Social Class, Culture, and Cognition

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Abstract

There are competing accounts of the relationship among social class, culture, and cognition. An *interactive* hypothesis suggests the relationship between social class and cognitive tendencies varies inasmuch as societies differ in their endorsement of those cognitive tendencies. An alternative *additive* hypothesis suggests that class-related environments promote differences in cognition. The authors addressed the validity of these accounts by simultaneously examining the effects of class among Americans (an independent society) and Russians (an interdependent society). Consistent with the additive hypothesis, lower social class was associated with more holistic cognition and more interdependent self-views in both countries. In Study 1, people from lower social class backgrounds and Russians displayed less dispositional bias. In Study 2, people from lower social class backgrounds and Russians demonstrated more contextual attention, more nonlinear reasoning about change, and more interdependent self-views (less self-inflation). Furthermore, in Study 2 differences in self-views mediated country and class effects on cognitive tendencies.

Keywords

culture, cognition, social class, independence, interdependence

Social class has been present in nearly every society and has been a central topic in the social sciences for centuries (e.g., Durkheim, 1893/1933; Marx, 1956). It has been associated with a broad range of consequences, including differences in aesthetic preferences (Bourdieu, 1984; Snibbe & Markus, 2005), child-rearing practices (Kohn & Schooler, 1969), health (Gallo, Monteros, & Shivpuri, 2009), and subjective well-being (Diener, Oishi, & Lucas, 2003). And yet only recently have psychologists begun to explore whether and how social class influences the ways in which people perceive and construe their world (Argyle, 1994).

Many social scientists hold that people of higher social class status dictate and exemplify the cultural practices of a society as a whole (Bourdieu & Passeron, 1977; Gramsci & Rosengarten, 1994). Thus, one would also suspect that the cognitive tendencies of people of higher social class status would be more culturally typical.[1] This *interactive* hypothesis of cultural transmission implies that the relationship between social class and cognitive tendencies will differ in societies that vary in their overall endorsement of those tendencies. An alternative *additive* hypothesis suggests that social-class-related environments promote differences in practices and values (Kohn & Schooler, 1983), which in turn may foster different cognitive tendencies. According to this hypothesis, social class will have the same effect on cognitive tendencies regardless of cultural differences in the overall endorsement of those tendencies. In the studies reported here, we examined whether social class is differentially associated with holistic versus analytic cognition in independently oriented and interdependently oriented cultures. In addition, we explored a common psychological mechanism underlying sociocultural differences in cognition.

Cultural Hegemony Versus Self-Direction

Philosophers, political scientists, and sociologists have suggested that people with higher social class status dictate the normative way of being and thinking in a given culture. For instance, the influential theory of *cultural hegemony* proposed by Gramsci suggests that the ideas and practices of the middle class are seen by the working class as general cultural norms, thus maintaining the existing social order (Gramsci & Rosengarten, 1994). A similar argument has been made by Bourdieu in *La Reproduction* (Bourdieu, 1984; Bourdieu & Passeron, 1977), where he suggests that cultural institutions such as education are used by the upper classes as a means of affirming and transmitting their practices, beliefs, and cognitive tendencies as those of the dominant culture. Ethnographic reports also suggest that some working-class children engage in countercultural behaviors to oppose the behaviors and norms associated with the middle class (Willis, 1981), despite the high value of conformity among working-class adults (Kohn, 1969). These observations suggest an interactive hypothesis regarding social class and cognition: The cognitive tendencies of higher class people exemplify those of a society more so than the cognitive tendencies of lower class people.

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An alternative additive hypothesis can be derived from the Marxist idea that control over the means of production and associated environmental affordances (e.g., working conditions) promote social class differences in cognitive style. Among others, Kohn, Schooler, and colleagues (e.g., Kohn & Schooler, 1983; Schooler, Samuel, & Oates, 2004) proposed that differences in people's occupations are the cause of social class differences in beliefs and practices (e.g., child-rearing practices) associated with self-direction. In a series of studies, those researchers found that higher class jobs facilitate occupational self-direction and promote a self-directed orientation (Kohn & Schooler, 1983). More importantly, researchers have replicated the effect of social class on values observed in the United States in a series of surveys in Japan, Ukraine, Poland, and Russia (Kohn et al., 1997; Kohn, Naoi, Schoenbach, Schooler, & Slomczynski, 1990; Tudge, Hogan, Snezhkova, Kulakova, & Etz, 2000), suggesting that the effects of social class on cognitive tendencies may also be universal across different societies.

