Can a Rude Waiter Make Your Food Less Tasty? Social Class Differences in Thinking Style and Carryover in Consumer Judgments

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Building on the notion that cognitive processes vary across social classes, we predict that social class shapes thinking style, which in turn affects consumer judgments. In doing so, we employ service failure domains as a way to understand social class effects. Across four studies, we show that, when faced with a failure incident occurring in one service dimension (e.g., rude employees), consumers in the low social class, relative to those in the high social class, carry over to influence their evaluations of the other service dimensions (e.g., food quality) that are unrelated to the failure incident. We further show that low-class consumers favor a holistic style of thinking, whereas high-class consumers favor an analytic style of thinking and that these differences in thinking style account for the carryover effects on evaluations. The pattern of the effects exists when the service failure is perceived to be severe rather than minor.

Keywords Social class; Thinking style; Carryover; Service failure; Failure severity

Introduction

Social class has long been a topic of interest in marketing. Consumers often identify themselves as belonging to certain social classes, and those of different social classes are characterized by distinct lifestyles, preferences, and choices. Much of the research on social class has examined class differences in attitudinal and behavioral domains that include purchase decision-making (Coleman, 1983; Martineau, 1958; Williams, 2002), financial choices (Henry, 2005), price judgments (Gaston-Breton & Raghurib, 2013), preferences for cultural tastes (Holt, 1998; Üstüner & Holt, 2010), and spending patterns in emerging economies (Kamakura & Mazzon, 2013). However, we understand relatively little about cognitive processes that may underlie these class differences in consumer contexts.

There is reason to believe that social class shapes consumers’ cognitive styles. It is well understood that cognitive processes are malleable and susceptible to social environments, and become largely automatic and unconscious (Nisbett, Peng, Choi, & Norenzayan, 2001). More relevant to the present research, social cognitive perspectives suggest that cognitive processing styles are dependent on the availability of social and economic resources that vary across social classes (for a review, see Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012). Integrating these perspectives, we propose that consumers of different social classes exhibit systematic differences in cognitive styles, which in turn influence their judgments. Specifically, we examine class differences in analytic and holistic styles of thinking. Analytic thinking involves detachment of individual objects from their context, whereas holistic thinking involves connections between objects and their context as a whole (for a review, see Nisbett et al., 2001). We highlight the role of thinking style in social class effects on consumer judgments.

To demonstrate the effects, we employ service failure domains that vary in service dimensions. We provide evidence that for low-class individuals, who perceive situations as interconnected and holistic, their evaluations of the service dimension where a failure incident occurs carry over to influence their evaluations of the other dimension that has no direct link to the failure incident. For example, low-class consumers, who experience unpleasant interactions with a restaurant employee, may extend their negative impression of the employee to their evaluations of food quality. We also find that this carryover effect occurs to a lesser degree for
high-class consumers, who perceive situations as isolated and analytic. We further document that thinking style serves as the underlying mechanism that accounts for the carryover effect.

Social Class and Cognitive Patterns

Social class is a multidimensional concept that reflects both objective and subjective components of socioeconomic status (Kraus et al., 2012; Snibbe & Markus, 2005). Objective social class is rooted in material resources and assessed with objective indicators such as income, educational attainment, and occupational prestige (Adler & Snibbe, 2003). In comparison, subjective social class is rooted in self-perceptions of social standing relative to others and assessed with one’s perceived rank in society or in one’s community (Adler, Epel, Castellazzo, & Ickovics, 2000). While these objective and subjective components of social class are related (Johnson & Krueger, 2006) and often used interchangeably (Adler & Snibbe, 2003), it is important to note that subjective class better accounts for psychological characteristics (Adler et al., 2000), cognitive patterns (Kraus, Piff, & Keltner, 2009), and judgments (Greitemeyer & Sagioglou, 2016; Smith & Pettigrew, 2014) than does objective class. Thus, it is reasonable to predict that subjective class, relative to objective class, will be a stronger predictor for class differences in thinking styles in the present research.

Social class influences aspects of the self, according to models of agency that represent implicit frameworks of ideas and practices about how to be a normatively good person in the world (Carey & Markus, 2016; Markus & Kitayama, 2003; Snibbe & Markus, 2005; Stephens, Markus, & Townsend, 2007). The relative abundance of resources and opportunities among high-class individuals promotes independence and encourages them to influence others and environments (disjoint models of agency). In contrast, the relative scarcity of resources and opportunities among low-class individuals promotes interdependence and encourages them to adapt to others and environments (conjoint models of agency).

Of particular relevance to the present research is evidence showing that such resource disparities across social classes, in turn, shape the way people perceive and respond to their social environments within a culture. Low-class individuals, who have relative resource scarcity and perceived lower rank, feel constrained while pursuing their goals and interests, and their actions are often affected by external forces outside of their own control (Kraus et al., 2012). As a result, low-class individuals tend to focus their attention on external contexts and favor contextual explanations of social events over dispositional explanations (Kraus et al., 2012). For example, Kraus et al. (2009) demonstrated that low-class individuals attributed economic inequality to contextual factors such as the economic structure of society or political influence over dispositional factors such as hard work, ability, or money management skills. Furthermore, Kraus, Côté, and Keltner (2010) found that low-class individuals perceived the emotions of other individuals more accurately than their high-class counterparts and that this tendency was attributed to their focus on features of the external social context.

Conversely, high-class individuals, who have relative resource abundance and perceived higher rank, feel free to pursue the goals and interests they choose for themselves (Johnson & Krueger, 2005; Lachman & Weaver, 1998) with relatively little concern about their material costs. As a result, high-class individuals tend to focus on their own internal states, ignoring contextual influences, and favor explanations of social events in terms of individual influences (Kraus et al., 2012). For example, high-class managers are more likely to blame underperformance of an employee on the personalities and abilities of the employee rather than contextual factors that hinder performance such as poor job design (Côté, 2011). Similarly, high-class individuals, relative to their low-class counterparts, tend to think that the realization of their hopes depends more on themselves and less on external contexts (Lamm, Schmidt, & Trommsdorff, 1976). In sum, when explaining social events, people in the low class tend to focus on contextual factors, while those in the high class tend to focus on individual traits. These differences between low and high-class individuals in cognitive orientations may reflect holistic and analytic thinking styles, respectively.

