

Where is the culture in social class?

Igor Grossmann

Alex Huynh

University of Waterloo, Canada

Keywords: social class, culture, cognitive style, independence vs. interdependence

In press in *Psychological Inquiry*

Word count: 2,825

Author's Note: Please direct correspondence to Igor Grossmann, Department of Psychology, University of Waterloo, 200 University Avenue West, Waterloo, Ontario, Canada N2L 3G1, E-mail: igrossma@uwaterloo.ca.

This article may not exactly replicate the final version published in the journal.

It is not the copy of record.

Where is the culture in social class?

Class is dead.

Modern social structure is too fragmented.

The idea of class is not meaningful.

These are just some of the statements recently raised by scientists who dismiss the concept of social class (Beck, 2007; Lyotard, 1984; Pakulski & Waters, 1996). In contrast to these statements, Kraus, Tan & Tannenbaum (this issue) demonstrate that social class is alive. They follow a recent trend in psychology indicating that social class differences - either subjectively induced or chronic - play a key role for a number of individual factors ranging from social cognition to emotion regulation and health disparities. Given the rising inequality in America, the importance of social class is unlikely to diminish in the foreseeable future.

We applaud Kraus and his colleagues' demonstration of the social class differences and agree with some of the key issues they raise: 1) class signals have a profound impact on social cognition, health, and emotion; 2) social class rank is known and understood by others; and 3) subjective class rank may be as important as objective class. Building on these issues, we propose that culture plays a crucial role for understanding social class. We use this cultural lens to reflect on the limitations of Kraus' et al. theoretical model. To this end, we first review how objective class and subjective class rank unfold in different cultural groups.

Social class, culture, and cognition

How do outcomes of objective social class differ across cultures? With respect to social-cognitive tendencies (Nisbett, Peng, Choi, & Norenzayan, 2001; but also Vygotsky, 1978), we can derive two distinct hypotheses from earlier sociological theory. On the one hand, social theorists like Bourdieu (Bourdieu, 1984; Bourdieu & Passeron, 1990) or Gramsci (Gramsci & Rosengarten, 1994) popularized the idea that social class status dictates the normative way of

being and thinking in a given culture, with upper classes using cultural institutions and media to distribute their practices and ways of thinking. These theories suggest an *interactive* hypothesis regarding social class and social cognition: The cognitive tendencies of higher class people exemplify those of a society more so than the cognitive tendencies of lower class people. If cultures then generally differ in social cognitive tendencies of their members, direction of social class effects would differ, too. Higher class individuals in each culture would be more aligned with the culturally-distinct ways of reasoning than lower class individuals. In contrast, other theorists suggested that control over the means of production and related environmental affordances promote different cognitive styles among lower vs. higher classes (Kohn & Schooler, 1983). This suggests an *additive* hypothesis: the environmental affordances promote differences in social cognitive practices above and beyond culture¹. Recently, researchers tested these two hypotheses against each other (Grossmann & Varnum, 2011), comparing social class effects on various social cognitive tendencies (situational vs. dispositional attributions, attention to context vs. to focal objects, dialectical vs. linear prediction of change, and symbolic self-views) among Russian and American college students. Social class was measured via educational level of the parents. In line with earlier work suggesting that Russian culture promotes more holistic cognitive style and lower individualism than American culture, results from two studies indicated that Russians showed more holistic cognition and less inflated self-view than Americans. Importantly, researchers also observed independent effects of social class on each of these variables, with students from less educated families in both countries indicating more situational (vs. dispositional) attributions, contextual focus in attention, greater awareness of change, and less inflated self-view than students from well-educated families. Comparable

¹ This hypothesis refers to existence and direction of social class differences. The question of magnitude of the differences is likely driven by other factors such as inequality of resource distribution (Solt, 2009) and cultural importance of power-distance (Hofstede, Hofstede, & Minkov, 1991; Triandis, 1982).

social class differences have been further observed in China (Hamamura, Xu, & Du, 2012), and among the Japanese younger adults (Kitayama, Karasawa, Matsubara, Grossmann, Na, Varnum, & Nisbett, 2013). This work provides some evidence suggesting that the effects of objective social class on basic attention and higher-order cognitive processes work similarly across several industrialized countries. Do such additive effects extend to subjective social class rank?

