

Fitting In but Getting Fat: Identity Threat and Dietary Choices Among U.S. Immigrant Groups

Psychological Science
22(7) 959–967
© The Author(s) 2011
Reprints and permission:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/0956797611411585
http://pss.sagepub.com


Maya D. Guendelman¹, Sapna Cheryan², and Benoît Monin³

¹University of California, Berkeley; ²University of Washington; and ³Stanford University

Abstract

In two experiments, we tested the hypothesis that pressure felt by U.S. immigrant groups to prove they belong in America causes them to consume more prototypically American, and consequently less healthy, foods. Asian Americans were three times more likely to report a prototypically American food as their favorite after being asked whether they spoke English than when they had not been asked; in contrast, questioning the English abilities of White Americans had no effect on their reports (Experiment 1). Also, Asian Americans ordered and ate dishes that were more American and contained an average of 182 additional calories and 12 extra grams of fat when their American identity was directly challenged than when their American identity was not challenged (Experiment 2). Identity-based psychological processes may help explain why the diets of U.S. immigrant groups tend to decline in nutritional value with longer residence in the United States and over generations.

Keywords

racial and ethnic attitudes and relations, stereotyped attitudes, immigration, food, threat

Received 11/3/10; Revision accepted 2/22/11

At home, I kept opening the refrigerator and cupboards, wishing for American foods to magically appear. I wanted what the other kids had: Bundt cakes and casseroles, Cheetos and Doritos. (Nguyen, 2007, p. 50)

Obesity prevalence in the United States has risen to epidemic proportions (Ogden, Yanovski, Carroll, & Flegal, 2007), and immigrants to the United States and their children are one of the subgroups of Americans most highly affected by this epidemic. Levels of obesity are considerably lower among immigrants newly arrived to the United States, but after 15 years of residence, these levels approach those of the overall U.S. population (Goel, McCarthy, Phillips, & Wee, 2004). In addition, U.S.-born children of immigrants are as prone to obesity as children of American-born parents are (Harris, Perreira, & Lee, 2009). One explanation for the rise in obesity and related chronic diseases (e.g., diabetes, hypertension, cardiovascular disease) among immigrants and their children is the adoption of a less-healthy American diet of fast food, sweets, and soda (Kim, Kim, Juon, & Hill, 2000; Lv & Cason, 2004; Pan, Dixon, Himburg, & Huffman, 1999). The choice to eat American foods is certainly, in part, due to their alluring convenience, affordability, and ubiquity (Satia-Abouta, Patterson, Kristal, Teh, & Tu, 2002). What people eat, however, is not only a matter of sustenance, but it also signals their identity to

others (Barthes, 1997; Levi-Strauss, 1997). In two experiments, we investigated whether members of non-White immigrant groups choose and consume American food as a way to convey that they belong in America.

A prominent concern for members of non-White immigrant groups is having their American identity go unrecognized or questioned by fellow Americans (Cheryan & Monin, 2005). According to research on social-identity threat (Branscombe, Ellemers, Spears, & Doosje, 1999; Steele, Spencer, & Aronson, 2002), having one's membership in a social group doubted can be a threatening experience that triggers behaviors designed to resolve that threat. One such strategy is to engage in behaviors that prove one's group membership to other people (Bosson, Vandello, Burnaford, Weaver, & Wasti, 2009; Cheryan & Monin, 2005; Maass, Cadinu, Guarnieri, & Grasselli, 2003). In an effort to be considered more American, members of non-White U.S. immigrant groups may distance themselves from behaviors associated with their ethnic identities in a manner similar to the strategy observed in response to stereotype threat (e.g., African Americans distancing

Corresponding Author:

Sapna Cheryan, Department of Psychology, University of Washington, Box 351525, Seattle, WA 98195-1525
E-mail: scheryan@uw.edu

themselves from the sport of basketball; Pronin, Steele, & Ross, 2004; Steele & Aronson, 1995).

Individuals who attempt to prove their American identity can do so by directly embracing behaviors associated with being American. For instance, Asian Americans whose American identity was questioned (i.e., “Do you speak English?”) spent more time recalling American cultural knowledge than did Asian Americans who were not similarly questioned (Cheryan & Monin, 2005). In contrast, White Americans, who fit the prototypical American image and therefore do not need to prove they are American to other people (Devos & Banaji, 2005), did not increase their efforts to recall American cultural knowledge.

Even behaviors that are potentially harmful to a person’s health may be invoked to establish his or her status as a group member. When African Americans and Latinos were reminded of their racial-group membership, they reported more health-fatalistic beliefs to better fit the norms of their racial group (Oyserman, Fryberg, & Yoder, 2007). A longitudinal study on sorority members found that they altered reports of binge-eating behaviors over time to better fit in with fellow sorority members (Crandall, 1988). The quest to fit into a group can thus affect reported health beliefs and behaviors. In the work reported here, we investigated whether the motivation to convey an identity can also bring about actual dietary decline.