Holistic and Analytic Thinking

The main distinction between holistic and analytic styles of thinking lies in the way people attend to the environment. Holistic thinkers attend primarily to interconnections between an object and its context and thus are known to be context-dependent. Conversely, analytic thinkers attend primarily to an individual object separate from its context and thus are known to be context-independent.

Different thinking styles arise from a variety of factors. One widely recognized factor is a cross-cultural difference. People from Eastern cultures tend
to be holistic, perceiving people, objects, and events in terms of their inseparable relations, whereas those from Western cultures tend to be analytic, perceiving people, objects, and events in terms of their isolated properties (Ji, Peng, & Nisbett, 2000; Masuda & Nisbett, 2001; Masuda et al., 2008; Nisbett et al., 2001). Although holistic and analytic styles of thinking are predominant in Eastern and Western cultures, respectively, it has been shown that thinking styles vary by both individual cognitive differences (Choi, Koo, & Choi, 2007) and situational factors (Kühnen & Oyserman, 2002; Miyamoto, Nisbett, & Masuda, 2006; Zhou, He, Yang, Lao, & Baumeister, 2012) within a culture. For example, Miyamoto et al. (2006) found that both Japanese and American participants who were exposed to the Japanese perceptual environment attended more to the holistic and contextual information than did those who were exposed to the American perceptual environment. These findings provide evidence that living in a different environment within a culture may determine whether people favor a holistic or analytic style of thinking.

Importantly, such within-culture differences in thinking styles have been documented to explain underlying processes of various responses. For example, Baaren, Horgan, Chartrand, and Dijkmans (2004) found that holistic thinkers engaged in behavioral mimicry more than analytic thinkers because of holistic thinkers’ reliance on contextual cues. In marketing contexts, Zhu and Meyers-Levy (2009) found that when a product was viewed on a display table, holistic thinkers perceived the product and the table as continuous parts of a larger unit, and as a result, the concepts elicited by the table’s surface materials were assimilated with perceptions of the product. Similarly, Monga and John (2010) found that for functional brands, holistic thinkers perceived brand extensions more favorably than analytic thinkers because of holistic thinkers’ ability to connect a parent brand and its extension. Additionally, Lalwani and Shavitt (2013) showed that holistic thinkers viewed price as a signal for quality more than analytic thinkers because of holistic thinkers’ attention to interrelations between the elements of a product.

**Social Class, Thinking Style, and Service Failure**

In the present research, we seek to demonstrate that consumer judgments differ across social classes and that these differences are driven by information processing styles, in particular, holistic and analytic styles of thinking. As a useful way to understand class differences in thinking styles in consumer contexts, we employ service failure domains that vary in dimensions of failure. We argue that low-class individuals, who tend to focus their attention on contextual factors, may engage in holistic thinking. If this is correct, it is expected that low-class consumers will carry over their negative evaluations of the service dimension related to a failure incident (hereafter, failure-related dimension) to the other dimension that is unrelated to the failure incident (hereafter, failure-unrelated dimension). In comparison, high-class individuals, who tend to focus their attention on focal attributes detached from the whole context, may engage in analytic thinking. If so, the carryover effect that occurs in the failure-unrelated dimension will emerge to a lesser degree for high-class consumers. Put another way, when faced with a service failure, low-class individuals will decrease their evaluations of the failure-unrelated dimension greater than their high-class counterparts. When it comes to evaluations of the failure-related dimension, however, there will be little to no difference across social class contexts.

For all these predictions, we identify a key moderating factor. It has been shown that the effects of service failure are significantly affected by failure magnitude. For example, when the magnitude of service failure is perceived to be severe versus minor (e.g., a reserved hotel room is unavailable vs. checking into a hotel room is slightly delayed), consumers provide more negative evaluations of service encounters (McCollough, Berry, & Yadav, 2000; Smith, Bolton, & Wagner, 1999). That is, consumers have cognitive appraisals of failure severity (Wang, Wu, Lin, & Wang, 2011) and perceive severe (vs. minor) failure as being a greater loss of their resources (Smith et al., 1999). In particular, low-class consumers, who have cognitive biases and appraise the same situation as potentially more harmful than their high-class counterparts (Chen & Matthews, 2001), are likely to amplify perceptions of loss when the failure becomes severe versus minor. Accordingly, it is necessary to consider perceived severity of service failure in our predictions on cognitive differences across classes, and we expect that severe service failure will enlarge the carryover effect among low-class consumers, relative to their high-class counterparts.

**Overview of Studies**

In four studies, we test how and why consumer evaluations of the failure-unrelated dimension systematically diverge across social class contexts.
Studies 1 and 2 provide evidence that low-class consumers evaluate the failure-unrelated dimension lower than high-class consumers when failure severity is perceived as severe rather than minor. Studies 3 and 4 examine the underlying mechanism of the effect obtained in Studies 1 and 2. Specifically, Study 3 measures analytic-holistic thinking and shows that low (vs. high) class consumers favor holistic thinking, which results in a decrease in evaluations of the failure-unrelated dimension. Study 4 primes thinking style and shows that priming low-class consumers with analytic thinking (vs. baseline) increases evaluations of the failure-unrelated dimension, whereas priming those of high social class with holistic thinking (vs. baseline) decreases evaluations of the dimension.

In all studies, we measure social class that varies along a continuum. That is, low class is operationalized as a group of people placed at the relatively low end of the continuum, whereas high-class is operationalized as a group of people placed at the relatively high end of the continuum. To demonstrate class differences in the carryover tendency, we use two service dimensions: the process dimension involving how consumers are treated during service encounters and the outcome dimension involving what consumers receive from service encounters.

Study 1

In Study 1, we attempt to show that, under certain circumstances, exposure to service failure in one dimension influences evaluations of the other service dimension that is seemingly unrelated to the failure. Using a process-failure scenario describing an inattentive waiter at a restaurant, we examine how evaluations of the other dimension—the outcome dimension (e.g., the availability of food)—differ as a joint function of social class and failure severity. We predict that low-class individuals will judge the outcome dimension (failure-unrelated dimension) less positively than their high-class counterparts when failure severity is high versus low. We also predict that there will be no class difference in judgments of the process dimension (failure-related dimension).

