

## Social Class, Solipsism, and Contextualism: How the Rich Are Different From the Poor

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Social class is shaped by an individual's material resources as well as perceptions of rank vis-à-vis others in society, and in this article, we examine how class influences behavior. Diminished resources and lower rank create contexts that constrain social outcomes for lower-class individuals and enhance contextualist tendencies—that is, a focus on external, uncontrollable social forces—that influence one's life outcomes. In contrast, abundant resources and elevated rank create contexts that enhance the personal freedoms of upper-class individuals and give rise to solipsistic social cognitive tendencies—that is, an individualistic focus on one's own internal states, goals, motivations, and emotions. Guided by this framework, we detail 9 hypotheses and relevant empirical evidence concerning how class-based contextualist and solipsistic tendencies shape the self, perceptions of the social environment, and relationships to other individuals. Novel predictions and implications for research in other socio-political contexts are considered.

*Keywords:* social class, socioeconomic status, inequality, culture, social cognition

In what is now known to be an apocryphal conversation, F. Scott Fitzgerald noted to his friend Ernest Hemingway that “The rich are different from the poor.” Hemingway's response: “Yes, they have more money.”

It goes without saying that the lives of the rich and poor are different. For more than 100 years, social scientists have known that social class is a profound dimension of social life (e.g., Durkheim, 1802; S. T. Fiske & Markus, 2011; Kohn, 1969; Markus & Kitayama, 2003; Marx & Engels, 1848/1973; Stephens, Fryberg, & Markus, 2011; Stephens, Hamedani, Markus, Bergsieker, & Eloul, 2009; Weber, 1958). Within psychological science, research has shown that social class influences a diverse array of domains that include aesthetic preferences (Snibbe & Markus, 2005), language (Bernstein, 1971), physical health (e.g., Adler et al., 1994; Gallo & Matthews, 2003), subjective well-being (e.g., Diener, Ng, Harter, & Arora, 2010; Howell & Howell, 2008), and cognitive performance (e.g., Nisbett, 2008). Notwithstanding these findings, psychological science has yet to fully offer a response to Fitzgerald's observation that the rich are different from the poor. A theory of how social class shapes basic psychological processes has not been fully articulated.

The aim of the present article is to provide such a theory, a social cognitive theory of social class. We contend that an indi-

vidual's social class is a context rooted in both the material substance of social life (wealth, education, work) and the individual's construal of his or her class rank, and is a core aspect of how he or she thinks of the self and relates to the social world. Our central argument is that social class contexts elicit reliable social cognitive patterns among lower-class individuals—characterized by a contextual, externally-oriented cognitive and relational orientation to the world—and upper-class individuals—characterized by a solipsistic, individualistic cognitive and relational orientation to the world. Guided by this analysis, we review several specific predictions and the empirical literatures they have inspired concerning how people from upper- and lower-class contexts think about the self, perceive the social world, and relate to others. In this review, we focus on upper- and lower-class individuals, respectively, for heuristic purposes, recognizing that social class occurs along a continuum of class categories (e.g., working class, middle class), and that it is possible for people to shift in their social class position over time.

### Empirical Traditions in the Study of Social Class

Three broad approaches to the study of social class inform the present theory. A *labor perspective on social class* is rooted in Marx and Engels's (1848/1973) analysis of capitalism and class conflict. Within this perspective, social classes are constituted by labor relations between individuals who control the means of production (e.g., factories and businesses) and those working within those means. Clear distinctions between the bourgeoisie—the ruling class—and the lower classes derive from these labor relations as well as from the prestige of the individual's occupation (Beeghley, 2004; Coleman & Rainwater, 1978; Gilbert, 2002; Hout, 2008; Thompson & Hickey, 2005). Different social institutions—elite preparatory schools, social clubs (the Bohemian Grove, cotillion societies), corporate boards, and access to political

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We wish to thank Cameron Anderson for helpful comments on an earlier version of this article.

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figures—reinforce the ruling class’s power and control over the lower classes in society (Domhoff, 1998). Out of these processes emerge the upper- and lower-classes, whose interests are opposed to one another. Marx and Engels (1848/1973) referred to the awareness of such societal stratification as “class consciousness.”

A second empirical tradition has emerged in the study of physical health, and might be called the *health psychology perspective on social class*. This perspective emerged in the seminal discovery that lower-class individuals are more vulnerable to physical disease and psychological hardships than their upper-class counterparts. For example, lower-class individuals are at greater risk of poor short- and long-term health outcomes relative to their upper-class counterparts (Adler et al., 1994; Kawachi, Kennedy, Lochner, & Prothrow-Stith, 1997; Wilkinson, 1999), tend to experience reduced subjective well-being (Diener & Suh, 1997; Howell & Howell, 2008), and tend to experience more intense and frequent negative mood states (e.g., dysphoric affect; Gallo & Matthews, 2003). Together, this research has focused on identifying aspects of lower-class environments (e.g., exposure to chronic stress) and class-related construals of those conditions (e.g., perceptions of control, reactions to threat) that give rise to diverging patterns in health and affect.

A third empirical approach to social class might be called the *social class as culture perspective*. An important precursor to our theory, this perspective conceptualizes social class as a form of culture, as a set of shared social contexts that create class-specific repertoires of values and behavioral scripts (Bourdieu, 1979; Grossmann & Varnum, 2011; Kohn, 1969; Markus & Kitayama, 2003; Snibbe & Markus, 2005; Stephens et al., 2011, 2009; Stephens, Markus, & Townsend, 2007). For example, empirical studies find that individuals from different class backgrounds are guided by different manners and rules of etiquette (Elias, 1978), honor different customs and habits (Bourdieu, 1979, 1985), express different aesthetic preferences for art and music (Snibbe & Markus, 2005), use language in different ways (Bernstein, 1971), employ different parenting strategies (Kusserow, 2004; Lareau, 2003; Pearlin & Kohn, 1966), and eat different foods (Monsivais & Drewnowsky, 2009). In being acculturated into these patterns of behaviors, norms, and expectations, the individual takes on a particular social class identity, which wields powerful influences upon thought and action (e.g., Markus & Kitayama, 1991; Shweder, 1991).

In this article, we offer a fourth *social cognitive perspective* on social class. Our social cognitive theory is informed by the labor and cultural perspectives’ assertion that structural determinants of social class (e.g., occupation status, educational attainment, wealth) shape the social contexts of lower- and upper-class individuals, and how these individuals relate to others. The health psychology perspective informs our theory in its highlighting of ancient, mammalian processes—such as threat vigilance (e.g., MacDonald & Leary, 2005)—that give rise to class-related social cognitive patterns of thought, feeling, and action. Finally, we share the assumption—at the heart of the cultural perspective—that social class leads to predictable social cognitive thought patterns and worldviews that are not idiosyncratic, but rather shared, upheld, and promoted by people in similar circumstances. Guided in part by these theories, we propose that the material conditions of the individual’s life, and how he or she experiences rank in those conditions, creates social class contexts that elicit a coherent set of social cognitive tendencies and guide patterns of thought, feeling, and action.<sup>1</sup>

## Resources and Rank: The Substance of Social Class

Fundamental to our theory is the assumption that social class is not simply a trait along which individuals vary, but is instead a social context that individuals inhabit in enduring and pervasive ways over time. Though some would suggest that social class is a relatively superficial category, one with little impact upon the psychology of the individual and that can be overcome with sufficient effort (Kingston, 2000), in reality, individuals spend a majority of their daily lives in contexts that are sorted largely in terms of social class. For example, consider that people tend to date and marry (Sweeney & Cancian, 2004), live in neighborhoods and attend schools (Lareau, 2003; Nisbett, 2008), and work with individuals who share similar levels of educational training and income (Argyle, 1994).

An emergent empirical literature is finding that social class contexts are defined by two processes: the objective experience of contrasting levels of material resources that define the individual’s social living, and the individual’s construal of rank vis-à-vis others in the social class hierarchy (Adler, Epel, Castellazzo, & Ickovics, 2000; Kraus, Piff, & Keltner, 2011). With respect to material resources, social class is typically indexed in some combination of three material or “objective” resources or capital: the individual’s financial wealth (Drenea, 2000), educational attainment (Snibbe & Markus, 2005), and occupational prestige (Oakes & Rossi, 2003). In university settings, researchers typically assess objective material resources using reports of family income, parental education, and parental occupation status (e.g., Kraus, Piff, & Keltner, 2009). Empirical studies with large, representative samples ( $N = 10,308$ ) find that these three indices of material resources tend to correlate highly, but not perfectly, suggesting that they are relatively independent ( $r = .42$  for income and education;  $r = .53$  for education and occupational grade;  $r = .58$  for income and occupational grade; Singh-Manoux, Adler, & Marmot, 2003). These three variables can be thought of as the material substance of the individual’s social class.

Importantly, people’s judgments of the material conditions of their lives are shaped by features of the local context—for example, the individuals to whom they compare their material wealth (e.g., Boyce, Brown, & Moore, 2010). This has led researchers to focus on a second process that gives rise to the individual’s sense of social class—the individual’s construal of social class rank vis-à-vis others in society (Adler et al., 2000; S. Cohen et al.,

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<sup>1</sup> We consider our theory of social class as a social cognitive perspective, rather than a cultural perspective, for several reasons. First, cultural theories typically suggest that behavior arises from acculturation processes, wherein a person learns norms, values, and expectations for how to be a person within a particular cultural group. Our social cognitive theory focuses instead on the underlying ingredients of the social class context—material resources and social class rank—that produce social cognitive tendencies and guide behavior. Second, many of our predictions involve physiological (e.g., autonomic physiology) and social responses (e.g., threat reactivity) rooted in evolutionary accounts of social hierarchies—both elements of our theorizing that are less readily anticipated by cultural theories and the acculturation processes they presuppose. Finally, our social cognitive theory has little to say about a central focus of cultural theories of social class—the process of mutual constitution, wherein participation in class-specific behaviors reinforces an individual’s social class identity (Shweder, 1991; Markus & Kitayama, 2003). The process of mutual constitution based on social class is a provocative area of future research, but beyond the scope of the present review.

2008). That is, to what extent does the individual believe his or her material resources are elevated or diminished relative to others?

Rank is a fundamental process in mammalian social life. In nonhuman primates, rank is well defined in display behavior, is negotiated in status contests, and has pervasive outcomes (de Waal, 1984). In stable hierarchies within non-human species, low ranking individuals tend to show higher chronic levels of cortisol (Sapolsky, 2000, 2004), increased aggression (Belzung & Anderson, 1986; Southwick, 1967), and reduced access to group resources (Post, Hausfater, & McClusky, 1980; Wrangham & Waterman, 1981). In contrast, high-ranking non-humans tend to enjoy more grooming partners (e.g., Watts, 2000) and increased reproductive opportunities (Abbott, 1984; Wickings & Dixon, 1992).

Humans sort themselves into positions of low and high rank along many dimensions, including physical attributes (e.g., physical stature, beauty), social behaviors (e.g., the ability to build group cohesion, the ability to tell a good story), and enduring traits (e.g., intelligence, extraversion; Anderson, John, Keltner, & Kring, 2001; Anderson & Kilduff, 2009; S. T. Fiske, 2010; Keltner, Van Kleef, Chen, & Kraus, 2008). Humans also rank themselves compared to others according to their perceived social class.

The most widely-used index of social class rank is the MacArthur Scale of Subjective Socioeconomic Status (Adler et al., 2000). In this measure, participants place themselves on a ladder with 10 rungs representing society. The highest rung of the ladder refers to people at the top of the social class hierarchy—those with the most income, education, and prestigious jobs. The bottom rung of the ladder refers to the bottom of the social class hierarchy—those with the least income, least education, and the lowest prestige jobs or no job. Subjective socioeconomic status (SES) can be assessed in terms of one's social class rank within society as a whole, or one's local community (Adler et al., 2000; Goodman et al., 2001). Other measures of social class rank include self-reports of social class categories (e.g., upper middle class, lower class; Bernstein, 1971; Mahalingam, 1998), the objective comparison of one's own material resources to that of others in one's local community (Boyce et al., 2010), or direct comparisons to a real or imagined interaction partner (e.g., Kraus, Horberg, Goetz, & Keltner, 2011). Importantly, rank-based measures of social class predict class-based patterns in self-rated and physiological health even after accounting for objective resource measures of social class (Adler et al., 2000; S. Cohen et al., 2008).

We posit that the social class context an individual inhabits is fundamentally shaped by these two related, but relatively independent processes—material resources and perceptions of social class rank. Material resources define social class contexts by, for example, determining a person's access to valued goods and services. Rank determines the social class context by shaping chronic perceptions of one's relative standing in society or in one's community. In research using both national and university samples, subjective SES correlated with measures of education ( $r_s = .13$  and  $.34$ , respectively,  $p_s < .05$ ) and income ( $r_s = .39$  and  $.59$ , respectively,  $p_s < .05$ ; Kraus et al., 2009) at levels that are consistent with a medium to large effect size (e.g., J. Cohen, 1992). These correlations were far from perfect, indicating that resources and rank are relatively independent aspects of social class.