Might attempts to prove one’s belongingness in America result in the selection of more-American foods over foods related to one’s ethnic background? We investigated how threats to American identity affect food choices among Asian Americans. In 2007, Asian Americans made up 23% of the U.S. immigrant population (Grieco, 2010), and nearly 80% of Asian American children were immigrants or had foreign-born parents (Urban Institute, 2011). In 1998, 27% of second-generation (i.e., U.S.-born) Asian American adolescents were obese, a percentage comparable to the rate of obesity among White American adolescents (24%; Popkin & Udry, 1998).

Preliminary evidence for our hypothesis was obtained by surveying Asian American and White American undergraduates ($N = 41$) to investigate whether their food practices are a source of threat. Participants were asked to list any “ethnic foods or food-related practices” they ate or performed at home growing up that would have made them embarrassed if seen by White Americans. Asian Americans were more likely than White Americans (68% vs. 27%) to have had one or more actual experiences of embarrassment due to their food-related practices while growing up, $\chi^2(1, N = 41) = 6.94, p = .008$. Examples of embarrassing foods and practices listed by Asian Americans included “rice, and oxen soup, and Chinese dumplings, and our use of chopsticks”; “eating all the parts of animals (chicken feet, etc.)”; “eating fried tilapia (eyes and all)”; “no dessert, pork head/butt, pig blood clots, chicken feet”; and “kimchi!” Most White participants responded that they could not think of any examples or left the section blank. Participants then rated, on 7-point scales from 1 (*not at all*) to 7 (*extremely*), how much discomfort they would have felt and

how much they would have complained to their parents if, when they were at lunch in elementary school, they had eaten a dish “that your parents cooked at home growing up” while their friends had American lunches. In response to the lunch-time scenario, Asian Americans reported greater discomfort ($M = 3.47$) than did White Americans ($M = 1.64$), $t(39) = 3.74, p = .001, d = 1.20$, and were more likely to complain to their parents ($M = 2.89$) than were White Americans ($M = 1.50$), $t(39) = 2.66, p = .01, d = 0.85$.

Traditional ethnic diets are typically healthier than the prototypical American diet (Nestle, 1994), yet the findings of our survey provide initial real-world evidence suggesting that misgivings about one’s traditional ethnic cooking are a part of growing up for many Asian Americans. Asian Americans recalled instances of embarrassment due to their ethnic foods that had occurred years before, illustrating the importance of this issue in their lives and suggesting that these threats might become chronic for some people (see Major, Quinton, & McCoy, 2002). Results also suggest that Asian Americans take behavioral steps, such as complaining to their parents, to bring their diet more in line with that of the group in which they desire to be seen as members.

Ethnic dietary practices may thus serve as a reminder to Asian Americans that they are different from the prototypical American and could be a source of threat to their American identity. We investigated directly whether such threats cause Asian Americans to change their espoused food preferences and actual food choices. Experiment 1 examined whether Asian Americans report favorite foods that are more prototypically American than their usual food choices when faced with a threat to their American identity. Experiment 2 investigated the influence of identity threat on actual food choices and how healthy those foods are. Experiment 2 also allowed us to examine the viability of an alternative explanation for our effects, namely, that a desire for unhealthy “comfort foods” in response to threat drives selection of American foods over ethnic foods (Inzlicht & Kang, 2010; Williams, Neighbors, & Jackson, 2008).

Experiment 1: Identity Threat and Espoused Preferences for American Foods

Tell me what you eat, and I’ll tell you who you are.
(Brillat-Savarin, 1825/1999, p. 3)

Experiment 1 investigated whether Asian Americans whose identity as Americans is threatened would change a seemingly stable fact about themselves—their favorite food—to appear more American. On the basis of our previous finding that White Americans did not feel a need to assert their American identity when it was questioned (Cheryan & Monin, 2005), we hypothesized that White Americans’ reported favorite foods would not differ in response to threats to their Americanness. Including White American participants in this study also

enabled us to rule out the possibility that Asian Americans' preference for American food when threatened did not result simply from activating the concept "American" (if this were the case, the same response would have been elicited from White Americans as well).

Method

Participants. Sixty-four participants recruited on the Stanford University campus were paid \$5 to participate in the experiment. Three who identified themselves as neither Asian American nor White American and eight who were not United States or Canadian citizens were eliminated, leaving 53 participants (27 women, 26 men,¹ mean age = 23.3 years). Twenty-four of the 53 were Asian American (15 Chinese/Taiwanese Americans, 4 Korean Americans, 3 Vietnamese Americans, 1 Indonesian American, and 1 unidentified), and 29 were White American.

Procedure. Participants were randomly assigned to one of two conditions. In the experimental condition, the American identity of participants in the two groups was threatened by a White American experimenter, who approached participants and asked them whether they spoke English (see Cheryan & Monin, 2005). In the control condition, the experimenter did not ask this question. Participants were then asked to write down their favorite food. The experiment concluded with demographic questions on a separate page.