Cultures and Analytic Versus Holistic Cognition

A revival in cultural psychological research has occurred in the past two decades (Heine, 2008). During this period, a heavy emphasis has been placed on two constructs: cognitive style and views of the self. Some countries, such as the United States, are characterized by *analytic cognition*: detaching a focal object from the perceptual field, predicting linear development of events, and ascribing causality to focal actors or objects. In contrast, other countries including China, Japan, and Korea are *holistic*, emphasizing paying attention to the entire perceptual field, especially relations among objects and events, predicting nonlinear development of events, and attributing causality to context (Nisbett, Peng, Choi, & Norenzayan, 2001). The ecological validity of these differences has been supported by cross-cultural analyses of cultural products such as newspapers, art, and advertisements (Masuda, Gonzalez, Kwan, & Nisbett, 2008).

Similarly, countries also differ in terms of their emphasis on self-direction as well as in their tendencies to endorse different views of the self. Some countries value *independence*: emphasizing uniqueness, possessing relatively low sensitivity to social cues, and encouraging self-directed behaviors that affirm autonomy. Other countries value *interdependence*, emphasizing harmonious relations with others, promoting sensitivity to social cues, and encouraging behaviors that affirm relatedness to others (Kitayama, Duffy, & Uchida, 2007). These cultural differences in views of the self have also been linked to differences in cognitive styles. A large body of evidence shows that interdependently oriented societies such as Japan, China, or Russia are more holistic in terms of cognitive style, whereas independently oriented societies such as Germany and the United States are more analytic (Markus & Kitayama, 1991; Nisbett et al., 2001; also see Varnum, Grossmann, Kitayama, & Nisbett, 2010, for a review).

It is worth noting that a self-directed orientation is part of the conceptualization of independent versus interdependent notions of the self (e.g., Markus & Kitayama, 1991). Consistent with research on social class effects on self-direction, psychologists have found that among North Americans higher social class status is associated with a preference for resisting influence and expressing uniqueness (Stephens, Markus, & Townsend, 2007) and lower levels of social mimicry (Kraus & Keltner, 2009)—all indications that higher social class is positively linked to independence. These findings, combined with the observation that self-views are associated with cognitive style (Varnum et al., 2010), suggest that working-class people are likely to be more holistic than middle-class people. In support of this claim, Kraus and colleagues found that working-class Americans favor contextual explanations for social events (Kraus, Piff, & Keltner, 2009).

Building on previous research on social class and culture, in the present research we tested interactive versus additive accounts of the relationship between social class and cognitive style. According to the interactive hypothesis, one would expect the middle class to be more analytic than the working class in predominantly analytic cultural contexts and more holistic than the working class in cultural contexts where holistic thinking is more predominant. Alternatively, the additive hypothesis suggests that the middle class is more analytic than the working class above and beyond the effect of country because of social structural differences in environmental affordances linked to independent versus interdependent views of the self.

Overview of the Present Research

We examined analytic or holistic cognition with a sample in which both country and social class varied simultaneously. We selected the United States as it is a Western, independently oriented society where analytic thinking is predominant (Nisbett et al., 2001). We selected Russia as it is an interdependently oriented society where holistic thinking is predominant (Grossmann & Kross, 2010; Kühnen et al., 2001).[2] Also, both Russian and American societies have been the focus of previous research on the relationship between social class and self-direction (e.g., Tudge et al., 2000). In Study 1, we examined class and country effects on dispositional bias. In Study 2, we addressed whether social class effects exist in other cognitive domains (visual attention and linear vs. nonlinear reasoning about change). In addition, we wanted to examine differences in self-views as a mechanism that mediates country and social class effects on cognition (Study 2).