Importantly, our analysis suggests that class is not simply explained by other rank-related processes. Perhaps most importantly, social power—a person's relative control over resources and ability to

administer punishments (S. T. Fiske, 2010; Guinote & Vescio, 2010; Keltner, Gruenfeld, & Anderson, 2003)—differs from social class in that social class does not guarantee control or influence over other individuals. A person with low education attainment, income, and occupation status (e.g., gas station manager) may still wield considerable power over other employees at his or her job, or may make most of the decisions at home. Yet, another pervasive rank-related process, sociometric status—which refers to the respect one enjoys in the eyes of members of important social groups (Anderson & Kilduff, 2009)—also differs from social class. Being from an upper-class environment does not guarantee high levels of social esteem or respect (e.g., wealthy individuals have long been stereotyped in ways—as “greedy” or “condescending”—that speak to a lack of social esteem; S. T. Fiske, Cuddy, Glick, & Xu, 2002).

One important implication of this analysis is that social class is not reducible to power or sociometric status. Empirical evidence likewise supports this assertion. For example, Anderson, Kraus, Galinsky, and Keltner (2012) collected a national online sample of adults who reported upon their social class through indices of objective resources (e.g., income, education) and subjective social class rank (subjective SES in the United States), along with several self-reports of power and status that included the following: the sense of power (e.g., “I think I have a great deal of power”; Anderson, John, & Keltner, 2012), autonomy (e.g., “I am self-determining and independent”; Ryff & Keyes, 1995), authority (“How much authority do I have in my social group”; Porter & Lawler, 1968), peer acceptance (e.g., “I feel accepted by others”; Anderson, Srivastava, Beer, Spataro, & Chatman, 2006), and sociometric status in three of participants' most important social groups (e.g., “I have a high level of respect in others' eyes”; Anderson et al., 2006). The results from this analysis ( $N = 316$ ), presented in Table 1, reveal that educational attainment and annual income measures were uncorrelated or negatively correlated with all measures of power and status, reflecting the separation of psychological rank-related constructs from measures of social class. Interestingly, even subjective SES, a rank-based measure of social class, was only moderately related to measures of power and status (average  $r = .23$ ), highlighting the independence of these psychological measures of power and related constructs and social class rank (Anderson, Kraus, et al., 2012). Though much can be learned about social class from understanding other forms of social rank (for a summary, see S. T. Fiske, 2010), theories of the social cognitive tendencies associated with class cannot solely draw upon past theories of power or sociometric status.

Thus far we have made the case that social class is rooted in experiences of different levels of material resources and in the construal of one's place in a class hierarchy vis-à-vis others, and is not reducible to other rank-related states. Building on this framework, in the following section we describe our social cognitive theory of the effects of social class.<sup>2</sup>

<sup>2</sup> Our social cognitive theory of social class aligns with recent conceptualizations of situated social cognition (for a review, see E. R. Smith & Semin, 2007). Specifically, our theory suggests that class-based social cognitive patterns are not isolated within individuals; rather, they are shaped by the pervasive social goals, values, and expectations that are inherent to lower- and upper-class contexts, respectively.

Table 1  
Correlations Between the Determinants of Power, Status, and Social Class

Social class	Psychological indices of power and status					
	Sense of power	Autonomy	Authority	Acceptance	Sociometric status	Average <sup>a</sup>
Education	-.15*	-.06	-.03	-.09	-.03	-.07
Income	.04	-.01	.10	.06	.08	.05
Subjective SES	.25*	.10	.23*	.19*	.36*	.23*

Note. SES = socioeconomic status.

<sup>a</sup> Indicates an average composite across all psychological indices of power and status.

\*  $p < .05$ .

### Social Class, Solipsism, and Contextualism

Advances in cultural psychology suggest that shared experiences lead to the development and activation of a rich network of norms, values, and expectations that, in turn, guide culture-specific repertoires of behavior (e.g., D. Cohen, 2007; Heine, 2008; Markus & Kitayama, 1991, 2003, 2010; Mendoza-Denton & Mischel, 2007). The same is true of close relationships: Relationship-specific ways of relating to others that are formed through attachment histories guide patterns of relating to new others (Andersen & Chen, 2002; Baldwin, 1995). We propose that social class functions in a similar way, that through shared experiences, individuals from a particular social class context develop a system of knowledge, action tendencies, and affects that determines how the individual thinks, feels, and relates to others. In the remainder of this article, we detail specific propositions that arise from our social cognitive theory.

In the most general sense, we propose that the context is prioritized for lower-class individuals. Disposed to relative resource scarcity and diminished rank, lower-class contexts expose individuals to increased external social influences on the material conditions of their lives—less safe neighborhoods, threats of job instability, resource fluctuations in schools—that constrain their actions and limit their social opportunities. Relative to upper-class

individuals, lower-class individuals' pursuit of goals and interests is constrained by their reduced economic resources and social rank. Diminished resources, uncertainty, and unpredictability are a central part of the social contexts of lower-class individuals.

The life circumstances of lower-class individuals give rise to *contextualist social cognitive tendencies*. In essence, lower-class individual's system of knowledge is characterized by a sense that one's actions are chronically influenced by external forces outside of individual control and influence. These contextual influences can be real, structural influences (e.g., social inequality, inadequate social services) or expectations of external influences on action (e.g., expectations for discrimination based on social class). The result of these perceived externalities is a system of knowledge that favors explanations of behavior that involve forces outside of individual control, increased attention to others' thoughts and actions, and increased situational influences on action (see Figure 1).

In contrast, upper-class contexts prioritize the individualized self. Disposed to environments of relatively abundant material resources and elevated rank in society, upper-class individuals are free to pursue the goals and interests they choose for themselves (W. Johnson & Krueger, 2005; Lachman & Weaver, 1998). Moreover, compared to lower-class individuals, upper-class individuals

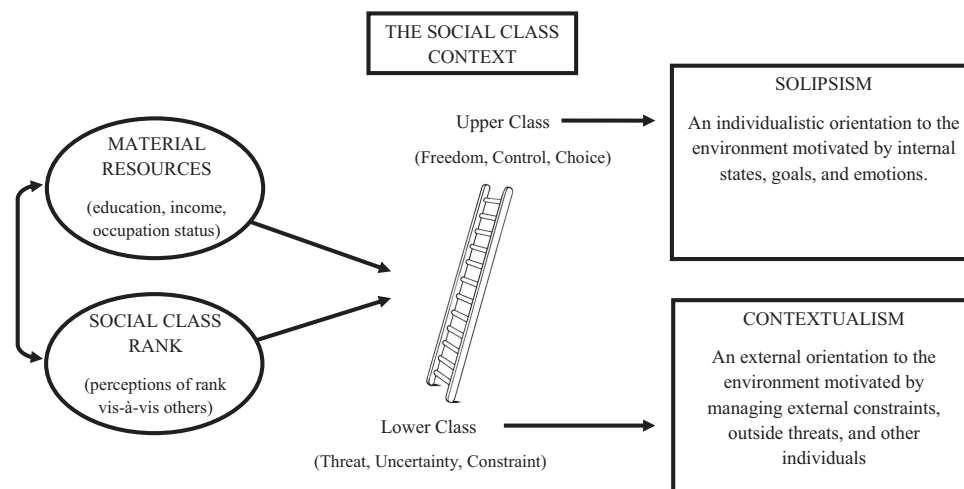


Figure 1. Conceptual model illustrating the characteristics of social class contexts and the expression of solipsistic and contextualist social cognitive tendencies.

pursue these goals and interests relatively free of concerns about their material costs. These life circumstances—increased resources and fewer external constraints—play out in the day-to-day thoughts and actions of upper-class individuals.

These life circumstances create what we call *solipsistic social cognitive tendencies* among upper-class individuals. Solipsism is a philosophical idea that centers on the notion that one's own mind is a fundamental source of knowledge about the social world and is the primary influence on people's everyday thoughts and actions (Russell, 1914). Guided by this conceptual definition, we contend that continuous life experiences of economic and social freedom create a system of knowledge—among upper-class individuals—characterized by the sense that one's own internal states (e.g., traits, goals, emotions) are, and should be, a fundamental influence on thought and action. Disposed to this solipsistic social cognitive mindset, upper-class individuals are likely to explain behavior as being caused by individual influence (vs. contextual influence), are more likely to attend to their own (vs. others') mental states, and are more likely to ignore and resist situational influences on action (see Figure 1).

These class-related social cognitive tendencies, we further posit, yield systematic influences upon three domains (in the Appendix, we present the empirical evidence from these three domains classified according to measure of social class and effect on social cognition). First, we examine class-based conceptions of the self, focusing specifically on how contextualist tendencies lead lower-class individuals to be more reactive to social threats and more communal, whereas solipsistic tendencies lead upper-class individuals to increased perceptions of control and personal agency. Second, we examine perceptions of the social environment, guided by the prediction that contextualist tendencies will elevate perceptual attunement to the context (e.g., external environmental forces, others' emotions) among lower-class individuals, whereas solipsistic tendencies will elevate upper-class individuals' perceptual attunement to internal influences on behavior. Finally, we expect contextualist and solipsistic tendencies to guide broad relationship strategies such that lower-class individuals will engage in more communally oriented behaviors toward others, whereas upper-class individuals will focus more on personal freedoms in relationships.

### Social Class and the Self-Concept

Our first set of hypotheses pertains to how class-related contextualist and solipsistic orientations influence the self-concept. The self-concept consists of the goals, attributes, motives, and beliefs about the self that an individual maintains (W. James, 1890; Markus & Kitayama, 1991, 2003, 2010). These aspects of the self shift according to goals for self-evaluation (Swann, 1990), cultural

norms (Markus & Kitayama, 1991, 2003), changes in the social context (Andersen & Chen, 2002), and the presence of social threats to the self (MacDonald & Leary, 2005).

Here, we focus on three aspects of the self: vigilance to threats (MacDonald & Leary, 2005), the personal sense of control (Lachman & Weaver, 1998), and models of agency versus communion (Markus & Kitayama, 2003, 2010). Table 2 summarizes our predictions regarding social class and the self. In these three domains, we hypothesize that lower-class individuals will demonstrate greater sensitivity to potential social and environmental threats, a lower personal sense of control, and a more communal self-concept. In contrast, we expect upper-class individuals to demonstrate a reduced sensitivity to threat, an elevated personal sense of control, and a self-concept characterized by increased personal agency.

### Hypothesis 1: Lower-Class Individuals Will Be More Vigilant to Threat Than Upper-Class Individuals

Threat is a basic appraisal underlying the construction of the self. Appraisals of threat give rise to patterns of emotion and temperament (e.g., C. A. Smith & Ellsworth, 1985), attachment tendencies (Mikulincer & Shaver, 2006), and core beliefs about the self. In our first hypothesis, we posit that threat is not randomly distributed across social classes, that in fact, lower-class individuals will be more vigilant to threats in the environment. This is so, we reason, because the environments of lower-class individuals are characterized by increased vulnerability and external threats relative to the environments of their upper-class counterparts. Lower-class individuals live in environments defined in part by increased violence and punitive responses from the criminal justice system (e.g., Sampson, Raudenbush, & Earls, 1997); more pervasive vulnerabilities to health problems, shorter life spans, increased depression and other disorders (Gallo & Matthews, 2003); and greater social threats such as stigmatization and ostracism (e.g., Williams, 2007). The myriad threats that lower-class individuals face should activate what theorists have called a threat detection system, which enables the organism to respond adaptively to physical, as well as social, survival-related threats (Blascovich & Mendes, 2000; Pickett & Gardner, 2005; Williams, 2007). This threat detection system is manifest in many indexes, from the psychophysiological to the subjective (MacDonald & Leary, 2005). A basic feature of the social self of lower-class individuals, we predict, is a heightened vigilance to threat.

Several lines of evidence, using multiple measures and methods, support this first hypothesis. Select evidence suggests that lower-class individuals experience elevated activation in physiological systems engaged by threat. For example, lower-class adults, measured in terms of annual income and possession of wealth, show

Table 2  
*Social Class and Dimensions of the Social Self*

Domain	Lower-class contextualism	Upper-class solipsism
Threat perceptions	Threat reactivity	Reduced threat sensitivity
Sense of control	Diminished personal control	Elevated personal control
Self-concept	Communal, common choice, contextually determined	Personally agentic, unique choice, genetically and trait determined

reduced decline in daily salivary cortisol levels—a correlate of physiological stress—relative to their upper-class counterparts (e.g., Hajat et al., 2010). Lower-class children, as assessed in parental education and occupation status, show elevated heart rate and blood pressure following ambiguously threatening social scenarios (Chen & Matthews, 2001). Given these findings, one might expect lower-class individuals to show greater activation of other physiological processes involved in threat, for example increased activation in the amygdala in response to anger faces—a brain region typically activated during perceptions of threat (Evans, Shergill, & Averbeck, 2010). Moreover, these heightened reactions to threatening stimuli may elevate cardiovascular reactivity (e.g., high blood pressure) and, in turn, could explain lower-class individuals' increased tendency to develop coronary heart disease (e.g., J. E. Phillips & Klein, 2010).

