

Unexpected Gains:

Overweight Asian Americans Are Buffered Against Anti-Foreign Prejudice

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WORD COUNT: 1987

Abstract

Can being overweight, a factor that commonly leads to stigmatization, ironically *protect* some people from anti-foreign prejudice? In 10 studies, participants were presented with photos that were edited to be overweight (BMI > 25) or normal-weight (BMI < 25). A meta-analysis of all studies revealed that overweight Asian Americans were perceived as significantly more American than normal-weight versions of the same people, whereas the same was not true for White, Black, or Latino Americans. A second meta-analysis showed that overweight Asian American men were perceived as less likely to be in the U.S. 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 being overweight can buffer Asian Americans from assumptions that they are not American and protect them from related forms of prejudice.

Keywords: Stereotypes, Discrimination, Race, Weight, American Identity

Unexpected Gains: Overweight Asian Americans Are Buffered Against Anti-Foreign Prejudice

Asian Americans are now the fastest growing minority in the U.S. (Pew Social & Demographic Trends, 2012). Nonetheless, they are perceived as less American than 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 those 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 11th (Ahluwalia & Pelletiere, 2010), and racial profiling of those perceived to be in the U.S. without documentation (American Civil Liberties Union, 2013). In the current work, we examine whether possessing a physical characteristic that is prototypical of Americans, even if commonly stigmatized, reduces perceptions that Asian Americans are outsiders in the U.S.

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

Possessing physical characteristics that are prototypical of a social group can influence 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, one paradoxical benefit is that they may be less likely to face prejudice and other negatively charged attitudes, such as having their legal status as Americans called into question. Approximately 13-15% of the Asian population in the U.S. is estimated to be without legal documentation, and Asians are the second largest undocumented population in the U.S. after Latinos (Pew Social & Demographic Trends, 2012). Additionally, controversial immigration laws (e.g., Arizona Senate Bill 1070) requiring police officers to check the legal 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, we might expect that being overweight would make people of any race seem more American². On the other hand, weight could have a uniquely powerful effect for Asian Americans, a group often assumed to be from stereotypically thin countries of origin. We test these two alternatives and examine whether being overweight makes people from multiple racial groups appear more American, or whether nationality

¹ We use 'normal-weight' and 'overweight' to be consistent with BMI category labels (National Institutes of Health, 2015).

² Indeed, this was our original hypothesis.

stereotypes moderate effects. In particular, we test 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 those already categorized as American, possessing a prototypical American characteristic may be unlikely to communicate additional information about one's national identity. The prototypical American is White (Devos & Banaji, 2005), and Black Americans are similarly assumed to be from the U.S. (Zou & Cheryan, in press). Both groups report that their American identity is not frequently called into question in daily interactions with others (Cheryan & Monin, 2005).

For those whose assumed country of origin is outside the U.S., stereotypes of the people in 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 Latin American countries are comparable to those of the U.S. (Sassi & Devaux, 2012). As a result, weight may not provide diagnostic information about whether a Latino American more closely resembles the American prototype or the prototype of their assumed country of origin.

Taken together, this work provides a novel framework for understanding when physical features communicate an identity. We apply this framework in the context of national identity and consider when being overweight signals American identity for those who have multiple potential identities.

Current Work

Ten studies test whether overweight Asian Americans are perceived as more American than normal-weight Asian Americans, and four of these studies test whether overweight Asian American men are perceived as less likely to be in the U.S. without documentation than their normal-weight counterparts. Seven of the studies examine effects of weight for White, Black, and Latino Americans. An eleventh study identifies why effects may be stronger for Asian Americans than other racial groups.

Studies 1-10 Method

In line with recommendations to avoid selective reporting (e.g., Cumming, 2014; Simonsohn, Nelson, & Simmons, 2014), this paper reports every study we conducted testing our main hypotheses, including both significant and null findings, to avoid a “file-drawer” bias (Greenwald, 1975). Studies were run between 2011 and 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 (only edited to reflect a change in weight) to control for other features that might cue American identity, such as clothing and hair. We present detailed procedures for the studies on Asian American photos first (Studies 1 to 3), then document variations from these procedures for our studies that add White photos (Studies 4 to 6) and White and Black or Latino photos (Studies 7 to 10).

Studies 1-3: Asian photos

These studies investigated how weight influences perceptions of Asian Americans’ American identity (Studies 1-3) and legal status (Study 3).