Study 1

Study 1 sought to provide an initial test of the interactive and additive hypotheses, examining the effects of social class on cognition in the domain of social inference. This study was both a conceptual replication of previous work on social class and dispositional attribution (Kraus et al., 2009) and an

Table 1. Descriptive Statistics and Zero-Order Correlations in Study 1

	Russia ($n = 60$)		United States ($n = 62$)					
Variable	*M*	*SD*	*M*	*SD*	1	2	3	4
Undesirable action								
1. Dispositional attribution	4.33	1.53	5.63	1.29	—	–.38***	.23**	.13
2. Situational attribution	5.25	1.42	4.66	1.49		—	.18*	.09
Desirable action								
3. Dispositional attribution	4.38	1.81	5.10	1.65			—	–.46***
4. Situational attribution	5.18	1.46	5.16	1.69				—

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

extension of this work as it simultaneously examined cross-country differences in the same domain. Based on previous findings that Russians are more holistic than Westerners (Grossmann & Kross, 2010; Kühnen et al., 2001), we hypothesized that Russians would make less dispositional attributions for others' behavior. The interactive hypothesis predicted that country would moderate social class effects on attribution, whereas the additive hypothesis predicted that social class effects would be independent of the effect of country such that lower social class would be associated with less dispositional bias.

Method

Participants. In exchange for course credit, 62 American students from the University of Michigan (34 females; $M_{age} = 18.71$ years, $SD_{age} = 0.86$; all European Americans) and 60 Moscow State Regional University students (43 females; $M_{age} = 19.02$, $SD_{age} = 1.35$; 95% Russian, 5% other ethnicities) participated in the study. Moscow State Regional University is one of the top 20 Russian universities with students coming from the larger Moscow region.

Procedure and materials. Participants completed the study on their own, guided by written instructions that informed them that the purpose of the study was to explore "personality differences in personal perception."[3] Participants read two vignettes, which described a protagonist who performed either a desirable or an undesirable action (Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006, Study 3; for verbatim items, see the online supplement available at http://sitemaker.umich.edu/igor.grossmann/files/supplement_grossmann__varnum.pdf). After reading each vignette, participants answered two questions indicating (a) the extent to which "features of the protagonist such as his/her character, attitude, or temperament influenced his/her behavior" (dispositional attribution score) and (b) the extent to which "features of the environment that surround the protagonist such as the atmosphere, social norms, or other contextual factors influenced his/her behavior" (situational attribution score; 1 = *strongly disagree*, 7 = *strongly agree*).

Social class. Educational attainment has been proposed as the key factor that distinguishes different classes (e.g., Ehrenreich, 1989; Lareau, 2003; Willis, 1981).[4] Therefore, at the end of the study, participants indicated their parents' educational attainment (1 = *high school*, 2 = *some college*, 3 = *completed college*, 4 = *postgraduate*). The higher score in the family was used as an indicator of social class (Russia: $M = 2.13$, $SD = 0.89$; United States: $M = 2.48$, $SD = 0.65$).

Results

Preliminary analyses indicated that the groups in each country were matched on age, $t(120) = 1.51$, *ns*, and gender ($\chi^2 = 3.32$, *ns*). Neither age nor gender interacted with social class, age $F(1, 120) = 1.09$, *ns*; gender $F(1, 120) = 0.01$, *ns*, and controlling for these variables did not influence any of the results. Thus, they are not discussed further.

We performed a general linear model on the attribution scores (dispositional vs. situational) with country (Russia = –0.5 vs. the United States = 0.5) and social class as between-subject factors and story type (negative vs. positive) as a within-subject factor. There were no main effects of country or story type (Fs < 1; see Table 1 for descriptives and zero-order correlations). We observed a significant country (Russia vs. the United States) × attribution score (dispositional vs. situational) interaction, $F(1, 119) = 7.24$, $p < .01$, $\eta_p^2 = .06$, with Russians showing less dispositional bias than Americans. Subsequent analyses conducted separately for dispositional and situational scores indicated that the interaction was driven by a significant effect of country on dispositional scores, $F(1, 119) = 12.64$, $p = .001$, $\eta_p^2 = .1$, with Russians making less dispositional attributions than Americans. The effect of country on situational attribution scores was not significant ($F < 1$).

In the next step, we examined the effects of social class. The social class × attribution score (dispositional vs. situational) interaction was significant, $F(1, 119) = 3.79$, $p = .05$, $\eta_p^2 = .03$ (see Figure 1), with lower social class being associated with lower dispositional and higher situational scores than higher social class above and beyond the effect of country. Neither the country × social class interaction nor any other interaction was significant (all Fs < 1).

