

Unexpected Gains: Being Overweight Buffers Asian Americans From Prejudice Against Foreigners



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Abstract

Can being overweight, a factor that commonly leads to stigmatization, ironically buffer some people from race-based assumptions about who is American? In 10 studies, participants were shown portraits that were edited to make the photographed person appear either overweight (body mass index, or BMI > 25) or normal weight (BMI < 25). A meta-analysis of these studies revealed that overweight Asian individuals were perceived as significantly more American than normal-weight versions of the same people, whereas this was not true for White, Black, or Latino individuals. A second meta-analysis showed that overweight Asian men were perceived as less likely to be in the United States without documentation than their normal-weight counterparts. A final study demonstrated that weight stereotypes about presumed countries of origin shape who is considered American. Taken together, these studies demonstrate that perceptions of nationality are malleable and that perceived race and body shape interact to inform these judgments.

Keywords

stereotypes, discrimination, race, weight, American identity, open data, open materials, preregistered

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Asian Americans are now the fastest growing minority in the United States (Pew Research Center, 2012). Nonetheless, they are perceived as less American than are White Americans (Devos & Banaji, 2005). As a result, Asian Americans not only suffer the psychological and emotional consequences of having an important identity go unrecognized (Huynh, Devos, & Smalarz, 2011), but they also face discrimination directed at people perceived as foreign (Yogeeswaran, & Dasgupta, 2010). For instance, Asian Americans have been subject to historical injustices such as Japanese internment (Irons, 1993), hate crimes after September 11, 2001 (Ahluwalia & Pelletiere, 2010), and racial profiling of people perceived to be in the United States without documentation (American Civil Liberties Union, 2013). In the current work, we examined whether possessing a physical characteristic that is prototypical of Americans, even if commonly stigmatized, reduces perceptions of Asian Americans as outsiders in the United States.

Weight Signals National Identity for Asian Americans

The U.S. population is one of the heaviest in the world (Sassi & Devaux, 2012). Over two-thirds of the U.S. population is currently obese or overweight. In contrast, many Asian countries have considerably lower rates of obesity. Less than half of the population is obese or overweight in China, Japan, and South Korea (Sassi & Devaux, 2012). Within the United States, Asian immigrants are significantly less likely to be overweight than native-born Asian Americans (Lauderdale & Rathouz, 2000). As a result of these weight distributions, Americans may believe that being overweight is a

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defining feature that distinguishes Americans from Asians (Sherman et al., 2009).

Possessing physical characteristics that are prototypical of a social group influences the extent to which people are perceived as belonging to that group (e.g., Johnson, Freeman, & Pauker, 2012; Rule, Ambady, Adams, & Macrae, 2008) and treated in accordance with one identity over another (e.g., Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006; Maddox, 2004). Because being overweight is more closely associated with the American than Asian prototype, Asian Americans who are overweight may be perceived as more American than normal-weight¹ Asian Americans (e.g., Brewer, 1988; Fiske & Neuberg, 1990; Macrae, Bodenhausen, & Milne, 1995).

If overweight Asian Americans are perceived as more American than normal-weight Asian Americans are, one paradoxical benefit is that they may be less likely to face instances of xenophobic prejudice, such as having their documentation status as Americans called into question. Approximately 13 to 15% of the Asian population in the United States is estimated to be without legal documentation, and Asians are the second largest undocumented population in the United States after Latinos (Pew Research Center, 2012). Additionally, controversial immigration laws (e.g., Arizona Senate Bill 1070) requiring police officers to check the documentation status of people suspected to be in the country without documentation directly threaten Asian Americans who, along with Latino Americans, may be disproportionately targeted by such legislation (American Civil Liberties Union, 2013).

Does Weight Signal American Identity for Everyone?

If being overweight is prototypical of Americans, one might expect that being overweight would make people of any race seem more American (indeed, this was our original hypothesis). On the other hand, weight could have a uniquely powerful effect for Asian Americans, a group often assumed to be from countries where people are stereotypically thin. We tested these two alternatives and examined whether being overweight makes people from multiple racial groups appear more American and, if so, whether nationality stereotypes moderate these effects. In particular, we examined whether effects of weight on judgments of American identity are weaker for people not commonly assumed to be foreigners (i.e., White and Black Americans) or assumed to be from stereotypically overweight countries (i.e., Latino Americans).

For individuals already perceived as American, possessing a prototypical American characteristic may be unlikely to communicate additional information about

their national identity. The prototypical American is White (Devos & Banaji, 2005), and Black Americans are similarly assumed to be from the United States (Zou & Cheryan, 2017). Both groups report that their American identity is rarely called into question in daily interactions with other people (Cheryan & Monin, 2005).

For individuals whose assumed country of origin is outside the United States, stereotypes about the people from that country may moderate effects of weight on American identity. Latino Americans, like Asian Americans, encounter pervasive stereotypes that they are not American (e.g., Dovidio, Gluszek, John, Dittmann, & Lagunes, 2010). However, obesity rates in many Latin American countries are comparable with those in the United States (Sassi & Devaux, 2012). As a result, weight may not provide diagnostic information about whether Latino Americans more closely resemble the American prototype or the prototype of their assumed country of origin.

This work provides a novel framework for understanding when physical features communicate an identity. We applied this framework in the context of national identity and considered when being overweight signals American identity and buffers people from xenophobic prejudice.