Participants. Study 1 participants ($N = 68$; see Supplement for participant details) were approached on the university campus and agreed to complete a paper survey. We initially ran 22 participants, analyzed the data and found an effect on American identity (i.e., being born in the

U.S.; $p = .04$), then ran an additional 46 participants to obtain a more reliable estimate of effect size. In all studies, to ensure participants perceived a difference in weight between overweight and normal-weight 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. Three of the 10 studies had one or more pair of photos that were not perceived as significantly different in weight³. See Appendix for sample stimuli. Three pairs of photos were used in Study 1, and there were no exclusions.

Study 2 participants ($N = 158$) and Study 3 participants ($N = 187$) completed questionnaires during mass testing sessions using the psychology participant pool. Stopping goals were determined by the number of participants available in mass testing. Four pairs of photos were used in Study 2 and there were no exclusions. In Study 3, one pair of photos (out of four pairs) was eliminated because participants did not perceive a difference in weight, bringing the final number of Study 3 participants to 141.

There were no significant main effects or interactions with participant gender in Studies 1, 2, or 3.

Procedure. Participants were randomly assigned to view one black and white photo of either an overweight or a normal-weight Asian woman (Studies 1 and 2) or man (Study 3) and answer questions about the person in the photo.

Materials. Photos of people who appear prototypically East and Southeast Asian were retrieved online (Studies 1-3), from a lab database of photos (Studies 1 and 2), or from an online mugshot database from American prisons (Study 3). People wore neutral clothing (e.g., no

³ We re-ran meta-analyses without excluding these photos. Effects of weight on judgments of Asians remained significant for American identity ($d = 0.22$, $p < .001$) but not legal status ($d = 0.11$, $p = .21$).

visible brands) and had no glasses, piercings, or visible tattoos (contact the first author for copies of the stimuli). We used male prison photos for Study 3 because undocumented immigrants are often stereotyped as criminals (Wang, 2012), and the majority of the U.S. undocumented population is male (Hofer, Rytina, & Baker, 2011). Original photos were edited in both directions (creating thinner and heavier versions) so that editing was not confounded with condition.

Participants were asked to judge American identity (Studies 1-3) and legal status (Study 3; see Table 1 for questions and reliabilities). Filler questions irrelevant to the hypothesis (e.g., perceived intelligence) were asked to disguise the purpose. Participants also estimated the person's weight and height, evaluated how edited the photo seemed, and provided demographic information (e.g., race, gender).

We also included questions that assessed cultural practices in Study 1 (i.e., "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 American (e.g., birthplace, legal status) than distal definitions (e.g., cultural practices).

Studies 4-6: Asian and White photos

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

Participants. Study 4 participants ($N = 95$) were recruited on the university campus. Our stopping goal was 96 (16 participants per photo), however one participant left the questionnaire blank. In addition, two participants were eliminated because they were accidentally given an

incorrect version of the questionnaire (i.e., photos were of different people). 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.

Studies 5 ($N = 85$) and 6 ($N = 91$) participants were recruited through the psychology participant pool and run in lab on the computer. Stopping goals for Studies 5 and 6 were determined by the end of the quarter. There were no exclusions for Study 5, and six pairs of photos were used. Two pairs of photos (out of six pairs) were not perceived as significantly different in weight in Study 6 and were eliminated. The final number of Study 6 participants was 62.

There were no significant main effects or interactions with participant gender in these studies.

Materials and Procedure.

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

Table 1. Dependent measures in Studies 1 - 10.

Dependent Variable	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. (R)	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 (R)		x	x		x					
Reliability (Correlation or Alpha)	<i>r</i> = .48	.84	.89	<i>r</i> = .48	.89	.93	.80, .85	.84	.89, .89	.92
Perceptions of legal 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
Reliability (<i>r</i>)			.69			.70			.50, .72	.51
Correlation between American Identity and Legal Status (<i>r</i>)			-.36			-.72			-.15, -.001	-.52

Note: For within-subject studies (7 and 9), reliability analyses were conducted for each weight class. Correlation coefficient for the overweight Asians and then the normal-weight Asians are presented. Some American identity measures had minor wording changes across studies (e.g., "How American does this person seem?"). Blank cells indicate that the dependent variable was not asked in that study.

