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The Influence of Weight Bias on Processes and Outcomes in Negotiation

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Abstract

In two studies, using a mix of samples, we examined the influence of weight bias on behaviors in competitive, potentially high stakes situations. As predicted, weight bias directed focal actors' treatment of counterparts in a negotiation. Negotiators made lower value offers to overweight counterparts relative to average-weight counterparts. In addition, overweight counterparts also received more negative messages over the course of their negotiation and were evaluated less favorably after the negotiation than average-weight counterparts.

Keywords: Negotiation, Conflict, Weight Bias, Obesity, Offers, Messaging

The Influence of Weight Bias on Processes and Outcomes in Negotiation

1 Introduction

Although obesity is a growing problem in America, being overweight continues to carry a stigma (Granberg, 2011; Puhl & Heuer, 2009; Puhl, Himmelstein, & Pearl, 2020). Relative to those of average weight, for instance, people who are overweight are seen as less active and less attractive, less intelligent, less competent, and less hardworking (Harris, Harris, & Bochner, 1982; Hebl & Heatherton, 1998; Levine & Schweitzer, 2015). Heavier people also are judged to be relatively more weak willed, self-indulgent, lazy, and immoral (Hebl & Mannix, 2003), characterizations rooted in a view that obesity is a controllable condition (Weiner, 1995).

Negative attributions extend to how obese people are treated. Heavier people are relatively less likely to be selected as friends and romantic partners (DeJong & Kleck, 1986; Harris, 1990; Sheets & Ajmere, 2005), even among pre-school aged children (Cramer & Steinwert, 1998). At work, being overweight carries significant and costly liabilities, undermining wages and occupational attainment (Morris, 2006; Norton & Han, 2008; Register & Williams, 1990). Results of a longitudinal survey of white women showed that an increase in 64 pounds above average weight was linked to a 9% drop in wages (Cawley, 2004). At every stage in the employment process from being chosen for an interview to selection to discipline to discharge being overweight is stigmatizing (Agerström & Rooth, 2011; Puhl & Heuer, 2009; Roehling, 1999).

Weight bias is pervasive and carries devastating consequences, yet at the bargaining table, where many of these outcomes are decided, its impact has yet to be explored. Given the growing number of studies showing that visual cues, such as attractiveness, race, and facial femininity, direct how individuals are treated in negotiation (Gladstone & O'Connor, 2014;

Haselhuhn, Wong, Ormiston, Inesi, & Galinsky, 2014; Hernandez, Avery, Volpone, & Kaiser, 2019) we would expect weight bias to exert strong effects on negotiators' decisions, actions, and, ultimately, outcomes.

Our goal is to examine whether a negotiator counterpart's weight influences the process and outcome of a negotiation. Our results are intended to make two contributions. First, this will be the first study to directly examine whether and how weight bias is expressed and experienced in negotiation. Second, by testing the role of weight bias in negotiation, we contribute to a nascent literature documenting the importance of visual cues at the bargaining table (Gladstone & O'Connor, 2014; Haselhuhn et al., 2014).

1.1 Weight Bias and Negotiation

The rate of obesity in the United States continues to grow at an alarming rate. It is estimated that one in three Americans (of all ages) is obese (Warren, Beck, & Delgado, 2019) and nearly 40% of all adults are obese (Hales, Fryar, Carroll, Freedman, & Ogden, 2018). Unfortunately, individuals who are obese are frequently subjected to bias, stigmatization, and discrimination (Puhl & Brownell, 2001; Puhl & Heuer, 2009). *Weight bias* refers to a negative evaluation of an individual based upon his/her weight (Washington, 2011) and is felt from the playground (Cramer & Steinwert, 1998) to the office (Giel, Thiel, Teufel, Mayer, & Zipfel, 2010; Roehling, 1999). Numerous studies document the deleterious effect of weight bias in healthcare, work, educational settings, interpersonal relationships, and other settings (Andreyeva, Puhl, & Brownell, 2008; Pearl, 2018; Puhl & Brownell, 2001; Puhl & Heuer, 2009).