The Current Work

Ten studies tested whether overweight Asian individuals are perceived as more American than normal-weight Asian individuals. Four of these 10 studies also tested whether overweight Asian men are perceived as less likely to be in the United States without documentation than their normal-weight counterparts. Of these 10 studies, 3 included photos of Asian individuals only; 3 included photos of Asian and White individuals; 2 included photos of Asian, White, and Black individuals; and 2 included photos of Asian, White, and Latino individuals. An 11th study identified why effects may be stronger for Asian individuals than other racial groups. In line with recommendations to avoid selective reporting (e.g., Cumming, 2014; Simonsohn, Nelson, & Simmons, 2014), we report every study we conducted to test our hypotheses, including both significant and null findings, to avoid a file-drawer bias (Greenwald, 1975). Studies 1 through 10 were run between 2011 and 2013, and Study 11 was run in 2015.

Participants viewed and provided responses to one or more photos of overweight or normal-weight people. Photos of the same people were used in both conditions (edited only to reflect a change in weight) to control for other features that might cue American identity, such as clothing and hair. Studies 1 to 3 examined perceptions of people perceived to be Asian, Studies

Table 1. Overview of the Design of Studies 1 Through 10

Study	Context	Studies on perceptions of American identity		Studies on perceived documentation status		Design
		<i>N</i>	Average cell size	<i>N</i>	Average cell size	
1	Campus	68	34			2 (weight: overweight, normal weight; between subjects)
2	Mass testing	157	78.5			2 (weight: overweight, normal weight; between subjects)
3	Mass testing	138	69	140	70	2 (weight: overweight, normal weight; between subjects)
4	Campus	60	15			2 (weight: overweight, normal weight; between subjects) × 2 (race: Asian, White; between subjects)
5	Lab	85	21.25			2 (weight: overweight, normal weight; between subjects) × 2 (race: Asian, White; between subjects)
6	Lab	62	15.5	62	15.5	2 (weight: overweight, normal weight; between subjects) × 2 (race: Asian, White; between subjects)
7	Lab	168	168			2 (weight: overweight, normal weight; within subjects) × 3 (race: Asian, White, Black; within subjects)
8	Online	187	31.17			2 (weight: overweight, normal weight; between subjects) × 3 (race: Asian, White, Black; between subjects)
9	Lab	58	58	58	58	2 (weight: overweight, normal weight; within subjects) × 3 (race: Asian, White, Latino; within subjects)
10	Lab	294	49	294	49	2 (weight: overweight, normal weight; between subjects) × 3 (race: Asian, White, Latino; between subjects)

Note: Questions on perceived documentation status were not asked in Studies 1, 2, 4, 5, 7, and 8.

4 to 6 added photos of people perceived to be White, Studies 7 and 8 included photos of people perceived to be Black, and Studies 9 and 10 added photos of people perceived to be Latino. See Table 1 for an overview of other differences among these 10 studies. In Study 11, we investigated whether the average weight in an individuals' perceived country of origin played a role in explaining prejudice against foreigners.

Method for Studies 1 Through 3: Photos of Asian Individuals

These studies investigated how weight influences perceptions of Asian individuals' American identity (Studies 1–3) and documentation status (Study 3).

Participants

Study 1 participants ($N = 68$) were approached on the University of Washington campus and asked to complete a paper survey.² We initially ran 22 participants and found an effect on American identity (i.e., being born in the United States; $p = .041$). We then ran an additional 46 participants to obtain a more reliable estimate of effect size. See Figure 1 for sample stimuli. Three pairs of photos were used in Study 1, and no photos were excluded.

Study 2 participants ($N = 158$) and Study 3 participants ($N = 187$) were drawn from the University of Washington psychology participant pool and completed questionnaires during mass testing sessions. Stopping goals were determined by the number of participants available for mass testing. Four pairs of photos were used in Study 2, and none were excluded. In Study 3, one pair of photos (out of four pairs) was eliminated because participants did not perceive a difference in weight,³ which brought the final number of Study 3 participants to 141.

Materials and procedure

Each participant was randomly assigned to view one black-and-white photo of either an overweight or a normal-weight Asian woman (Studies 1 and 2) or Asian man (Study 3) and answer questions about the person in the photo. Photos of people who appeared to be of prototypically East and Southeast Asian descent were retrieved online (Studies 1–3), from a lab database of photos (Studies 1 and 2), and from an online mug-shot database from American prisons (Study 3). People wore neutral clothing (e.g., no visible brands) and had no glasses, piercings, or visible tattoos (contact the first author for copies of the stimuli). We used photos of male prison inmates for Study 3 because undocumented



Fig. 1. Sample stimuli used in Studies 1, 7, and 8.

immigrants are often stereotyped as criminals (Wang, 2012), and the majority of the U.S. undocumented population is male (Hoefer, Rytina, & Baker, 2011). Original photos were edited to create both thinner and heavier versions of the individuals pictured so that editing was not confounded with condition.

Participants responded to two questions assessing their perceptions of the target’s American identity. In Studies 2 and 3, four additional questions about American identity were answered, and in Study 3, two further questions assessing participants’ perceptions of the target’s documentation status were answered (see Table 2 for questions and Table 3 for reliabilities of and correlations between measures; questions on

documentation status used the term “illegal” rather than “undocumented” because students reported being less familiar with the latter term at the time these studies were run). Filler questions irrelevant to the hypothesis (e.g., perceived intelligence) were asked to disguise the purpose of the studies. Participants also estimated the target’s weight and height, evaluated how edited the photo seemed, and provided demographic information (e.g., race, gender).⁴

**Method for Studies 4 Through 6:
Photos of Asian and White Individuals**

These studies investigated whether being overweight is a stronger cue of American identity for Asian individuals than for White individuals.

Participants

Study 4 participants (*N* = 95) were recruited on the University of Washington campus. Our stopping goal was 96 (16 participants per photo); 1 participant left the questionnaire blank. In addition, 2 participants were eliminated because they were accidentally given an incorrect version of the questionnaire (i.e., the wrong photos were included). Two pairs of photos (out of six pairs) were not perceived as significantly different in weight and were eliminated. The final number of Study 4 participants was 61.