Studies 7-10: Asian, White, Black, and Latino photos

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

Participants. Participants for Studies 7 ($N = 171$), 9 ($N = 58$), and 10 ($N = 294$) were recruited through the psychology participant pool and run in lab on the computer. Stopping goals were determined by the end of the quarter. Study 8 participants ($N = 248$) were run online on Amazon MTurk. Study 8 had a stopping goal of 240 (20 of each weight, race, and gender combination). After excluding responses with duplicate IP addresses and unfinished questionnaires, there were 187 participants. Results were similar when including everyone. There were no exclusions in these studies based on weight estimations. There were no significant main effects or interactions with participant gender in any study.

Materials and Procedure. Participants either viewed Asian, White, and Black photos (Studies 7 and 8) or Asian, White, and Latino photos (Studies 9 and 10). Studies 8 and 10 were between-subjects, and Studies 7 and 9 were within-subjects.

For between-subjects studies, participants were randomly assigned to view one photo of either an overweight or normal-weight Asian, White, or Black man or woman (Study 8) or 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, 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-subject studies, participants saw one 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

race/weight/gender combination. In Study 9, participants viewed 6 photos (two 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 race/weight combination. See Supplement Table 2 for the counterbalancing procedure.

Results for Studies 1-10

Results of the meta-analyses are presented below and in Table 2, and individual study results are presented in Tables 3 and 4. Table 3 in the Supplement has main effects of race of the person in the photo.

Manipulation check. Of the 3335 total estimations of weight, one estimation of 1603 pounds and 21 estimations of less than 80 pounds for women or 100 pounds for men were excluded from analyses on perceived weight. The overweight Asians were perceived to be significantly heavier (weighted mean across studies: men = 181.72 pounds; $SD = 28.07$; women = 147.71 pounds, $SD = 22.68$) than the normal-weight Asians (weighted mean across studies: men = 154.77 pounds; $SD = 17.89$; women = 121.07 pounds; $SD = 11.47$), all $ps < .05$. Participants also estimated that the overweight White, Black, and Latino stimuli weighed more than their normal-weight counterparts (see Table 4 in the Supplement).

Weighted BMIs across studies were calculated for each photo. According to the National Institutes of Health (2015), a BMI of 25 is the cutoff for being “overweight”, whereas a BMI between 18.5 and 24.9 would be considered “normal-weight”. The perceived weighted mean BMI of 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-subject and within-subject 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 similar results as those reported below.

The first set of meta-analyses included only the eight between-subjects studies (Lipsey & Wilson, 2001) and examined effects of weight on American identity and legal status judgments of Asian and White photos. The second set of meta-analyses included all ten 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-subject 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 photos and on legal status judgments of Asian, White, and Latino photos.

Perceptions of American identity: Studies 1-10. For the between-subjects meta-analysis, effects of being overweight were significantly different for perceptions of Asians and Whites, $Q_B(1) = 5.50, p = .02$. Being overweight caused Asians to be seen as more American than being normal-weight, $d = 0.327, p = .0001, 95\% \text{ CI } [.167, .486]$. Weight did not significantly influence whether Whites were perceived as American, $d = -0.020, p = .87, 95\% \text{ CI } [-.261, .222]$.

For the second set of meta-analyses, comparing effects of the within-subject studies to the between-subject studies revealed similar effect size magnitudes for ratings of Asian, White, and Black photos, $ps > .22$, suggesting that between-subject and within-subjects studies can be combined for these groups (Morris & Deshon, 2002). Effect size magnitudes for Latino photos differed by design, $Q_B(1) = 4.10$, $p = .04$, suggesting that results were different in the between-subject and within-subject studies (see Table 3 for direction of difference), but here we combine the two studies to facilitate comparisons between racial groups. Similar to the between-subjects analysis, effects of being overweight were significantly different across racial groups, $Q_B(3) = 13.11$, $p = .004$. Overweight Asians were perceived as significantly more American than normal-weight Asians, $d = 0.255$, $p < .0001$, 95% CI [.144, .366] (see Figure 1). In contrast, White, $d = 0.086$, $p = .16$, 95% CI [-.034, .206], Latino, $d = 0.084$, $p = .59$, 95% CI [-.216, .383], and Black, $d = -0.097$, $p = .23$, 95% CI [-.256, .063], photos were not perceived differently based on weight.

Perceptions of legal status: Studies 3, 6, 9, and 10. For the between-subjects meta-analysis, effects of weight marginally differed for perceptions of legal status for Asian and Whites, $Q_B(1) = 3.23$, $p = .07$. Overweight Asians were perceived as significantly more likely to be in the U.S. legally than normal-weight Asians, $d = 0.293$, $p = .02$, 95% CI [.054, .532]. Weight did not influence perceptions of Whites' legal status, $d = -0.094$, $p = .60$, 95% CI [-.441, .253].