That amplified threat vigilance is a fundamental component of the social selves of lower-class individuals is also demonstrated by their enduring expectations of threat. As one example, along with their increased physiological responses to threat, lower-class children perceive greater threat and hostility in videos of ambiguously hostile interactions (Chen & Matthews, 2001). As well, a recent meta-analytic review found that lower-class individuals self-reported more chronic levels of cynical mistrust and hostility relative to upper-class individuals, two core social beliefs founded in perceived threat (Gallo & Matthews, 2003).

Threat vigilance is likely to have pronounced influences upon the relationships of lower-class individuals—a theme we return to later in this review. On this theme, in our own work we have documented that lower-class individuals are more accurate in detecting the threatening emotions of close friends, a finding that is in keeping with Hypothesis 1. Specifically, after teasing one another, female friends estimated their own and their friends' hostile emotions (i.e., anger, contempt, and disgust) during the interaction. Consistent with our threat reactivity hypothesis, although friends from lower- and upper-class backgrounds (as assessed with parental income and education) were both accurate in judging their friends' positive emotions, only the lower-class participants proved to be accurate in judging their friends' hostile emotions (Kraus, Horberg, et al., 2011). Importantly, lower-class individuals' accurate perceptions of threat were observed when measured in terms of both objective social class resources, and high versus low social class rank within the friendship.

The heightened vigilance to threat documented among lower-class individuals should lead to a series of downstream consequences. For example, the chronic vigilance to threat is a predictor of poor health outcomes (e.g., Sapolsky, 2000, 2004) and may account for some of the health problems lower-class individuals are prone to experiencing (Gallo & Matthews, 2003). Within educational settings, lower-class individuals are likely to anticipate social rejection and threat. On this important theme, S. E. Johnson, Richeson, and Finkel (2011) have documented that students from relatively lower-income families felt more socially rejected and had greater concerns about their own academic competency in comparison to more affluent students at an elite private university. Earlier in this emergent empirical literature, Croizet and Clare (1998) found that when academic tests are framed as diagnostic of ability, students with parents who had lower prestige occupations were presumably more anxious about confirming negative expectations about their lower ranking social group, and as a result,

performed worse than when the test was framed as not diagnostic of ability (cf. Spencer & Castano, 2007). More generally, class-related expectations of threat and social rejection are likely to predict reduced feelings of belonging at universities or social institutions primarily dominated by upper-class individuals (Stephens et al., 2007), and a potential lack of trust of government officials or political leaders (e.g., Tyler, Rasinski, & McGraw, 1985).

## **Hypothesis 2: Lower-Class Individuals Will Experience Reduced Personal Sense of Control Relative to Upper-Class Individuals**

As central as appraised threat is to the social self, so too is the personal sense of control—which reflects the extent that individuals feel elevated freedom and influence over their lives (Lachman & Weaver, 1998). Perceived control is a core appraisal that gives rise to patterns of emotion (e.g., Keltner, Ellsworth, & Edwards, 1993), optimism (Weinstein, 1980), and positive self-regard (e.g., Brown & Taylor, 1986). In our second hypothesis, we predict that relative to lower-class individuals, upper-class individuals will assume they possess greater control over life's outcomes (Lachman & Weaver, 1998). This class-related belief in control, as with appraisals of threat, emerges out of the different life circumstances of lower- and upper-class individuals. Specifically, in contrast to the vulnerability and external threats that characterize lower-class contexts, upper-class individuals inhabit environments of enhanced wealth, personal freedom, and social opportunities (Domhoff, 1998). More likely to occupy positions of influence and elevated status, upper-class individuals should be more likely to experience an elevated sense of personal control. This is our second hypothesis concerning social class and the self.

Numerous studies support this hypothesis. For example, several nationally collected adult samples have documented associations between income and elevated reports of personal control—measured by assessing perceptions of control in different life domains ( $r = .10, p < .02$ ; W. Johnson & Krueger, 2005), general perceptions of mastery ( $r_s = .08$  to  $.16, p_s < .01$ ; Lachman & Weaver, 1998), perceptions of life constraints ( $r_s = -.21$  to  $-.31, p_s < .01$ ; Lachman & Weaver, 1998), or daily experience assessments of perceived control ( $R^2 = .21, p < .01$ ; Gallo, Bogart, Vranceanu, & Matthews, 2005). In similarly motivated research, across studies of both university students and adults, participants who reported higher subjective SES ratings in the United States or in their local community also reported a heightened sense of personal control over their own life outcomes ( $r_s = .28$  to  $.40, p_s < .05$ ). Importantly, this relationship between subjective social class rank and increased personal control persisted even after controlling for objective indicators of social class, participants' ethnic background, and liberal (vs. conservative) political beliefs (Kraus et al., 2009).

This second hypothesis has been particularly informative in understanding the link between social class and health outcomes. On this point, empirical evidence finds that upper-class individuals experience more positive health outcomes, in part, because of perceptions that they can personally control and regulate their reactions to life's stressors (W. Johnson & Krueger, 2005, 2006). Other studies suggest that an elevated personal sense of control can protect lower-class individuals from the poorer perceived health,

reduced life-satisfaction, and depression that often accompanies their class circumstances (Lachman & Weaver, 1998).

We expect class influences on the personal sense of control to manifest in other facets of the social self. For instance, upper-class individuals may exhibit heightened personal control over the expression and regulation of their own emotions in interactions with others (e.g., Gross & John, 1998). On this point, Côté, Gyurak, and Levenson (2010) have recently documented that people from upper-class backgrounds, as assessed with personal income, demonstrated greater ability to up regulate, or express upon demand, disgust in response to film clips that evoke this emotion. Buoyed by the belief in their own sense of control, upper-class individuals may be prone to overestimating the influence they wield over particular social outcomes. As one illustration, upper-class individuals may actually believe that their votes have greater impact than their lower-class counterparts, which in turn, might contribute to the higher rates of voting in upper-class communities (Krosnick, 1990). The sense of control is a core construct in the perceptions of upper-class individuals and sets the stage for our third hypothesis, which posits that lower- and upper-class individuals will endorse distinct models of agency within their social selves.

### **Hypothesis 3: Lower-Class Individuals Will Develop More Communal Self-Concepts, Whereas Upper-Class Individuals Will Develop More Personally Agentic Self-Concepts**

Thus far we have seen that appraised threat is a central social cognitive tendency of lower-class individuals, whereas upper-class individuals perceive their worlds through the lens of a greater sense of control. These core tendencies to appraise the environment in different ways should give rise to different conceptions of how the self relates to others. One useful way of thinking about this social self, and captured in our third hypothesis, centers upon two broad dimensions: *Communion* (referred to as the *conjoint model of agency* in Markus & Kitayama, 2003, 2010), which refers to the extent that the individual conceives of the self as defined by social connections to relationship partners (e.g., family members, close friends), important social groups, and communities; and *Personal Agency* (referred to as the *disjoint model of agency* in Markus & Kitayama, 2003, 2010), which refers to the extent that the individual conceives of the self as constituted by the choices one makes, the capacity to personally control one's life outcomes, and the extent one stands out from other individuals (Abele & Wojciszke, 2007; Markus & Kitayama, 1991, 2010; Paulhus & John, 1998; Wiggins, 1991). In Hypothesis 3, we predict that lower-class individuals' increased contextual focus should lead to a communal self-concept defined in terms of interdependence and connections to others. In contrast, upper-class individuals' solipsistic tendencies will lead them to conceptualize the self in terms of individual agency and to think about the self in terms of personal choice, autonomy, and one's uniqueness relative to others.<sup>3</sup>

Class-based models of communion and personal agency should shape the self-concept in the three domains of self-expression, choice, and the genetic and trait (as opposed to contextual) determinants of behavior. More specifically, disposed to communal self-concepts, lower-class individuals should exhibit more spontaneous expressions of the self that emphasize blending into the

environment, greater positive evaluation of making the same choices as others, and reduced genetic influences on behavior. In contrast, the personally agentic self-concepts of upper-class individuals should enhance focus on internal traits in self-expression, increase positive evaluation toward making unique choices, and give rise to heightened genetic influences on behavior. Select studies support these predictions that derive our third hypothesis.

In the domain of self-expression, we expect upper-class individuals to favor internal traits when engaging in self-expression. In contrast, the communal self-concepts of lower-class individuals should enhance self-expressions that help the individual blend into the surrounding social environment. In one study that brings this prediction into focus, upper-class adolescents from Iceland, measured by the occupation status of their parents, were more likely to spontaneously describe themselves by using unique individual traits (e.g., "smart," "silly") relative to lower-class adolescents, who tended to describe themselves more in terms of physical appearance (e.g., "I'm tall"; Hart & Edelstein, 1992). Research also indicates that these class differences in self-expression are cultivated at early ages. Using both observational data and in-depth interviews, Weininger and Lareau (2009) found that whereas working-class parents stressed that their children blend into their elementary school environments, parents from middle-class families, with at least one parent's job involving a managerial role or a highly credentialed skill set, were more likely to stress the importance of their children's curiosity and independence (cf. Kohn, 1969; Kusserow, 2004; Lareau, 2003). This latter finding highlights one process—parents' conceptions of their children—by which individuals transmit class-related social cognitive tendencies from one generation to the next.

Class-related tendencies toward communion and personal agency in self-expression are also reflected in aesthetic preferences. For example, high-school educated individuals (all from European American backgrounds) were more likely to report they enjoyed country music, which contains themes reflecting personal struggles against harsh external environments—a theme consistent with conceiving of the self as shaped by contextual forces. In contrast, college-educated individuals preferred alternative rock music, which centers upon themes of autonomy, personal choice, and self-expression—all features of a disjoint model of agency, or personally agentic self-concept (Snibbe & Markus, 2005).

Social class differences in communion and personal agency should also influence the self-concept in the domain of personal choice. Specifically, upper-class individuals' enhanced personal agency should increase preferences to make unique choices that help these individuals stand out from others. In contrast, the communal self-concepts of lower-class individuals should increase common choices that promote blending in with others. Empirical research provides support for these predictions. When asked to choose a pen among many, lower-class individuals, measured by

<sup>3</sup> In Hypothesis 3, our prediction does not contend that lower-class individuals lack agency. Rather, we contend instead that lower-class individuals think of the self as fundamentally defined by social connections, whereas upper-class individuals think of the self as fundamentally separate and unique.

parents' educational attainment, were more likely to choose a pen that resembled the other pens, reflecting their more communal orientations. In contrast, upper-class individuals were more likely to choose the unique pen, reflecting personally agentic preferences to stand out from others (see Figure 2; Stephens et al., 2007). In a second study, participants with a working-class occupation (i.e., fire-fighters) reported feeling more positively about making the same choice as a friend (e.g., buying the same car as a friend), whereas participants with a master's degree in business administration felt irritated by making the same choice as a friend (Stephens et al., 2007).

In more recent work examining social class influences on choice, when offered a pen as a gift for participating in an experiment, participants from lower-class backgrounds, indexed in measures of educational attainment, were more likely to accept the gift; upper-class participants, by contrast, were more likely to want to have an option to choose a pen for themselves (Stephens et al., 2011). As a final example of class-related differences in choice, lower-class participants reported greater liking for a shirt that was chosen for a confederate than one the confederate chose for herself. In contrast, upper-class participants reported increased liking for the shirt the confederate chose for herself (Stephens et al., 2011).

Given the reasoning underlying Hypothesis 3, we would also expect temperament—for example, as captured in baseline differences in sympathetic autonomic arousal or particular genetic polymorphisms—to drive patterns of social behavior or cognition more strongly for upper-class individuals than for their lower-class counterparts. In essence, upper-class contexts, with more advantaged resources and elevated rank, may expose upper-class individuals to environments that allow the expression of unique traits and attributes, including those attributes that are genetically-based. In contrast, the constraints of lower-class contexts may not so readily allow for the expression of genetic predispositions (cf. Bronfenbrenner & Ceci, 1994).

Empirical studies of gene–environment interactions support this prediction derived from Hypothesis 3. In groundbreaking work in

this area, Turkheimer, Haley, Waldron, D'Onofrio, and Gottesman (2003) relied on twin data to examine variability in intelligence as a function of social class using biometric models that estimate the extent that intelligence among twins is due to genetic factors, shared environmental experiences, or nonshared environmental experiences. With this approach, approximately 72% of the variability in intelligence of upper-class children, where social class was derived from measures of maternal education, income, and occupation status, was attributable to genetic factors. In contrast, only approximately 10% of variance in intelligence among children in lower-class environments was due to genetic factors. When examining the shared environmental influences on intelligence, the pattern was reversed: A larger proportion of lower-class children's variability in intelligence was accounted for by the shared environment relative to upper-class children (Turkheimer et al., 2003). This important finding is in keeping with a broad assertion of our theory—that lower-class contexts are more powerful and salient in determining the social self—and has since been replicated. Specifically, in a sample of infant twin pairs assessed at 2 years of age, genes accounted for 50% of variability in intellectual ability among children raised in upper-class families but only 8% of intellectual ability among children raised in lower-class families (Tucker-Drob, Rhemtulla, Harden, Turkheimer, & Fask, 2011). These findings suggest that social class may moderate other gene to behavior relations, with stronger associations between genetic polymorphisms and behavior observed in upper-class individuals.