Table 2. Dependent Variables in Studies 1 Through 10

Dependent variable and question	Study									
	1	2	3	4	5	6	7	8	9	10
Perceptions of American identity										
How American do you think this person is?	X	X	X	X	X	X	X	X	X	X
How likely is this person to have been born outside the U.S.? (reverse-scored)	X	X	X	X	X	X	X	X	X	X
To what extent do you believe this person identifies as American?		X	X		X				X	
How likely is it that this person’s native language is English?		X	X		X	X	X	X	X	X
How fluently do you think this person speaks English?		X	X							
How much do you think this person speaks English at home?					X	X	X		X	X
How likely do you think it is that this person has a foreign accent? (reverse-scored)		X	X		X					
Perceptions of documentation status										
How likely is it that this person is in the U.S. illegally?			X			X			X	X
How much does this person resemble a typical illegal immigrant?			X			X			X	X

Note: Minor wording changes were made for some American-identity measures across studies (e.g., “How American does this person seem?” vs. “How American do you think this person is?”).

Table 3. Reliability of and Correlation Between the Dependent Variables for Asian Individuals in Studies 1 Through 10

Study	Reliability		Correlation
	Perceptions of American identity	Perceptions of documentation status	
Study 1	$r = .48$		
Study 2	$\alpha = .84$		
Study 3	$\alpha = .89$	$r = .69$	$r = -.36$
Study 4	$r = .48$		
Study 5	$\alpha = .89$		
Study 6	$\alpha = .93$	$r = .70$	$r = -.72$
Study 7 ^a	$\alpha = .80,$ $\alpha = .85$		
Study 8	$\alpha = .84$		
Study 9 ^a	$\alpha = .89,$ $\alpha = .89$	$r = .50,$ $r = .72$	$r = -.15,$ $r = -.001$
Study 10	$\alpha = .92$	$r = .51$	$r = -.52$

^aFor within-subjects studies, values are given for overweight Asian individuals and normal-weight Asian individuals, respectively.

Study 5 ($N = 85$) and Study 6 ($N = 91$) participants were recruited through the psychology participant pool and run in the lab on a computer. Data collection for Studies 5 and 6 was stopped at the end of the term. Studies 5 and 6 both used six pairs of photos. There were no exclusions in Study 5, but two pairs of photos in which the targets were not perceived as significantly different in weight were eliminated in Study 6. The final number of Study 6 participants was 62.

Materials and procedure

Materials and procedures were identical to those used in Studies 1 through 3, except that participants were randomly assigned to rate a photo of an Asian or a White woman (Study 4) or an Asian or a White man (Studies 5 and 6). See Tables 2 and 3 for dependent measures in each study.

Method for Studies 7 Through 10: Photos of Asian, White, Black, and Latino Individuals

These studies examined whether weight influences perception of American identity and documentation status for Asian, White, Black, and Latino individuals.

Participants

Participants for Studies 7 ($N = 171$), 9 ($N = 58$), and 10 ($N = 294$) were recruited through the University of

Washington psychology participant pool and run in the lab on a computer. Data collection was stopped at the end of the term. Study 8 participants ($N = 248$) were run online on Amazon Mechanical Turk. Study 8 had a stopping goal of 240 participants (20 for each combination of pictured individuals' weight, race, and gender). After excluding responses with duplicate Internet protocol (IP) addresses and unfinished questionnaires, there were 187 participants. Results were similar when we included all participants. No photos were excluded in these studies on the basis of weight estimations.

Materials and procedure

Participants viewed photos of Asian, White, and Black targets (Studies 7 and 8) or photos of Asian, White, and Latino targets (Studies 9 and 10). Studies 8 and 10 had a between-subjects design, and Studies 7 and 9 had a within-subjects design. For the between-subjects studies, each participant was randomly assigned to view one photo of either an overweight or a normal-weight Asian, White, or Black man or woman (Study 8) or an overweight or a normal-weight Asian, White, or Latino man (Study 10). Twenty-four pairs of photos were used in Study 8, and nine pairs of photos were used in Study 10. In Study 10, the race of the person in the photos was specified in the instructions (e.g., "Please form an impression of the White man shown above").

For within-subjects studies, participants saw 1 photo on the screen at a time and provided ratings before seeing the next photo. In Study 7, participants viewed 12 photos (one each of overweight and normal-weight Asian, White, and Black men and women), presented in random order. There were a total of 48 photos used in this study, with 4 photos representing each combination of race, weight, and gender. In Study 9, participants viewed 6 photos (1 each of overweight and normal-weight Asian, White, and Latino men), presented in random order. There were a total of 12 photos used in this study, with 2 photos representing each combination of race and weight. (See Table S2 in the Supplemental Material available online for the counterbalancing procedure.) The procedure in these studies was otherwise identical to that in the previous studies (see Tables 2 and 3 for dependent measures).

Results for Studies 1 Through 10

Results of the meta-analyses are presented in Tables 4 and 5, and individual study results are presented in Tables 6 and 7. Table S3 in the Supplemental Material shows main effects of race of the person in the photo. There were no significant main effects of or interactions with participant gender in any study.