Method

A total of 216 participants (M_{age} = 36.21, SD = 12.06) recruited from an online panel via Amazon Mechanical Turk completed the study in return for a small payment. The ethnic composition of the sample was 13.4% African/African American, 6.9% Asian/Asian American, 69.9% White/Caucasian, 7.4% Hispanic/Hispanic American, and 2.3% other ethnicities. Upon agreeing to participate, participants were told that they would participate in short separate studies. Participants were first asked to complete a social class scale designed to measure subjective perceptions of social standing relative to others (Adler et al., 2000). In this measure, participants were presented with a drawing of a 10-rung ladder representing where people stand relative to others and were asked to indicate their relative social standing on a 10-point scale (e.g., 1 = bottom rung, 10 = top rung) with higher numbers associated with higher social classes (see Appendix S1 for measures and manipulations of all studies).

Following this task, participants were asked to read a process-failure scenario adapted from Smith et al. (1999). Participants were randomly assigned to either a minor or severe service failure condition. Participants in the minor failure condition (hereafter, low severity condition) read: “The waiter brings your beverages and entrees and leaves without asking if you need anything else. He does not refill your beverages while you are eating.” In comparison, participants in the severe failure condition (hereafter, high severity condition) read: “The waiter brings your entrees and leaves without asking if you need anything else. The waiter never brings your beverages, and he doesn’t stop back to check on you while you’re eating. He drops off the bill without asking if you want anything more.” All participants were then asked to indicate failure severity on a 7-point scale (1 = not severe at all, 7 = very much severe), which served as a manipulation check. As expected, participants in the high severity condition (M = 5.13, SD = 1.47) reported the failure incident to be more severe than those in the low severity condition (M = 4.26, SD = 1.42; F(1, 214) = 19.59, p < .001).

For dependent measures, we asked participants to indicate how much they would agree or disagree with statements about the waiter’s attitude (failure-related dimension) and the availability of food (failure-unrelated dimension), adapted from Chan, Wan, and Sin (2009), all on 3-item 7-point scales (1 = strongly disagree, 7 = strongly agree). A sample item for the process dimension includes “It appears that the waiter’s attitude is acceptable,” and a sample item for the outcome dimension includes “It appears that the availability of food is good enough.” Responses to the items were averaged to form composite scores of the process (failure-related dimension (α = .71) and the outcome
(failure-unrelated) dimension ($z = .87$) with higher numbers reflecting better evaluations.

Finally, we assessed participants’ objective social class using both educational attainment ($1 = did\ not\ finish\ high\ school$, $2 = high\ school\ graduate\ or\ some\ college$, $3 = college\ graduate$, $4 = postgraduate$) and annual household income ($1 = under\ $15,000$, $2 = $15,001$–$25,000$, $3 = $25,001$–$35,000$, $4 = $35,001$–$50,000$, $5 = $50,001$–$75,000$, $6 = $75,001$–$100,000$, $7 = Over\ $100,000$). Participants had a median educational attainment of college graduate and a median household income between $35,001$ and $50,000$.

Results

Evaluations of the failure-unrelated dimension. We first regressed participants’ evaluations of the outcome (failure-unrelated) dimension onto subjective social class ($M = 4.69$, $SD = 1.60$), failure severity ($0 = low\ severity$, $1 = high\ severity$), and their interaction. The results revealed no main effect of subjective social class ($B = -0.17$, $SE = .17$; $t(212) = -1.05$, $p = .30$), but there was a main effect of failure severity ($B = -1.68$, $SE = .53$; $t(212) = -3.15$, $p < .01$). Importantly, there was a two-way interaction between subjective class and failure severity ($B = 0.23$, $SE = .11$; $t(212) = 2.15$, $p < .05$). To decompose this interaction, we conducted a spotlight analysis by creating conditional values for subjective social class that were one standard deviation above and below its mean. We used Hayes (2013) PROCESS macro for model 1 with 5,000 bootstrapped samples. As predicted, low-class individuals reported lower evaluations than high-class individuals, and this effect emerged in the high severity condition ($B = 0.29$, $SE = .08$; $t(212) = 3.66$, $p < .001$), but not in the low severity condition ($B = -0.06$, $SE = .07$; $t(212) = 0.77$, $p = .44$). The pattern of these results is illustrated in the top panel of Figure 1. Our results remained significant when we controlled for objective class indicators—education and income. That is, the analysis calculated with the controls revealed that low-class individuals, relative to their high-class counterparts, judged the outcome dimension less positively in the high severity condition ($B = 0.27$, $SE = .09$; $t(210) = 3.12$, $p < .01$), but there was no class difference in the low severity condition ($B = 0.03$, $SE = .08$; $t(210) = 0.43$, $p = .67$). Additionally, to identify the range of the subjective class scale in which the effect of failure severity was significant, we performed a floodlight analysis (Spiller, Fitzsimons, Lynch, & McClelland, 2013) using the Johnson–Neyman technique. This analysis revealed that there was a significant negative influence of failure severity on evaluations among those who scored lower than 5.60 ($B_{JN} = -0.39$, $SE = .19$, $t(212) = -1.97$, $p = .05$) on the 10-point scale of subjective class, confirming our predictions that those relatively low in social class provided lower evaluations in the high (vs. low) severity failure.

Next, we tested our prediction using objective class indicators. Both education and income were positively correlated with subjective social class ($r = .24$ for subjective social class and education; $r = .54$ for subjective social class and income; $r = .24$ for education and income; $ps < .001$). However, none of these objective measures accounted for class differences in evaluations of the outcome dimension ($ps > .38$), irrespective of whether we used each separate measure or averaged them into one overall measure with education and income standardized. This finding is consistent with previous research findings suggesting that subjective social class shapes people’s judgments (Greitemeyer & Sagioglou, 2016; Smith & Pettigrew, 2014) and cognitive patterns (Kraus et al., 2009) above and beyond objective social class.

Evaluations of the failure-related dimension. Finally, we regressed participants’ evaluations of the process service failure as a function of failure severity (Study 1)
(failure-related) dimension onto subjective social class, failure severity, and their interaction. The only significant result to emerge was the effect of failure severity \((B = -1.09, \ SE = .44; \ t(212) = -2.46, \ p = .01)\), suggesting that both low and high-class participants in the high severity condition reported lower evaluations than those in the low severity condition (see the bottom panel of Figure 1).