Study 2

Study 1 provided initial support for the additive hypothesis. In Study 2, we examined whether and how social class affects

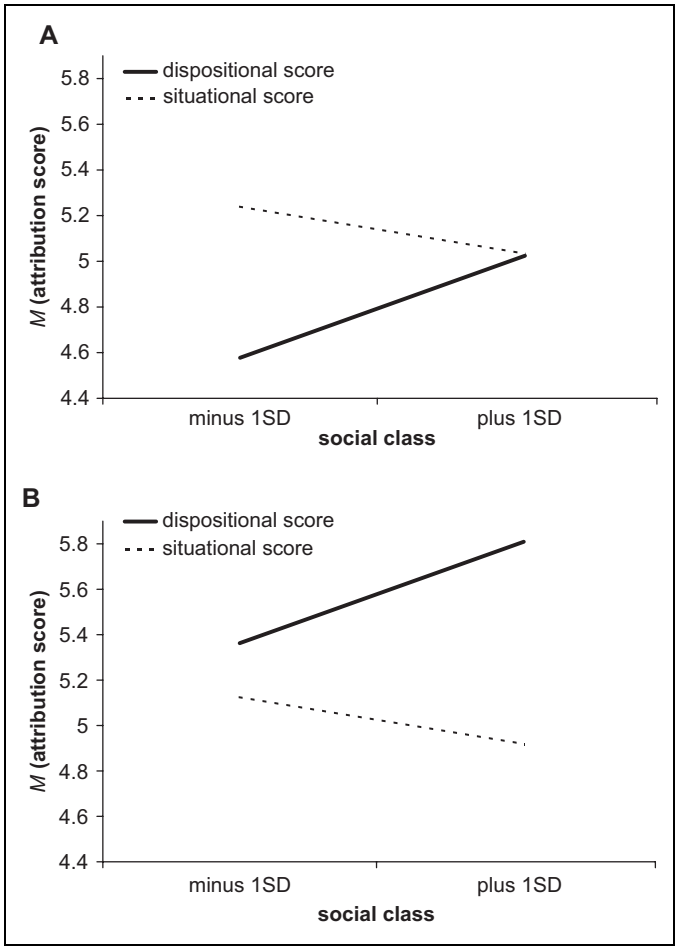

Figure 1. Effects of social class ($\pm$ 1 *SD* of the mean) for dispositional and situational attributions in Study 1 for Russia (Panel A) and the United States (Panel B)

other aspects of holistic thinking. We sought to address this question by examining holistic versus analytic tendencies in visual attention and reasoning about change.

Another question we addressed in Study 2 concerns the psychological mechanisms that mediate cultural and social class differences in cognitive style. Specifically, in line with previous cultural psychological theories about the social origin of cognitive styles (e.g., Markus & Kitayama, 1991; Varnum et al., 2010), we hypothesized that independent versus interdependent self-views drive differences in analytic versus holistic cognition. Members of societies in which independent self-views are more common should be motivated to symbolically inflate representations of their personal self at the expense of others. Indeed, self-inflation is more common in more independent countries (e.g., the United States) than in more interdependent countries (e.g., Japan; Duffy, Uchida, & Kitayama, 2008; Kitayama, Park, Sevincer, Karasawa, & Uskul, 2009). The second goal of Study 2 was to provide a formal test of this mediation hypothesis by simultaneously assessing cultural and social class differences in independent versus interdependent self-views and how these self-views relate to differences in cognition.

Method

Participants. In return for $12 (Michigan) or 350 rubles (Moscow, approximately $11), 53 University of Michigan students (36 female; $M_{age} = 19.54$, $SD = 1.33$; 92.0% European Americans, 2.0% African Americans, 6.0% other ethnicities) and 61 Moscow City University of Education and Psychology students (46 female; $M_{age} = 20.05$, $SD = 2.94$; 93.2% Russians, 6.8% other ethnicities) participated in the study.

Procedure. Participants completed the study on their own, guided by written instructions, which informed them that this study explored social relationships and cognition and invited them to participate in the attention task.