Table 4. Results of the Meta-Analyses of the Effect of Weight on Perceptions of Being American and Perceptions of Documentation Status

Measure and target race	Experiments contributing data	<i>k</i>	<i>N</i>	Mean <i>d</i>	95% confidence interval	<i>p</i>
Between-subjects studies						
Perceptions of American identity						
Asian	1–6, 8, 10	8	618	0.327	[0.167, 0.486]	< .001
White	4–6, 8, 10	5	267	–0.020	[–0.261, 0.222]	> .250
Latino	10	1	95	0.368	—	—
Black	8	1	71	–0.246	—	—
Perceptions of documentation status						
Asian	3, 6, 10	3	272	0.293	[0.054, 0.532]	.016
White	6, 10	2	129	–0.094	[–0.441, 0.253]	> .250
Latino	10	1	95	0.136	—	—
All studies						
Perceptions of American identity						
Asian	1–10	10	844	0.255	[0.144, 0.366]	< .001
White	4–10	7	493	0.086	[–0.034, 0.206]	.162
Latino	9, 10	2	153	0.084	[–0.216, 0.383]	> .250
Black	7, 8	2	239	–0.097	[–0.256, 0.063]	.234
Perceptions of documentation status						
Asian	3, 6, 9, 10	4	330	0.155	[–0.035, 0.345]	.110
White	6, 9, 10	3	187	–0.087	[–0.265, 0.091]	> .250
Latino	9, 10	2	153	–0.132	[–0.430, 0.165]	> .250

Note: *k* indicates the number of effect sizes included in each analysis.

Manipulation check

Of the 3,335 total estimations of perceived weight, one estimate of 1,603 pounds and 21 estimates of less than 80 pounds for women and less than 100 pounds for men were excluded from manipulation-check analyses. Across studies, the overweight Asian targets were perceived to be significantly heavier (men: weighted mean = 181.72 pounds, *SD* = 28.07; women: weighted mean = 147.71 pounds, *SD* = 22.68) than the normal-weight Asian

targets (men: weighted mean = 154.77 pounds, *SD* = 17.89; women: weighted mean = 121.07 pounds, *SD* = 11.47), all *ps* < .001. Participants also estimated that the overweight White, Black, and Latino targets weighed more than their normal-weight counterparts (see Table S4 in the Supplemental Material for estimated weight and BMI for all combinations of race and gender).

Weighted body mass indexes (BMIs) across studies were calculated for each photo. According to the National Institutes of Health (2015), a BMI of 25 is the

Table 5. Results of the Meta-Analysis: Homogeneity and Race-Differences Tests

Studies and measure	Test of effect-size homogeneity	Test of target-race differences
Between-subjects studies (1–6, 8, 10)		
Perceptions of American identity	$Q_w(11) = 10.01, p > .250$	$Q_B(1) = 5.50, p = .019$
Perceptions of documentation status	$Q_w(3) = 2.55, p > .250$	$Q_B(1) = 3.23, p = .072$
All studies		
Perceptions of American identity	$Q_w(17) = 17.34, p > .250$	$Q_B(3) = 13.11, p = .004$
Perceptions of documentation status	$Q_w(6) = 9.30, p = .158$	$Q_B(2) = 4.23, p = .121$

Note: Q_w and Q_B test homogeneity of within-groups and between-groups variance, respectively.

Table 6. Descriptive Statistics and Effect Sizes for Analyses on Perceptions of American Identity

Study	<i>p</i> value for interaction	Asian individuals				White individuals				Black individuals				Latino individuals			
		Mean rating		Difference		Mean rating		Difference		Mean rating		Difference		Mean rating		Difference	
		Over-weight target	Normal-weight target	<i>p</i>	<i>d</i>	Over-weight target	Normal-weight target	<i>p</i>	<i>d</i>	Over-weight target	Normal-weight target	<i>p</i>	<i>d</i>	Over-weight target	Normal-weight target	<i>p</i>	<i>d</i>
1		4.77 (1.09)	4.19 (1.02)	.026	0.55												
2		4.37 (1.02)	3.99 (1.06)	.023	0.37												
3		3.43 (1.08)	3.02 (1.01)	.026	0.38												
4	> .250	4.60 (0.99)	4.17 (0.65)	.245	0.52	5.50 (0.96)	5.37 (1.33)	> .250	0.11								
5	> .250	3.40 (1.20)	3.14 (0.83)	> .250	0.25	5.48 (0.78)	4.98 (1.00)	.094	0.56								
6	.099	3.15 (0.99)	2.65 (1.07)	.183	0.49	5.66 (1.27)	6.05 (0.80)	> .250	-0.37								
7	.127	3.76 (0.88)	3.61 (1.01)	.088	0.13	5.63 (0.87)	5.54 (0.97)	.200	0.10	5.42 (0.88)	5.49 (0.82)	> .250	-0.07				
8	.240	4.41 (1.14)	4.03 (1.31)	> .250	0.31	5.27 (1.04)	5.54 (1.07)	> .250	-0.25	4.91 (1.32)	5.21 (1.11)	> .250	-0.25				
9	.092	3.04 (1.14)	2.73 (1.00)	.032	0.29	5.96 (0.84)	5.81 (1.00)	.225	0.16					3.44 (1.28)	3.82 (1.73)	> .250	-0.15
10	> .250	2.56 (1.06)	2.58 (0.89)	> .250	-0.03	5.36 (1.15)	5.40 (0.96)	> .250	-0.04					3.03 (0.93)	2.72 (0.74)	.122	0.37

Note: Standard deviations are in parentheses. Huynh-Feldt estimates were used when assumptions of sphericity were violated in repeated measures analyses.