**Discussion**

Study 1 shows the existence of class differences in evaluations of the failure-unrelated dimension of service encounters. Using the process-failure context, we find that low-class participants formed less positive evaluations of the outcome dimension than high-class participants when the severity of failure was considered high versus low. These results remained significant when we controlled for objective class measures—education and income. Moreover, none of these objective class measures were associated with class differences in evaluations of the failure-unrelated dimension. While our findings provide initial evidence that social class affects the way people judge service failure, there is the possibility that interpersonal characteristics inherent in the process dimension produced the effects observed in Study 1. Accordingly, we address this issue in Study 2 using an outcome-failure context, which is noninterpersonal.

**Study 2**

**Method**

A total of 207 participants \((M_{age} = 35.70, \ SD = 11.22)\) from an online panel via Amazon Mechanical Turk completed the study in return for a small payment. The ethnic composition of the sample was 5.8% African/African American, 5.3% Asian/Asian American, 77.3% White/Caucasian, 10.1% Hispanic/Hispanic American, and 1.4% other ethnicities. The procedure was identical to that of Study 1. Participants were first presented with a drawing of a ladder and asked to indicate their subjective social standing on a 10-point scale. Following this task, participants were asked to read an outcome-failure scenario adapted from Smith et al. (1999) describing unfulfilled orders at a restaurant and were randomly assigned to either a low or high severity condition. Participants then indicated their perceived severity of the failure on a 7-point scale \((1 = \text{not severe at all}, \ 7 = \text{very much severe})\). As predicted, participants in the high severity condition \((M = 5.08, \ SD = 1.36)\) reported the failure in the scenario to be more severe than did those in the low severity condition \((M = 3.55, \ SD = 1.77; \ F(1, 205) = 48.56, \ p < .001)\).

For dependent measures, we asked participants to indicate how much they agreed or disagreed with statements about the availability of food (failure-related dimension) and the waiter’s attitude (failure-unrelated dimension) using the same scales reported in Study 1. Responses to the items were averaged to form composite scores of the outcome (failure-related) dimension \((\alpha = .85)\) and process (failure-unrelated) dimension \((\alpha = .84)\). Finally, we assessed education and income using the same scales as in Study 1. Participants had a median educational attainment of college graduate and a median household income between $35,001 and $50,000.

**Results**

**Evaluations of the failure-unrelated dimension.** We first regressed participants’ evaluations of process (failure-unrelated) dimension onto subjective social class \((M = 5.32, \ SD = 1.64)\), failure severity \((0 = \text{low severity}, \ 1 = \text{high severity})\), and their interaction. There was a marginally significant main effect of subjective social class \((B = -0.29, \ SE = .17; \ t(203) = -1.74, \ p = .08)\) and a significant main effect of failure severity \((B = -1.96, \ SE = .59; \ t(203) = -3.32, \ p < .01)\). Importantly, a two-way interaction between subjective social class and failure severity was significant \((B = 0.25, \ SE = .11; \ t(203) = 2.39, \ p < .05)\). To probe this interaction, we performed a spotlight analysis using Hayes (2013) PROCESS macro for model 1 with 5,000 bootstrapped samples. The analysis revealed that low-class individuals provided lower evaluations than high-class individuals, and this effect emerged in the high severity condition \((B = 0.22, \ SE = .08; \ t(203) = 2.86, \ p < .01)\) but not in the low severity condition \((B = -0.04, \ SE = .07; \ t(203) = -0.48, \ p = .64)\). The pattern of these results appears in the top panel of Figure 2. Our results remained significant when we controlled for education and income.

We conducted additional regression analyses using objective class indicators. Both education and income were positively correlated with subjective social class \((r = .38 \text{ for subjective social class and education}; \ r = .52 \text{ for subjective social class and income}; \ r = .35 \text{ for education and income}; \ ps < .001)\). However, none of these objective class indicators accounted for class differences in evaluations of the
process dimension ($ps > .47$), irrespective of whether we used each separate measure or averaged standardized scores into one overall measure.

**Evaluations of the failure-related dimension.** Finally, we regressed participants’ evaluations of the outcome (failure-related) dimension onto subjective social class, failure severity, and their interaction. Consistent with the finding of Study 1, the only significant result to emerge was the effect of failure severity ($B = \text{-}1.16$, $SE = .55$; $t(203) = \text{-}2.12$, $p < .05$; see the bottom panel of Figure 2).

**Discussion**

Using the outcome-failure scenario, Study 2 fully replicates Study 1, displaying that the observed effects are extended to noninterpersonal failures. We provide robust support for class differences in the carryover effect. Specifically, regardless of whether the failure is process-related (Study 1) or outcome-related (Study 2), low-class participants rated the failure-unrelated dimension significantly lower than did their high-class counterparts. These effects emerged when the level of failure severity was viewed as high rather than low. However, social class does not pertain to evaluations of the failure-related dimension.

As noted earlier, we argue that these differential effects on evaluations of the failure-unrelated dimension are attributed to class differences in thinking style. In the next set of studies, we examine the role of thinking style as a potential mechanism responsible for the carryover effect. In doing so, we measure (Study 3) and manipulate (Study 4) thinking style. We predict that low-class individuals, relative to their high-class counterparts, will have a tendency to view situations in a more holistic manner and thus evaluate the failure-unrelated dimension less favorably in response to a specific failure incident.

One may speculate that the relative scarcity of resources among low-class individuals produces cognitive orientations focused on resource constraints (e.g., the unavailability of food), which in turn decrease evaluations of the resource unavailability. To address this issue, we employ different dependent measures independent of resource constraints: the cleanliness of the hotel rooms (Study 3) and the quality of the restaurant food (Study 4).