When combining the between-subjects studies with the within-subjects study, effects of weight on judgments of legal status were no longer significantly different across racial groups, $Q_B(2) = 4.23$, $p = .12$. Participants may have been less likely to make sensitive judgments about legal status when rating several people in a row, as opposed to evaluating an isolated image.

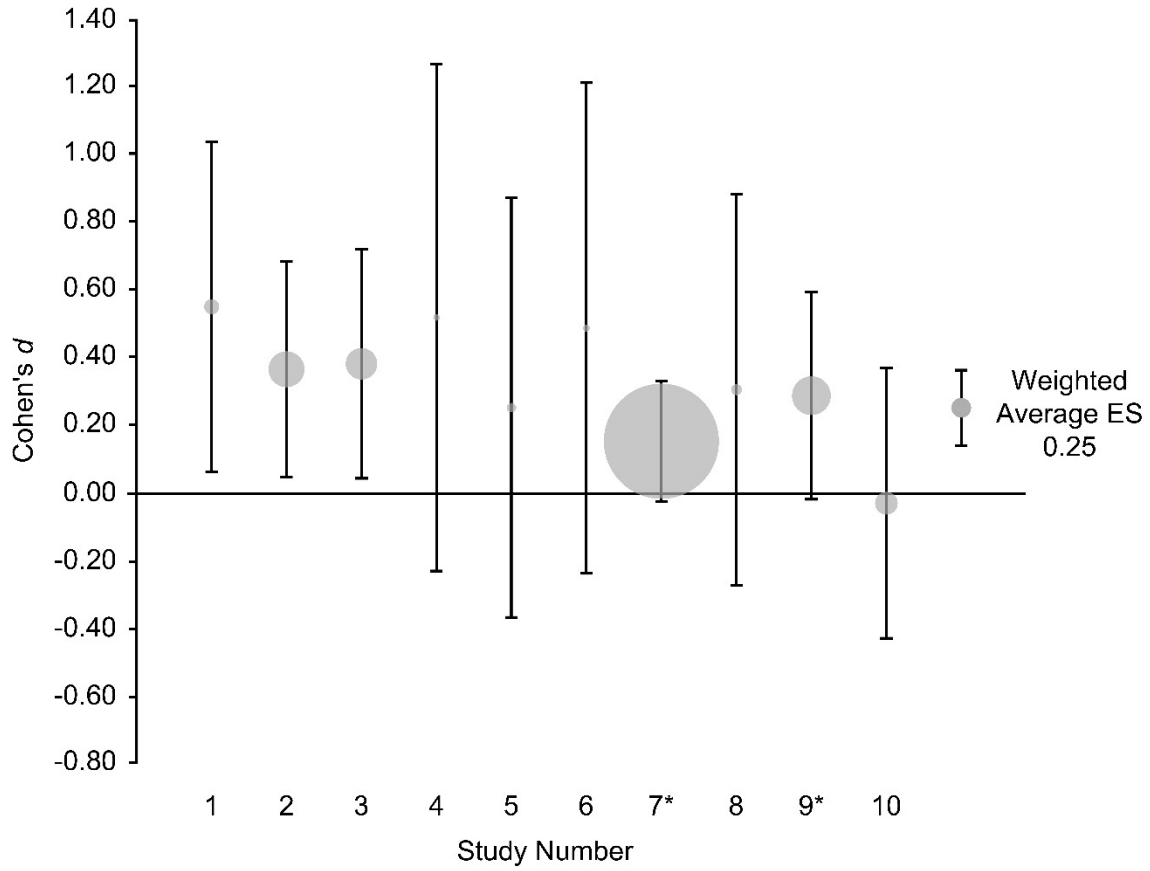


Figure 1. Effect size and confidence intervals comparing overweight to normal-weight Asians on ratings of American identity. Size of the circle corresponds to study weight in the meta-analysis. * Indicates a within-subject design.

Table 2. Meta-analysis of the effect of weight on perceptions of being American and legal status by photo race.