Table 7. Descriptive Statistics and Effect Sizes for Analyses on Perceived Documentation Status

Study	<i>p</i> value for interaction	Asian individuals				White individuals				Latino individuals			
		Mean rating		Difference		Mean rating		Difference		Mean rating		Difference	
		Over-weight target	Normal-weight target	<i>p</i>	Cohen's <i>d</i>	Over-weight target	Normal-weight target	<i>p</i>	Cohen's <i>d</i>	Over-weight target	Normal-weight target	<i>p</i>	Cohen's <i>d</i>
3		3.28 (1.23)	3.61 (1.22)	.107	0.27								
6	.043	2.90 (1.33)	3.56 (1.21)	.100	0.52	2.16 (1.09)	1.64 (0.66)	.212	-0.57				
9	.096	3.19 (1.16)	3.10 (1.29)	> .250	-0.06	1.83 (1.02)	1.74 (0.99)	> .250	-0.11	4.36 (1.50)	3.68 (1.60)	.048	-0.27
10	> .250	3.62 (1.21)	3.93 (1.28)	.216	0.25	2.64 (1.19)	2.70 (1.38)	> .250	0.04	4.15 (1.18)	4.32 (1.21)	> .250	0.14

Note: Standard deviations are given in parentheses. Higher means indicate that pictured individuals were more likely to be rated as being in the United States without documentation.

cutoff for being considered overweight, whereas a BMI between 18.5 and 24.9 is considered normal weight. The perceived weighted-mean BMIs of the overweight Asian men ($M = 27.64, SD = 4.33$) and Asian women ($M = 25.14, SD = 3.62$) were both over 25. The perceived weighted-mean BMIs of the normal-weight Asian men ($M = 23.56, SD = 2.89$) and Asian women ($M = 20.71, SD = 1.88$) were between 18.5 and 24.9.

Meta-analysis

We ran two sets of meta-analyses because of differing recommendations on whether to combine between-subjects and within-subjects designs in a single meta-analysis (e.g., Lipsey & Wilson, 2001; Morris & DeShon, 2002). Both sets of meta-analyses used the MetaF.sps macro (see Lipsey & Wilson, 2001) with random-effects models using maximum likelihood to estimate weighted-mean effect sizes. Conducting meta-analyses using bias-corrected estimates of Cohen's *d* effect sizes (Hedges, 1981) generated results similar to those reported here.

The first set of meta-analyses included only the 8 between-subjects studies (Lipsey & Wilson, 2001) and examined effects of weight on American identity and documentation-status judgments of Asian and White targets. The second set of meta-analyses included all 10 studies. According to Morris and DeShon (2002), between-subjects and within-subjects studies can be combined when both designs are estimating the same population parameters. We calculated a common effect-size metric (i.e., within-subjects errors did not account for correlations between dependent measures) and design-specific estimates of sampling variance (Morris

& DeShon, 2002). Including all studies in the second set of meta-analyses allowed us to examine effects of weight on American-identity judgments of Asian, White, Latino, and Black targets and on documentation-status judgments of Asian, White, and Latino targets.

Perceptions of American identity: Studies 1 through 10.

In the between-subjects meta-analysis, effects of being overweight were significantly different for perceptions of Asian and White targets, $Q_B(1) = 5.50, p = .019$.⁵ Being overweight caused Asian targets to be seen as more American than did being normal weight, $d = 0.327, p < .001$, 95% confidence interval (CI) = [0.167, 0.486]. Weight did not significantly influence whether White targets were perceived as American, $d = -0.020, p > .250$, 95% CI = [-0.261, 0.222].

For the second set of meta-analyses, we first compared effects of the within-subjects studies with effects of the between-subjects studies and found similar effect-size magnitudes for ratings of Asian, $p = .222$, White, $p > .250$, and Black, $p > .250$, targets, which suggests that between-subjects and within-subjects studies can be combined for these groups (Morris & DeShon, 2002). Effect-size magnitudes for Latino targets differed by design, $Q_B(1) = 4.10, p = .043$, which suggests that results were different in the between-subjects and within-subjects studies (see Table 3 for the direction of differences), but here we combine the two studies to facilitate comparisons among racial groups. As in the between-subjects analysis, effects of being overweight were significantly different across racial groups, $Q_B(3) = 13.11, p = .004$. Overweight Asian targets were perceived as significantly more American

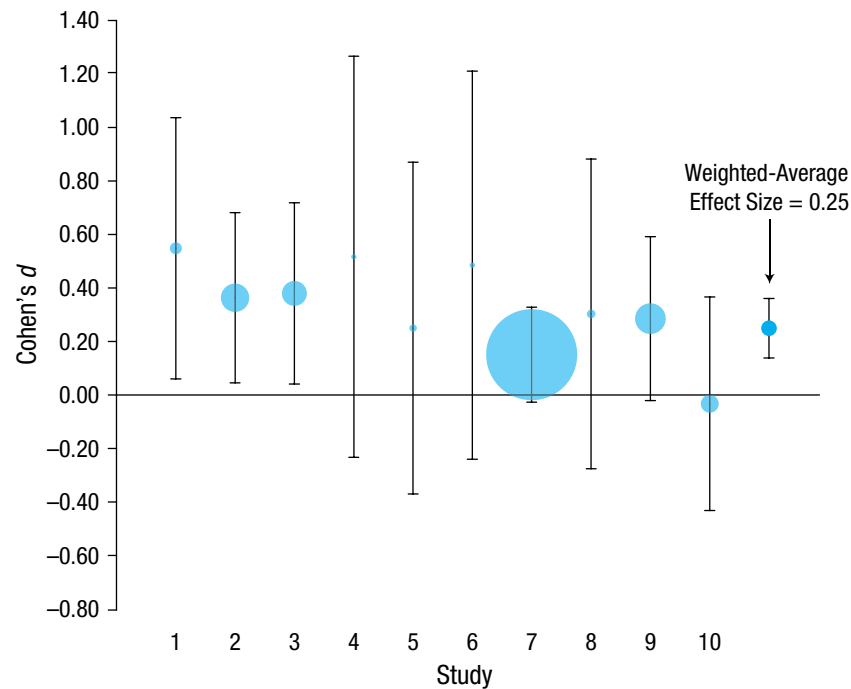


Fig. 2. Results from Studies 1 through 10: effect size for comparisons of overweight and normal-weight Asian individuals' perceived American identity. The size of each circle corresponds to the study weight in the meta-analysis. Error bars indicate 95% confidence intervals. Studies 7 and 9 had a within-subjects design, whereas the other 8 studies had a between-subjects design.

than normal-weight Asian targets, $d = 0.255$, $p < .001$, 95% CI = [0.144, 0.366] (see Fig. 2). In contrast, White targets, $d = 0.086$, $p = .162$, 95% CI = [-0.034, 0.206]; Latino targets, $d = 0.084$, $p > .250$, 95% CI = [-0.216, 0.383]; and Black targets, $d = -0.097$, $p = .234$, 95% CI = [-0.256, 0.063], were not perceived differently on the basis of weight.