**Study 3**

In this study, we attempt to generalize our previous findings and provide evidence for the mediating role of thinking style in the relationship between social class and evaluations of the failure-unrelated dimension. Noting that the effects observed in the first two studies are most pronounced when failure severity is high, we test our predictions using the high severity context only. In addition to testing our predictions, we examine some alternative explanations in the study. First, Kraus et al. (2009) find that low-class people experience a reduced sense of power and thus focus their attention on contextual information. If so, it is plausible that this reduced sense of power may be associated with the class-specific effects observed in our previous studies. Second, Ruggiero and Marx (1999) suggest that low-class people, characterized by fewer resources to reduce psychological stress, tend to perceive themselves as more discriminated. Thus, low-class people may decrease their evaluations of the failure-unrelated dimension because of their feelings of discrimination. Last, we attempt to rule out the possibility that class differences in evaluations of the dimension may be associated with differences in feelings of compassion (Piff, Kraus, Côté, Cheng, & Keltner, 2010; Stellar, Manzo, Kraus, & Keltner, 2012).
Method

In a correlational study, 278 participants ($M_{age} = 37.22, SD = 12.53$) from an online panel via Amazon Mechanical Turk completed the study in return for a small payment. The ethnic composition of the sample was 6.5% African/African American, 8.3% Asian/Asian American, 77.0% White/Caucasian, 7.2% Hispanic/Hispanic American, and 1% other ethnicities. Participants were first asked to read a high-severity process-failure scenario adapted from Smith et al. (1999) describing an inattentive representative at a hotel. As expected, participants perceived the failure in the scenario to be severe, as compared to a midpoint of 4 ($M = 5.77, SD = 1.06; t(277) = 27.92, p < .001$).

After reading the scenario, participants indicated their agreement with statements about the representative’s attitude (failure-related dimension) and the cleanliness of the hotel rooms (failure-unrelated dimension), all on 3-item 7-point scales (1 = strongly disagree, 7 = strongly agree). A sample item for the process dimension (failure-related dimension) includes “It appears that the representative’s attitude is acceptable,” and a sample item for the outcome dimension (failure-unrelated dimension) includes “It appears that the cleanliness of the hotel rooms is good enough.” The three items for each scale were averaged to form composite scores of process (failure-related) dimension ($\alpha = .76$) and outcome (failure-unrelated) dimension ($\alpha = .76$) with higher numbers reflecting better evaluations.

Next, participants completed a series of measures, all on 7-point scales (1 = strongly disagree, 7 = strongly agree). To assess participants’ feelings of discrimination, we instructed participants to think about how they would feel if they were in the situation described in the scenario and to indicate their agreement with five items ($\alpha = .82$). A sample item is “If I were in the situation, I would feel discriminated.” Thinking style was assessed with the 24-item scale of analytic versus holistic thinking tendency ($\alpha = .78$) adapted from Choi et al. (2007). A sample item includes “Everything in the universe is somehow related to each other.” We measured participants’ compassion using five items ($\alpha = .92$) adapted from Shiota, Keltner, and John (2006). A sample item includes “I am a very compassionate person.” To assess participants’ sense of power, we used the 8-item scale of power ($\alpha = .88$) adapted from Anderson and Galinsky (2006). A sample item includes “I think I have a great deal of power.” We then measured participants’ subjective social class using six items ($\alpha = .81$) adapted from Griskevicius, Tybur, Delton, and Robertson (2011). A sample item is “I feel relatively wealthy these days.” Finally, we measured participants’ objective social class using education and income as in Studies 1 and 2. Participants had a median educational attainment of college graduation and a median household income between $35,001 and $50,000.

Results

Evaluations of the failure-unrelated dimension. We regressed participants’ evaluations of the outcome (failure-unrelated) dimension onto subjective social class ($M = 3.41, SD = 1.31$). As predicted, low-class participants evaluated the cleanliness of the hotel rooms (failure-unrelated dimension) significantly lower than high-class participants ($B = 0.20, SE = .06; t(276) = 3.23, p < .01$). This finding remained significant when we controlled for education and income ($B = 0.20, SE = .07; t(274) = 2.95, p < .01$). We reran the regression analysis using objective class indicators. While both education and income were positively correlated with subjective social class ($r = .24$ for subjective social class and education; $r = .42$ for subjective social class and income; $r = .31$ for education and income; $ps < .001$), none of these objective class indicators were associated with class differences in evaluations of the failure-unrelated dimension ($ps > .19$), irrespective of whether we used each separate measure or averaged standardized scores into one overall measure.

Evaluations of the failure-related dimension. Next, we regressed participants’ evaluations of the process (failure-related) dimension onto subjective social class. As expected, a regression analysis did not produce any significant effect ($ps > .40$), irrespective of whether education and income were entered as control variables or not, replicating our previous findings that there is no social class difference in evaluations of the failure-related dimension.

Mediation analysis. We conducted a multiple mediator analysis using Hayes (2013) model 4 with 5,000 bootstrapped samples. In the multiple mediator model, subjective social class was treated as the predictor variable, evaluations of the failure-unrelated dimension as the criterion variable, and feelings of discrimination, analytic-holistic thinking, compassion, and power as the potential mediators. Table 1 contains the parameter estimates and confidence intervals for the total and indirect effects of the four mediator variables on the relationship between subjective social class and evaluations of the failure-unrelated dimension. The zero included
in the confidence interval for the total indirect effect (95% CI = −0.0030 to 0.1079) indicates that the mediating effect of the combination of the four mediator variables was not significant. However, specific indirect effects were examined because suppression effects could obscure the impact of individual mediators (MacKinnon, Krull, & Lockwood, 2000; Preacher & Hayes, 2008).

Among the four potential mediators, the only significant mediator was analytic-holistic thinking (95% CI = 0.0016 to 0.0547) as demonstrated by confidence intervals that excluded zero. Specifically, subjective social class was negatively related to analytic-holistic thinking (B = −0.06, SE = .03; t(276) = −2.23, p < .05), which in turn was negatively related to evaluations of the failure-unrelated dimension (B = −0.35, SE = .15; t(272) = −2.30, p < .05). When we controlled for objective class indicators (education and income), analytic-holistic thinking remained the only significant mediator (95% CI = 0.0014 to 0.0615). These results suggest that class differences in thinking style account for the carryover effect. However, the alternative accounts related to discrimination, compassion, and power were independent of the effect. A summary of descriptive statistics and correlation matrix for these variables appears in Table 2.