The view of social class rank within and across cultural groups

One important assumption of the social ladder theory by Kraus and colleagues is that people act on the subjective perception of their social rank. The “subjective” in the social ladder measure implies that individuals with different cultural meaning systems may interpret such signs of status in different ways. Earlier research provides some support for this statement. Whereas subjective social status is associated with education and income for European-Americans, it is mainly related to education among African-Americans (Adler et al., 2008). Overall, objective markers of socio-economic status account for little variance in subjective rank perception among the African-Americans². Further, there is a divergence in importance of the subjective vs. objective social class for self-reported health across different cultural groups. Whereas subjective social class rank is related to self-reported health above and beyond objective social class measures (e.g., income, education) among European- and Chinese-Americans, only income is a significant correlate of self-reported health among African-Americans and Latino populations (Ostrove, Adler, Kuppermann, & Washington, 2000).

The latter finding is particularly important, because it suggests that the meaning of the subjective social status is grounded in the environmental affordances: African-Americans and Hispanic minorities tend to live in more impoverished conditions than European- and Chinese-

² These studies also found that higher subjective social rank is linked to optimism among both black and white Americans, which suggests that the social ladder effects maybe in part driven by emotional dispositions, and not only by chronic or situated social rank comparisons.

Americans (US Department of Health and Human Services, 2012). Thus, among the more impoverished groups awareness of the material resources may play a more crucial role than the subjective experience of greater power. Data reviewed by Kraus and colleagues is consistent with this proposition. Specifically, subjective social class cues were found to be meaningful for lower-class individuals mainly when there were reminded of their relatively lower financial resources (Kraus, Horberg, Goetz, & Keltner, 2011, Study 2). Individuals from relatively impoverished environments were more vigilant to threats when reminded of their lower economic standing, whereas this was not the case for individuals who were well-off. This work suggests that people are sensitive to those signals of rank that are more meaningful in their cultural context. In other words, the meaning of the subjective rank status itself is a product of a particular social class culture.

Theoretical extension

In light of these findings we propose an individual-level extension to the model by Kraus and colleagues³. First, we hypothesize that the differences in objective social class may contribute to social cognitive processes directly via distinct environmental affordances of higher vs. lower classes and indirectly via rank perception, as advocated by Kraus and colleagues (see Figure 1).

-- insert Figure 1 about here --

This model suggests that the objective class (e.g., being from a poorly vs. highly-educated background) may not *necessarily* activate one's rank awareness. Rather, it may act as culture per se, acquired and shaped in interaction with the class-typical environment, and via the socialization of class-related practices. In addition, environmental affordances can influence the

³ Different processes may be at play at a group level (Na et al., 2010). Subjective meaning of social class may also influence structural conditions over time (Stephens, Fryberg, & Markus, 2012), suggesting that the dynamics between subjective rank and environmental affordances are likely bidirectional.

meaning of one's subjective social rank. Thus, even though we agree that social class – as measured by such markers as education or income -- have a profound impact on social cognition, the *signaling* of social class may not be the only way how social class affects psychological processes.

This model may be particularly important in a cross-cultural perspective. For instance, Russians and Americans show similar pattern of socio-cognitive differences between people from low vs. highly educated backgrounds (Grossmann & Varnum, 2011). However, is subjective rank awareness – be it chronic or acute –responsible for these effects? Arguably, social class subjectively means different things in Russia vs. the U.S. For instance, the majority of Americans self-identify as middle-class (Hout, 2008), whereas less than a third of Russians do so (e.g., Anikin, 2008, p. 236). Overall, direct testing of effects of subjective rank and objective class across cultures would be an important contribution for future research on social class and cognition.