Measure	Photo race	Experiments contributing data	k	total <i>n</i>	Heterogeneity test	Test of photo race differences	Mean <i>d</i>	95% CI	<i>p</i>
Between-subjects studies									
American identity	Asian	1-6, 8, 10	8	618	$Q_W(11) = 10.01,$ $p = .53$	$Q_B(1) = 5.50,$ $p = .02$	0.327	.167 to .486	.0001
	White	4-6, 8, 10	5	267			-0.020	-.261 to .222	.87
	Latino	10	1 ^a	95	-	-	0.368 ^a	-	-
	Black	8	1 ^a	71	-	-	0.246 ^a	-	-
Legal status	Asian	3, 6, 10	3	272	$Q_W(3) = 2.55,$ $p = .47$	$Q_B(1) = 3.23,$ $p = .07$	0.293	.054 to .532	.02
	White	6, 10	2	129			-0.094	-.441 to .253	.60
	Latino	10	1 ^a	95	-	-	0.136 ^a	-	-
All studies									
American identity	Asian	1-10	10	844	$Q_W(17) = 17.35,$ $p = .43$	$Q_B(3) = 13.11,$ $p = .004$	0.255	.144 to .366	<.0001
	White	4-10	7	493			0.086	-.034 to .206	.16
	Latino	9, 10	2	153			0.084	-.216 to .383	.59
	Black	7, 8	2	239			-0.097	-.256 to .063	.23
Legal status	Asian	3, 6, 9, 10	4	330	$Q_W(6) = 9.30,$ $p = .16$	$Q_B(2) = 4.23,$ $p = .12$	0.155	-.035 to .345	.11
	White	6, 9, 10	3	187			-0.087	-.265 to .091	.34
	Latino	9, 10	2	153			-0.132	-.430 to .165	.38

Note: *K* indicates the number of effect sizes included in each analysis. Q_W indicates the heterogeneity test for subject-level or within studies variance. Q_B indicates the heterogeneity test for between-group variance.

^a Only one effect size is available.

Table 3. Individual study results for perceptions of American identity.

Study	N	Location	Average cell size	Design	Inter-action	Asian Photos			White Photos			Black Photos			Latino Photos		
					<i>p</i> value	Over-weight <i>M (SD)</i>	Normal-weight <i>M (SD)</i>	<i>p</i> value contrasts / Cohen's <i>d</i>	Over-weight <i>M (SD)</i>	Normal-weight <i>M (SD)</i>	<i>p</i> value contrasts / Cohen's <i>d</i>	Over-weight <i>M (SD)</i>	Normal-weight <i>M (SD)</i>	<i>p</i> value contrasts / Cohen's <i>d</i>	Over-weight <i>M (SD)</i>	Normal-weight <i>M (SD)</i>	<i>p</i> value contrasts / Cohen's <i>d</i>
1	68	Campus	34	2 (weight; btw)		4.77 (1.09)	4.19 (1.02)	.03* / 0.55									
2	157	Mass testing	78.5	2 (weight; btw)		4.37 (1.02)	3.99 (1.06)	.02* / 0.37									
3	138	Mass testing	69	2 (weight; btw)		3.43 (1.08)	3.02 (1.01)	.03* / 0.38									
4	60	Campus	15	2 (weight; btw) × 2 (race; btw)	.57	4.60 (0.99)	4.16 (0.65)	.25 / 0.52	5.50 (0.96)	5.37 (1.33)	.72 / 0.11						
5	85	In lab	21.25	2 (weight; btw) × 2 (race; btw)	.57	3.40 (1.20)	3.14 (0.83)	.37 / 0.25	5.48 (0.78)	4.98 (1.00)	.09† / 0.56						

6	62	In lab	15.5	2 (weight; btw) × 2 (race; btw)	.10†	3.15 (0.99)	2.65 (1.07)	.18 / 0.49	5.66 (1.27)	6.05 (0.80)	.31 / -0.37						
7	168	In lab	168	2 (weight; wth) × 3 (race; wth)	.13†	3.76 (0.88)	3.61 (1.01)	.09† / 0.13	5.63 (0.87)	5.54 (0.97)	.20 / 0.10	5.42 (0.88)	5.49 (0.82)	.37 / -0.07			
8	187	MTurk	31.17	2 (weight; btw) × 3 (race; btw)	.24	4.41 (1.14)	4.03 (1.31)	.26 / 0.31	5.27 (1.04)	5.54 (1.07)	.36 / -0.25	4.91 (1.32)	5.21 (1.11)	.28 / - 0.25			
9	58	In lab	58	2 (weight; wth) × 3 (race; wth)	.09†	3.04 (1.14)	2.73 (1.00)	.03* / 0.29	5.96 (0.84)	5.81 (1.00)	.23 / 0.16				3.44 (1.28)	3.82 (1.73)	.26 / -0.15
10	294	In lab	49	2 (weight; btw) × 3 (race; btw)	.37	2.56 (1.06)	2.58 (0.89)	.89 / -0.03	5.36 (1.15)	5.40 (0.96)	.85 / -0.04				3.03 (0.93)	2.72 (0.74)	.12 / 0.37

Note: Intxn = interaction between photo race and photo weight; btw = between-subjects, wth = within-subjects; † $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. Huynh-Feldt estimates were used when assumptions of sphericity were violated in repeated-measures analyses.