Perceptions of documentation status: Studies 3, 6, 9, and 10. In the between-subjects meta-analysis, effects of weight marginally differed for perceptions of documentation status for Asian and White men, $Q_B(1) = 3.23$, $p = .072$. Overweight Asian men were perceived as significantly more likely than normal-weight Asian men to be in the United States with documentation, $d = 0.293$, $p = .016$, 95% CI = [0.054, 0.532]. Weight did not influence perceptions of White men's documentation status, $d = -0.094$, $p > .250$, 95% CI = [-0.441, 0.253].

When combining the between-subjects studies with the relevant within-subjects study, we found that effects of weight on judgments of documentation status were no longer significantly different across racial groups, $Q_B(2) = 4.23$, $p = .121$. Participants may have been less likely to make sensitive judgments about documentation status when rating several people in a row, as opposed to evaluating an isolated image.

Participant-race differences. White participants and participants of color did not significantly differ in their tendency to perceive overweight Asian individuals as more American or more likely to be in the United States with documentation than normal-weight Asian individuals in either meta-analysis, $p_s > .250$.

Stimuli effects

We conducted additional analyses in which we treated stimuli and participants as random effects (Judd, Westfall, & Kenny, 2012). For the between-subjects studies, including random intercepts for stimuli did not change the results for six of the studies. For the other two studies, mixed-effects models including random intercepts for stimuli failed to converge. Examining interactions of stimuli and weight condition on American identity and documentation status within each racial group revealed no significant interactions for any between-subjects study. For the two within-subjects studies, including random intercepts of stimuli and participants caused the Weight Condition \times Race interactions to become statistically significant for American identity, Study 7: $F(2, 1789.97) = 3.34$, $p = .036$, Study 9: $F(2, 282.02) = 4.65$, $p = .010$, and documentation status, Study 9: $F(2, 282.02) = 3.58$, $p = .029$. The

models did not converge when random slopes were included.

Explaining differences between racial groups

Next, we examined why being overweight provided a signal of American identity for Asian individuals but not for White, Black, or Latino individuals. We first analyzed open-ended responses from Studies 5, 6, 7, 9 and 10 (see the Supplemental Material for analysis) to assess where people in the photos were assumed to be from. Consistent with expectations, results showed that White and Black individuals were predominantly assumed to be from the United States, whereas Latino and Asian individuals were assumed to be from foreign countries. We then ran a descriptive study ($N = 122$; see the Supplemental Material), which revealed that being overweight was more associated with countries that Latino individuals were assumed to be from (e.g., Mexico) than with countries that Asian individuals were assumed to be from (e.g., China). Asian Americans but not White, Black, or Latino Americans—are associated with foreign countries that are not seen as stereotypically overweight, which enables greater weight to signal an American identity.

Study 11: Manipulating Country-of-Origin Stereotypes

We directly tested our proposed mechanism by manipulating whether or not an individual's country of origin is stereotypically associated with being overweight. We hypothesized that overweight people would be perceived as more American than normal-weight people when the population in their country of origin was portrayed as stereotypically normal weight but not when it was portrayed as stereotypically overweight.

Method

Participants. Participants ($N = 383$) were recruited on Amazon Mechanical Turk and completed the questionnaire (see Materials and Procedure). Four participants with duplicate IP addresses were excluded, which left 379 participants (192 women, 184 men, 1 other, 2 unidentified; 265 White, 38 Black, 31 Asian American, 18 Latino, 5 Middle Eastern, 1 Pacific Islander, 20 multiracial or other, 1 unidentified).

Design. The study had a 2 (country-of-origin weight stereotypes; within subjects) \times 2 (target's weight; between subjects) design. Participants learned about the weight

stereotype of a fictitious country, saw a photo of someone associated with the fictitious country, and answered questions about how American that person was. Participants then learned about another fictitious country with the opposite weight stereotype, saw a photo of another target from the same weight class as the person in the first target photo, and answered questions about how American that person was. All within-subjects variables (country-of-origin weight stereotypes, country name, which person participants rated, and which set of photos they saw) were fully counterbalanced. This study's target sample size, procedures, hypotheses, and analysis plan were preregistered prior to data collection.

Materials and procedure. Each participant first learned about a fictitious country (Boden or Thamen) and was randomly assigned to learn weight stereotypes about that country ("Like in the U.S. where most people are overweight, the vast majority of people in Boden [Thamen] are overweight" vs. "Unlike the U.S. where most people are overweight, the vast majority of people in Boden [Thamen] are not overweight"). To reinforce the manipulation, we showed participants a set of four overweight or normal-weight people. Overweight and normal-weight versions of four Asian men and four Asian women from Studies 7 and 8 were used. These were split into four sets of photos with two men and two women each.

Next, participants saw a photo of an overweight or normal-weight "Bodenian American" (or "Thamenian American") woman and rated how American she was. Overweight and normal-weight versions of two Asian women from Studies 4, 7, and 8 were used as target stimuli. Participants then completed this procedure again for the other country and for the other woman, with the opposite country-weight condition and the same target-weight condition. Attention and manipulation checks and demographic questionnaires were administered at the end.