Hypothesis 3 provides a starting point for several corollary predictions. One is the expectation that upper-class individuals, prioritizing personal agency, will be more likely to express their self-concepts in more coherent self-descriptions or in cross-situationally consistent behavior relative to their lower-class counterparts. That is, whereas lower-class individuals may shift how they define the self to best match the demands of the social context, upper-class individuals may be more freely able to express their traits across distinct social contexts. Along the same lines, we expect lower-class individuals to define the self more centrally in terms of how it is intertwined with other close relationship partners (e.g., Aron, Aron, Tudor, & Nelson, 1991), whereas upper-class individuals may value a distinct definition of the self that is independent of relations with others. We would also expect collective aspects of self-esteem (Luhtanen & Crocker, 1992)—that is, the extent an individual's self-esteem is staked on how one's social group is valued by others—to be particularly important for the well-being of lower-class individuals.

In this section, we have summarized our central predictions regarding how class-based solipsistic and contextualist tendencies influence the self. Specifically, we have seen that lower- and upper-class individuals define and experience the self in profoundly different ways: Lower-class individuals appraise their environments in terms of elevated threat, and they define the self in more communal terms; upper-class individuals appraise the environment in terms of an increased personal sense of control and a more personally agentic self-concept. These core differences in defining the self, we shall see in the next section, extend to how upper- and lower-class individuals perceive and understand the social environment and other individuals.

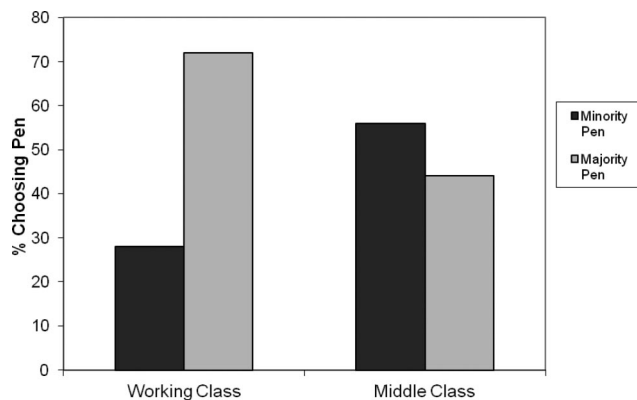


Figure 2. Participant social class and preferences for picking unique (minority pen) versus common (majority pen) objects. Reprinted from "Choice as an Act of Meaning: The Case of Social Class," by N. Stephens, H. M. Markus, and S. M. Townsend, 2007, *Journal of Personality and Social Psychology*, 93, p. 817. Copyright 2007 by the American Psychological Association.



### Social Class and Social Perception: Construing Others and the Social Environment

Our second set of hypotheses pertains to how class-related solipsistic and contextualist orientations guide construals of the actions and intentions of others and the social environment. We focus on three broad areas of social cognition: empathy, attribution, and the components of attitudes and intergroup perception. As summarized in Table 3, we hypothesize that the contextualist tendencies of lower-class individuals will lead them to greater empathy, the favoring of contextual attributions, and greater endorsement of social constructivist conceptions of group categories. In contrast, the solipsistic tendencies of upper-class individuals will be associated with reduced empathy, the tendency to make dispositional attributions, and greater endorsement of essentialist beliefs about group categories.

#### Hypothesis 4: Lower-Class Individuals Will Exhibit Enhanced Empathy Compared to Upper-Class Individuals

Emotions have been called a grammar of social life (Eibl-Eibesfeldt, 1979) in that their expression signals information about others' intentions and attitudes and forms the basis of social interactions (Frijda & Mesquita, 1994; Keltner & Haidt, 1999). In this way, emotions shape the behaviors of those who experience them and those who perceive them (Sy, Côté, & Saavedra, 2005; Van Kleef, De Dreu, & Manstead, 2004).

Navigating social interactions depends on empathy—that is, the sharing and understanding of others' emotion experiences and affective states (Zaki, Bolger, & Ochsner, 2009). Empathy involves a family of emotion processes that include empathic accuracy—the ability to accurately read others' affective states (Ickes, Stinson, Bissonnette, & Garcia, 1990; Levenson & Ruef, 1992); physiological linkage—the extent one's physiological responses are linked in time course with those of others (Levenson & Gottman, 1983; Zaki et al., 2009); and emotion contagion—the extent that individuals mimic or re-experience the emotions that others experience (Anderson, Keltner, & John, 2003; Barsade, 2002; Hatfield, Cacioppo, & Rapson, 1994).

In Hypothesis 4, we predict that given their increased contextualist tendencies, lower-class individuals will show heightened empathic accuracy—that is, increased accuracy in their perceptions of others' emotions—relative to upper-class individuals. Research on constructs related to social class serves as one platform for this prediction. For instance, people who are more interdependent in their relationships, such as close friends or individuals with heightened trait agreeableness, show greater empathic accuracy relative to their less agreeable, more independent counterparts

(Graziano, Habashi, Sheese, & Tobin, 2007; Stinson & Ickes, 1992).

Research relevant to Hypothesis 4 has indeed documented that lower-class individuals demonstrate greater empathic accuracy than their upper-class counterparts (Kraus, Côté, & Keltner, 2010). In one study in this research, university employees with either a high school or college education took a standard measure of empathic accuracy that required that they attempt to accurately label, with emotion terms, different posed facial expressions (Mayer, Salovey, & Caruso, 2002). On this test of empathic accuracy, the high school educated participants proved to be better able to accurately identify the emotions in facial expressions relative to college educated participants. In follow-up experimental work, participants induced to think about a context in which they were lower-class (by imagining an interaction with an upper-class person) felt lower in social class rank compared to participants thinking of an upper-class context. Subsequently, individuals manipulated to feel they were of lower social class performed better than the upper-class individuals on the Mind in the Eyes Task (Baron-Cohen, Wheelwright, Hill, Raste, & Plumb, 2001), which requires that participants identify emotions based on subtle expressions in movements of muscles around the eyes.

The advantage lower-class individuals enjoy over the upper class in reading the emotions of others is demonstrated by a third study in this research, which focused on the accuracy with which people decode spontaneous emotion within social interactions. In this study, participants engaged in a mock job interview with a stranger and then rated their own emotions during the interview and estimated the emotions of their partner. Replicating the other studies, lower-class participants, measured in terms of subjective SES, were more accurate in judging the specific emotions (e.g., contempt, sympathy) of their partner relative to upper-class participants. Moreover, following the interview, participants offered explanations of their interview performance that were coded for dispositional attributions (e.g., "I did well in the interview because I am good at interviews") or contextual attributions (e.g., "I did well in the interview because I had a giant cup of coffee right before the interview started"). In keeping with our claims about contextualism, lower-class individuals' greater ability to accurately read others' emotions was mediated by these individuals' tendency to attend to environmental factors that influenced interview performance (Kraus et al., 2010). Importantly, these findings establish that a broad contextualist orientation explains why lower-class individuals are more accurate judges of others' emotions.

A second prediction that derives from Hypothesis 4 is that lower-class individuals will be more likely to demonstrate physiological linkage in their responses to other individuals during social interactions relative to upper-class individuals. Preliminary research supports this prediction. For instance, in one study, two strangers played a board game (e.g., Taboo) while their cardiovascular reactivity was measured with an electrocardiogram and impedance cardiography (Page-Gould, Koslov, & Mendes, 2012). During the interaction, participants from lower social class backgrounds (e.g., lower family income and education) showed physiological responses that were empathically linked to those of their interaction partner. More specifically, lower social class participants' pre-ejection period—a measure of cardiac contractility that indexes sympathetic nervous system activation—was significantly associated with the pre-ejection period of their partner from 1 min

Table 3  
*Social Class and Perceptions of the Social World*

Domain	Lower-class contextualism	Upper-class solipsism
Empathy	Empathic accuracy, linkage, contagion	Reduced empathy
Causal explanation	Contextual	Dispositional
Inter-group attitudes	Social constructivist	Essentialist

earlier in the interaction. Upper-class individuals' cardiovascular reactivity was completely independent of that of their interaction partner. More generally, we would expect lower-class individuals to demonstrate greater physiological linkage in other ways, for example, in empathic blushing (e.g., Shearn, Bergman, Hill, Abel, & Hinds, 1990) or linked respiratory sinus arrhythmia—a physiological response associated with emotion regulation (Gyurak & Ayduk, 2008) and tonic positive emotionality (Oveis et al., 2009).

For parallel reasons, we would expect lower-class individuals to show greater evidence of a third kind of empathic process—emotion contagion—relative to their upper-class counterparts. Emotion contagion refers to the transmission of emotion from one interaction partner to another, and it arises through facial mimicry, emotional expressiveness of one's interaction partners, and perceptions of other individuals' emotions (Barsade, 2002; Kelly & Barsade, 2001). In research relevant to social class, dormitory roommates with low levels of trait power—who presumably are often influenced by others—showed greater emotional convergence to their roommates' emotional responses over the course of several months than did roommates who felt elevated power (Anderson et al., 2003). In a direct test of Hypothesis 4, Kraus and colleagues examined self-reports of emotions in social interactions wherein friends teased each other. In the interactions, participants who were lower in social class rank—measured in terms of parental education and income relative to their friend—experienced contagion in the realm of hostile emotion (i.e., anger, contempt, disgust); that is, their hostile emotions became more similar to the hostile emotions of their upper-class friend over the course of the interaction. In contrast, participants who were higher in parental education and income relative to their friend reported experiencing hostile emotions that were independent of the emotions experienced by their friend (Kraus, Horberg, et al., 2011). Importantly, these results also highlight the enhanced empathy-relevant threat reactions (Hypothesis 1) that lower-class individuals experience relative to their upper-class counterparts.

Building upon the findings we have reviewed relevant to Hypothesis 4, we would also expect lower-class individuals' elevated empathy to extend to greater accuracy in judgments of others' specific thoughts, attitudes, and personality traits—domains of great relevance to the literature on empathic accuracy (Fletcher & Kerr, 2010). Moreover, given the solipsistic tendencies of upper-class individuals, we would expect these individuals to make judgments about other individuals' emotions based on their own current feelings, rather than on the behavior of other individuals. As well, upper-class individuals' solipsistic focus on their own goals and rewards may predispose these individuals to perceive certain positive emotions more accurately—such as pride—because research documents associations between experiences of pride and feelings of high status and achievement (e.g., Tracy & Robins, 2007). Finally, it will be interesting to investigate whether intergroup interactions moderate class-based patterns of empathy. For instance, given the increased physiological demands of cross-group interactions with stigmatized others (e.g., Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell, 2001), perhaps upper-class individuals strategically engage in empathic responses with in-group members, where resource demands are less costly. The empirical study of social class and empathy offers many promising lines of inquiry.

### **Hypothesis 5: Lower-Class Individuals Will Favor Contextual Explanations, Whereas Upper-Class Individuals Will Favor Dispositional Explanations**

Causal explanations of social events reflect a mixture of contextual (or situational) and dispositional attributions. The relative weight given to contextual and dispositional causes shifts according to personal motives to assign blame (e.g., D. T. Miller & Ross, 1975; Sherman & Kim, 2005), societal norms for explanation (Jellison & Green, 1981), perspectives taken as an actor or perceiver (Jones & Nisbett, 1987), transient emotion (Keltner et al., 1993), and the individual's cultural background (J. G. Miller, 1984; Morris & Peng, 1994). In Hypothesis 5, we predict that social class will shape causal explanations in systematic ways.

Lower-class contexts are characterized by reduced resources, increased social threats, and diminished rank relative to upper-class contexts. Given this, we predict that lower-class individuals will be more likely to attribute the causes of personal outcomes and everyday social events to the external environment. In contrast, upper-class individuals live lives of reduced threat and elevated personal control (Hypothesis 2). These conditions should give rise to a tendency for upper-class individuals to attribute personal outcomes and social events to internal dispositional forces (e.g., goals, traits)—a central component of the solipsistic social cognitive tendency we have been portraying thus far.

Research across a variety of samples and measures of social class lends support to Hypothesis 5. In one study, a national phone survey, participants were asked to give explanations of wealth and poverty in society (e.g., “Why are people rich or poor?”). Lower-income participants were more likely to endorse contextual explanations for individual wealth and poverty (e.g., political influence, discrimination), whereas upper-income participants were more likely to endorse dispositional explanations (e.g., hard work, effort; Kluegel & Smith, 1986). In a second study conducted in France, participants were asked to explain the actions of a fictitious person leaving a supermarket (e.g., an irritated cashier). Lower-class participants, categorized in terms of occupational status as a worker (vs. an executive), explained people's behavior in the vignettes as contextually determined (e.g., due to external distractions) 33% of the time and dispositionally determined (e.g., due to temperament) only 20% of the time. Upper-class participants' explanations reversed this ratio, invoking dispositional causes (50%) more than contextual ones (17%; Beauvois & Dubois, 1988). Importantly, these class-based differences in attribution have been demonstrated in the United States—where dispositional explanations are more common—and in cultures such as Russia, where contextual explanations are normative (Grossmann & Varnum, 2011). That these patterns emerge across different nations suggests that class-based patterns of attribution style extend over and above other cultural influences on attribution (e.g., Choi & Nisbett, 1998).