Table 4. Individual study results for perceived legal status from Studies 3, 6, 9, and 10. Higher means represent more likely to be seen as in the U.S. illegally.

Study	N	Location	Average cell size	Design	Intxn <i>p</i> value	Asian Photos			White Photos			Latino Photos		
						Over-weight <i>M</i> (<i>SD</i>)	Normal-weight <i>M</i> (<i>SD</i>)	<i>p</i> value contrasts / Cohen's <i>d</i>	Over-weight <i>M</i> (<i>SD</i>)	Normal-weight <i>M</i> (<i>SD</i>)	<i>p</i> value contrasts / Cohen's <i>d</i>	Over-weight <i>M</i> (<i>SD</i>)	Normal-weight <i>M</i> (<i>SD</i>)	<i>p</i> value contrasts / Cohen's <i>d</i>
3	140	Mass testing	70	2 (weight; btw)		3.28 (1.23)	3.61 (1.22)	.11 / 0.27						
6	62	In lab	15.5	2 (weight; btw) × 2 (race; btw)	.04*	2.90 (1.33)	3.56 (1.21)	.10† / 0.52	2.16 (1.09)	1.64 (0.66)	.21 / -0.57			
9	58	In lab	58	2 (weight; wth) × 3 (race; wth)	.09†	3.19 (1.16)	3.10 (1.29)	0.65 / -0.06	1.83 (1.02)	1.74 (0.99)	.40 / -0.11	4.36 (1.50)	3.68 (1.60)	.05* / -0.27
10	294	In lab	49	2 (weight; btw) × 3 (race; btw)	.77	3.62 (1.21)	3.93 (1.28)	.22 / .25	2.64 (1.19)	2.70 (1.38)	.82 / .04	4.15 (1.18)	4.32 (1.21)	.53 / 0.14

Note: btw = between-subjects, wth = within-subjects; † $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Testing for participant race differences. White participants and participants of color did not significantly differ in their tendency to perceive overweight Asians as more American or more likely to be in the U.S. legally than normal-weight Asians in either meta-analysis, $ps > .52$.

Stimuli effects. We conducted additional analyses in which we treated stimuli and participants as random effects (Judd, Westfall, & Kenny, 2012). For the between-subject studies, including random intercepts (stimulus, participant, or both, depending on model convergence) did not change results for six of the studies. For the other two studies, mixed effect models including random intercepts for stimuli and/or participants failed to converge. Examining interactions of stimulus and weight condition on American identity and legal status within each racial group revealed no significant interactions for any between-subject study. For the two within-subject studies, including random intercepts of stimulus and participant caused the weight condition \times race interactions to become statistically significant for American identity, Study 7: $F(2, 1789.97) = 3.34, p = .04$, Study 9: $F(2, 282.02) = 4.65, p = .01$, and legal status, Study 9: $F(2, 282.02) = 3.58, p = .03$. The models failed to 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 Americans but not for White, Black, or Latino Americans.

Preliminary Results. We first analyzed open-ended responses from our studies presented above (Studies 5-7, 9-10; see Supplement for analysis) to assess where people in the photos were assumed to be from. Consistent with expectations, we found that whereas White and Black targets were predominantly assumed to be from the U.S., Latino and Asian targets were assumed to be from foreign countries. We then ran a descriptive study ($N = 122$; see Supplement) revealing that being overweight is more associated with countries that Latino Americans are assumed to be from (e.g., Mexico) than with countries that Asian Americans are 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, enabling greater weight to signal an American identity.

Study 11: Manipulating country of origin stereotypes

We directly tested our proposed mechanism by manipulating whether an individual's country of origin is stereotypically associated with being overweight or not. We hypothesized that overweight people are perceived as more American than normal-weight people when their

country of origin is portrayed as stereotypically normal-weight but not when their country of origin is stereotypically overweight.

Participants. Participants ($N = 383$) were recruited on Amazon MTurk. Four participants with duplicate IP addresses were excluded, leaving 379 participants in total (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/Other, 1 Unidentified).