American identity was assessed with three questions adapted from the previous studies (overweight country: $\alpha = .72$; normal-weight country: $\alpha = .74$): "How Bodenian [Thamenian] or American is this person?" (1 = *very Bodenian [Thamenian]*, 7 = *very American*), "To what extent do you believe this person identifies as Bodenian [Thamenian] or American?" (1 = *very Bodenian [Thamenian]*, 7 = *very American*), and "How likely is it that this person was born outside of the U.S.?" (1 = *not at all likely*, 7 = *very likely*). Participants completed two manipulation checks for each country: "What proportion of the people in that country is overweight?" (1 = *most*, 2 = *about half*, 3 = *almost none*) and "How heavy was the person in the photo?" (1 = *not at all heavy*, 7 = *very heavy*).

Results

Manipulation checks. Participants in the overweight condition rated the countries as having a greater proportion of overweight people ($M = 1.89$, $SD = 0.97$) than did those in the normal-weight condition ($M = 2.10$, $SD = 0.97$), $t(377) = 2.18$, $p = .030$, $d = 0.11$. The overweight targets were rated as heavier than the normal-weight targets in both the overweight-country-stereotype condition ($M = 4.91$, $SD = 1.19$ vs. $M = 2.25$, $SD = 1.39$), $t(376) = 19.89$, $p < .001$, $d = 2.06$, and the normal-weight-country-stereotype condition ($M = 4.79$, $SD = 1.21$ vs. $M = 2.27$, $SD = 1.26$), $t(376) = 20.05$, $p < .001$, $d = 2.04$.

American identity. A 2 (country-of-origin weight: overweight, normal weight; within subjects) \times 2 (target's weight: overweight, normal weight; between subjects) analysis of variance on American identity revealed a main effect of target's weight, $F(1, 376) = 13.03$, $p < .001$; no main effect of country-of-origin weight, $F(1, 376) = 2.25$, $p = .134$; and a significant interaction between country-of-origin weight and target's weight, $F(1, 376) = 72.86$, $p < .001$. Participants who read that people in the country of origin were of normal weight rated the overweight person as more American ($M = 4.30$, $SD = 1.15$) than the normal-weight person ($M = 3.36$, $SD = 1.20$), $F(1, 376) = 60.86$, $p < .001$, $d = 0.80$. However, participants who read about a stereotypically overweight country rated the overweight person as less American ($M = 3.61$, $SD = 1.17$) than the normal-weight person ($M = 3.84$, $SD = 1.14$), $F(1, 363) = 3.91$, $p = .049$, $d = 0.20$ (see Fig. 3). Effects were similar for

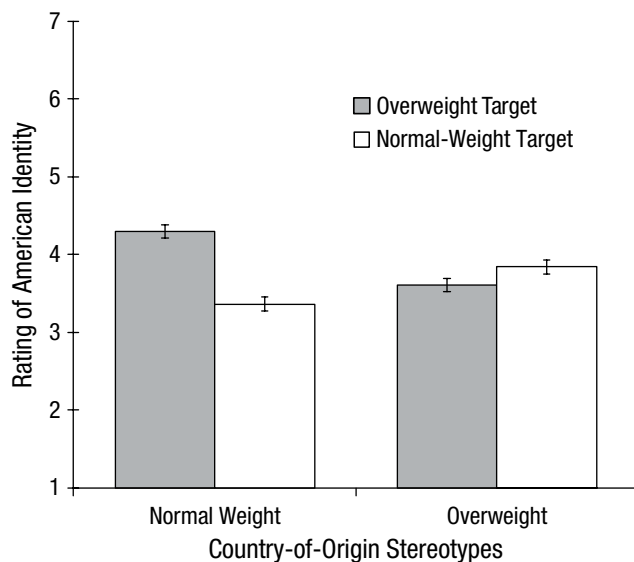


Fig. 3. Results from Study 11: mean rating of the extent to which targets appeared to be American as a function of stereotypes about people's weight in the targets' country of origin and the weight of the target. Error bars show ± 1 SE.

both targets regardless of the order in which they were presented. Including random intercepts for stimuli and participants in a mixed model (Judd et al., 2012) generated similar results. Including random slopes prevented the models from converging.

We created a composite of the first two American measures because they had a meaningful midpoint. Participants who read that the population in the country of origin was stereotypically normal weight and saw a photo of an overweight woman rated her as more American than foreign (i.e., above the midpoint), $t(198) = 4.12$, $p < .001$, $d = 0.59$. In all other conditions, targets were rated as marginally or significantly more foreign than American (i.e., below the midpoint)—normal-weight country and normal-weight women: $t(178) = -8.06$, $p < .001$, $d = 1.21$; overweight country and normal-weight women: $t(178) = -1.95$, $p = .053$, $d = 0.29$; overweight country and women: $t(199) = -4.75$, $p < .001$, $d = 0.67$.

General Discussion

Despite the stigma commonly associated with being overweight (e.g., Puhl & Brownell, 2001), extra weight—even relatively small amounts—ironically afforded Asian individuals a measure of protection against assumptions that they are not American. Overweight Asian men were also more likely than their normal-weight counterparts to be buffered from assumptions that they were living in the United States without documentation.

Weight did not affect perceptions of how much members of other racial groups (i.e., White, Black, and Latino individuals) were perceived as American. These findings are consistent with our proposed mechanism: Weight may affect perceptions of American identity when the person is assumed to be from a country other than the United States and when the population of the assumed country of origin is not associated with being overweight.