**Discussion**

Study 3 replicates the results from Studies 1 and 2 with a different failure scenario and a different dependent measure, displaying the generalizability of our findings in other contexts. Importantly, the multiple mediator model reveals that thinking style significantly mediated the effect of social class on evaluations of the failure-unrelated dimension. The analysis calculated with education and income as control variables also provides consistent evidence that the positive association between social class and evaluations is driven by thinking style. That is, as compared to high-class participants, low-class participants favor a holistic style of thinking, which results in lower evaluations of the failure-unrelated dimension. However, because of the correlational nature of these findings, no causal interpretations

Table 1
*Indirect Effects of Subjective Social Class on Evaluations of the Cleanliness of the Hotel Rooms Through Feelings of Discrimination, Thinking Style, Compassion, and Power (study 3)*

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Parameter estimate</th>
<th>SE</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
<th>Parameter estimate</th>
<th>SE</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>0.0462</td>
<td>.0279</td>
<td>−0.0030</td>
<td>0.1079</td>
<td>0.0339</td>
<td>.0255</td>
<td>−0.0094</td>
<td>0.0904</td>
</tr>
<tr>
<td>Discrimination</td>
<td>−0.0060</td>
<td>.0085</td>
<td>−0.0307</td>
<td>0.0053</td>
<td>−0.0093</td>
<td>.0105</td>
<td>−0.0409</td>
<td>0.0037</td>
</tr>
<tr>
<td>Thinking style</td>
<td>0.0204</td>
<td>.0133</td>
<td>0.0016</td>
<td>0.0547</td>
<td>0.0224</td>
<td>.0150</td>
<td>0.0014</td>
<td>0.0615</td>
</tr>
<tr>
<td>Compassion</td>
<td>0.0000</td>
<td>.0041</td>
<td>−0.0079</td>
<td>0.0101</td>
<td>0.0000</td>
<td>.0044</td>
<td>−0.0092</td>
<td>0.0094</td>
</tr>
<tr>
<td>Power</td>
<td>0.0318</td>
<td>.0225</td>
<td>−0.0057</td>
<td>0.0839</td>
<td>0.0209</td>
<td>.0165</td>
<td>−0.0017</td>
<td>0.0637</td>
</tr>
</tbody>
</table>

Table 2
*Correlations Among Subjective SES, Evaluations of the Cleanliness of the Hotel rooms, Discrimination, Analytic-holistic Style of Thinking, Compassion, Power, Education, and Income (Study 3)*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Subjective SES</td>
<td>3.41</td>
<td>1.31</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. Evaluations</td>
<td>3.99</td>
<td>1.38</td>
<td>0.19**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>3. Discrimination</td>
<td>4.23</td>
<td>1.46</td>
<td>0.05</td>
<td>−0.12*</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>4. Thinking style</td>
<td>4.84</td>
<td>.57</td>
<td>−0.13*</td>
<td>−0.17**</td>
<td>0.12*</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>5. Compassion</td>
<td>5.33</td>
<td>1.21</td>
<td>−0.01</td>
<td>−0.07</td>
<td>0.21**</td>
<td>0.37**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>6. Power</td>
<td>4.57</td>
<td>1.12</td>
<td>0.29**</td>
<td>−0.13*</td>
<td>0.05</td>
<td>0.09</td>
<td>0.17**</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>7. Education</td>
<td>2.69</td>
<td>.67</td>
<td>0.24**</td>
<td>0.07</td>
<td>−0.05</td>
<td>−0.09</td>
<td>−0.09</td>
<td>0.16**</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>8. Income</td>
<td>4.11</td>
<td>1.80</td>
<td>0.42**</td>
<td>0.07</td>
<td>−0.02</td>
<td>−0.01</td>
<td>0.01</td>
<td>0.35**</td>
<td>0.31**</td>
<td>—</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01.
are appropriate. To address this issue, Study 4 employs an experimental design.

**Study 4**

In Study 4, we extend our underlying mechanism findings of Study 3 using an experimental causal chain design (Spencer, Zanna, & Fong, 2005), in which we manipulate styles of thinking. We have argued that thinking style is responsible for class differences in the carryover effect. That is, low-class individuals favor holistic thinking and thus decrease evaluations of the failure-unrelated dimension, as compared to high-class individuals, who favor analytic thinking. If this reasoning is correct, priming analytic and holistic thinking for low and high-class individuals, respectively, should reverse this pattern. That is, priming low-class individuals with analytic thinking will increase evaluations of the failure-unrelated dimension, whereas priming high-class individuals with holistic thinking will decrease evaluations of the dimension.

**Method**

A total of 187 undergraduate students (Mage = 21.76, SD = 3.43) at a large public university participated in the study for extra course credit. The ethnic composition of the sample was 12.3% African/African American, 19.3% Asian/Asian American, 49.2% White/Caucasian, 9.1% Hispanic/Hispanic American, and 10.1% other ethnicities. Participants were told that they would participate in a few separate studies and completed all tasks on a computer in a laboratory. Upon arrival in the lab, participants were randomly assigned to experimental conditions in a three-group (thinking style: baseline vs. analytic vs. holistic) between-subjects design. Participants assigned to the analytic and holistic thinking conditions were asked to read a fictitious report and write a statement that supported the report. Participants assigned to the baseline condition were not asked to complete any priming task.

Next, we presented participants with the high-severity process-failure scenario describing an inattentive waiter at a restaurant as used in Study 1. As expected, participants perceived the service failure in the scenario to be severe, as compared to a midpoint of 4 (M = 5.48, SD = 1.53; t(186) = 13.28, p < .001). To measure evaluations of the failure-unrelated dimension, we asked them to indicate their agreement with the quality of food (failure-unrelated dimension) using two items (r = .77) on a 7-point scale (1 = strongly disagree, 7 = strongly agree). The items are “Food is likely to be delicious” and “Food is likely to be good.” Note that we used different items to measure participants’ evaluations of the failure-unrelated dimension, as compared to those used in Study 1. Finally, we assessed both subjective class using the same scale (six items; α = .84) as in Study 3 and objective class using annual household income. Participants reported a median household income between $35,001 and $50,000.

**Results**

**Manipulation check.** To ascertain the effectiveness of the manipulation of thinking styles, we performed a pretest using a separate sample of participants (N = 148) from Amazon Mechanical Turk. We randomly assigned participants to one of the three conditions (baseline vs. analytic thinking vs. holistic thinking) and asked them to indicate their agreement with each statement at that present moment using the same 24-item 7-point scale (α = .79) as in Study 3. A one-way ANOVA revealed a significant difference among the conditions (F(2, 145) = 9.18, p < .001). As expected, participants in the analytic thinking condition (M = 4.59, SD = .53) reported a significantly lower score on the scale than those in the holistic thinking (M = 5.06, SD = .57; F(1, 145) = 18.34, p < .001) and baseline (M = 4.84, SD = .52; F(1, 145) = 5.26, p = .023) conditions. Also, there was a significant difference between participants in the holistic thinking (M = 5.06, SD = .57) and baseline (M = 4.84, SD = .52; F(1, 145) = 4.04, p = .046) conditions.