Dependent Variables

Visual attention. Following Masuda and Nisbett (2006), participants watched three pairs of 20-s animated scenes (e.g., a construction site and an airport, each of them presented four times) on a technically identical 15 in. monitor, which included three to four focal objects (moving or fixed in the foreground or middle-range area; e.g., aircraft) and several background objects (e.g., ground, sky, buildings). Each scene pair consisted of two similar but slightly different vignettes, and the participants' job was to detect the differences between them. Participants recorded changes between the first and second version. Two hypothesis-blind Russian–English bilinguals coded each sentence for reference to one of the two categories of change (focal vs. context). Interrater reliability was high (93% agreement, with disagreements decided by the first author). The number of changes to focal objects and to the context that participants noticed was counted and averaged across the four sets of scenes. Following Masuda and Nisbett (2006), focal change scores were subtracted from context change scores (r[difference scores] = .29) and collapsed to form a single index.

Prediction of change. Participants were presented with eight graphs, each showing a trend (e.g., economic growth; for materials, see Ji, Nisbett, & Su, 2001), and indicated the next two points on each graph. We measured the vertical distance (number of cells on the grid) between the baseline in "2004" and the prediction in "2008." These scores were multiplied by "–1" and averaged to form a single index of nonlinear reasoning ($r > .42$).

Symbolic representation of self and friends (self-inflation). Self-inflation has been previously conceptualized as a "habitual, automatic, and thus implicit" tendency associated with independent and interdependent views of the self (Kitayama et al., 2009, p. 242). In our study, participants drew diagrams of their social networks (for verbatim instructions, see Duffy et al., 2008) using ovals to represent people. Two hypothesis-blind coders measured the diameter of each oval at its largest point ($r = .95$; coders' scores were averaged). A self-representation ratio was obtained by dividing the size of the average friend-circle by the size of the self-circle. Previous research indicates that people in independent countries (e.g., the United States)

Table 2. Descriptive Statistics and Correlations in Study 2

	Russia ($n = 61$)		United States ($n = 50$)				
Variable	*M*	*SD*	*M*	*SD*	1	2	3
1. Visual attention	0.28	0.68	–0.31	0.71	–.24*	.18†	.29**
2. Prediction of change	0.43	0.84	–0.51	0.96		–.17†	.48***
3. Self-views	0.49	0.75	–0.45	0.96			–.35***

Note: Zero-order correlations appear above the diagonal. Partial correlations with social class appear on the diagonal. Higher numbers for all variables indicate a relatively more holistic cognition and interdependent view of the self.
† $p \leq .1$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

count more people as part of their social network than people in interdependent countries (e.g., Japan; Fiori, Antonucci, & Akiyama, 2008). Because the space in which to draw the diagram is limited, including more friends may by necessity reduce the size of the "friend-circles." To control for this potential artifact, we adjusted the self-inflation scores for the number of friends in the network. Another potential artifact is that individuals may differ in the size of the circles they draw in general. To control for this, we opted to calculate self-inflation as a ratio rather than a difference score. We took this adjusted score as an indicator of how interdependent a participant's self-views were, with higher scores indicating greater importance placed on close others relative to the self.

Social class. Social class was measured using the procedure from Study 1 (Russia: $M = 2.89$, $SD = 0.55$; United States: $M = 3.36$, $SD = 0.90$).

Results

Cultural groups were matched on age, $t(112) = 1.52$, *ns*, and gender ($\chi^2 = 0.86$, *ns*). Neither age nor gender interacted with social class, age $F(1, 112) = 0.15$, *ns*; gender $F(1, 112) = 0.01$, *ns*, and controlling for these variables did not influence any of the results. Thus, they are not discussed further.

For each of the three dependent variables, we ran a regression with country (Russia = –0.5 vs. the United States = 0.5) and social class as predictors (see Table 2 for descriptive statistics and zero-order correlations). Country had a significant effect on each of the cognitive variables in the predicted direction (attention: $\beta = -.49$, $p < .001$; prediction of change: $\beta = -.47$, $p < .001$). As shown in Table 2, Russians paid more attention to context and made more nonlinear predictions about change. Consistent with previous cross-cultural research on independent versus interdependent views of the self in Russia (e.g., Realo & Allik, 1999), Russians also showed less self-inflation than Americans, as indicated by the ratio of the size of friend-circles to the self-circle on their social network diagrams ($\beta = -.48$, $p < .001$).