The effects of weight bias has been explained by a number of theoretical approaches in the literature. These theories include attribution theory (Crandall, D'Anello, Sakalli, Lazarus, Nejtardt, & Feather, 2001; Crocker, Cornwell, & Major, 1993), social identity theory (Brewer,

1979; Tajfel & Turner, 1986), socio-cultural theory (Polivy & Herman, 2004), social consensus theory (Puhl & Brownell, 2003), stereotype content model and behavior from intergroup affect and stereotypes framework (Cuddy, Fiske, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002; Levine & Schweitzer, 2015), evolutionary theory (Kurzban & Leary, 2001) and others (see Elran-Barak & Bar-Anan, 2018; Pearl, 2018; Puhl & Brownell, 2003). As Elran-Barak & Bar-Anan (2018) note, attribution theory, social identity theory, and socio-cultural theory are among the most frequently cited in the recent literature.

One place in which the effects of weight bias and discrimination are particularly damaging is the workplace (Nowrouzi, McDougall, Gohar, Nowrouz-Kia, Casole, & Ali, 2015; Rudolph, Wells, & Bates, 2009). In a review of weight bias in in work settings, Giel and colleagues (Giel et al., 2010) found that weight bias had broad reaching effects – influencing perceptions of general job performance, interpersonal skills, self-control, motivation/drive, intelligence, reliability, and self-confidence.

Weight bias influences hiring, promotion, compensation and other important work-related outcomes (Pearl, 2018; Puhl & Brownwell, 2001; Puhl & Heuer, 2009; Rudolf, Wells, Weller, Baltes, 2009). Although the link between obesity and work outcomes, such as wages, for example, is well documented (Baum & Ford, 2004; Roehling, 1999), we know surprisingly very little about its effects at the bargaining table, were some of these decisions take place. Consistent with the theory and the results described above, we expect weight bias will have a direct, and negative impact on offers in negotiation. More specifically, we expect that negotiators will make lower value offers to counterparts who are overweight, relative to average weight counterparts (H1).

Overweight individuals are also often the targets of direct and indirect stigma, such as negative comments and bullying (Puhl & King, 2013). Children, for example, are often bullied because of their weight (Pont, Puhl, Cook, & Slusser, 2017). Negative comments, however, do not end at the playground. At work, overweight individuals are subjected to negative humor and comments by co-workers and supervisors (Puhl & Brownell, 2006). Although it is unlikely that participants would demonstrate such behaviors in a laboratory study, this form bias may manifest itself more subtly in the form of microaggressions (Pearl, 2018), such as in the tone of the messages sent to overweight counterparts in negotiation. We hypothesize that negotiators will be more likely to send negative messages to counterparts who are overweight, relative to average weight counterparts (H2).

Given the broad and reaching effects of weight bias, we expect that it may not only manifest itself in behavior at the bargaining table, such as with offers and messaging, but also in the evaluation of overweight counterparts after the negotiation is over. Individuals who are overweight and obese are often perceived as lazy, less likeable, and less disciplined (Ross, Shivy, & Mazzeo, 2009), especially among those perceived as being responsible for being overweight (Weiner, Perry, & Magnusson, 1988). Impressions of negotiation counterparts after a negotiation matter (Curhan, Elfenbein, & Xu, 2006). Negotiators, for instance, who are less liked by their partners at the end of a negotiation are less likely to be chosen for future negotiations (Reb, 2010). After the negotiation is over, we expect that negotiators will have less favorable impressions of overweight counterparts than average weight counterparts (H3).

In our study, we will have participants negotiate with a simulated counterpart to better approximate what happens in real-world negotiation settings. By having participants negotiate with a computer program, we control for the other side's behavior, enabling us to test whether it

is counterparts' weight—as opposed to counterparts' behavior—that affects participants' perceptions and actions.

2 STUDY 1

2.1 Method

2.1.1 Participants and procedure.

We recruited 72 undergraduate students (44% women) from the first author's school laboratory participant database. Average age was 20 ($SD = 2.26$), and ages ranged from 18-33.