Design overview. The design of this study was a 2 (country of origin weight stereotypes; within) x 2 (target weight; between). Participants learned about the weight stereotype of a fictitious country, saw a photo of someone who was 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 individual from the same weight class as the first target photo they saw, and answered questions about how American that person was. All within-subject variables (country of origin weight stereotypes, country name, which person they rated, and which set of photos they saw) were fully counterbalanced. This study's target N , procedures, hypotheses, and analyses were pre-registered prior to data collection (<https://osf.io/gz3wj/>).

Materials and Procedure.

Photos. Two sets of photos were used in this study. As part of the country of origin weight stereotype manipulation, each participant saw photos of either four overweight or four 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.

Overweight and normal-weight versions of two Asian women used in Studies 4, 7 and 8 were used as target stimuli. One woman was shown for the first country and the other woman was shown for the second country.

Procedure. Participants first learned about a fictitious country (Boden or Thamen) and were 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" versus "Unlike the U.S. where most people are overweight, the vast majority of people in Boden/Thamen are not overweight"). To reinforce the manipulation, participants saw a set of four overweight or normal-weight people (described above). Next, participants saw a photo of an

overweight or normal-weight “Bodenian/Thamenian-American” and rated how American she was. Participants then completed this procedure again for the other country, with the opposite country weight condition and the same target weight condition. Attention/manipulation checks and demographics were asked at the end.

Measures. American identity was assessed with three questions adapted from the previous studies (overweight country $\alpha = .72$; not overweight 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 ($M = 1.89$, $SD = .97$) than those in the normal-weight condition ($M = 2.10$, $SD = .97$), $t(377) = 2.18$, $p = .03$, $d = 0.11$. The overweight target photos were rated as heavier than the normal-weight target photos 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, non-overweight; within) x 2 (target weight: overweight, normal-weight; between) ANOVA on American identity revealed a main effect of target weight, $F(1, 376) = 13.03$, $p < .001$, no main effect of country weight, $F(1, 376) = 2.25$, $p = .13$, and a significant country of origin weight by target weight interaction, $F(1, 376) = 72.86$, $p < .001$. Participants who read that the country of origin was stereotypically 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 Figure 2). Effects were similar for both target photos

regardless of order presented. Including random intercepts of stimulus and participant in a mixed model (Judd et al., 2012) generated similar results. Including random slopes prevented the model from converging.

We created a composite of the first two American measures because they had a meaningful midpoint. Participants who read that 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, they were rated as marginally or significantly more foreign than American (i.e., below the midpoint): normal-weight country and normal-weight photo: $t(178) = -8.06, p < .001, d = 1.21$; overweight country and normal-weight photo: $t(178) = -1.95, p = .053, d = 0.29$; overweight country and photo: $t(199) = -4.75, p < .001, d = 0.67$.