Communication across classes

Differences in perception and meaning of higher vs. lower social status rank may also be important in the domain of cross-class communication within a given society. One of the consistent findings across a range of social cognitive studies on social class suggests that lower-class individuals are more likely to interpret behavior of others in terms of situational constraints, and higher-class individuals are more likely to interpret the same behavior in terms of personal dispositions and individual agency (Grossmann & Varnum, 2011; also Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012; Na et al., 2010; Stephens, Markus, & Townsend, 2007). Thus it is possible that the signaling of social rank by others may be interpreted differently by individuals from the lower vs. the higher class background. Specifically, participants from the

lower class background may interpret rank signals of others to reflect situational and environmental constraints (e.g., she signals higher status, which means that she comes from a well-off vs. impoverished background), whereas participants from the higher-class background may interpret rank signals as representing individual intentions (e.g., she signals higher status, which means that it is important vs. not-important to her). Such differences in interpretation of signals of social rank across members of lower vs. higher class background may be important for the cross-class interactions. For instance, consider a situation in which individuals from different class background – Julie from the higher-class and Mary from the lower-class – work on a group project. Julie may start a conversation, signaling her class background via her independent agency, self-directedness, etc. Such factors may be interpreted by Mary as indicating Julie's greater knowledge and mastery of the task. Mary may think of Julie's agentic behavior as an indicator of objective context. Mary may think that 'Julie probably knows a lot.' For these reasons, as well as Mary's tendency to view compromise and pro-social behavior as more important than individual contribution to the project, Mary may support Julie's ideas without much criticism. In turn, such actions may be interpreted by Julie as indicative of Mary's lack of motivation, and free-riding. Such differences in interpretation of class-typical behavior may result in a conflict between the two individuals and lower group performance.

Groups consisting of exclusively lower- vs. higher- class individuals may work very differently, too. Past research indicated that culture plays a key role for one's tendency to spend effort when working in a group vs. when working on their own. True to the typically independent mindset promoted in the middle-class North American culture (Stephens, Fryberg, & Markus, 2012), higher-class Americans show signs of social loafing by performing better on their own than in a group setting (e.g., Ingham, Levinger, Graves, & Peckham, 1974). In contrast,

Taiwanese, Chinese, and Israeli tend to perform better in a group setting than on their own, particularly when interacting with people who are similar to them (Earley, 1993; Gabrenya, Wang, & Latané, 1985). Because this *social striving* tendency is likely driven by relatively more interdependent mindset in these cultures, and such mindset is arguably more prevalent among the lower-class in the U.S., it is possible that the performance of lower-class Americans would be higher when they work with members of their in-group than when they work alone. We bring these speculative examples, because we believe that the greatest advantage of the psychological models of social class is for behavior, as well as for understanding cross-class dynamics. We hope that the target article by Kraus and colleagues will provide an impetus towards greater focus on effects of social class in these domains, which will be not only of the theoretical, but also of practical significance in educational or work setting.

The WEIRD social ladder: Cautionary note about the samples

A great number of past studies in psychology have been based on WEIRD -- Western, Educated, Industrialized, Rich, and Democratic -- subjects, causing researchers to promote broader claims than these samples realistically permit (Henrich, Heine, & Norenzayan, 2010). Despite evidence of the unique qualities of these subjects, inferences about human behavior drawn from these populations are frequently left unquestioned. How WEIRD is the past work on social class? We performed a cursory review of the last two decades of studies exploring the impact of social class on socio-cognitive processes. As Table 1 indicates, these samples were overwhelmingly North American (85.80%). Over two-thirds of the studies focused on college students. Moreover, 49% of the published studies lacked explicit information about where the participants are coming from (see Table 1).