Studies using measures of subjective perceptions of social class rank have yielded similar results. Across several studies, Kraus et al. (2009) asked participants to explain a graph showing increasing economic inequality in the United States, the causes of everyday life outcomes (e.g., being laid off at work), and the emotional expressions of a focal person surrounded by others. In these studies, lower-class individuals, measured in terms of subjective SES, offered more contextual explanations of economic inequality (e.g., “it's due to differences in political influence”) and everyday

life outcomes. They were also more likely to take peripheral emotion expressions into account when attributing emotion to facial expressions in the foreground. In contrast, upper-class individuals favored dispositional explanations for economic inequality and everyday life outcomes, and they indicated that an individual's facial expressions were independent of emotions expressed by other individuals in the periphery. Importantly, these findings held even after controlling for objective indices of social class (i.e., educational attainment and annual income) and political orientation, indicating that social class rank independently shapes these attributional patterns. Moreover, the personal sense of control mediated the association between social class and dispositional versus contextual explanations. That is, lower-class individuals tended to make contextual explanations because of the reduced freedom and influence they enjoy relative to upper-class individuals (see Figure 3).

Dispositional and contextual explanatory styles are likely to influence other dimensions of how upper- and lower-class individuals perceive the social world. The class-related differences in attribution we have documented are likely to shape punishment decisions. Given that upper-class individuals prioritize personal responsibility, we would expect them to mete out more severe punishments of suspected criminals (e.g., Weiner, Graham, & Reyna, 1997). Within academic settings, lower-class individuals should be more likely to favor contextual explanations of their and others' academic success by, for example, attributing others' exemplary grades to uncontrollable external forces (e.g., biased teachers). This pattern of explanation could contribute to poorer performance and a reduced sense of belonging in academic contexts, to the extent that academic performance is based on individual hard work and effort (e.g., Dweck & Leggett, 1988). Class-based attribution styles also have implications for emotion and social categorization, two topics we turn to in later sections of this review.

### Hypothesis 6: Lower-Class Individuals Will Believe Social Categories Are Socially Constructed, Whereas Upper-Class Individuals Will Essentialize Social Categories

The extent to which individuals believe that categories are socially constructed—that is, created within social ideologies and

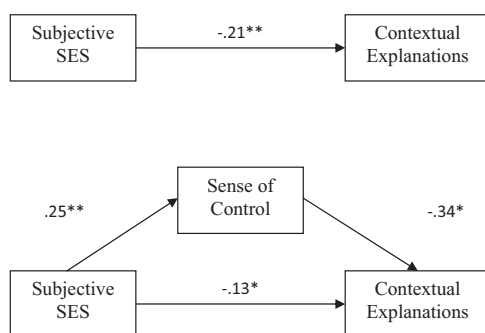


Figure 3. The relationship between lower subjective socioeconomic status (SES) and contextual explanations partially mediated by the personal sense of control. \*  $p < .05$ . \*\*  $p < .01$ . Reprinted from “Social Class, the Sense of Control, and Social Explanation,” by M. W. Kraus, P. K. Piff, and D. Keltner, 2009, *Journal of Personality and Social Psychology*, 97, p. 1000. Copyright 2009 by the American Psychological Association.

histories—or essentialist—based on inherent, stable, and unchangeable qualities—is central to intergroup perception (Haslam, Rothschild, & Ernst, 2000; Keller, 2005). Essentialist beliefs, for example, are at the core of out-group prejudice because they increase the perceived legitimacy of group differences (Allport, 1954). Individuals invoke essentialist beliefs about others to justify or maintain social hierarchies (Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004; Jost, Pelham, Sheldon, & Sullivan, 2003). The simple exposure to essentialist lay theories about social hierarchy—for example, by learning that gender inequality is likely to remain stable over time—leads both women and men to be less likely to oppose gender inequality (Morton, Postmes, Haslam, & Hornsey, 2009).

Historical analyses suggest that essentialism may be a predilection of upper-class individuals. For example, the tendency for upper-class, 19th century scientists to espouse Social Darwinism—which includes the thesis that some races are inherently superior to others—can be seen as an example of those from the upper-class strata categorizing groups according to what are believed to be innate characteristics (Degler, 1991; Gould, 1981). Historical analyses of manners and taste yield a similar conclusion, that those in the upper classes readily endorse the view that certain people are inherently more refined in their sensibilities, and worthy of their station (e.g., Bourdieu, 1979; Elias, 1978).

In Hypothesis 6, we posit that contextualist and solipsistic orientations will lead lower- and upper-class individuals to categorize social groups in different ways. More specifically, we predict that lower-class individuals will be more likely to believe that social categories (e.g., gender, ethnicity, social class) are culturally constructed—that is, shaped by prevailing ideologies, historical and economic conditions, and social mores. In contrast, upper-class individuals will be more likely to endorse essentialist theories of social groups, that social categories are based on inherent and unchangeable biological factors, such as particular genetic tendencies or temperament profiles. This prediction follows, in part, from the tendency for upper-class individuals to explain social behavior in dispositional terms (Hypothesis 5).

Research on India's caste system provides initial evidence in support of Hypothesis 6. Mahalingam (2003, 2007) recruited people who belonged to the upper- (Brahmins) and lower-castes (Dahhlits) of India. These participants read stories wherein the protagonist—either from an upper- or lower-caste—is adopted by an upper- or lower-caste family, after which participants made inferences about the protagonist's future behavior. Lower-caste Indians responded in a social constructivist manner: They believed that a child would behave in a fashion consistent with the caste of the family he or she was adopted by. In contrast, upper-caste Indians responded in an essentialist manner: They predicted that having birth parents from an upper-caste would lead the protagonist to behave in upper-caste fashion.

Lower- and upper-class individuals in the United States show similar patterns of essentialist beliefs about the category of social class (Kraus, 2010). In one survey study, adults indicated their beliefs in essentialist (e.g., “A person's social class cannot be changed”) or social constructivist (e.g., “It is impossible to determine one's social class by examining their genes”) conceptions of social class categories. As expected, lower-class participants, measured in terms of subjective SES, were more likely to endorse social constructivist theories of social class, whereas upper-class

participants endorsed essentialist theories of social class, presupposing that social class was inherent, biological, and unchangeable.

Upper-class individuals' essentialist beliefs are likely to extend beyond what we have discussed thus far—social class categories. We posit that upper-class individuals are likely to endorse essentialist lay theories for physical abilities, intellectual aptitudes, and even other social categories (e.g., ethnicity, gender). On this latter point, some of our own preliminary research is suggestive: Individuals scoring higher in subjective SES tend to also endorse general beliefs about biological essentialism (e.g., “The kind of person someone is can be largely attributed to their genetic inheritance”; Bastian & Haslam, 2006) more than their lower-class counterparts (Kraus & Keltner, 2012). Whether essentialist beliefs, endorsed by wealthy and high-ranking individuals in society, are used to justify the current structure of society (e.g., by reducing support for wealth redistribution) or to perpetuate social inequality (e.g., by reducing charitable donations or favoring less progressive tax policies) are important areas of future research.

In this second section of our review, we have seen that class-based differences in the social self extend to how people from different class backgrounds perceive their social worlds. More specifically, we have detailed three hypotheses and accompanying empirical evidence showing that contextualist tendencies of lower-class individuals heighten empathic accuracy and the attunement to others' emotions, contextual attributions, and the espousal of social constructivist theories about social categories. In contrast, solipsistic tendencies of upper-class individuals decrease empathic accuracy, elevate dispositional attribution tendencies, and amplify essentialist beliefs. In the ensuing section of our review, we move beyond core self conceptions and social perceptions to examine how social class influences the interpersonal realm.

### **Social Class and the Interpersonal Realm: Prosocial Behavior, Relationship Strategies, and Moral Judgment**

Thus far we have seen that lower- and upper-class individuals construe the self and other individuals and events in their social environment in different ways. In our final set of hypotheses, we lay out predictions concerning the interpersonal consequences of class-related contextualism and solipsism. More specifically, we offer predictions and evidence concerning how lower-class individuals engage in more prosocial behavior. Within relationships, we predict that lower-class individuals will exhibit greater tendencies toward communal relationship strategies relative to their upper-class counterparts. And finally, with respect to moral judgment, we posit that lower-class individuals will attach greater value to concerns related to group safety and purity, whereas upper-class individuals will privilege concerns related to individual authority and respect. Table 4 summarizes our predictions regarding the influences of social class in the interpersonal realm.

### **Hypothesis 7: Lower-Class Individuals Will Feel More Compassion and Behave More Prosocially Relative to Upper-Class Individuals**

As we have noted, lower-class contexts are characterized by elevated social and environmental threats (Domhoff, 1998). One

Table 4  
*Social Class and Relationship Strategies*

Domain	Lower-class contextualism	Upper-class solipsism
Social behavior	Prosocial, compassionate	Self-focused, unethical
Relationship strategies	Communal	Exchange
Moral judgment	Group safety and purity	Individual rights and respect

response to such threat is hostile reactivity, and we have detailed evidence showing that in some cases, lower-class individuals display this reactive tendency (Hypothesis 1). Recent analyses of attachment patterns, the neurobiology of threat, and social connection bring into focus another social response to threat, one that should vary according to social class: tending to one's relationship partners as a source of social support (Pickett & Gardner, 2005; Taylor, 2006; Taylor et al., 2000). Threat is thought to be a trigger of attachment-related behaviors in humans (e.g., Bowlby, 1979; Mikulincer & Shaver, 2005). In Taylor et al.'s (2000) tend and befriended model, relationship building processes supported by oxytocin networks in the central and peripheral nervous systems are likewise triggered by threat. Given this theorizing, it follows that lower-class individuals will respond to their more threatening social environments with prosocial and other-oriented behaviors (Hypothesis 7). Disposed toward prosociality, lower-class individuals should form relationships that enable their adaptation to such harsh environments. This hypothesis also readily derives from the reasoning and findings reviewed relevant to Hypothesis 4, that people of lower-class backgrounds are more empathetic, for empathy is one predictor of prosocial responses (Batson & Shaw, 1991). The paradoxical implication is that those who have less will actually give more and will be more responsive to the needs of others.

Several lines of evidence support the prediction that lower-class individuals demonstrate greater prosociality. For example, national survey research on consumer spending finds that lower-class individuals (measured in terms of income) spend a smaller portion of their income on costly consumer goods (e.g., automobiles) and proportionately more on assisting others in need relative to upper-class individuals (Frank, 1999). Similarly, in nationwide surveys of charitable contributions in America, lower-income individuals consistently give a higher proportion of their annual income to charity when compared to higher-income individuals (Greve, 2009; R. N. James & Sharpe, 2007). For instance, a study conducted by Independent Sector (2002) found that households earning under \$25,000 contributed 4.2% of their income to charity, whereas households making \$75,000 or more contributed only 2.7%. Although there are clearly multiple determinants of these findings, the social cognitive tendencies of individuals from different social class backgrounds is certainly one, and in keeping with Hypothesis 7.

Recent research by Piff, Kraus, Côté, Cheng, and Keltner (2010) builds upon these survey results, demonstrating that lower-class individuals are more likely to engage in many different kinds of prosocial behaviors during controlled laboratory experiments. In a first study, participants who were lower in subjective SES gave approximately 40% more of a 10-point gift they were presumably

going to receive during an experiment (which would later be exchanged for money) to an anonymous partner compared to upper-class participants (Piff et al., 2010). In a second study, participants induced to think of a context in which they were lower in social class rank—by comparing themselves to a person at the top of the social class hierarchy—were more likely to endorse the belief that people in general should give a higher proportion of their salary to charity relative to participants induced to think of a context in which they were upper-class. In a final study of actual prosocial behavior, lower-income individuals were more likely than upper-income individuals to help a distressed experiment partner by taking on a larger proportion of the workload in the experiment.

Other research has documented how contextualist (vs. solipsistic) orientations account for these class-related differences in prosocial response. In a final study in the aforementioned research, participants filled out a trait measure of attention to the needs of others—the social values orientation—wherein participants indicate how cooperative they are by allocating a selection of points to an anonymous “other” (Van Lange, 1999). On this measure, lower-class participants, indexed in terms of average education and income, showed higher trait levels of attention to others’ needs relative to their upper-class counterparts. Moreover, mediation analyses revealed that this focus on others’ needs explained why lower-class participants gave more in an economic game—wherein they allocated more points (which were equated to potential money winnings) to an actual experiment partner, despite the threat of a lack of reciprocation from the partner (Berg, Dickhaut, & McCabe, 1995). In essence, lower-class individuals were more contextually oriented to the needs of other individuals and, as a result, were more prosocial relative to their upper-class counterparts (Piff et al., 2010).