Rating foods. Favorite foods were rated in two ways. First, a separate sample ($N = 31$; 17 women, 13 men, 1 unidentified; 17 Asian Americans, 14 White Americans) rated how American each food was on a scale from 1 (*not at all*) to 5 (*very much*); results were based on averaging across raters ($\alpha = .96$). Second, three coders (2 Asian American, 1 White American) blind to hypothesis categorized participants' favorite foods as American, Asian, or neither ($\alpha = .87$). Coders were instructed to try to categorize foods as American or Asian before using the "neither" category.

Results and discussion

Using the scale ratings of how American each food was, a 2 (ethnicity: Asian vs. American) \times 2 (condition: experimental vs. control) analysis of variance (ANOVA) revealed no main effects but the predicted interaction, $F(1, 49) = 4.34, p = .04$. Asian Americans who felt their identity was threatened listed favorite foods that were more prototypically American ($M = 3.45$) than did Asian Americans whose identity was not threatened ($M = 2.75$), $F(1, 49) = 4.45, p = .04, d = 0.80$. In contrast, White Americans' favorite foods did not differ between conditions (experimental: $M = 3.28$; control: $M = 3.51$), $F(1, 49) = 0.60, p = .44$. Seen another way, in the control condition, the food preferences of Asian Americans looked less prototypically American than the food preferences of

White Americans, $F(1, 49) = 5.88, p = .02, d = 0.82$; however, in the experimental condition, Asian Americans' food preferences looked as American as those of White Americans, $F(1, 49) = 0.29, p = .60$.

The category coding revealed that a significantly greater percentage of threatened than nonthreatened Asian Americans (75.0% vs. 25.0%) listed an American food as their favorite, $\chi^2(1, N = 24) = 6.00, p = .01$ (Fig. 1, Table 1). In contrast, the percentage of White Americans listing an American food did not differ between conditions (experimental: 85.7%; control: 80.0%), $\chi^2(1, N = 29) = 0.17, p = .68$. We also investigated whether the shift toward American foods corresponded to a shift away from Asian foods, similar to the distancing effect found in response to stereotype threat (Steele & Aronson, 1995). Threatened Asian Americans were significantly less likely to list an Asian food as their favorite (25.0%) than were nonthreatened Asian Americans (66.7%), $\chi^2(1, N = 24) = 4.20, p = .04$. Asian Americans, but not White Americans, altered their food preferences to assert a threatened American identity.

Experiment 2: Eating to Assert an American Identity

Growing up in Oakland [California] . . . I was Chinese and desperately wanted to be American. I was American, of course, but . . . I didn't feel much like the people I saw outside Chinatown, or in books and movies . . . No wonder I would sneak off, on the way to Chinese school, to Hamburger Gus for a helping of thick-cut French fries. (Fong-Torres, 2007, p. 11)

Does the effort to assert an American identity also explain the actual food choices of Asian Americans? This is an important

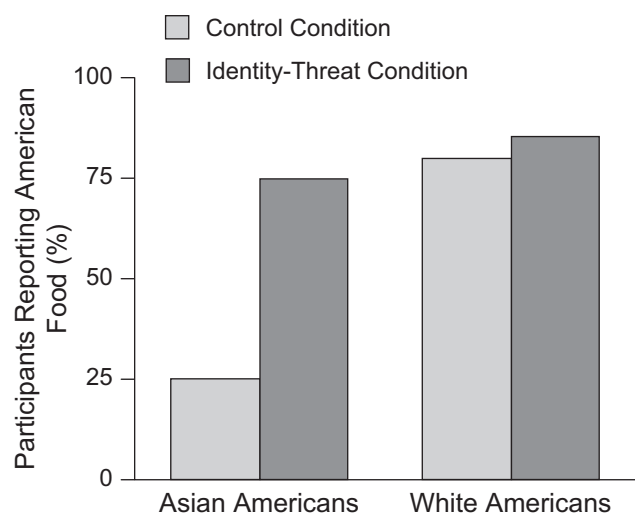


Fig. 1. Percentage of Asian Americans and White Americans in the two conditions who reported an American food as their favorite in Experiment 1.

Table 1. Categorization of Favorite Foods Reported by Asian Americans and White Americans in the Control and Identity-Threat Conditions in Experiment 1

Group and condition	Categorization	
	American	Asian
Asian American		
Control condition	Cheeseburger Spaghetti, slightly raw vegetables, ground beef Steak, medium rare, no sauce, with seasoning	Beef noodle soup Chinese eggplant, sushi Korean barbecue-style thinly sliced strips of beef Lobster over bed of egg noodles with Asian sauce Peking duck Steamed rice, soup, seafood, vegetables, kimchi Stuffed eggplant (Chinese) Sushi
Identity-threat condition	Gelato Italian (pasta, pizza, etc.) Lasagna with beef and tomato sauce McDonald's Big Mac Pizza Prime rib Sausage sandwich Steak, medium rare with butter Vanilla ice cream	Mango Stir-fried noodles Rice and steak (any variant of these foods)
White American		
Control condition	Bagel (most kinds with about any topping, toasted) Baked potato BBQ baby back ribs Frozen yogurt Grilled salmon Grilled shrimp, olive oil, salt, pepper Hawaiian pizza Kiwi Pasta with olive oil and marinara sauce Raspberries Steak and mashed potatoes Turkey sandwich	Southeast Asian curries Sushi Sushi (rainbow roll)
Identity-threat condition	Arugula salad with balsamic vinaigrette Banana bread Fruit salads Fruit (plums and nectarines) Grilled salmon with onions, dijon, and thyme Hamburger Lasagna Olives (pretty much any kind) Pasta with basil, sun-dried tomatoes, and pancetta Pizza Salmon and avocado salad Spaghetti Bolognese	—