-- insert Table 1 about here --

The processes by which social class operates to influence our patterns of social cognition should be scrutinized across different samples both within and beyond the WEIRD. As such, the model developed and discussed by Kraus and colleagues is primarily driven by research on North-American college students, a population that is inherently unusual. It provides a setting where sensitivity to rank perception and environmental affordances are particularly salient. As a next step, research on social class requires sensitivity to different cultural meaning systems and to the different elements that emerge from having diverse backgrounds. For example, the lack of psychological research on members of ethnic minorities is a well-documented issue (Graham, 1992; Imada & Schiavo, 2005). Even though the discussion here specifically concerns differences in social class, ethnic minorities may be especially sensitive to the signaling of social class and the patterns of psychological experience that are derived from such signals. As a result of socioeconomic progress in ethnic minorities, there is an increasing presence of ethnic minorities in middle class and across different class structures (Shelton & Wilson, 2012). Moreover, the interpretations of what it means to belong to the certain classes differ psychologically across ethnic backgrounds (Mossakowski, 2012). Researchers should also be aware of the fact that university settings may not offer the most representative of populations. With one in every six college students being a first generation student (Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007), university settings provide a great deal of opportunities for cross-class interactions, opportunities that are arguably less frequent in real-world contexts (e.g., Nisbett, 2009). Although this would suggest university settings as a good place to observe interclass interactions, it may nevertheless be atypical. University settings are often not context-neutral – instead university institutions are built around cultural norms of independence. This emphasis generates a cultural mismatch between first-generation college students who are accustomed to

working class *interdependence* norms, and the *independent* norms established by the university (Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012). Thus lower class individuals in university settings may be particularly sensitive to their social class cues and their rank status. Although college student populations are convenient, the confounded environment implicates college student populations as a unique, but inevitably unrepresentative sampling population.

The cautionary tale we advocate here is that the psychological experiences of higher vs. lower social rank may vary across different ethnicities both between and within different societies. Researchers of social class need to be aware of their samples. University populations represent the core of the WEIRD and may be particularly sensitive to differences in social class in the same manner that befalls ethnic minorities.

Conclusion

Social class is alive, it matters, and so does social rank. Yet, social class is not culture-free: in addition to signaling one's rank, social class background also indicates social practices and system of values transmitted across generations. Class-specific behavior is not only about chronic awareness of one's rank, but also about habits of thought. Much more future work is needed to explore the meaning of social rank in different cultures, and in cross-class group dynamics. We should start this work by paying more attention to the samples we use when making inferences about effects of social class on psychological processes.

References

- Adler, N., Singh-Manoux, A., Schwartz, J., Stewart, J., Matthews, K., & Marmot, M. G. (2008). Social status and health: A comparison of british civil servants in whitehall-II with european-and african-americans in CARDIA. *Social Science & Medicine* (1982), 66(5), 1034.
- Anikin, V. A., & Khromov, K. A. (2008) "Reproduction of Human Capital in the Middle Class" in N.Tikhonova, M.Gorshkov (eds) *Middle Class in Modern Russia* (Moscow: Institute of Sociology RAS), pp.223-253. ISBN 978-5-89697-144-3. (in Russian)
- Beck, U. (2007). Beyond class and nation: Reframing social inequalities in a globalizing world1. *The British Journal of Sociology*, 58(4), 679-705.
- Bowman, N. A., Kitayama, S., & Nisbett, R. E. (2009). Social class differences in self, attribution, and attention: Socially expansive individualism of middle-class Americans. *Personality and Social Psychology Bulletin*, 35, 880-893.
- Blascovich, J., Mendes, W. B., Hunter, S. B., Lickel, B., & Kowai-Bell, N. (2001). Perceiver threat in social interactions with stigmatized others. *Journal of Personality and Social Psychology*, 80(2), 253-267.
- Bourdieu, P. (1984). *Distinction: A social critique of the judgment of taste* Harvard University Press.
- Bourdieu, P., & Passeron, J. (1990). *Reproduction in education, society and culture* SAGE publications Limited.
- Chen, E., & Matthews, K. A. (2001). Cognitive appraisal biases: An approach to understanding the relation between socioeconomic status and cardiovascular reactivity in children. *Annals of Behavioral Medicine*, 23(2), 101-111.
- Earley, P. C. (1993). East meets west meets mideast: Further explorations of collectivistic and individualistic work groups. *Academy of Management Journal*, , 319-348.
- Gabrenya, W. K., Wang, Y., & Latané, B. (1985). Social loafing on an optimizing task cross-cultural differences among chinese and americans. *Journal of Cross-Cultural Psychology*, 16(2), 223-242.
- Graham, S. (1992). " Most of the subjects were white and middle class": Trends in published research on african americans in selected APA journals, 1970–1989. *American Psychologist*, 47(5), 629.
- Gramsci, A., & Rosengarten, F. (1994). *Letters from prison*. Columbia University Press.