Prosocial behavior is driven by specific emotional responses, such as empathic concern and compassion (e.g., Batson & Shaw, 1991; Eisenberg et al., 1989; Goetz, Keltner, & Simon-Thomas, 2010). Building upon the social class and empathy findings reviewed earlier (Hypothesis 4), we contend that lower-class individuals will be prone to more prosocially-oriented emotion profiles relative to upper-class individuals. Recent work on compassion

lends credence to these claims. Compassion is an affective experience characterized by greater concern for the well-being of others (Batson & Moran, 1999; Eisenberg, 2002; Goetz et al., 2010; Oveis, Horberg, & Keltner, 2010). Previous studies have found that people in positions of power, for similar reasons outlined here, respond with less compassion than individuals in low power positions (Van Kleef et al., 2008).

With respect to social class, Stellar, Manzo, Kraus, and Keltner (2011) have found in several studies that lower-class individuals experience greater compassion in response to others’ suffering than their upper-class counterparts. In one study, lower-class individuals, measured in terms of self-reported social class category (e.g., upper middle class), reported experiencing more daily compassion relative to upper-class participants using the dispositional positive emotion scale (Shiota, Keltner, & John, 2006). In a second study, participants viewed two different videos presented in counterbalanced order—one displaying distress and suffering and another displaying more neutral behavior of individuals—and then reported upon their own emotion experiences while their physiological responses were measured. In response to the distress stimuli, lower-class university students, measured in terms of parental income and educational attainment, were more likely to show a decrease in heart rate relative to when they viewed the neutral stimuli, a peripheral physiological response associated with an approach orientation to others (Eisenberg, 2002; Porges, 2007). Upper-class participants showed no such differences in heart rate between the two videos (Stellar et al., 2011; see Figure 4). It will be important to examine how social class influences other measures of peripheral central nervous system response shown to covary with compassion and prosociality, such as respiratory sinus arrhythmia (e.g., Oveis et al., 2009; Porges, 2007).

To the extent that empathy and compassion predict increased ethical behavior (e.g., Goetz et al., 2010), a related prediction arising from Hypothesis 7 is that upper-class individuals will also be more likely to engage in increased unethical and antisocial behavior relative to lower-class individuals. Preliminary evidence is in keeping with this prediction. For example, reported shoplifting events occur most frequently among individuals with at least some college education or household incomes over \$70,000

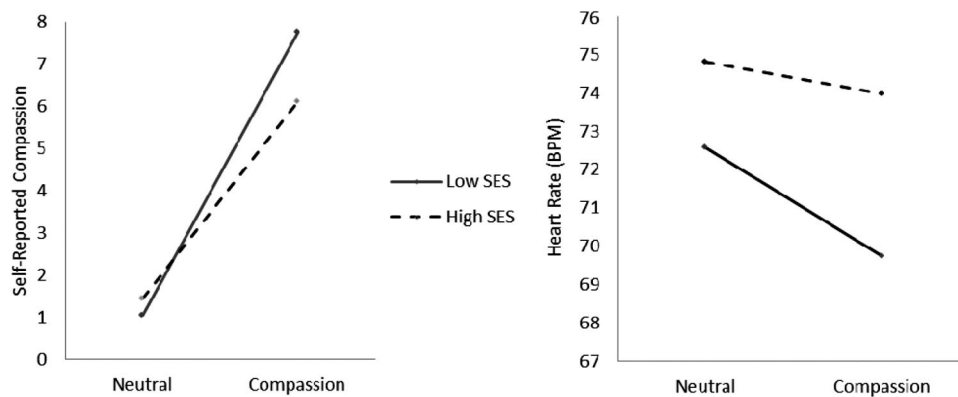


Figure 4. Social class differences in self-reports of compassion and heart rate when watching a neutral or compassion-inducing emotion video. SES = socioeconomic status; BPM = beats per minute. Reprinted from “Class and Compassion: Socioeconomic Factors Predict Responses to Suffering,” by J. E. Stellar, V. M. Manzo, M. W. Kraus, and D. Keltner, 2011, *Emotion*. Copyright 2011 by the American Psychological Association.

(Blanco et al., 2008). Moreover, laboratory studies by Piff, Stancato, Côté, Mendoza-Denton, and Keltner (2012) found that upper-class individuals, measured in terms of subjective social class rank, were more likely to exhibit a variety of self-serving unethical behaviors, including cheating, lying, taking valuable goods from children, and driving in violation of the law than their lower-class counterparts.

Taken together, the above research suggests that one way lower-class individuals respond to their potentially threatening environments is by building relationships with other individuals through prosocial behavior and emotion. Several lines of inquiry emerge from this theorizing and relevant findings. First, it will be important to examine the factors—such as the in- versus out-group status of those in need—that determine when lower-class individuals respond to threat with prosocial responses and when they respond with cynical mistrust or hostility. For example, it seems reasonable to expect that lower-class individuals may be particularly likely to respond prosocially in the absence of direct competition for resources with out-group members, or when perceived threats are not self-relevant. Just as intriguing is the question of the motives that may increase prosocial responses among upper-class individuals. Prosocial behaviors arise for several reasons (Batson & Shaw, 1991), and we have only focused on one here—the empathic, compassionate attention to others' needs. Perhaps upper-class individuals are more likely to respond in prosocial fashion when their goals are aligned with the goals of those-in-need, or when their helping behavior is visible to others, and is thereby used as a means to attain elevated status and respect (Anderson & Kilduff, 2009; Hardy & van Vugt, 2006).

### **Hypothesis 8: Lower-Class Individuals Will Engage in More Communal Relationship Strategies, Whereas Upper-Class Individuals Will Engage in More Exchange Strategies**

Close relationships with friends, family members, and romantic partners are essential to life-satisfaction (Reis & Collins, 2004); shape people's self-conceptions, goals, and motivations (Andersen & Chen, 2002; Baldwin, 1995; Bowlby, 1979); and provide social support in times of stress (Taylor, 2006). In this section, we detail how solipsistic and contextualist orientations drive divergent relationship strategies among upper- and lower-class individuals.

Our predictions derive from theorizing on communal and exchange relationships strategies (Beck & Clark, 2010; Clark, 1984; Clark & Mills, 1993; A. P. Fiske, 1992; J. W. Johnson & Grimm, 2010). In exchange-relationships, individuals seek to trade relationship benefits with partners (e.g., emotional support, responding to needs) for equal value, and they keep track of costs and benefits within their relationships. In contrast, in communal relationships, individuals give relationship benefits to partners unconditionally, and they are more concerned with need than equality. In Hypothesis 8, we predict that upper-class individuals' solipsistic tendencies will lead these individuals to favor exchange relationship strategies more than their more communally-oriented, lower-class counterparts. This prediction follows from many of the findings we have reviewed thus far—for example, that upper-class individuals are relatively less empathic (Hypothesis 4), less prosocial (Hypothesis 7), and more personally agentic (Hypothesis 3), whereas lower-class individuals are more prosocially oriented to the emo-

tions and needs of others. We expect class-based relationship strategies to shape many types of relationships, from the briefest encounter with a stranger to the most consequential long-term relationship with a significant other.

The few studies relevant to Hypothesis 8 are suggestive. For example, a communal orientation to relationships is characterized by unconditional emotional engagement with the needs and interests of others, even in response to strangers and non-kin (Clark & Mills, 1993). Recent work by Kraus and Keltner (2009) documented that lower-class individuals show increased engagement behaviors, even in relatively brief social encounters with strangers. In this research, university students varying in social class, as measured by family income and parental education, took part in a get-acquainted interaction with a stranger. In the first 60 s of this interaction, lower-class participants were significantly more likely to show socially engaged nonverbal behaviors—head nods, eyebrow raises, laughs, and shared gaze—relative to their upper-class counterparts. In contrast, upper-class participants were more likely to disengage from their interaction partners, engaging instead in rude behaviors that included object manipulations (e.g., checking a cellular phone), doodling, and self-grooming. It will be important to test Hypothesis 8 further by extending these findings concerning engagement behavior to other relationships—for example, those between friends, romantic partners, or colleagues at work.

Communal relationship strategies include other kinds of behaviors that increase interdependence, and select studies find class-related differences in such behaviors. For example, lower-class children's play behavior also demonstrates their increased engagement with others. In this work, researchers took pictures of grade school children while they played together in the school yard. Detailed coding of these pictures revealed that children from lower-class neighborhoods were more likely to play at closer proximity with each other relative to children from relatively upper-class neighborhoods (Scherer, 1974). Moreover, given the research we summarized earlier suggesting that lower-class parents shape the self-concepts of their children by stressing the importance of blending in (vs. standing out) at school (Pearlin & Kohn, 1966; Weininger & Lareau, 2009), it is possible that these class-based communal relationship strategies arise from lower-class individuals' contextualist orientations to the self (Hypothesis 3).

Social class should also shape the dynamics of romantic bonds. Research on lower-class individuals' marital relationships has focused primarily on how financial strain and economic uncertainty lead to increased relationship dissatisfaction (e.g., Vinokur, Price, & Caplan, 1996), marital instability (e.g., Gudmunson, Beutler, Israelsen, McCoy, & Hill, 2007), and divorce (e.g., Amato & Previti, 2003). Studies of class-based differences in communal behavior in romantic relationships are clearly needed. Given the literature on communal relationships, one might expect lower-class individuals to be more responsive to the needs of their partner, more attuned to their partner's emotions (Levenson & Gottman, 1983), and less likely to keep track of the costs and benefits of social support (see Clark & Mills, 1993).

In Hypothesis 8, we also predict that upper-class individuals will be more likely to adopt exchange strategies in their romantic relationships, and indirect evidence lends initial support to this prediction. More specifically, individuals who exhibit exchange relationship strategies are likely to experience relationship conflict

when their relationship partners do not meet their needs, are perceived as selfish, or do not share similar goals (e.g., Clark & Mills, 1993). Research by Amato and Previti (2003) bears on the prediction that upper-class individuals demonstrate such an exchange orientation in intimate relationships, experiencing conflict primarily because their partners do not meet their personal needs. The researchers analyzed a 17-year study on marital instability involving more than 2,000 married persons, of which, 208 individuals provided an explanation for why they divorced. Relative to their lower-income counterparts, upper-income participants in this sample were more likely to report personality problems (e.g., “He was selfish and only thought of himself”) or incompatibility (e.g., “We didn’t agree on sex, friends, goals, mutual ideas, or anything”) as reasons for their divorce—suggesting that upper-class participants viewed marriage relationships more in terms of an exchange process wherein partners engage in mutually satisfying trades (Amato & Previti, 2003).

Other studies yield convergent findings: When explaining the reasons for their divorce, people from upper-class backgrounds are more likely to report conflict in values (Goode, 1956), partners’ excessive demands on them (Levinger, 1966), and self-interest and incompatibility (Kitson, 1992) than their lower-class counterparts. All these reasons reflect a focus, among upper-class individuals, on the partner’s role in meeting their needs, receiving equal benefits from their partner, and sharing similar goals and interests. In contrast, lower-class individuals tend to report either external financial stressors (Goode, 1956; Kitson, 1992; Levinger, 1966) or physical and emotional abuse (Amato & Previti, 2003; Kitson, 1992; Levinger, 1966) as reasons for their divorce, reminiscent of the themes of threat (Hypothesis 1) and contextual attributions (Hypothesis 5) that we have reviewed earlier.

Research examining relationship strategies among upper- and lower-class individuals is in its infancy. More direct tests of the complementary predictions of Hypothesis 8 are needed to pin down with greater confidence that lower- and upper-class individuals resort to communal- and exchange-based strategies, respectively. Other corollaries of Hypothesis 8 await empirical examination. For instance, one might expect class-based differences in the determinants of relationship satisfaction, with lower-class individuals deriving greater satisfaction from responding to their romantic partner’s needs and upper-class individuals from having their needs met by their romantic partner. Given their communal orientation, we would expect lower-class individuals to form relationships more quickly, which is likely to yield many benefits (greater friendship networks, a stronger sense of community or social support) as well as problems (increased vulnerability to rejection). Future research is necessary to test these possibilities.

### **Hypothesis 9: Lower-Class Individuals’ Moral Judgments Will Prioritize Purity and Harm, Whereas Upper-Class Individuals’ Moral Judgments Will Prioritize Individual Rights, Respect, and Authority**

In what has become a classic study, Haidt, Koller, and Dias (1993) asked participants from lower- and upper-class neighborhoods in Brazil and the United States to read vignettes in which a person engaged in harmless but offensive or disgusting acts. In one, a person cleans a toilet with a national flag. In another, a man has sex with a chicken carcass and then cooks and eats it in the privacy of his own home. Across cultures, lower-class individuals were more likely to deem these harmless and disgusting behaviors as harmful and more likely to endorse punishments for the individuals engaging in the actions relative to their upper-class counterparts, who indicated that these actions were more matters of personal choice than moral condemnation (see Table 5).