Note: Three responses did not match the criteria for either categorization and were excluded from this table: "McDonald's cheeseburger, or Korean barbecue" (Asian American group, control condition) and "Mexican food" and "Tabouli" (both in the White American group, identity-threat condition).

question because an affirmative answer would demonstrate that Asian Americans go as far as altering their diet and potentially compromising their health in response to identity-based threats. We hypothesized that threats to their American identity cause Asian Americans to choose more prototypical

American foods as a way to prove their Americanness, and this leads them to consume less-healthy foods. We also investigated an alternative causal path: that identity threat increases the desire for unhealthy foods, and this in turn causes selection of American foods.

Method

Participants. Fifty-five U.S.-born Asian Americans were recruited through the subject pool at the University of Washington. Participation in the experiment was open only to students who were both U.S.-born and self-identified as Asian American, without their knowledge of this racial restriction. Three vegetarian participants and one other participant who encountered technical difficulties were eliminated. The final sample consisted of 51 participants (28 women, 23 men; mean age = 19.4 years), among whom were 15 Chinese/Taiwanese Americans, 13 Southeast Asian (i.e., Vietnamese, Thai, Cambodian, Filipino, Indonesian) Americans, 11 Korean Americans, 3 Japanese Americans, 2 South Asian Americans, and 7 participants of mixed or unidentified Asian ethnicities.

Food Web site and pretest. Participants were shown a fake food-delivery Web site, created for the experiment and hosted at <http://seattlemenupages.com>. The front page included links to six cuisine options (American, Asian, Greek, Italian, Mexican, and Middle Eastern). Clicking on the American or Asian links brought up restaurants with a list of foods and corresponding prices. The mean price was the same for both the American and the Asian menu items.

An initial list of prototypical American and Asian dishes was generated by culling online menus of 10 midpriced American restaurants (e.g., Johnny Rockets) and 10 midpriced Asian restaurants (e.g., Mandarin Chef) in Seattle. For the Asian dishes, we sampled two restaurants each from five of the six ethnic Asian categories (Japanese, Chinese, Vietnamese, Thai, and Korean) that represented the most common Asian cuisines found in Seattle according to Zagat (<http://www.zagat.com>) and Yelp (<http://yelp.com>).² Thirty-three dishes that were easy to procure and occurred repeatedly on at least three American menus or on both ethnic Asian menus in each category were then given to a separate sample of 27 Asian American students (18 women, 9 men), who rated the dishes for how Asian and how American they were on a scale from 1 (*not at all*) to 5 (*very much*). The foods included on the fake food-delivery Web site were the 13 dishes rated by the separate sample as the most American—bacon, lettuce, and tomato sandwich, chicken tenders, Cobb salad, fish and chips, fried chicken, grilled cheese sandwich, grilled chicken club salad, hot dog, hamburger, macaroni and cheese, pepperoni pizza, Philly cheesesteak sandwich, and submarine sandwich—and the 13 dishes rated as the most Asian—beef yakisoba (noodles), bibimbap (rice with vegetables and meat), chicken katsu (fried chicken), chicken teriyaki, com tom xao rau (prawns and vegetables), kalbi (ribs), lad na (wide noodles), pad thai, pho (noodle soup), pork banh mi (Vietnamese sandwich), sushi plate, tempura udon (noodle soup), and Thai curry with chicken.

Nutrition information. Calories, fat, and saturated fat for a single serving of each dish were obtained using Nutritionist

Pro software (<http://www.nutritionistpro.com/>). Information was available in Nutritionist Pro for 15 of the 26 dishes, and information for the remaining 11 dishes was obtained by entering the dish's ingredients into the software. Ingredients were found by selecting the most popular recipe on <http://food.com>. Consistent with observed differences between the healthiness of prototypical American foods and the healthiness of prototypical Asian foods (e.g., Franzen & Smith, 2009; Kudo, Falciglia, & Couch, 2000), data showed that, on average, the 13 American foods were higher than the 13 Asian foods in calories (649.63 vs. 507.57), fat (32.59 g vs. 20.55 g), and saturated fat (11.87 g vs. 7.00 g). All of these effects were sizeable, $d_s > 0.56$, even if these differences were not statistically significant, $t_s(24) < 1.62$, $p_s > .11$, presumably because of the small sample of foods.