We next examined the effects of social class on these variables. Consistent with the results of Study 1, lower social class was positively associated with contextual attention and nonlinear change prediction indicating more holistic cognitive tendencies ($\beta = -.20$, $p = .03$ and $\beta = -.17$, $p = .06$, respectively). In addition, lower social class was positively associated with larger friend-to-self ratios ($\beta = -.32$, $p < .001$), suggesting a more interdependent self-view. The country × class interaction did not have a significant effect on any of the dependent variables (all βs < .10, *ns*).

We subsequently examined whether self-inflation mediates the relationship between social class and each of the cognitive variables assessed in this study by performing a series of multiple regression analyses. As Figure 2 illustrates, in each case the conditions for establishing mediation according to Shrout and Bolger (2002) were met. Specifically, social class was related to self-inflation, and each of these variables was related to each of the outcome variables assessed in this study. Importantly, the results of a bootstrapping test, the technique of choice for assessing mediation in small samples (Preacher & Hayes, 2004; Shrout & Bolger, 2002), indicated that controlling for self-inflation significantly attenuated the relationship between social class and attention as well as the relationship between social class and prediction of change. Moreover, a mediation analysis with country (Russia vs. the United States) as a predictor also indicated that controlling for self-inflation significantly attenuated the relationship between country and each of the cognitive variables (see Figures 2 and 3 for 95% confidence intervals generated by the bootstrapping test for each mediation analysis). Sobel tests confirmed the bootstrapping test results, indicating that social class effects were mediated by self-inflation (attention: Sobel = 1.71, $p = .08$; nonlinear reasoning: Sobel = 3.33, $p < .001$) as were country effects (attention: Sobel = 3.65, $p < .001$; nonlinear reasoning: Sobel = 2.96, $p = .003$).

Using structural equation modeling, we compared how well the model in which self-inflation mediates the social class–cognition (attention and nonlinear reasoning) link (Model 1) fit the data against a model in which cognitive tendencies mediate the social class–self-inflation link (Model 2). The results indicated that Model 1 fit the data well (comparative fit index [CFI] ≤ 1, root mean square error of approximation [RMSEA] $\leq .001$, $\chi^2 \leq .83$, $p \leq .36$), whereas Model 2 fit the data poorly (CFI $\leq .98$, RMSEA $\leq .09$, $\chi^2 \leq 8.91$, $p \leq .003$).

General Discussion

In two studies, we found evidence that social class and country have independent effects on cognition. We found that people