- Grossmann, I., & Varnum, M. E. (2011). Social class, culture, and cognition. *Social Psychological and Personality Science*, 2(1), 81-89.
- Hamamura, T., Xu, Q., & Du, Y. (2012). Culture, social class, and independence–interdependence: The case of chinese adolescents. *International Journal of Psychology*, (ahead-of-print), 1-8.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world. *Behavioral and Brain Sciences*, 33(2-3), 61-83.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (1991). *Cultures and organizations* McGraw-Hill London.
- Hout, M. (2008). How class works: Objective and subjective aspects of class since the 1970s. *Social Class: How does it Work*, , 25-64.
- Imada, T., & Schiavo, R. S. (2005). The use of ethnic minority populations in published psychological research, 1990-1999. *The Journal of Psychology: Interdisciplinary and Applied*, 139(5), 389-400.
- Ingham, A. G., Levinger, G., Graves, J., & Peckham, V. (1974). The ringelmann effect: Studies of group size and group performance. *Journal of Experimental Social Psychology*, 10(4), 371-384.
- Johnson, S. E., Richeson, J. A., & Finkel, E. J. (2011). Middle class and marginal? socioeconomic status, stigma, and self-regulation at an elite university. *Journal of Personality and Social Psychology*, 100(5), 838.
- Kitayama, S., Karasawa, M., Matsubara, M., Grossmann, I., Na, J., Varnum, M.E.W. & Nisbett, R.E. (2013). East-West Differences in Cognitive Style and Social Orientation: Do They Hold for Non-College Populations? Manuscript in preparation.
- Kohn, M. L., & Schooler, C. (1983). *Work and personality: An inquiry into the impact of social stratification* Ablex Publishing Corporation Norwood, NJ.
- Kraus, M. W., Côté, S., & Keltner, D. (2010). Social class, contextualism, and empathic accuracy. *Psychological Science*, 21(11), 1716-1723.
- Kraus, M. W., Horberg, E., Goetz, J. L., & Keltner, D. (2011). Social class rank, threat vigilance, and hostile reactivity. *Personality and Social Psychology Bulletin*, 37(10), 1376-1388.
- Kraus, M. W., & Keltner, D. (2009). Signs of socioeconomic status A thin-slicing approach. *Psychological Science*, 20(1), 99-106.
- Kraus, M. W., Piff, P. K., & Keltner, D. (2009). Social class, sense of control, and social explanation. *Journal of Personality and Social Psychology*, 97(6), 992-1004.

- Kraus, M. W., Piff, P. K., Mendoza-Denton, R., Rheinschmidt, M. L., & Keltner, D. (2012). Social class, solipsism, and contextualism: How the rich are different from the poor. *Psychological Review*, *119*(3), 546.
- Kraus, M. W., Adler, N., & Chen, T. D. (2013). Is the association of subjective SES and self-rated health confounded by negative mood? an experimental approach. *Health Psychology*, *32*(2), 138-145. doi: 10.1037/a0027343
- Lyotard, J. F. (1984). *The post-modern condition: A report on knowledge* (Trans. G. Bennington and B. Massumi). Minneapolis: University of Minnesota Press.
- Mahalingam, R. (2003). Essentialism, culture, and power: Representations of social class. *Journal of Social Issues*, *59*(4), 733-749.
- Mossakowski, K. N. (2012). Racial/Ethnic inequality in wealth during young adulthood and midlife A social-psychological perspective of the middle class. *American Behavioral Scientist*, *56*(5), 728-746.
- Na, J., Grossmann, I., Varnum, M. E., Kitayama, S., Gonzalez, R., & Nisbett, R. E. (2010). Cultural differences are not always reducible to individual differences. *Proceedings of the National Academy of Sciences*, *107*(14), 6192-6197.
- Nisbett, R. E. (2009). *Intelligence and how to get it: Why schools and cultures count* New York, NY: Norton.
- Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review*, *108*(2), 291.
- Ostrove, J. M., Adler, N. E., Kuppermann, M., & Washington, A. E. (2000). Objective and subjective assessments of socioeconomic status and their relationship to self-rated health in an ethnically diverse sample of pregnant women. *Health Psychology*, *19*(6), 613.
- Pakulski, J., & Waters, M. (1996). *The death of class* SAGE Publications Limited.
- Piff, P. K., Kraus, M. W., Côté, S., Cheng, B. H., & Keltner, D. (2010). Having less, giving more: The influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, *99*(5), 771-784.
- Saenz, V. B., Hurtado, S., Barrera, D., Wolf, D., and Yeung, F. (2007). *First in my family: A profile of first-generation college students at four-year institutions since 1971*. Los Angeles: Higher Education Research Institute, UCLA.
- Shelton, J. E., & Wilson, G. (2012). Evolving issues of integration and inequality among middle class minorities. *American Behavioral Scientist*, *56*(11), 1459-1461.