Procedure. Participants were randomly assigned to one of two conditions. On participants' arrival, the experimenter told those in the identity-threat condition, "Actually, you have to be an American to be in this study" (this procedure was also used in Cheryan & Monin, 2005). All participants told the experimenter that they were American, at which point the experimenter invited them in. In the control condition, the experimenter simply invited them in. Participants were told that the purpose of the study was to investigate "how appetite affects cognitive processing" and that they would be ordering food for a second session.

Participants saw the food delivery Web site and were told to select a dish from either the American or Asian restaurants because the experimenters had accounts there. The Web site recorded how long participants spent on each menu and their food choice. To gauge negative emotional responses to the identity threat, we then asked participants how offended, angry, and annoyed they felt (along with other moods irrelevant to the hypothesis) on scales from -4 (*not at all*) to 4 (*very much*; $\alpha = .74$). Demographics were collected at the end of this session. Because this study involved a test of actual food choices, participants came back for a second session, held on average 9 days after the first session, and were served and ate the dishes they had ordered.³ Seven participants (4 in the identity-threat condition, 3 in the control condition) did not return for the second session; eliminating them from analyses did not change any results.

Results and discussion

Choice of food. As predicted, a 2 (between subjects: identity-threat condition vs. control condition) \times 2 (within subjects: Americanness of the food vs. Asianness of the food) ANOVA on average pretest ratings of the foods chosen in the main experiment revealed no main effects but a significant interaction, $F(1, 49) = 5.89$, $p = .02$ (Fig. 2). Participants in the identity-threat condition chose dishes that had been rated as more American ($M = 3.58$) than dishes chosen by control participants ($M = 2.78$), $F(1, 49) = 6.92$, $p = .01$, $d = 0.75$, and less

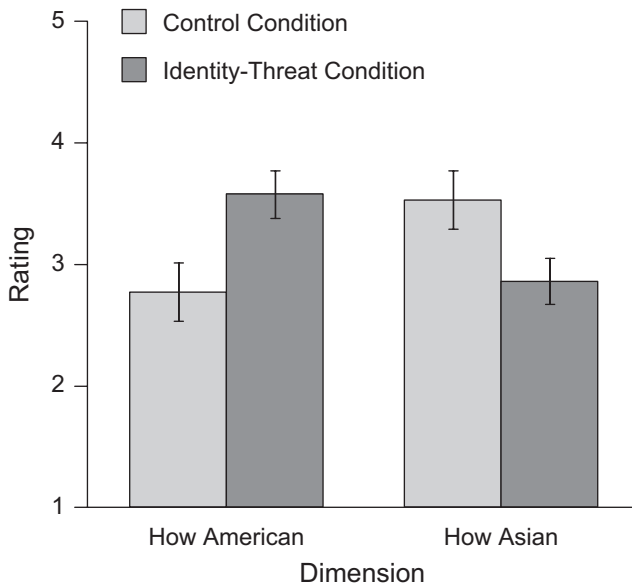


Fig. 2. Ratings of Americanness and Asianness of the dishes selected and consumed by Asian Americans in the two conditions in Experiment 2. Error bars show standard errors.

Asian ($M = 2.87$) than control participants' dishes ($M = 3.54$), $F(1, 49) = 4.70, p = .04, d = 0.63$. Consistent with this result, the choices of the majority of threatened participants were dishes from the American menu (58.1%); in contrast, the majority of participants in the control condition chose foods from the Asian menu (70.0%), $\chi^2(1, N = 51) = 3.84, p = .05$.

Healthiness of food choice. Compared with participants in the control condition, participants in the identity-threat condition ordered and ate dishes with an additional 182 calories ($M = 721.86$ vs. $M = 539.42$), $t(49) = 2.10, p = .04, d = 0.60$; an additional 12 g of fat ($M = 31.40$ g vs. $M = 19.77$ g), $t(49) = 1.99, p = .05, d = 0.57$; and an additional 7 g of saturated fat ($M = 12.72$ g vs. $M = 5.62$ g), $t(49) = 2.53, p = .02, d = 0.72$. Because the participants in this experiment made an actual food

choice—that is, selected a food that they later ate—this experiment demonstrates how identity-based threats influence actual health behaviors.

We conducted a mediation analysis using 5,000 bootstrapping resamples (Baron & Kenny, 1986; Preacher & Hayes, 2004) to examine whether the difference in calorie consumption between the two conditions was explained by the threatened group selecting more-American dishes (Fig. 3). As noted previously, participants in the identity-threat condition were more likely to choose higher-calorie foods than control participants were, $b = 182.44, SE = 86.70, p = .04$. Participants in the identity-threat condition were also more likely to choose more-American foods than control participants were, $b = 0.80, SE = 0.31, p = .01$. After controlling for condition, we found that ratings of Americanness continued to predict how caloric the dishes were, $b = 142.32, SE = 35.50, p < .001$. Finally, controlling for ratings of how American the dishes were eliminated the relationship between threat condition and calories, $b = 68.23, SE = 80.99, p = .40$. The 95% confidence interval (CI), [10.23, 218.18], did not include 0, and the Sobel test supported the finding that Americanness of the dishes was a significant mediator, $z = 2.15, p = .03$.