Participants sat at computer terminals, and read that they were paired with a person in another room of the laboratory. They learned that they would be representing an apartment renter looking to sublet his/her apartment for the summer, a common negotiation for this population. There were three issues to negotiate—sublease start date, rental amount, and percentage of utilities covered. Appendix A contains the payoff schedule.

To enhance the realism of the experiment, waiting times were built into the program—while participants waited for their partners and between rounds. The waiting periods varied randomly from 12 seconds to 42 seconds. After reading the negotiation instructions, participants then saw a photo of their counterpart. Before negotiating, participants responded to questionnaire items that assessed their perceptions of their counterparts. While participants were not told the terminal round of the negotiation, the software was set to end the negotiation after Round 4 due to “time reasons.” All participants went the full four rounds. Whereas negotiators were free to choose their own offers and messages, they received pre-programmed offers and messages (see Appendix B) from their ostensible counterparts.

2.1.2 Independent variables

We selected a photograph of an average-sized white man and an average-sized white woman from the Face Database at the University of Texas at Dallas (<http://agingmind.utdallas.edu/facedb>). Using common photo editing software (Adobe Photoshop), we manipulated the photos of participants to create a set that were overweight versions of the originals (see Appendix C). To ensure that the photographs were roughly equivalent, we gathered pilot data with 49 participants. Results showed that the overweight man and woman were seen as equally overweight (man: $M = 4.47$, $SD = .55$; woman: $M = 4.22$, $SD = .48$) and equally attractive (man: $M = 2.41$, $SD = .59$; woman: $M = 2.38$, $SD = .61$). Similarly, there were no significant differences between men and women in the average-sized condition for overweight (man: $M = 1.89$, $SD = .51$; woman: $M = 1.95$, $SD = .46$) and for attractiveness (man: $M = 2.27$, $SD = .41$; woman: $M = 2.23$, $SD = .49$). Thus, we appear to have equivalent photos of a man and a woman within weight condition.

2.1.3 Dependent variables

To test whether our manipulation of overweight was effective, participants rated the counterpart's slimness (reversed) and the degree to which he/she was overweight (1 = not all, 7 = extremely), $\alpha = .94$. We also collected a variety of other judgments of counterparts that were not relevant to our hypotheses (e.g., honest, friendly, tall, untrustworthy). Given that attractiveness is related to perceptions of obesity and liking (Puhl & Brownell, 2003; Richmond, Austin, Walls, & Subramanian, 2012), participants also rated the degree to which the other negotiator was "unattractive" (1 = not all, 7 = extremely). Attractiveness (unattractive) was included as a covariate in all of our analyses.

We measured negotiator offers by summing the total value of his/her offer across the four rounds. During the course of the negotiation, participants could choose from a list of eleven

messages to send along with their offers (see Appendix D). We, apriori, coded the first six messages as positive (1) and the last five messages as negative (2). We created a negative message score by summing across the four rounds, with higher scores indicating more negative messaging. Finally, we used three items to measure post-negotiation perceptions of partners. Participants rated the degree to which the other negotiator was “likable” (Reb, 2010), “cooperative”, and “easy to work with” (1 = not all, 7 = extremely), $\alpha = .88$.

2.2 Results and Discussion

The study’s means, standard deviations and intercorrelations are in Table 1.

Insert Table 1 about Here

Our manipulation of weight was effective, as negotiators assigned to an average weight partner viewed that counterpart as less overweight ($M = 2.11$, $SD = .70$) relative to those assigned to an overweight partner ($M = 5.68$, $SD = .84$), $F(1, 70) = 378$, $p < .0001$, $\eta_p^2 = .84$. Neither participant-reported gender nor photo sex had any impact on perceptions of weight. There were no significant interactions for weight X photo sex, weight X participant gender, and participant gender X photo sex on total offers, negative messages, or post-negotiation perceptions.