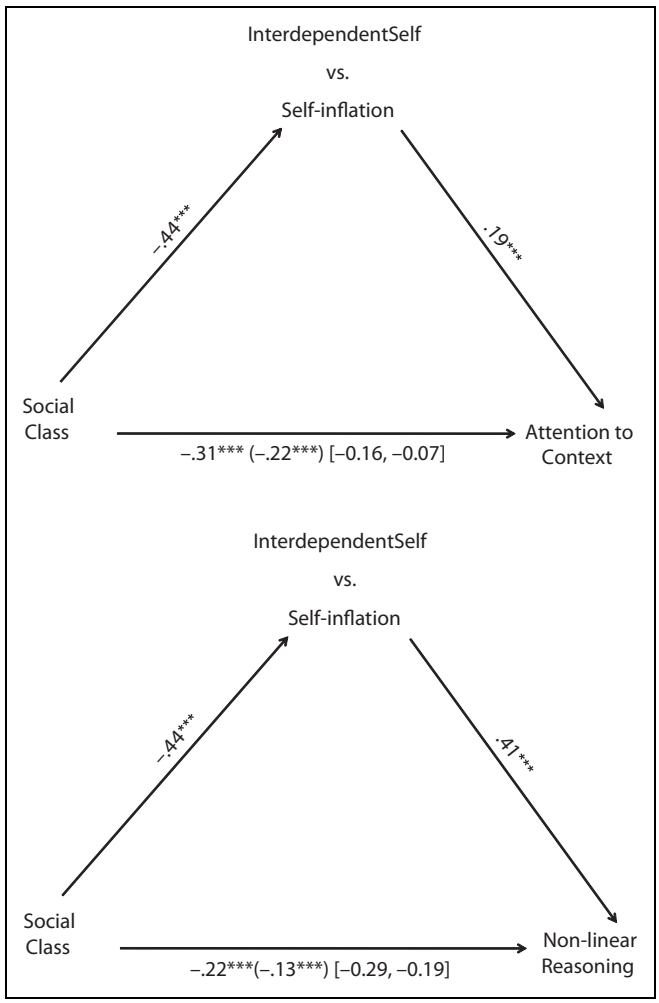

Figure 2. Standardized betas from a path analysis examining the role that self-inflation plays in mediating the effect of social class on (a) attention to context versus focal objects (Panel A) and (b) nonlinear versus linear reasoning (Panel B)
Note: Higher scores on the self-inflation measure indicate greater importance placed on close others relative to the self. The standardized coefficients in parentheses show the relationship between social class and the dependent variables after controlling for social orientation. In square brackets are 95% confidence intervals from a bootstrap test; the mediation is significant if the confidence interval does not include zero.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

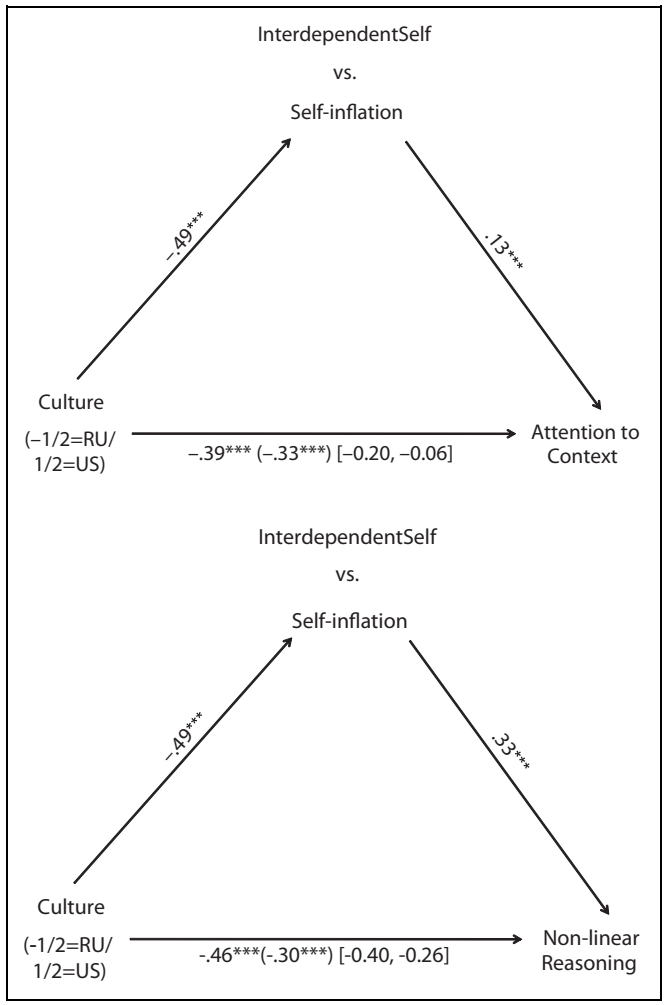

Figure 3. Standardized betas from a path analysis examining the role that self-inflation plays in mediating the effect of culture on (a) attention to context versus focal objects (Panel A) and (b) nonlinear versus linear reasoning (Panel B)
Note: Higher scores on the self-inflation measure indicate greater importance placed on close others relative to the self. The standardized coefficients in parentheses show the relationship between culture and the dependent variables after controlling for social orientation. In square brackets are 95% confidence intervals from a bootstrap test; the mediation is significant if the confidence interval does not include zero.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

from lower social class backgrounds were more holistic than those from higher social class backgrounds, and we found that Russians were more holistic than Americans with regard to contextual versus dispositional attribution, holistic processing of visual information, and prediction of nonlinear versus linear development of events. We also found that people from lower social class backgrounds and Russians endorse more interdependent self-views than do people from higher social class backgrounds and Americans. Furthermore, these differences in self-views partially mediated the group differences in cognition that we observed.

