class categories than did participants manipulated to experience lower-class rank ($M = 3.78$), $t(160) = 2.11$, $p < .05$, $d = .33$. That is, relative to lower-class rank individuals, manipulated upper-class rank participants tended to endorse beliefs suggesting that social class is stable, inherent, and biologically determined.[4]

Social class and policy decisions. To test the punitive judgment hypothesis that lower-class rank individuals tend to endorse social policies emphasizing restorative forms of justice, we conducted a 2 (punishment type) × 2 (social class rank) mixed model ANOVA with punishment type as the within-subjects factor. The analysis yielded a significant punishment type main effect, such that participants preferred more restorative punishments ($M = 4.64$) relative to retributive punishments ($M = 4.13$), $F(1, 160) = 6.39$, $p < .05$, $\eta_p^2 = .04$. A marginally significant main effect for social class rank also emerged such that lower-class rank participants ($M = 4.32$) endorsed less punishment, regardless of the type of punishment, than did upper-class rank participants ($M = 4.46$), $F(1, 160) = 3.20$, $p = .08$, $\eta_p^2 = .02$. However, this effect was qualified by a marginally significant interaction, $F(1, 160) = 2.87$, $p = .09$, $\eta_p^2 = .02$.

Examination of the separate types of punishment yielded a pattern in line with the punitive judgment hypothesis: As expected, upper-class rank participants ($M = 4.40$) were less likely to endorse restorative punishments than were lower-class rank participants ($M = 4.88$), $t(160) = -2.26$, $p < .05$, $d = .36$. As in Study 3, when examining retributive punishments, upper- ($M = 4.24$) and lower-class rank participants ($M = 4.03$) showed no significant differences in preferences for these punishments, $t(160) = 0.95$, ns.

Finally, we also examined manipulated social class differences in judgments of how morally outraged participants were and how serious participants thought the offense was, finding no differences between each of these measures for upper- and lower-class rank participants (ps > .78). Importantly, when we conducted the above analysis as an analysis of covariance (ANCOVA) where we controlled for individual differences in judgments of moral outrage and the seriousness of the lawbreaking behavior, the interaction between social class rank and type of punishment became significant, $F(1, 158) = 4.14$, $p < .05$, $\eta_p^2 = .03$. Taken together, these analyses suggest that manipulated social class rank was related to endorsement of restorative punishments independent of moral outrage for law-violating behavior or beliefs about the seriousness of this behavior (see Figure 3).

In Study 4 and consistent with the essentialism hypothesis, participants manipulated to experience momentary perceptions of upper-class rank tended to endorse essentialist beliefs about social class categories. Consistent with the punitive judgment hypothesis, upper-class rank individuals tended to oppose more restorative punishments than did their manipulated lower-class rank counterparts. Participants also did not differ in moral outrage engendered by the crimes or perceptions of severity of the crimes, suggesting
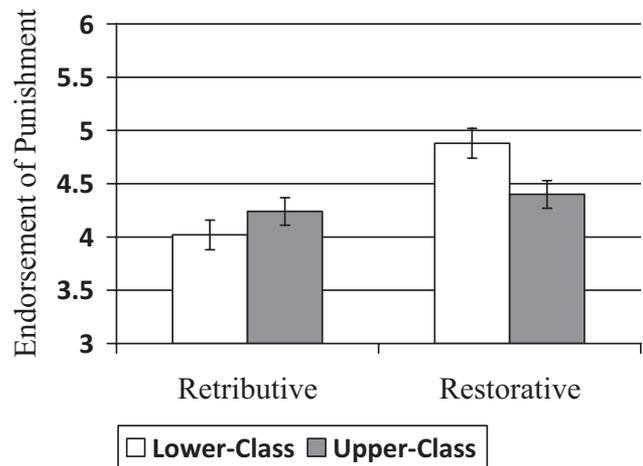

Figure 3. Endorsement of restorative and retributive punishment of financial crimes for individuals with manipulated lower social class rank or manipulated upper social class rank while controlling for beliefs about moral outrage over the crime and seriousness of the crime. Error bars represent standard errors of the mean.

that class-based essentialist beliefs impact restorative forms of punishment and that they do so independent of retributive justice concerns, moral judgments, and severity perceptions. Finally, through the manipulation of social class rank, Study 4 provides initial causal evidence that upper-class rank leads to both greater endorsement of essentialist beliefs about social class and decreased preferences for restorative punishments.[5]

General Discussion

Social rank in society is a fundamental organizing principle in social relations (Keltner, van Kleef, Chen, & Kraus, 2008), and in the present research, we examined essentialist lay theories about one aspect of human hierarchy—a person's social class. Drawing from theory suggesting that people are motivated to justify their elevated social position in society (e.g., Keller, 2005), we expected that upper-class rank individuals would be more likely to endorse essentialist lay theories about social class than would their lower-class rank counterparts.