Insert Table 2 and Table 3 about Here

In Hypothesis 1, we predicted, there would be a significant main effect of weight on total offers. Consistent with H1 (see Table 2), negotiators made higher value offers to themselves (and, thus, lower value offers to the other side) when they negotiated with overweight

counterpart ($M = 945.1$, $SD = 144.7$) than with average weight counterparts ($M = 876.2$, $SD = 156.1$), $F(1, 69) = 4.13$, $p = .046$, $\eta_p^2 = .06$). We also expected weight bias to influence the tone of the messages sent to negotiators throughout the negotiation. It did. As noted in Table 3, negotiators were more likely to send messages with a negative tone to overweight ($M = 5.63$, $SD = .94$) than average weight ($M = 4.91$, $SD = .96$) partners, $F(1, 69) = 5.91$, $p = .02$, $\eta_p^2 = .08$. A chi-square test for messaging, $\chi^2(3, N = 72) = 10.72$, $p = .01$, was also significant. Finally, consistent with Hypothesis 3, negotiators had less positive impressions of their overweight counterparts ($M = 3.01$, $SD = 1.69$) after the negotiation than average weight ($M = 3.64$, $SD = 1.33$) counterparts, $F(1, 69) = 5.12$, $p = .02$, $\eta_p^2 = .07$ (see Table 4).

Insert Table 4 about Here

This pattern of findings highlights the deleterious effects of weight bias in negotiation. Weight bias influenced the total value of offers made in the negotiation, the tone of the messages sent to negotiators, and post-negotiation perceptions of overweight partners. To assess the robustness and significance of these findings, we conducted a second study in which we test the same hypotheses with a different and larger sample of participants.

3 STUDY 2

3.1 Method

3.1.1 Participants and procedure

We recruited 200 participants (61% male, 38% female, 1% non-binary) from Amazon Mechanical Turk (MTurk), and to control for potential cultural differences in perceptions of

overweight people, our draw was limited to the United States. The average age of participants was 36 years ($SD = 10.1$ years), and ages ranged from 19-66.

We used same procedures and simulation as Study 1. This time, however, participants were led to believe they would be negotiating with another participant who was online at the same time. As with the first study, to enhance the realism, similar waiting times were built into the experiment.

3.1.2 Independent and Dependent Variables

We collected data on participant-reported gender and also manipulated the sex and weight of the counterpart through the same photographs as Study 1. We used the same measures for our manipulation check of perceived weight ($\alpha = .94$), total offers, messages, and post-negotiation partner perceptions ($\alpha = .90$). We also included several other items not related to our hypotheses (e.g., tall, honest, strong). Consistent with Study 1, we included attractiveness (unattractive) as a covariate in our analyses.

3.2 Results and Discussion

The study's means, standard deviations and intercorrelations are in Table 2.

Insert Table 5 about Here

Our manipulation of weight was effective. Negotiators assigned to an average weight partner viewed that counterpart as less overweight ($M = 2.60$, $SD = 1.24$) relative to those assigned to an overweight partner ($M = 5.49$, $SD = 1.26$), $F(1, 197) = 299.8$, $p < .0001$, $\eta_p^2 = .54$. As with Study 1, neither participant-reported gender nor photo sex had any impact on perceptions of weight. There were no significant interactions for weight X photo sex, weight X participant

gender, and participant gender X photo sex on total offers, negative messages, or post-negotiation perceptions.

Insert Table 6 and Table 7 about Here

Consistent with Study 1, there was a main effect for weight bias on total offers (see Table 6). Negotiators made higher value offers to themselves (lower value offers to the other side) when they negotiated with overweight counterparts ($M = 853.9$, $SD = 198.9$) than with average weight counterparts ($M = 793.3$, $SD = 209.5$), $F(1, 197) = 10.90$, $p = .001$, $\eta_p^2 = .05$. As seen in Table 7, negotiators were also more likely to send messages with a negative tone to overweight ($M = 5.40$, $SD = 1.11$) than average weight ($M = 4.98$, $SD = .89$) partners, $F(1, 197) = 15.35$, $p < .0001$, $\eta_p^2 = .07$. The chi-square test was also significant, $\chi^2(3, N = 200) = 15.17$, $p = .002$. Lastly, negotiators had less favorable impressions of overweight partners ($M = 3.95$, $SD = 1.77$) after the negotiation than average weight ($M = 4.31$, $SD = 1.57$) partners, $F(1, 197) = 4.29$, $p = .04$, $\eta_p^2 = .02$ (see Table 8). Whether a counterpart belonged to a stigmatized group (overweight) was a significant driver of processes and outcomes in negotiation.