Our research extends previous findings on the influence social class has on how people construe the world in three ways. First, the present results show that the effects of social class are not limited to social inference but can also be observed in nonsocial domains such as visual perception and prediction of change. Second, the effects of social class have been replicated in a non-Western interdependent society. These findings suggest that the interactive view of social class and culture needs to be seriously reconsidered. It appears that, at least with regard to cognitive style, people from higher social class backgrounds do not dictate and exemplify the cognitive tendencies of society as a whole. Instead, and consistent with previous theories that social class differences in environmental affordances lead to differences in self-direction (e.g., Schooler, 2007), the present research supports

an additive account of social class and cultural differences in cognition.

Finally, we were able to identify a common mechanism that accounted for both social class and cross-national differences in cognition. These insights about the relationship among sociocultural environments, self-views, and cognition have both practical and theoretical implications. For instance, recent studies suggest that taking a broader, more holistic perspective can be adaptive when reflecting on negative events (Grossmann & Kross, 2010). Taken together with our current findings, this suggests that social classes may also differ in their patterns of emotion regulation. Future research should explore the relationship between class differences in cognitive style and emotion regulation as well as its impact on health- and mood-related vulnerabilities (Adler et al., 1994).

Several caveats are in order. The meditation analyses reported in this article are based on cross-sectional, correlational data, thus limiting causal inference. Longitudinal and experimental research is thus needed to more closely examine the causal nature of the relationships suggested by the mediation analyses reported in Study 2. In addition, it is worth noting that we used self-inflation as a measure of independent versus interdependent self-views in our research. At this point, it is an empirical question whether other measures of independence–interdependence also mediate the effect of culture and social class on cognitive tendencies. Previous work on social class suggests that it shapes many aspects of our social lives and experiences. The present research adds to this literature by showing that even basic nonsocial perception is colored by social class and that these class-related differences in cognitive style are linked to viewing the self as interdependent. Understanding that social class affects how people perceive and reason about the social and nonsocial world may have implications for fields such as marketing and politics as well as educational and therapeutic settings involving people of differing socioeconomic status. For example, people from lower social class backgrounds may be at a disadvantage in academic settings that reward analytical reasoning and perception. School curricula might be modified or interventions could be designed to address this disparity. Therapists may also benefit from the knowledge that working-class clients may be more likely to locate causality in the situation rather than the individual and that this pattern may reflect differences in sociocultural norms as opposed to maladaptive cognitions.

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Notes

1. In line with theory in cultural psychology and cognitive development (e.g., Markus & Kitayama, 1991; Nisbett, Peng, Choi, & Norenzayan, 2001; Saxe, 1999), we use Vygotsky's (1978) theoretical framework proposing tight links between cultural practices and cognition.
2. Previous cross-cultural behavioral and survey research has consistently documented that Russians are more interdependent than people in the Western societies. For instance, Naumov (1996) showed that Russians have higher scores on Hofstede's value dimensions related to interdependence than Germans. Similarly, Matsumoto, Takeuchi, Andayani, Kouznetsova, and Krupp (1998) conducted a multicountry comparison of individualistic versus collectivistic beliefs and behavioral tendencies, which indicated that Russians had significantly higher collectivism scores than Americans. Finally, Realo and Allik (1999) used the Twenty Statement Test to examine the relational versus independent self-descriptions among Russian, Estonian, and American college students. Their results indicated a significantly larger percentage of relational self-descriptions among Russians than among Estonians, or Americans.
3. All materials in this article were back translated from English into Russian (Brislin, 1970) and presented in Russian to the Russian samples.
4. Consistent with sociological theory, education has been found to explain twice as much variance in occupational prestige as income and to be more closely related to other socioeconomic indicators (Oakes & Rossi, 2003). Therefore, and in line with theory and empirical work on social stratification (Ehrenreich, 1989; Gilbert, 2008), we sought to capture class differences on a continuum: working class (high school)–lower middle class (some college)–upper middle class (completed college)–intelligentsia class (postgraduates). Preliminary analyses yielded comparable results in both studies whether analyzing social class as a continuous or as an ordinal-level variable.

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