**Evaluations of the failure-unrelated dimension.** We first performed a one-way ANOVA with thinking style as the experimental factor. There was a significant effect of thinking style on participants’ ratings of food quality (F(2, 183) = 8.59, p < .001). Planned contrasts revealed that participants in the analytic thinking condition (M = 4.12, SD = 1.33) scored higher on ratings of food quality than those in the holistic thinking (M = 3.21, SD = 1.13; F(1, 184) = 17.32, p < .001) and baseline (M = 3.61, SD = 1.19; F(1, 184) = 17.32, p < .02) conditions. The difference between the latter two conditions was marginally significant (F(1, 184) = 3.35, p = .069).

Next, we examined a two-way interaction between thinking style and subjective class by performing a multiple regression analysis. Our regression analysis involved a multicategorical variable with three levels (thinking style: 0 = baseline vs. 1 = analytic thinking vs. 2 = holistic thinking) and a continuous variable (subjective class). Following the procedure of Hayes and Montoya (2017), we
transformed thinking style into two dummy variables—D1 and D2. Thus, the regression model included subjective class, D1, D2, subjective class × D1, and subjective class × D2 as the independent variables, and evaluations of food quality as the dependent variable. To test a two-way interaction between subjective class and thinking style, we conducted a test of significance for the change in $R^2$ in the regression model using PROCESS model 1 with 5,000 bootstrapped samples (Hayes & Montoya, 2017). Our findings revealed that the two-way interaction was significant ($\Delta R^2 = .036$, $F(2, 181) = 3.75$, $p < .05$), suggesting that the effect of subjective class on evaluations of food quality is contingent on thinking style. We further probed the interaction in two separate ways. First, we implemented indicator coding to determine differences in evaluations of food quality between the baseline condition and each of the thinking style conditions for the levels of subjective class that were one standard deviation above and below its mean. As expected, low-class participants reported higher evaluations under the analytic condition, relative to the baseline condition ($M_{\text{analytic}} = 4.20$ vs. $M_{\text{baseline}} = 3.21$; $t(181) = 3.21$, $p < .01$), whereas high-class participants reported lower evaluations under the holistic condition, relative to the baseline condition ($M_{\text{holistic}} = 3.10$ vs. $M_{\text{baseline}} = 4.01$; $t(181) = -3.15$, $p < .01$). Second, we implemented Helmert coding to identify differences in evaluations of food quality between the analytic condition and the holistic condition for the levels of subjective class that were one standard deviation above and below its mean. As expected, low-class participants reported higher evaluations under the analytic condition, relative to the holistic condition ($M_{\text{holistic}} = 3.36$ vs. $M_{\text{analytic}} = 4.20$; $t(181) = -2.75$, $p < .01$), whereas high-class participants reported lower evaluations under the holistic condition, relative to the analytic condition ($M_{\text{holistic}} = 3.10$ vs. $M_{\text{analytic}} = 4.02$; $t(181) = -2.95$, $p < .01$). An additional analysis indicated that there was no class difference in either the holistic or analytic thinking condition ($ps > .35$). Figure 3 displays the pattern of these results. Our findings remained the same when we controlled for objective class (income).

Finally, using objective class (income), we reran the regression analysis involving a multicategorical variable (thinking style) and a continuous variable (objective class). While objective class was positively correlated with subjective class ($r = .37$; $p < .001$), there was no significant interaction between objective class and thinking style ($\Delta R^2 = .015$, $F(2, 181) = 1.55$, $p = .22$).

Discussion

We replicate our previous findings and further highlight the crucial role of thinking style in class differences in evaluations of the failure-unrelated dimension. In doing so, we manipulated thinking style to strengthen the causal link and generalize our findings. When making judgments about service failure, low (high) class participants decreased (increased) evaluations of the failure-unrelated dimension. Using the experimental causal chain design, we provide evidence that these class differences were attributed to differences in thinking style. That is, priming low-class participants with analytic thinking increased evaluations of the failure-unrelated dimension, while priming high-class participants with holistic thinking decreased evaluations of the dimension. Furthermore, evaluations of the failure-unrelated dimension decreased for participants primed with holistic thinking and increased for those primed with analytic thinking, thus indicating that thinking style is the underlying factor that explains class differences in the carryover effect.

General Discussion

We provide converging evidence for our theorizing that social class affects consumer judgments and that the underlying factor driving the effect is thinking style. The pattern of our effects remained the same regardless of whether service failure was process-related (interpersonal) or outcome-related (noninterpersonal) in the domains of both restaurant and hotel. Utilizing the two primary dimensions of service encounters—process and outcome—as a means to explore our predictions, we demonstrated that low-class individuals responded less
favorably to service failure than their high-class counterparts, especially when evaluating the failure-unrelated dimension. However, low-class individuals did not differ from their high-class counterparts in evaluations of the failure-related dimension. Notably, we identified failure severity as an important moderating factor for the carryover effect obtained in our studies. That is, the effect occurs when service failure is considered severe, but not when it is minor. Supporting this evidence, previous research shows that when both low and high-class individuals are exposed to the same stressful events, low-class individuals have cognitive biases and appraise situations as potentially more harmful than their high-class counterparts (Chen & Matthews, 2001), feel more stressed (Kessler, 1979; Kessler & Cleary, 1980), and increase more aggression (Greitemeyer & Sagioglou, 2016). Consequently, such cognitive biases among low-class individuals may be accentuated most strongly when the severity is high rather than low.

As one explanation for class differences in evaluations, we demonstrated that individuals in the low social class were more holistic in thinking style than those in the high social class, and these differences in thinking style contributed to the observed effects on evaluations of the failure-unrelated dimension. Using a multiple mediator model, we ruled out alternative accounts related to discrimination, compassion, and power. Furthermore, we provide additional evidence showing an opposite pattern in the effects of social class on evaluations, such that activating analytic thinking among low-class individuals increased evaluations of the failure-unrelated dimension, while activating holistic thinking among high-class individuals decreased evaluations of the dimension. That is, activating thinking styles eliminated differences in evaluations between social classes, displaying that thinking style was a driving force underlying the observed effects.