- Snibbe, A. C., & Markus, H. R. (2005). You can't always get what you want: Educational attainment, agency, and choice. *Journal of Personality and Social Psychology*, 88(4), 703.
- Solt, F. (2009). Standardizing the world income inequality database*. *Social Science Quarterly*, 90(2), 231-242.
- Stellar, J. E., Manzo, V. M., Kraus, M. W., & Keltner, D. (2012). Class and compassion: Socioeconomic factors predict responses to suffering. *Emotion*, 12(3), 449.
- Stephens, N. M., Fryberg, S. A., & Markus, H. R. (2011). When choice does not equal freedom: A sociocultural analysis of agency in working-class American contexts. *Social Psychological and Personality Science*, 2(1), 33-41.
- Stephens, N. M., Fryberg, S. A., & Markus, H. R. (2012). It's your choice: How the middle class model of independence disadvantages working class Americans. *Facing Social Class: Social Psychology of Social Class*, 87-106.
- Stephens, N. M., Fryberg, S. A., Markus, H. R., Johnson, C. S., & Covarrubias, R. (2012). Unseen disadvantage: How American universities' focus on independence undermines the academic performance of first-generation college students. *Journal of Personality and Social Psychology*, 102(6), 1178-1197.
- Stephens, N. M., Markus, H. R., & Townsend, S. S. (2007). Choice as an act of meaning: The case of social class. *Journal of Personality and Social Psychology*, 93(5), 814.
- Triandis, H. C. (1982). Review of culture's consequences: International differences in work-related values. *Human Organization*, 41(1), 86-90.
- US Department of Health and Human Services. (2012). *Information on Poverty and Income Statistics*. Retrieved from: <http://aspe.hhs.gov/hsp/12/povertyAndIncomeEst/ib.shtml>
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press

Table 1. Overview of social class markers, sample populations, and locations used in recent empirical papers involving the socio-cognitive processes of social class.