Testing alternative explanations. The choice of American dishes could also have resulted from a desire to choose higher-calorie foods to cope with negative emotions generated by the threat to participants' American identity. To test this possibility, we first switched the mediator (Americanness of food) and dependent measure (calories) from the previous mediation analysis, again using 5,000 bootstrapping resamples. The 95% CI, [-0.02, 0.67], included 0, and the Sobel z for the reverse mediation was only marginally significant, $z = 1.82, p = .07$. To further test this potential alternative explanation, we examined negative emotional reactions. Consistent with the findings of our previous study (Cheryan & Monin, 2005), results showed that participants in the identity-threat condition reported greater negative emotions ($M = -1.03$) than did participants in the control condition ($M = -3.43$), $t(48) = 5.27, p < .001, d = 1.52$. However, negative emotions did not

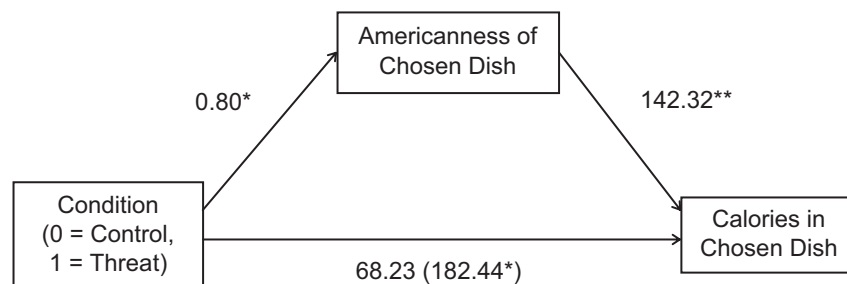


Fig. 3. Model showing the effect of condition (identity threat vs. control) on the caloric content of a chosen food dish. Americanness of the chosen dish was included as a mediator in the model. Unstandardized regression coefficients are shown. Along the bottom path, the value outside the parentheses is the coefficient without controlling for Americanness, and the value inside the parentheses is the coefficient without controlling for Americanness. Significant coefficients are indicated with asterisks (* $p < .05$; ** $p < .001$).

mediate the relationship between condition and Americanness of chosen foods (Step 1: $b = 0.76$, $SE = 0.31$, $p = .02$; Step 2: $b = 2.40$, $SE = 0.46$, $p < .001$; Step 3: $b = -0.06$, $SE = 0.10$, $p = .55$; Step 4: $b = 0.90$, $SE = 0.39$, $p = .02$; 95% CI [-0.61, 0.33]; Sobel $z = -0.59$, $p = .56$). Finally, we looked at only participants who chose Asian foods ($n = 27$). As expected, participants in the identity-threat condition chose foods that were calorically equivalent to foods chosen by control participants ($M = 508.94$ vs. $M = 504.62$), $t(25) = 0.05$, $p = .96$. Thus, the proposed model—in which less-healthy food choice is a consequence of the desire for more-American foods—appears to be a more viable mechanism to explain the present findings than the other examined possibilities.

General Discussion

In two experiments, we tested an identity-based explanation for the situational adoption of an American diet by Asian Americans. When faced with a threat to their American identity, Asian Americans altered both their food preferences (Experiment 1) and their actual food choices (Experiment 2) to be more prototypically American—and, as a consequence, less healthy (Experiment 2)—than did Asian American participants who were not confronted with a threat to their American identity. The same pattern was not observed among White Americans (Experiment 1), who do not have to contend with similar everyday threats to their American identity (Cheryan & Monin, 2005).

Subtle challenges to American identity can lead to increased consumption of American foods over traditional ethnic foods. Trading a traditional diet for a prototypical American diet may thus provide a way, albeit a potentially harmful one (Nestle, 1994), for individuals to prove their American identity to others who might doubt it. Asian Americans who had their American identities threatened consumed dishes with the caloric and fat equivalent of an extra four-piece order of McDonald's Chicken McNuggets (190 calories; 12 g of fat), compared with participants whose identity was not threatened. Asian Americans report that their national identities are often questioned in interactions with other Americans (Cheryan & Monin, 2005). Repeated daily, dietary changes in response to these situational or chronically felt threats could cumulatively contribute to the deterioration of immigrants' health both as the duration of their residence in the United States increases and over generations. Our research thus contributes a possible identity-based psychological explanation for dietary decline, which to date has been understood primarily as a socioeconomic, cultural, and structural phenomenon (Satia, 2010).