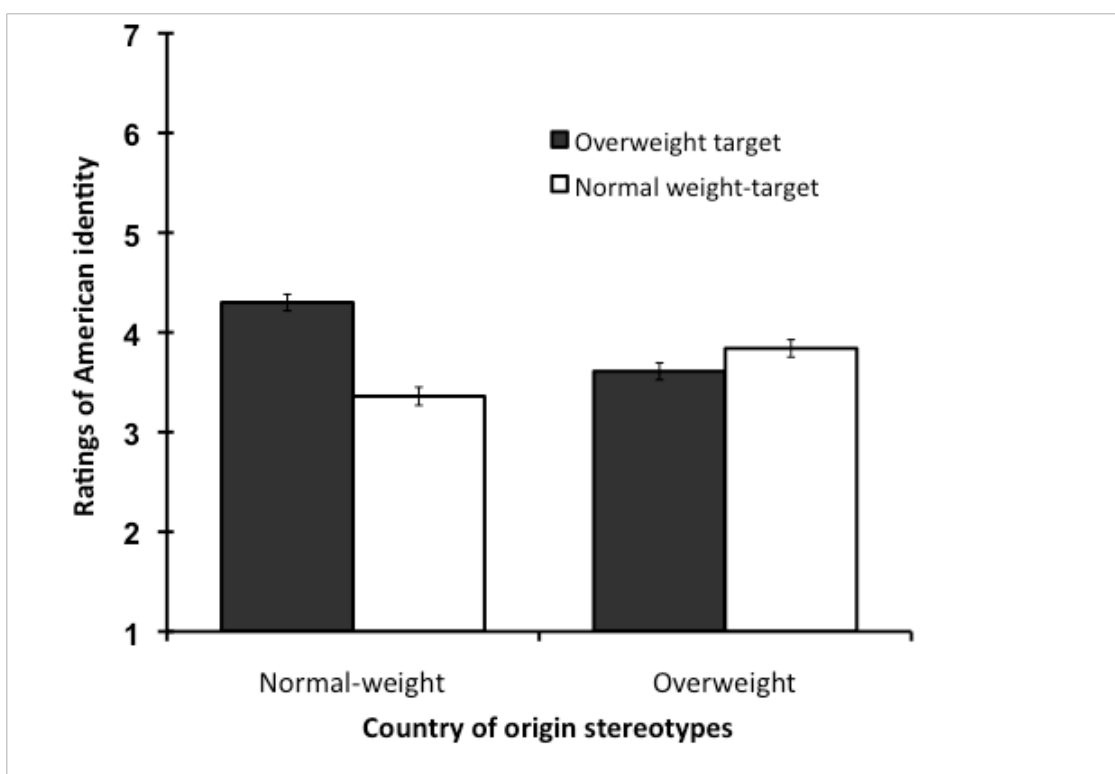


Figure 2. Overweight targets were judged as more American than normal-weight targets when the country of origin was stereotypically normal-weight but not when the country of origin was stereotypically overweight.

General Discussion

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

Weight did not affect perceptions of how much members of other racial groups (i.e., White, Black, and Latino Americans) 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 U.S. and the assumed country of origin is not associated with being overweight.

Our theoretical framework makes several contributions to current literature. First, it informs work on multiple identities by showing when weight contributes to assumptions about group membership. Future work could extend this 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, Tsai, Jiang, Wang, Fung, & Zhang, 2015), but positive expression may be less effective in signaling American identity for Latino Americans because of stereotypes of the 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 Asians are also associated with strong academic performance.

Second, our theory informs research on prejudice by demonstrating that the same physical cue can be used as a marker of exclusion for marginalized group members more than core group members. People who possess multiple subordinate identities can at times be shielded from prejudice directed at more prototypical members, while also being 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 those countries are perceived and treated. This is especially important in countries with high rates of immigration, such as the U.S.

Our theory could also extend to the targets' perspective. Asian Americans may gain weight as a strategy to signal that they are American, or might be more likely to engage in other physical modifications, such as undergoing surgery or painful procedures (e.g., blepharoplasty; skin bleaching), to avoid prejudice (e.g., Berger & Heath, 2008). Note that being overweight did not completely exempt Asian Americans from assumptions that they were not American, and thus individual strategies to appear more American are likely less effective 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, nine of the ten studies generated results in the predicted direction, and three of the five studies with non-significant p values had medium effects (d 's from 0.31 to 0.52) in the predicted direction for American identity. Studies with non-significant 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, overweight Asians Americans were seen as more American than normal-weight Asian Americans ($d = 0.25$). Had we only included the studies with p values less than .05, our effect size would have been $d = 0.37$, which is close to the average effect size in published research in social psychology ($d = 0.40$; Fraley & Vazire, 2014).

Conclusion

The health and social costs of being overweight are well documented (e.g., Crandall, 1994). This work suggests, however, that there may be social benefits to Asian Americans who weight more. Asian Americans who are overweight are more likely to be considered American by other Americans and less likely to have their documentation status 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 by changing oneself to appear more American.

C. Handron developed the study concept. All 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 performed the data analysis and checking. C. Handron, T. A. Kirby, H. E. Matskewich, and S. Cheryan drafted the manuscript and all authors provided critical revisions. All authors approved the final version of the manuscript for submission.

Acknowledgments

We thank Benoit Monin, Cheryl Kaiser, Tony Greenwald, Sarah Grover, Sanford Devoe, Galen Bodenhausen and the Stereotypes, Identity, and Belonging Lab for helpful comments on previous versions of this manuscript.

Funding

This research was supported by National Science Foundation Graduate Research Fellowships awarded to the first and second authors. The fourth author was supported by a Western Washington University Faculty Research Grant and the SPSSI Grants-in-Aid program. Portions of this research were conducted while the last author was a Visiting Scholar at the Russell Sage Foundation and a Leonore Annenberg and Wallis Annenberg Fellow in Communication at the Center for Advanced Study in the Behavioral Sciences at Stanford University.

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Appendix

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