The current research makes several contributions to the literature. First, it informs work on multiple identities by showing when weight contributes to assumptions about group membership. Future work could extend this framework by investigating other types of cues. For instance, Asian Americans may be seen as more American when expressing excitement because of stereotypes characterizing Asians as emotionally reserved (Sims et al., 2015), but positive expression may be less effective in signaling American identity for Latino Americans because of stereotypes of that group as sociable and outgoing (Ramírez-Esparza, Mehl, Álvarez-Bermúdez, & Pennebaker, 2009). Similarly, Black-White biracial people who excel in school may

be perceived as more White than Black because of negative stereotypes associating Black people with poor academic achievement (Steele & Aronson, 1995). However, excelling in school might not signal a White identity for Asian-White biracial people, because Asian Americans are also associated with strong academic performance.

Second, our theory informs research on prejudice by demonstrating that the same physical cue can be used differentially as a marker of exclusion for marginalized group members. People who possess multiple subordinate identities can at times be shielded from prejudice directed at more prototypical members, yet also be more likely to be overlooked or forgotten (Purdie-Vaughns & Eibach, 2008; Sesko & Biernat, 2010).

Third, this work demonstrates how nationality stereotypes influence how people who are assumed to be from other countries are perceived and treated. This is especially important in countries with high rates of immigration, such as the United States.

Our theory could also extend to the targets' perspective. Asian Americans may gain weight as a strategy to signal that they are American, and they may be more likely to engage in other physical modifications to avoid prejudice (e.g., Berger & Heath, 2008), some of which could require surgery or painful procedures (e.g., blepharoplasty, skin bleaching). Note that being overweight did not completely exempt Asian individuals from assumptions that they were not American, and thus individual strategies to appear more American are less desirable than societal interventions to change this perception.

In line with Schimmack's (2012) recommendations, we presented every study that we ran. We did not obtain significant p values in every study. However, 9 of the 10 main studies generated effects in the predicted direction, and 3 of the 5 studies with nonsignificant p values had medium-sized effects (d s = 0.31–0.52) in the predicted direction for American identity. Studies with nonsignificant p values also tended to have the lowest cell sizes. Our meta-analytical approach enabled us to include studies with smaller average cell sizes that, taken individually, would be difficult to use to draw conclusions. When including all studies, we found that overweight Asian individuals were seen as more American than normal-weight Asian individuals ($d = 0.25$). Had we included only the studies with p values less than .05, our effect size would have been 0.37, which is close to the average effect size in published research in social psychology (0.40; Fraley & Vazire, 2014).

Conclusion

The health and social costs of being overweight are well documented (e.g., Crandall, 1994). The current work suggests, however, that there may be social benefits for Asian Americans who weigh more. Asian Americans who

are overweight are considered more likely to be American by other Americans and less likely to have their documentation status as American citizens questioned than those who are not overweight. These findings begin to highlight how people marginalized as less American often face suboptimal choices: remain the "perpetual foreigner" or potentially jeopardize health to appear more American.

Action Editor

Wendy Berry Mendes served as action editor for this article.

Author Contributions

C. Handron developed the study concept. All of the authors contributed to the study designs. Testing and data collection were performed by C. Handron and H. E. Matskewich under the supervision of S. Cheryan. C. Handron, T. A. Kirby, J. Wang, H. E. Matskewich, and S. Cheryan analyzed and checked the data. C. Handron, T. A. Kirby, H. E. Matskewich, and S. Cheryan drafted the manuscript, and all of the authors provided critical revisions. All of the authors approved the final version of the manuscript for submission.

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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.

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Supplemental Material

Additional supporting information can be found at <http://journals.sagepub.com/doi/suppl/10.1177/0956797617720912>

Open Practices



Data and materials for Studies 1 through 10 have been made publicly available via the Open Science Framework and can be accessed at <https://osf.io/jrmk4/> and <https://osf.io/rjrke/>.

respectively. Data and materials for Study 11 have been made publicly available via the Open Science Framework and can be accessed at <https://osf.io/z68ku/> and <https://osf.io/9ny42/>, respectively. The design and analysis plan for Study 11 was preregistered at the Open Science Framework and can be accessed at osf.io/yfbz8. (Note that we originally posted our design and analysis plan prior to data collection. However, because of copyright concerns, we reposted the preregistration materials with the stimulus photos removed. No other changes to the materials were made.) The complete Open Practices Disclosure for this article can be found at <http://journals.sagepub.com/doi/suppl/10.1177/0956797617720912>. This article has received badges for Open Data, Open Materials, and Preregistration. More information about the Open Practices badges can be found at <http://www.psychologicalscience.org/publications/badges>.

Notes

1. We use the terms *normal weight* and *overweight* to be consistent with body-mass-index (BMI) category labels (National Institutes of Health, 2015).
2. See Table S1 in the Supplemental Material available online for race and gender breakdowns of all participants in Studies 1 through 10.
3. In all studies, to ensure participants perceived a difference between the overweight and normal-weight versions of the individuals in the photos, we checked for significant interactions between pairs of photos and condition on weight estimations and excluded pairs of photos for which participants did not estimate significantly different weights. At least one pair of photos was excluded in 3 of the 10 studies. We reran the meta-analyses without excluding these photos and found that effects of weight on judgments of Asian individuals remained significant for American identity ($d = 0.22, p < .001$) but not for documentation status ($d = 0.11, p = .208$).
4. We also included questions that assessed cultural practices in Study 1 (“How integrated is this person in American culture?”), Study 7 (e.g., “How likely is it that this person celebrates typical American holidays?”), and Studies 3, 6, 9, and 10 (e.g., “How loyal is this person to the United States?”) but did not find differences on these measures. Weight may have more of an influence on the proximal definition of being American (e.g., birthplace, documentation status) than on the distal definitions of being American (e.g., cultural practices).
5. Q_w and Q_b refer to the tests of homogeneity of within-groups and between-groups variance, respectively.

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