This important study, and others that followed (e.g., Greene, Sommerville, Nystrom, Darley, & Cohen, 2001), have led to a burst of interest in the psychology of morality, which refers to evaluations (good or bad) of others’ actions or character that are based on one’s cultural values (de Waal, Macedo, & Ober, 2006; Haidt, 2001; Janoff-Bulman, Sheikh, & Hepp, 2009). It also led to important theorizing about cultural determinants of moral judgment (Shweder, Much, Mahapatra, & Park, 1998) and the emotional bases of moral intuitions (Haidt, 2007; Haidt & Graham, 2007; Horberg, Oveis, & Keltner, 2011). In a synthesis of this emergent field, Haidt posits five moral domains: harm (e.g., committing self/other injury), purity (e.g., cleanliness of body and mind), fairness or injustice (e.g., stealing), authority or respect (e.g., interrupting your teacher), and loyalty and in-group favoritism (e.g., national pride; Haidt, 2007; Haidt & Graham, 2007).

Somewhat surprisingly, perhaps the most robust effect in Haidt and colleagues’ (1993) original study—that of social class upon moral judgments of offensive actions—has received little empirical attention. In our review thus far, we have already seen that lower- and upper-class individuals diverge in their judgments related to moral domains—for example, in judgments of inequality (Hypothesis 5), in their attunement to others’ harm (Hypothesis 4), and in their prosocial, altruistic action (Hypothesis 7). In our final hypothesis, we offer predictions concerning how class will influence moral judgments within Haidt’s five moral domains. More specifically, we predict that lower-class individuals will prioritize the domains of purity and harm in their moral frameworks, whereas upper-class individuals will prioritize respect and authority.

Table 5

*Percentage of Adults Who Said That the Immoral Actor Should Be Stopped or Punished for Harmless, but Offensive, Actions*

Action done to the immoral actor	Recife, Brazil		Porto Alegre, Brazil		Philadelphia, United States	
	Low SES	High SES	Low SES	High SES	Low SES	High SES
Stopped or punished?	63	35	57	34	63	19

*Note.* Numbers indicate percentages. SES = socioeconomic status. Data reprinted from “Affect, Culture, and Morality, or Is It Wrong to Eat Your Dog?” by J. Haidt, S. H. Koller, and M. G. Dias, 1993, *Journal of Personality and Social Psychology*, 65, p. 619, Table 1. Copyright 1993 by the American Psychological Association.

Many of the findings we have reviewed thus far justify the prediction that lower-class individuals will moralize the domains of purity and harm relative to their upper-class counterparts (for specific dimensions of “moralization,” see Horberg et al., 2011; Rozin, 1999). Because of their sensitivity to threats in their environments (see Hypothesis 1), violations of purity—wherein a person engages in an unclean or unhealthy action (e.g., eating rotten food) that could spread disease—are particularly likely to be perceived as harmful to lower-class individuals. Recent research has indeed documented that lower-class individuals have stronger negative reactions to violations of purity, and stronger positive reactions to purity virtues, than their upper-class counterparts. Across studies, Horberg, Oveis, Keltner, and Cohen (2009) had participants rate vignettes portraying impure actions (e.g., having sexual intercourse with a chicken carcass, engaging in acts of sexual promiscuity) or virtuous actions in the realm of purity (e.g., being a vegetarian, meditating). Across these studies, lower-class individuals—measured in terms of social class categorization (e.g., middle class)—were more likely to punish impure actions relative to upper-class individuals but praise the moral worthiness of pure actions (Horberg et al., 2009; see Figure 5).

In the harm and care domain, it is likely that lower-class individuals, given their enhanced empathy (Hypothesis 4), proso-

ciality (Hypothesis 7), and communal orientation (Hypothesis 8), will judge actions that harm the self or others as particularly deplorable, and caregiving behavior as particularly praiseworthy relative to their upper-class counterparts. Evidence we reviewed earlier relevant to Hypothesis 7, that lower-class individuals show stronger physiological reactions to the suffering of others, is in keeping with this prediction.

With regard to the authority and respect domain, upper-class individuals may be particularly likely to want to maintain their elevated social positions and, by implication, may view violations of respect and obedience as particularly worthy of moral condemnation relative to lower-class individuals. As well, upper-class individuals may view personal achievement as particularly worthy of moral praise relative to lower-class individuals. Whether this pattern of moral judgment is most likely when social hierarchy is unstable, or among individuals who tend to value status differences between groups in society (e.g., Sidanius & Pratto, 2001), represent important areas of future research.

The preceding predictions concern class-related differences in the privileging of different moral foundations. When individuals de-emphasize specific moral concerns, they often construe actions within the domain as a matter of personal choice (Greene & Haidt, 2002; Haidt et al., 1993; Shweder et al., 1998; Tisak & Turiel, 1984). In light of this reasoning, we would predict that upper-class individuals—given to a solipsistic focus on their own personal control (Hypothesis 2) and their own personal choices (Hypothesis 3)—would be likely to deem actions relevant to moral domains as matters of individual rights and personal choice relative to their lower-class counterparts.

Aside from Haidt et al.’s (1993) original research, select studies are in keeping with this prediction. For example, young upper- and lower-class Brazilian children, defined by their neighborhood, parents’ occupation title, and income, were given vignettes portraying children’s treatment of the personal items of others (e.g., “should a child peak at the personal diary of another child?”). In this study, upper-class children tended to view the handling of other people’s personal items as a matter of personal choice, whereas lower-class children viewed these actions as morally inappropriate (Nucci, Camino, & Shapiro, 1996).

This tendency for upper-class individuals to view morally-relevant actions through the lens of personal choice is likely to influence other kinds of moral judgments. Upper-class individuals may be more likely to think injustice and unfairness in society are matters of personal choice rather than a moral problem of right and wrong, a finding that would align with research suggesting that upper-class individuals endorse dispositional explanations for economic inequality in society (Hypothesis 5).

### Social Class: A New Frontier of Psychological Inquiry

In this review, we have taken steps to outline a social cognitive theory of social class. We have argued that the differences in resources and rank that define lower- and upper-class contexts give rise to contextualist and solipsistic social cognitive patterns that guide class-specific ways of construing the self, perceiving the world, and relating to others. The rich do indeed differ from the poor. With respect to the self, lower-class individuals show elevated sensitivities to threat and conceptualize the self in communal fashion, whereas upper-class individuals experience an elevated

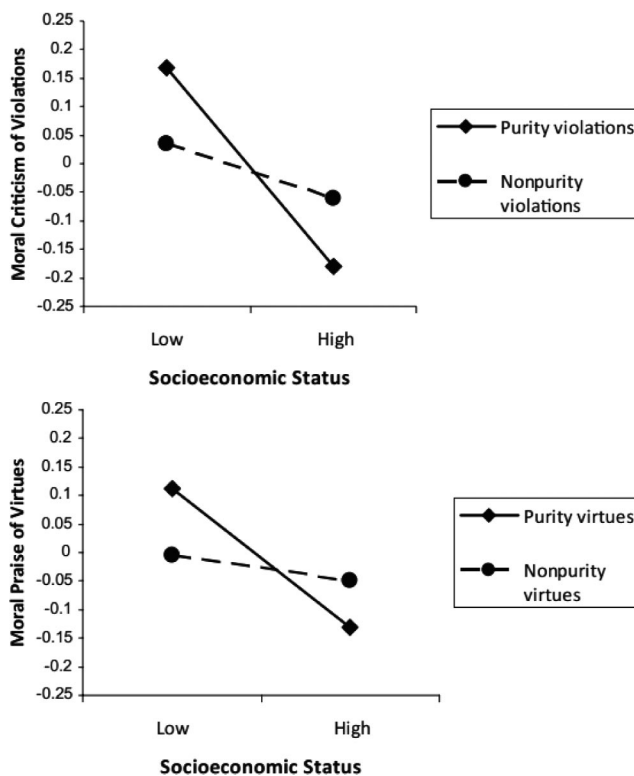


Figure 5. Meta-analysis across three studies illustrating participants’ tendency to criticize violations of purity (top graph) or to praise purity virtues (bottom graph) compared to reactions to actions in non-purity domains, as a function of social class. Reprinted from “Disgust and the Moralization of Purity,” by E. J. Horberg, C. Oveis, D. Keltner, and A. B. Cohen, 2009, *Journal of Personality and Social Psychology*, 97, p. 972. Copyright 2009 by the American Psychological Association.



sense of control and experience the self in personally agentic ways. With respect to perceiving the world, lower-class individuals are more empathic, explain events in terms of broad contextual forces, and conceive of social categories as cultural constructions, whereas upper-class individuals invoke dispositional explanations to make sense of the world and essentialize social categories. In the interpersonal realm, lower-class individuals respond with compassion and communal relationship strategies, and they—not surprisingly—privilege the moral domains of purity and harm. Upper-class individuals, by contrast, are disposed toward more exchange-oriented relationship strategies, and they appear to moralize the domains of authority, respect, and individual rights. In our review of the nine hypotheses that form the core of our theory, we have noted many ways in which more definitive data are needed. As the psychological study of social class matures, additional complexities await empirical attention.

### Measuring Social Class

We have advocated measuring the social class context that an individual inhabits through indices of an individual's material resources (e.g., education and income) and perceived social class rank relative to others. Initial studies suggest that the more objective indices of social class and their rank-based counterparts influence behavior in similar fashion (e.g., Kraus, Piff, et al., 2011). Nevertheless, there are likely to be instances where perceptions of social class rank are a more powerful predictor than objective measures, perhaps given their closer connection to the everyday experience of social class (e.g., Adler et al., 2000; Kraus et al., 2009). Future research is needed to better understand why, and in what circumstances, social class rank is more proximally related to class-based social cognitive patterns.

On this latter point, a few studies are suggestive of the importance of perceptions of social class rank. First, in the aforementioned research of S. E. Johnson et al. (2011), middle class students—many of whom come from objectively wealthier families—actually perceived increased threat in elite university contexts predominantly inhabited by considerably more wealthy individuals. As a second example, participants with lower objective social class, measured using a composite of educational attainment and annual income, were particularly likely to expect others to behave in a hostile or aggressive manner when thinking of an interaction where they were lower (vs. higher) in social class rank (Kraus, Horberg, et al., 2011). In both these studies and others we have reported in this review (e.g., Adler et al., 2000; Kraus et al., 2009), social class rank emerged as a powerful determinant of class-based social cognitive tendencies even after accounting for objective resource measures of social class.

With respect to measurement, moderate correlations among the three objective measures of social class and perceived social class rank highlight the need to examine whether and how different facets of social class impact class-based social cognitive patterns in unique ways. For instance, research in Mexico has found that whereas higher educational attainment was associated with lower blood pressure—presumably due to education-based efforts to warn against the negative health effects of obesity—higher income was actually associated with elevated blood pressure (Fernald & Adler, 2008; Martorell, Kettel Khan, Hughes, & Grummer-Strawn, 1998). Determining when the different components of social class

are likely to predict divergent or convergent patterns of behavior represents a rich and uncharted terrain of future research.

### Signaling Social Class

We have posited that contexts are sorted largely in terms of social class, and these contexts are the basis for the contextualist and solipsistic social cognitive patterns of lower- and upper-class individuals, respectively. One question that follows from conceptualizing social class in this fashion concerns how the social cognitive patterns of behavior that arise from these shared contexts can serve as signals of social class. This question is especially provocative given that unlike other social categories with relatively clear physical signals (e.g., gender, ethnicity), people do not readily display their objective social class (e.g., degrees, occupational titles) to others.

Preliminary evidence suggests that even in the constrained setting of a laboratory, social class signaling takes place. Kraus and Keltner (2009) had university students from differing family social class backgrounds engage in dyadic interactions, which were recorded and presented to a separate sample of naïve observers who rated the social class of the strangers in the videos based on 60-s observations of these brief encounters. Naïve observers correctly guessed the family social class of the students in the videos at levels of accuracy above chance—that is, social class was accurately signaled to strangers in 60 s. This study raises questions about the specific signals of social class. Most directly, observable symbols of wealth, education, and occupation are likely to signal social class. Social class is also likely signaled in subtler patterns of behavior, for example, in aesthetic preferences (e.g., art and music) or distinct manners and customs (e.g., table etiquette).

If indeed social class is signaled in interactions, as this preliminary work suggests, interesting questions also arise concerning the consequences of crossing social class boundaries. For instance, American colleges and universities are a predominantly upper-class context, created and organized by wealthy and well-educated individuals (Stephens et al., 2011, 2007). An upper-class context should theoretically favor upper-class individuals given their shared experiences in similar social environments. The work reviewed earlier by S. E. Johnson et al. (2011), wherein students from less wealthy families felt more socially rejected at an elite private university, is in keeping with this assertion. How signals of social class contribute to similar experiences of social rejection in university contexts represents one of the many intriguing future directions in this domain.

### Social Class Across Cultures, Ideologies, and the Life Course

The meaning of social class is certain to vary across cultures and political systems. Cultures vary dramatically in their degree of inequality—which separates the rich from the poor—and attitudes toward inequality (Domhoff, 1998; Hacker & Pierson, 2010; K. Phillips, 2002). Cultures also vary in their endorsement of egalitarian (vs. meritocratic) social values. It will be important for future research and theory to integrate concerns about culture, inequality, and attitudes toward class and equality into characterizations of how social class influences behavior.