Authors	Study	<i>N</i>	<i>M</i> _{age} (<i>range</i>)	Social Class Measure	Population (Sampling method)	Location (Country)
Bowman,	1	2586	(25-74)	Edu	MIDUS (R)	Nationwide (US)
Kitayama, &	2a	23	--	Parental Edu	Students (C)	Washtenaw community College (US)
Nisbett (2009)	2b	77	--	Parental Edu	Students (SP)	University of Michigan (US)
	3	173	--	Parental Edu	Students (C)	University of Michigan (US)
Chen & Matthews (2001)	--	201	13.6	Parental SES	Children and Adolescents (C)	Pittsburg, PA (US)
Grossmann & Varnum (2011)	1	62	18.71	Parental Edu	Students (SP)	University of Michigan (US)
		60	19.02	Parental Edu	Students (SP)	Moscow State Regional University (Russia)
	2	53	19.54	Parental Edu	Students (SP)	University of Michigan (US)
		61	20.05	Parental Edu	Students (SP)	Moscow City University of Education and Psychology (Russia)
Hamamura et al., (2012)	--	1184	14.78	Parental Edu	Adolescents (C)	Hangzhou, China (China)
Johnson, Richeson, & Finkel, (2011)	1	474	--	Household income	Students (SP)	Northwestern University (US)
	2	51	--	Household income	Students (SP)	Northwestern University (US)
	3	79	--	Household income	Students (SP)	Northwestern University (US)
	4	100	--	Household income	Students (SP)	Northwestern University (US)
Kraus, Adler, & Chen (2013)	--	300	33.84 (18-72)	Edu/Income	Mturk on-line sample (C)	Nationwide (US)
Kraus, Côté, & Keltner (2010)	1	200	42	Edu	University Employees (C)	UC Berkeley (US)*
	2	106	--	Subjective SES	Students (C)	UC Berkeley (US)*
	3	81	--	Subjective SES	Students (C)	UC Berkeley (US)*
Kraus & Keltner (2009)	--	106	--	Family income and Edu	Students (C)	UC Berkeley (US)*
Kraus et al., (2011)	1	244	(18-25)	Parental Edu and Income	Students (C)	UC Berkeley (US)*
	2	91	37	Edu and family income	Mturk on-line sample (C)	Nationwide (US)
Kraus, Piff, & Keltner (2009)	1	103	--	Parental Edu/income; Subjective SES	Students (SP)	UC Berkeley (US)*

	2	96	--	Parental Edu/income; Subjective SES	Students (SP)	UC Berkeley (US)*
	3	444	33.53 (18-74)	Subjective SES; Edu and family income	Online Sample (C)	Nationwide (US)
	4	125	--	Subjective SES; Edu and family income	Students (SP)	UC Berkeley (US)*
Mahalingam (2003)	--	199	--	Caste affiliation	Community (C)	Tamil Nadu (India)
Na et al., (2010)	--	235	(25-93)	Edu	Community (R)	Washtenaw county, MI (US)
Piff, Kraus, Côté, Cheng, & Keltner, (2010)	1	124	22.57 (18-59)	Subjective SES	Students/Community (SP)	Berkeley, CA (US)*
	2	88	--	Family income	Students (C)	Berkeley, CA (US)*
	3	155	--	Edu/Income	Online sample (C)	Nationwide (US)
	4	102	21.64	Income	Students / Community (SP, C)	Toronto, ON (Canada)*
Snibbe & Markus (2005)	2	43	33.23 (19-50)	Edu	Community (C)	Northern California (US)
	3	120	38.89 (20-65)	Edu	Community (C)	Northern California/Eastern Massachusetts (US)
Stellar, Manzo, Kraus, & Keltner (2012)	1	148	--	Subjective Social Class	Students (SP)	UC Berkeley (US)*
	2	65	--	Parent Edu and family income	Students (SP)	UC Berkeley (US)*
	3	106	--	Parent Edu and family income	Students (SP)	UC Berkeley (US)*
Stephens, Fryberg, & Markus (2011)	1	89	46.3	Edu	Community (C)	Unknown (US)
	2	787	19.03	Parental Edu	Students (C)	Unknown (US)
	3	65	23.2	Parental Edu	Female students (C)	University of Arizona (US)*
Stephens et al., (2007)	1	50	22.85	Parental Edu	Students (C)	Stanford (US)*
	2	100	21.49	Parental Edu	Female students (C)	Stanford (US)*
	3	86	21.9	Parental Edu	Students (C)	Stanford (US)*
	4a	62	33.06	Occupation	Firefighters and MBA students (C)	Stanford and Palo Alto, CA (US)*
	4b	884	19.09	Edu	Students (C)	Stanford (US)*

Note. *For these studies we estimated location based on authors' affiliation at the point of study collection. C = Convenience Sampling; R = Random Sampling; SP = Psychology Student Subject Pool.

Figure 1. Extended model of that proposed by Kraus et al. (this issue). Objective social class may contribute to the socio-cognitive processes and class-consistent behavior directly and indirectly through subjective rank perception. Environmental affordances influence all relevant processes (e.g., lack of resources due to poverty, or self-directed orientation afforded to middle class occupations).