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[4] When we examined the influence of the social class rank manipulation on the discreteness and biological basis subscales, manipulated upper-class rank participants showed no differences ($M = 4.11$) relative to manipulated lower-class rank participants ($M = 3.91$) in endorsement of discreteness beliefs, $t(160) = 1.27$, $p = .21$. Manipulated upper-class rank participants were marginally significantly more likely ($M = 4.04$) than lower-class rank participants ($M = 3.59$) to endorse the biological beliefs subscale, $t(160) = 1.77$, $p = .08$, $d = .27$.

[5] In previous research, social class rank has had interactive effects with material resource measures of social class (e.g., Kraus et al., 2011), but this was not the case in the present study save for one exception: When we examined restorative justice, both income, $\beta = -.17$, $t(151) = -2.23$, $p < .05$, and the social class rank manipulation, $\beta = -.17$, $t(151) = -2.24$, $p < .05$, showed significant main effects qualified by a significant interaction, $\beta = -.16$, $t(151) = -1.98$, $p < .05$. This pattern of results suggests that high-income participants who received the upper-class rank manipulation were particularly unlikely to endorse restorative justice policies.

Consistent with expectations, Study 1 showed that people reporting elevated social class rank tended to think of social class categories in more essentialist terms. Study 2 extended these initial findings by suggesting that upper-class rank individuals endorse essentialist theories of social class, in part, to justify their elevated positions in society's hierarchy. Study 3 demonstrated that manipulating people's essentialist beliefs about social class categories led to reduced support for restorative policies for academic cheating. Building on these initial studies, Study 4 manipulated momentary perceptions of relative social class rank. We found that, compared to their manipulated lower-class rank counterparts, manipulated upper-class rank individuals endorsed more essentialist conceptions of social class and were more likely to reject restorative justice proceedings for people caught engaging in economic crimes. Moreover, relationships among social class rank, essentialist beliefs, and punitive judgments could not be accounted for by measures of individuals' material resources or political orientation.

Essentialism, Social Policy, and Social Mobility

The current research dovetails with a growing body of research suggesting that, relative to their lower-class counterparts, upper-class individuals focus on internal, stable, and trait-based explanations for the actions of others and deemphasize the social context (for a review, see Kraus et al., 2012). This research suggests that these broad class-based differences in social perception extend to beliefs in the biological basis of fundamental social categories. These findings have implications for social mobility.

The current results provide some initial evidence suggesting that essentialist beliefs are associated with justifying and legitimizing an individual's own position in society and raise the possibility that these beliefs will also increase justification of unfairness in the distribution of economic and social resources: That essentialist beliefs endorsed by upper-class individuals were associated with failing, rather than rehabilitating, academic cheaters suggests that one way in which individuals can maintain current societal structure is through the use of essentialist beliefs. Future research is necessary to determine what other legitimizing behaviors high-status individuals may engage in to constrain upward mobility in society (e.g., opposition to affirmative action programs) and whether essentialist conceptions of social categories explain this behavior.

As well, endorsing social constructivist beliefs—beliefs that social class is based on changeable, external social forces—led to the favoring of social policies related to academic policy and judicial procedure that focus on rehabilitating individuals. Perhaps social constructivist views, endorsed by lower-class rank individuals, may increase optimism among these individuals with regard to overcoming current financial hardship, future career opportunities, or even the economic advancement of future generations.

In the present research, both social class rank and essentialist beliefs about social class categories were not associated with endorsement of retributive punishments. Given these results, it is interesting to speculate about why social class rank might be more closely tied to restorative justice concerns than to retributive ones. One possible explanation for this pattern is that social class rank is associated with enhanced contextual explanations—the tendency to explain broad social events or personal outcomes in terms of

external forces outside of individual control (e.g., Grossmann & Varnum, 2011; Kraus et al., 2009). That is, whereas retributive punishments hold individuals personally responsible for their unlawful actions, restorative punishments acknowledge the positive influence of contextual forces on individual behavior (e.g., rehabilitation programs). Future studies that examine beliefs about the efficacy of contextual intervention as the key ingredient that leads lower-class rank individuals and social constructivists to endorse restorative justice are likely to yield important insights.