Our research makes several contributions to the literature on social class. Although it is widely recognized that social class, as a useful factor for market segmentation, shapes consumer behavior on diverse consumption contexts (for reviews, see Henry, 2005; Kamakura & Mazzon, 2013), little is known about the cognitive processes that might account for social class effects (for reviews, see Carey & Markus, 2016; Shavitt, Jiang, & Cho, 2016). Our research fills this gap. We document the crucial role of holistic-analytic styles of thinking in consumer judgments across social class contexts. We indicate that holistic tendencies among low-class individuals are related to the carryover of their judgments, while analytic tendencies among high-class individuals are not linked to it. It is noteworthy that these differences between social classes existed even after we held constant objective class indicators such as education and income. Moreover, we reveal that none of these objective class indicators accounted for class differences in the carryover effect. These findings are consistent with previous research showing that a subjective sense of social standing relative to others is a stronger predictor of social cognitive tendencies than the objective indicators of social class (Greitemeyer & Sagioglou, 2016; Kraus et al., 2009; Smith & Pettigrew, 2014). Additionally, a recent Gallup poll reveals that the percentage of Americans who identify themselves as working or lower class has increased to 48% in 2015, as compared to 33% in 2000 (Newport, 2015). Considering these figures, it becomes evident that marketers should make more efforts to understand consumers in the lower half of social class, who may have previously been neglected in favor of those higher in social class (Pham, 2016).

Limitations and Future Directions

While the present research focuses on the carryover effect showing that low-class consumers tend to incorporate nondiagnostic information into their evaluations of a focal attribute, it does not reflect overall service (brand) evaluations. As in recent review articles (e.g., Shavitt et al., 2016), it is plausible that low (vs. high) class consumers, who make external (vs. internal) attributions for behavior, may provide their overall evaluations of service less negatively in response to negative publicity of service (e.g., Monga & John, 2008). For example, viewing negative reviews about a restaurant may have less impact on overall evaluations of the restaurant among low (vs. high) class consumers because of their tendency to seek out external explanations for the negative reviews. How class differences in the carryover tendency influence overall evaluations of a brand is an empirical question worthy of further research.

Related to this, some studies find that low (vs. high) class individuals show higher levels of compassion in response to the needs of others (Stellar et al., 2012) and thus engage in more prosocial behavior (Piff et al., 2010). Aligning with this perspective, one may speculate that low-class consumers are likely to evaluate a service failure less negatively than their high-class counterparts. However, recent studies provide contradictory evidence; high (vs. low) class individuals engage in more...
prosocial behavior (Korndörfer, Egloff, & Schmukle, 2015) and low (vs. high) class individuals tend to be more aggressive (Greitemeyer & Sagioglou, 2016). Our findings show that there was no class difference in evaluations of the failure-related dimension and levels of compassion. Thus, it is worthwhile to identify potential moderating factors for the relationship between social class and compassionate behavior.

In addition, our research is limited to negative service contexts. However, would such a carryover effect among holistic thinkers exist in positive service contexts? Some research offers interesting insights into this question. For example, in the context of product perceptions, Henderson and Arora (2010) find that when a product brand is associated with a social cause, the positive associations with the brand carry over to other product categories that share the brand’s name but do not pertain to the social cause. Similarly, Chernev and Blair (2015) find that company’s prosocial activities including charitable donations positively alter not just company reputations but also consumer attitudes toward product performance, even when the activities have no direct association with company products. More relevant, within the context of service failure, Bolton and Mattila (2015) show that company’s prosocial activities attenuate the negative impact of service failure on satisfaction and loyalty, irrespective of whether the failure is process-related or outcome-related, suggesting that overall positive evaluations of a company may have a carryover effect on other specific service dimensions. Thus, it is likely that the carryover effect observed in our studies may be extended to positive service contexts.

Our findings also provide avenues for future research. First, previous research suggests that people in the high social class display a disjoint model of agency in which their good actions are characterized as promoting independence, controlling environments, and influencing others, while those in the low social class display a conjoint model of agency in which their good actions are defined as promoting interdependence, adjusting the self to environments, and attending to others (Markus & Kitayama, 2003; Snibbe & Markus, 2005; Stephens et al., 2007). Recognizing these differences, Stephens, Hamedani, Markus, Bergsieker, and Eloul (2009) show that in response to stressful situations (e.g., Hurricane Katrina), people who are predominantly grounded in the disjoint model of agency tend to leave the situations (e.g., find a way to evacuate), while those who are grounded in the conjoint model tend to stay in the situations by having faith and maintaining hope (e.g., adjust the self to the situations). Similarly, Becker, Kraus, and Rheinschmidt-Same (2017) show that when faced with a social disadvantage, low-class individuals tend to remain politically inactive, as compared to high-class individuals. In a marketing context, these findings indicate that in response to service failures, high-class consumers may take action and leave for other service providers (e.g., switching behavior), especially when there is an opportunity to do so, rather than to remain with their existing service providers.

Second, previous research shows that a service experience recalled about a focal company may influence evaluations of its competing company depending on modes of recalling the experience (Bickart & Schwarz, 2001). For example, when the experience was episodically recalled, the evaluations for the competing company (e.g., Burger King) were in the same direction as those for the focal company (e.g., McDonald’s; termed assimilation effects). However, when it was analytically recalled, the evaluations for the competing company were in the opposite direction to those for the focal company (termed contrast effects). Thus, it seems reasonable to predict that the carryover effect observed in our studies may differ in judgments of competing companies among consumers who favor analytic thinking versus holistic thinking.

Finally, future research may investigate cross-cultural differences in carryover effects across social classes. Miyamoto and Wilken (2010) find that American leaders (e.g., those who influence others) tend to provide analytic explanations, whereas Japanese leaders tend to have holistic perceptions, suggesting that high-class individuals may have different thinking styles depending on their culture. Furthermore, Na, McDonough, Chan, and Park (2016) show that people from interdependent cultures (relative to independent cultures) are more sensitive to social contexts in their choices regardless of social class and, consequently, the effects of social class on choices are significantly attenuated among those from interdependent cultures. Thus, cultural orientations may moderate the carryover effect observed in our studies, and the effect may hold for independent cultures, but not for interdependent cultures.

References


**Supporting Information**

Additional supporting information may be found in the online version of this article at the publisher’s website:

**Appendix S1. Methodological Details.**