It is also important to consider how cultural values of independence (vs. interdependence), such as those found in East Asian cultures (e.g., Choi & Nisbett, 1998; Markus & Kitayama, 2010), relate to our theory. For instance, some evidence suggests that interdependent cultural values tend to arise in countries with relatively lower economic resources (e.g., Hofstede, 2001) or in cultural groups within countries (e.g., Latino/a individuals in the United States) with relatively lower resources and construed rank (Triandis, 1995). Whether or not economic advancement in cultures that are traditionally viewed as interdependent leads to an increase in solipsistic social cognitive patterns, as our theory suggests, points to fascinating areas of inquiry. Preliminary evidence points to the plausibility of this claim: Mean levels of self-reported narcissism have increased in China—a predominantly interdependent culture—over the last few decades, and these self-reports are correlated with subjective perceptions of economic rank in society (Hua, Kwan, & Sedikides, 2011).

Given the rise of ethnic diversity in many parts of the world, and in particular, countries like the United States, it will also be important to examine how social class interacts with ethnic identity. For theoretical reasons, we would anticipate that individuals from traditionally stigmatized cultural groups (e.g., African Americans) have looser associations between resource- and rank-based measures of social class, given that individuals from these groups have cultural identities that also rank them in society, independent of social class. For instance, in a sample of pregnant women from different ethnic groups, subjective SES ratings predicted self-ratings of health significantly for White and Asian American women but not for African Americans and Latinas (Ostrove, Adler, Kuppermann, & Washington, 2000). Given that much of the research we report in this review involves ethnically homogenous samples, future research would do well to investigate how social class impacts social cognitive tendencies across distinct ethnic groups.

Another rich domain of inquiry pertains to the interactions between class, power, and sociometric status. Initial empirical data suggest that these three kinds of hierarchy are actually surprisingly independent in terms of individual experience (e.g., Bryan, Webster, & Mahaffey, 2011). It will be important to document how these three forms of hierarchy interact. For example, given that people attain status based on their demonstrated value to their peer groups (Anderson & Kilduff, 2009), recent evidence suggests that the solipsistic tendencies of upper-class individuals—characterized by the pursuit of one's own goals and interests at the potential expense of one's peers—may prevent upper-class individuals from attaining elevated sociometric status among their peers, and may explain why upper-class individuals are seen as competent but low in interpersonal warmth (e.g., S. T. Fiske, Cuddy, & Glick, 2007; S. T. Fiske et al., 2002). This is just one of many questions related to the interfaces between class, power, and sociometric status that await empirical inquiry.

As well, an individual's social class is situated within a broader cultural context that varies with respect to the mobility of social class and conceptions of such mobility. How does the economic mobility of the individual influence class-based social cognitive tendencies? Some studies find that family background is a stronger predictor of class-based health outcomes or social behaviors than the individual's own social class (e.g., Griskevicius, Delton, Robertson, & Tybur, 2011). These findings raise intriguing questions

about the development of class-based social cognitive patterns and how changes in class background over the life course factor into these patterns.

Finally, it is also important for future research to consider the experience of people who cross social class boundaries (e.g., the middle class student who attends an elite private university). Though research we have reviewed suggests that these cross-class contexts can heighten threat reactivity among lower-class individuals (e.g., S. E. Johnson et al., 2011), questions still remain regarding individuals who move fluidly between class boundaries, or those who transition from a working class background to middle class life as an adult. What is the acculturation process for these individuals? Perhaps an alternation model of biculturalism, where individuals move fluidly up or down the social class hierarchy depending on the context, fits these individuals' experiences (LaFromboise, Coleman, & Gerton, 1993). Understanding what sorts of behaviors people engage in to alternate between cultures, and the individual differences that may make these transitions more or less fluid, represents an important area of future research.

The psychological study of social class is an emerging frontier of research. As global inequality rises (Domhoff, 1998; Norton & Ariely, 2011) and new economic superpowers emerge with their own class dynamics, the psychological study of social class becomes even more critical to understanding how the material and rank-related conditions of social living influence how individuals perceive and relate to others.

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(Appendix follows)



## Appendix

Summary Table of Reviewed Studies Linking Social Class to the Nine Hypotheses

Authors	Country	Sample population	Measure of social class	Hypothesis (H)	Results
Chen & Matthews, 2001	United States	Children and adolescents	Composite of parental occupation and education	(H1) Threat perceptions	↓ social class ↑ heart rate; ↑ blood pressure; ↑ perceptions of threat and hostility while viewing ambiguous social interactions
Croizet & Clare, 1998	United States	Undergraduates	Parental occupation	(H1) Threat perceptions	↓ social class ↓ performance on academic tests framed as diagnostic of ability
Hajat et al., 2010	United States	Adults	Composite of assets and annual income	(H1) Threat perceptions	↓ social class ↓ decline in salivary cortisol after awakening
S. E. Johnson et al., 2011 (Study 1)	United States	Undergraduates	Family household income	(H1) Threat perceptions	↓ social class ↑ concerns about academic competency
S. E. Johnson et al., 2011 (Study 3)	United States	Undergraduates	Family household income	(H1) Threat perceptions	↓ social class ↓ Stroop task performance in elite university context
Kraus, Horberg, et al., 2011 (Study 1)	United States	Undergraduates	Composite of parental education and income; Social class rank within friendship	(H1) Threat perceptions	↓ social class ↑ accuracy in judging friends' hostile emotions during interaction
Côté et al., 2010	United States	Adults	Subjective income (e.g., lower income)	(H2) Sense of control	↑ social class ↑ ability to express emotions upon demand
Gallo et al., 2005	United States	Adult women	Occupation	(H2) Sense of control	↑ social class ↑ perceived control of daily activities
W. Johnson & Krueger, 2005	United States	Adult twin pairs	Annual income	(H2) Sense of control	↑ social class ↑ sense of control over various life outcomes
Kraus et al., 2009 (Studies 1–3)	United States	Adults and undergraduates	Subjective social class rank; Annual income; Parental education	(H2) Sense of control	↑ social class ↑ perceptions of personal control
Lachman & Weaver, 1998 (Studies 1–3)	United States	Adults	Annual income	(H2) Sense of control	↑ social class ↑ sense of personal mastery; ↓ sense of personal constraints
Hart & Edelstein, 1992	Iceland	Children	Parental occupation	(H3) Self-concept	↑ social class ↑ self-descriptions using unique individual traits
Snibbe & Markus, 2005 (Study 1)	United States	Adults	Educational attainment	(H3) Self-concept	↑ social class ↑ preferences for rock music (vs. country music)
Stephens et al., 2011 (Study 1)	United States	Adults	Educational attainment	(H3) Self-concept	↑ social class ↑ desire to choose a gift for oneself
Stephens et al., 2011 (Study 2)	United States	Undergraduates	Parental educational attainment	(H3) Self-concept	↑ social class ↓ liking of a t-shirt gift chosen for a confederate
Stephens et al., 2007 (Study 1)	United States	Undergraduates	Parental educational attainment	(H3) Self-concept	↑ social class ↑ likelihood of choosing a unique (vs. common) pen
Stephens et al., 2007 (Study 4)	United States	Adults	Occupation	(H3) Self-concept	↑ social class ↓ positive feelings about making same choice as a friend
Tucker-Drob et al., 2011	United States	Infants	Composite of parental education, income, and occupation	(H3) Self-concept	↑ social class ↑ genetic influence on mental ability

(Appendix continues)

## SOCIAL CLASS, SOLIPSISM, AND CONTEXTUALISM

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## Appendix (continued)

Authors	Country	Sample population	Measure of social class	Hypothesis (H)	Results
Turkheimer et al., 2003	United States	Children	Composite of parental education, income, and occupation	(H3) Self-concept	↑ social class ↑ genetic influence on intelligence
Weininger & Lareau, 2009	United States	Adult parents	Parental occupation	(H3) Self-concept	↑ social class ↑ focus on internal processes of children (e.g., intellectual growth)
Kraus et al., 2010 (Study 1)	United States	Adults	Educational attainment	(H4) Empathy	↓ social class ↑ accuracy in identifying emotions in facial expressions
Kraus et al., 2010 (Study 2)	United States	Undergraduates	Subjective social class rank	(H4) Empathy	↓ social class ↑ accuracy in reading an interaction partner's emotions
Kraus et al., 2010 (Study 3)	United States	Undergraduates	Manipulated subjective social class rank	(H4) Empathy	↓ social class ↑ accuracy in reading micro-expressions of emotion
Kraus, Horberg, et al., 2011 (Study 1)	United States	Undergraduates	Social class rank within friendship	(H4) Empathy	↓ social class ↑ contagion of hostile emotions during teasing interaction
Page-Gould et al., 2012	United States	Adults	Composite of family income and education	(H4) Empathy	↓ social class ↑ physiological linkage of sympathetic nervous system responses
Beauvois & Dubois, 1988	France	Adults	Occupational status	(H5) Causal explanation	↓ social class ↑ contextual explanations of behavior during ambiguous scenarios
Grossmann & Varnum, 2011 (Study 1)	United States and Russia	Undergraduates	Parental education	(H5) Causal explanation	↓ social class ↑ contextual attributions
Grossmann & Varnum, 2011 (Study 2)	United States and Russia	Undergraduates	Parental education	(H5) Causal explanation	↓ social class ↑ contextual attention; ↑ interdependent views of the self
Kluegel & Smith, 1986	United States	Adults	Annual income	(H5) Causal explanation	↓ social class ↑ contextual explanations for why people are rich or poor
Kraus et al., 2009 (Studies 1 and 2)	United States	Undergraduates	Subjective social class rank	(H5) Causal explanation	↓ social class ↑ contextual explanations of economic inequality
Kraus et al., 2009 (Study 3)	United States	Adults	Subjective social class rank	(H5) Causal explanation	↓ social class ↑ contextual explanations of personal life events
Kraus et al., 2009 (Study 4)	United States	Undergraduates	Subjective social class rank	(H5) Causal explanation	↓ social class ↑ contextual influence on ratings of focal target's emotions
Kraus, 2010 (Studies 1 and 3)	United States	Adults and undergraduates	Subjective social class rank	(H6) Inter-group attitudes	↑ social class ↑ beliefs that social class is stable and biologically determined
Mahalingam, 2003	India	Adults	Caste membership	(H6) Inter-group attitudes	↑ social class ↑ beliefs in essentialist folk theories (e.g., receiving a brain transplant from a rich person makes one rich)
Mahalingam, 2007	India	Adults	Caste membership	(H6) Inter-group attitudes	↑ social class ↑ beliefs that caste identity is transmitted from mother to offspring
Independent Sector, 2002	United States	Adults	Annual income	(H7) Social behavior	↓ social class ↑ proportion of income donated to charity

(Appendix continues)

## Appendix (continued)

Authors	Country	Sample population	Measure of social class	Hypothesis (H)	Results
Piff et al., 2010 (Study 1)	United States	Adults and undergraduates	Subjective social class rank	(H7) Social behavior	↓ social class ↑ generosity in the Dictator game
Piff et al., 2010 (Study 2)	United States	Undergraduates	Manipulated subjective social class rank; Annual income	(H7) Social behavior	↓ social class ↑ belief that people should donate to charity
Piff et al., 2010 (Study 3)	United States	Adults	Composite of education and household income	(H7) Social behavior	↓ social class ↑ giving in Trust game; ↑ egalitarian social values
Piff et al., 2010 (Study 4)	Canada	Adults and undergraduates	Composite of childhood and current income	(H7) Social behavior	↓ social class ↑ time helping distressed confederate
Piff et al., 2012	United States	Undergraduates	Manipulated subjective social class rank	(H7) Social behavior	↑ social class ↑ taking of candy set aside for children
Stellar et al., 2011 (Study 1)	United States	Undergraduates	Subjective social class category (e.g., middle class)	(H7) Social behavior	↓ social class ↑ trait levels of reported compassion
Stellar et al., 2011 (Study 2)	United States	Undergraduates	Composite of parental income and education	(H7) Social behavior	↓ social class ↓ heart rate during a compassion-inducing video
Amato & Previti, 2003	United States	Adult couples	Average education of couple	(H8) Relationship strategies	↑ social class ↑ report of incompatibility as a reason for divorce
Kraus & Keltner, 2009	United States	Undergraduates	Composite of parental education and family income	(H8) Relationship strategies	↑ social class ↓ nonverbal engagement (e.g., head nods, laughs); ↑ nonverbal disengagement (e.g., self-grooming) during an interaction
Scherer, 1974	United States	Children	Neighborhood wealth	(H8) Relationship strategies	↓ social class ↑ closeness of play behavior at school in still photographs
Haidt et al. (1993)	Brazil and United States	Adults and children	Neighborhood wealth and education	(H9) Moral judgment	↓ social class ↑ harm perceptions in response to disgusting acts; ↑ punishment of disgusting acts
Horberg et al., 2009 (Studies 1–3)	United States	Undergraduates	Subjective social class category	(H9) Moral judgment	↓ social class ↑ punishment of impure actions (e.g., promiscuity); ↑ praise of pure actions
Nucci et al., 1996 (Study 2)	Brazil	Children	Neighborhood wealth and education	(H9) Moral judgment	↓ social class ↑ tendency to view treatment of others' belongings as a moral responsibility

Received September 11, 2011  
Revision received March 25, 2012  
Accepted April 16, 2012 ■