Given that the current justice system in the United States is based on retributive, rather than restorative, punishment strategies (Gromet & Darley, 2006; Tyler & Jost, 2007; Weiner et al., 1997), the current research anticipates the following question: Do essentialist beliefs in social hierarchy underlie current punishment practices in the United States? Future research is needed to better understand how shifting essentialist beliefs could change current justice practices and how these changes would impact society as a whole. That is, could social constructivist beliefs of social hierarchy increase favor for rehabilitation-based punishments that could improve community life in the long term (e.g., drug treatment programs for prisoners)?

It is also important to consider how essentialist lay theories contribute to beliefs about reduced social mobility among lower-class individuals (see Kennedy, Kawachi, Prothrow-Stith, Lochner, & Gupta, 1998). For example, one perspective holds that social constructivist conceptions of social class represent an optimistic understanding of social class hierarchy, in that social mobility is not blocked by genetic predeterminants of lower-class status. However, as previous research suggests, lower-class individuals are also keenly aware of the uncontrollable contextual factors that influence their lives (Kraus et al., 2012) and tend to favor political actions that perpetuate the current social order (e.g., Jost et al., 2002). As such, it will be interesting in future research to consider whether social constructivist lay theories of social class increase the pursuit of economic advancement among lower-class individuals, or whether these theories reveal the many external obstacles to social advancement (e.g., biased criminal justice system, unsafe neighborhoods, political influence) that maintain lower-class individuals in their lower ranking positions.

Notwithstanding the findings from the present investigation, a few limitations are worth mentioning. First, the results of our current studies would benefit from generalizing to other communities. For example, while our adult samples are representative of the wide range of education and income found in the United States, the samples do fall short in terms of generalizing to communities characterized by poverty, or to communities of great affluence. Replicating this research among these samples gives us greater confidence in the conclusions reached in the present research. As well, the current research examined the association between social class rank and essentialist beliefs about social class categories in particular. We expect that upper-class rank individuals endorse essentialist beliefs, in part, to justify their elevated social position. As such, upper-class rank individuals might engage in essentialist beliefs about other social categories (e.g., race, gender) more generally—particularly in contexts where such beliefs can help to justify their own elevated social position.

It would also be interesting to test the present hypotheses in other cultures (see Mahalingam, 2007), in particular those where economic inequality is not as pronounced. Evidence indicates that

economic disparities between rich and poor may be at a historical high in the United States (Phillips, 2002), which suggests that essentialist lay theories of social class have an objective basis for being so powerful in shaping voting behavior and policy decisions among upper- and lower-class individuals. Would similar effects be observed in cultures with lesser disparities between rich and poor?

Conclusion

Social class is a primary determinant of rank in human social hierarchy, and it profoundly shapes perceptions of the social environment (Kraus et al., 2012). In this research, we have shown that social class shapes essentialist conceptions of social class hierarchy that, in turn, impact endorsement of punitive judgments. In this way, social class leads to differences in the way individuals explain their rank in society and the forms of punishment they support in their everyday lives.

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(Appendix follows)

Appendix

Essentialism Article: "Scientists Pinpoint Genetic Underpinnings of Socioeconomic Status"

Researchers recently collected data from people from all different levels of socioeconomic status. This included people from very low economic backgrounds and very wealthy people. In their analysis, the researchers looked at family histories of socioeconomic status and genetic similarities between members of the same socioeconomic status (SES) groups. The researchers found that children of lower SES parents are much more likely to become lower SES than children of upper SES parents. In addition, lower SES people tend to have more genetic similarity with other lower SES people than with upper SES people. As a result of their analyses, the researchers are now able to correctly guess a person's socioeconomic status at a rate that was significantly above chance. The lead author was quoted as saying that "we obtain our genetic material from our parents, so we generally inherit their success, work ethic, and intelligence, which ultimately determines our socioeconomic status."

Social Construction Article: "Scientists Reveal That Socioeconomic Status Has No Genetic Basis"

Researchers recently collected data from people from all different levels of socioeconomic status. This included people from very low economic backgrounds and very wealthy people. In their analysis, the researchers looked at family histories of socioeconomic status and genetic similarities between members of the same socioeconomic status (SES) groups. The researchers found that children of lower SES parents were just as likely to become upper SES as children of upper SES parents. In addition, lower SES people tend to have as much genetic similarity with other lower SES people than with upper SES people. As a result of their analyses, the researchers were not able to correctly guess a person's socioeconomic status at a rate that was significantly above chance. The lead author was quoted as saying that "we obtain our genetic material from our parents, but the practice of classifying people into socioeconomic groups based on genetic information is entirely cultural in origin. There's just no genetic basis to socioeconomic status."