In 2007, more than 54 million people in the United States, or nearly one fifth of the nation's population, were immigrants or children of immigrants (Grieco, 2010; Urban Institute, 2011). Asian Americans and other U.S. immigrant groups for whom collectivism is prominent (e.g., Latinos; Oyserman, Coon, & Kemmelmeier, 2002) might be particularly susceptible to threats to belonging. Dietary decline after arrival to the United

States has been shown in multiple immigrant groups, including those from Africa (Patil, Hadley, & Djona Nahayo, 2009) and South and Central America (Ayala, Baquero, & Klinger, 2008; Guendelman & Abrams, 1995). These findings suggest that the processes we investigated in our experiments may not be unique to Asian Americans. Future research should examine these processes in other immigrant groups within and outside the United States. Encouraging immigrant groups to resist adoption of the unhealthy aspects of the American diet—while also encouraging them to retain salubrious changes (Satia, 2010)—may help curb the obesity epidemic and decrease diet-related morbidity and mortality in the United States. Hopefully, such efforts will become less necessary as U.S. society broadens its definition of what is considered American food and who is considered American—so that Asian Americans eating sushi or kimchi will one day raise no more suspicion that they are foreigners than do White Americans eating hamburgers and French fries.

Acknowledgments

We thank Hazel Markus, Chris Crandall, Tony Greenwald, Rudy Mendoza-Denton, Marissa Vichayapai, John Rohrbach, and the Kaiser-Cheryan lab group. Experiment 1 was part of M. D. Guendelman's honors thesis.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Funding

Funds were provided by a grant to S. Cheryan from the University of Washington's Institute for Ethnic Studies in the United States and by a Stanford Undergraduate Major Grant to M. D. Guendelman.

Notes

1. There were no main effects of or interactions with gender in either experiment.
2. We excluded Indian restaurants, the fifth most common Asian cuisine, because Indians are not perceived as being Asian to the same extent as East and Southeast Asians are (Kibria, 1996).
3. While eating, participants filled out a questionnaire that asked how often they ate that dish, on a scale from 1 (*never*) to 5 (*very often*); how healthy that dish was, on a scale from 1 (*not at all*) to 5 (*extremely*); and how important it was for them to eat healthy, on a scale from 1 (*not important*) to 5 (*very important*). Participants in the identity-threat condition reported eating the dish they selected marginally less often ($M = 3.41$) than did those in the control condition ($M = 3.94$), $t(42) = -1.78$, $p = .08$, $d = 0.55$, but the former did not rate it as less healthy than the latter did ($M = 2.70$ vs. $M = 2.82$), $t(42) = -0.40$, $p = .69$. Participants may have recognized that their food choices were affected by the threat but may have been motivated not to see their choices as unhealthy. We also observed a significant main effect of health importance on Americanness of dishes, $b = -0.46$, $SE = 0.22$, $p = .05$, qualified by a Condition \times Health Importance interaction, $b = 0.82$, $SE = 0.36$, $p = .03$. The more important it was for

participants in the control condition to eat healthy, the less likely they were to choose prototypically American foods, $b = -0.46$, $SE = 0.22$, $p = .05$, but this relationship was eliminated in the identity-threat condition, $b = 0.37$, $SE = 0.29$, n.s.

References

- Ayala, G. X., Baquero, B., & Klinger, S. (2008). A systematic review of the relationship between acculturation and diet among Latinos in the United States: Implications for future research. *Journal of the American Dietetic Association*, *108*, 1330–1344.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182.
- Barthes, R. (1997). Toward a psychosociology of contemporary food consumption. In C. Counihan & P. Van Esterik (Eds.), *Food and culture: A reader* (pp. 20–27). New York, NY: Routledge.
- Bosson, J. K., Vandello, J. A., Burnaford, R. M., Weaver, J. R., & Wasti, S. A. (2009). Precarious manhood and displays of physical aggression. *Personality and Social Psychology Bulletin*, *35*, 623–634.
- Branscombe, N. R., Ellemers, N., Spears, R., & Doosje, B. (1999). The context and content of social identity threat. In N. Ellemers & R. Spears (Eds.), *Social identity: Context, commitment, content* (pp. 35–58). Oxford, England: Blackwell Science.
- Brillat-Savarin, J. A. (1999). *The physiology of taste: Or, meditations on transcendental gastronomy* (M. F. K. Fisher, Trans.). Washington, DC: Counterpoint. (Original work published 1825)
- Cheryan, S., & Monin, B. (2005). “Where are you really from?” Asian Americans and identity denial. *Journal of Personality and Social Psychology*, *89*, 717–730.
- Crandall, C. S. (1988). Social contagion of binge eating. *Journal of Personality and Social Psychology*, *55*, 588–598.
- Devos, T., & Banaji, M. R. (2005). American = White? *Journal of Personality and Social Psychology*, *88*, 447–466.
- Fong-Torres, B. (2007, February 4). Hungry heart [Review of the book *Stealing Buddha's dinner: A memoir*, by B. M. Nguyen]. *The New York Times Sunday Book Review*, p. 11.
- Franzen, L., & Smith, C. (2009). Acculturation and environmental change impacts dietary habits among adult Hmong. *Appetite*, *52*, 173–183.
- Goel, M. S., McCarthy, E. P., Phillips, R. S., & Wee, C. C. (2004). Obesity among US immigrant subgroups by duration of residence. *Journal of the American Medical Association*, *292*, 2860–2867.
- Grieco, E. M. (2010). *Race and Hispanic origin of the foreign-born population in the United States: 2007* (American Community Survey Reports, ACS-11). Retrieved from U.S. Census Bureau Web site: <http://www.census.gov/prod/2010pubs/acs-11.pdf>
- Guendelman, S., & Abrams, B. (1995). Dietary intake among Mexican-American women: Generational differences and a comparison with white non-Hispanic women. *American Journal of Public Health*, *85*, 20–25.
- Harris, K. M., Perreira, K. M., & Lee, D. (2009). Obesity in the transition to adulthood: Predictions across race/ethnicity, immigrant generation, and sex. *Archives of Pediatrics & Adolescent Medicine*, *163*, 1022–1028.
- Inzlicht, M., & Kang, S. K. (2010). Stereotype threat spillover: How coping with threats to social identity affects aggression, eating, decision making, and attention. *Journal of Personality and Social Psychology*, *99*, 467–481.
- Kibria, N. (1996). Not Asian, Black or White? Reflections on South Asian American racial identity. *Amerasia Journal*, *22*, 77–86.
- Kim, M. T., Kim, K. B., Juon, H. S., & Hill, M. N. (2000). Prevalence and factors associated with high blood pressure in Korean Americans. *Ethnicity & Disease*, *10*, 364–374.
- Kudo, Y., Falciglia, G. A., & Couch, S. C. (2000). Evolution of meal patterns and food choices of Japanese-American females born in the United States. *European Journal of Clinical Nutrition*, *54*, 665–670.
- Levi-Strauss, C. (1997). The culinary triangle. In C. Counihan & P. Van Esterik (Eds.), *Food and culture: A reader* (pp. 28–35). New York, NY: Routledge.
- Lv, N., & Cason, K. L. (2004). Dietary pattern change and acculturation of Chinese Americans in Pennsylvania. *Journal of the American Dietetic Association*, *104*, 771–778.
- Maass, A., Cadinu, M., Guarnieri, G., & Grasselli, A. (2003). Sexual harassment under social identity threat: The computer harassment paradigm. *Journal of Personality and Social Psychology*, *85*, 853–870.
- Major, B., Quinton, W. J., & McCoy, S. K. (2002). Antecedents and consequences of attributions to discrimination: Theoretical and empirical advances. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 34, pp. 251–330). San Diego, CA: Academic Press.
- Nestle, M. (1994). Traditional models of healthy eating: Alternatives to “techno-food.” *Journal of Nutrition Education*, *26*, 241–245.
- Nguyen, B. M. (2007). *Stealing Buddha's dinner: A memoir*. New York, NY: Penguin.
- Ogden, C. L., Yanovski, S. Z., Carroll, M. D., & Flegal, K. M. (2007). The epidemiology of obesity. *Gastroenterology*, *132*, 2087–2102.
- Oyserman, D., Coon, H. M., & Kimmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin*, *128*, 3–72.
- Oyserman, D., Fryberg, S. A., & Yoder, N. (2007). Identity-based motivation and health. *Journal of Personality and Social Psychology*, *93*, 1011–1027.
- Pan, Y. L., Dixon, Z., Himburg, S., & Huffman, F. (1999). Asian students change their eating patterns after living in the United States. *Journal of the American Dietetic Association*, *99*, 54–57.
- Patil, C. L., Hadley, C., & Djona Nahayo, P. (2009). Unpacking dietary acculturation among new Americans: Results from formative research with African refugees. *Journal of Immigrant and Minority Health*, *11*, 342–358.
- Popkin, B. M., & Udry, J. R. (1998). Adolescent obesity increases significantly in second and third generation U.S. immigrants: The National Longitudinal Study of Adolescent Health. *The Journal of Nutrition*, *128*, 701–706.

- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, *36*, 717–731.
- Pronin, E., Steele, C. M., & Ross, L. (2004). Identity bifurcation in response to stereotype threat: Women and mathematics. *Journal of Experimental Social Psychology*, *40*, 152–168.
- Satia, J. A. (2010). Dietary acculturation and the nutrition transition: An overview. *Applied Physiology, Nutrition, and Metabolism*, *35*, 219–223.
- Satia-Abouta, J., Patterson, R. E., Kristal, A. R., Teh, C., & Tu, S.-P. (2002). Psychosocial predictors of diet and acculturation in Chinese American and Chinese Canadian women. *Ethnicity & Health*, *7*, 21–39.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, *69*, 797–811.
- Steele, C. M., Spencer, S. J., & Aronson, J. (2002). Contending with group image: The psychology of stereotype and social identity threat. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 34, pp. 379–440). San Diego, CA: Academic Press.
- Urban Institute. (2011). *Children of immigrants data tool*. Retrieved from <http://datatool.urban.org/charts/datatool/pages.cfm>
- Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2008). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health*, *98*, S29–S37.