Insert Table 8 about Here

4 GENERAL DISCUSSION

As the rate of obesity continues to grow, so, too, will the problem of weight bias in the workplace. In two studies, using a mix of samples, we examined the influence of weight bias on processes and outcomes in negotiation. As hypothesized, we found that negotiators who were

overweight received lower value offers, more negative messages during the course of the negotiation, and less favorable post-post negotiation evaluations. This was true even though negotiator behavior was held constant throughout the negotiation.

Visual cues as an area of research in negotiation is growing in strength (Gladstone & O'Connor, 2014; Haselhuhn et al., 2014; Solnick & Schweitzer, 1999). Given how quickly people take one another's measure (Malle & Holbrook, 2012), it is no surprise that facial features like femininity or race, for instance, affect how much negotiators offer a counterpart (Gladstone & O'Connor, 2014; Hernandez et al., 2019). Our work extends this line of research by showing how a heavier face affects how counterparts are treated. As evidence for the impact of visual cues stacks up, researchers cannot ignore the lasting impact those initial judgments might have on patterns of behavior in social interactions. And these are unlikely to be limited to negotiation settings. Visual cues are likely to leave impressions that affect the distribution of work and development of rapport in work groups, the likelihood of two people building a positive or a negative tie, and even in one's willingness to provide help.

5 LIMITATIONS AND FUTURE DIRECTIONS

In our studies, interactions between participants and (simulated) counterparts were restricted to a computer-mediated setting. By having participants negotiate with a program, it enabled us to control for the other side's behavior, allowing us to determine whether it was counterparts' weight, as opposed to behavior, that affected participants' actions. It is possible, however, that settings in which negotiators interact face-to-face may amplify or diminish the effects of weight bias in negotiation. Future research should examine the impact of weight bias in more interactive negotiation contexts.

Galinsky and colleagues found perspective taking (cognitive empathy) helped reduce bias in negotiation (Galinsky & Ku, 2004; Gilinsky & Moskowitz, 2000; Todd, Bodenhausen, Richardson, & Galinsky, 2011). Future research should investigate the role that perceptual taking (cognitive empathy) and empathy (affective empathy) may play in reducing weight bias in negotiation (see Gloor & Puhl, 2016). Affective empathy, for example, has been found to reduce bullying (Stavrinides, Georgiou, & Theofanous, 2010). Finally, the role of individual difference factors in moderating the effects of weight bias, such as the need for closure and social dominance orientation, should also be investigated (see Meadows, Higgs, Burke, Dovidio, van Ryn, & Phelan, 2017).

In this study, we found that weight bias influenced the tone of messages sent to overweight partners in negotiation. Future research should investigate the impact of these and other messages in more interactive contexts. Messages can convey affective tone, which, in turn, can influence outcomes in negotiation. Negative messaging, for instance, may increase distributive behavior and impasses and decrease the opportunities for integrative agreements (Belkin, Kurtzberg, Naquin, 2013; Sinaceur, Adam, Van Kleef & Galinsky, 2013).

6 CONCLUSION

The results of our studies show that the influence of weight bias extends to the bargaining table. As with other areas, more work needs to be done to understand how to mitigate the effects of weight bias and other forms of bias in negotiation.

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Table 1

Study 1: Descriptive Statistics

Measure	M	SD	1	2	3
1 Weight Condition	.53	.50			
2 Total Offers	912.6	153.1	0.23 [†]		
3 Negative Messages	5.29	1.01	0.36 ^{**}	0.00	
4 Partner Perceptions	3.31	1.28	-0.24 [*]	-0.38 ^{**}	-0.22 [†]

Notes: $N \geq 64$; [†] $p < .10$, ^{*} $p < .05$, ^{**} $p < .01$; weight condition (0 = average weight, 1 = overweight).

Table 2

Study 1: ANOVA summary table for the influence of weight bias on total offers

Source of variance	df	MS	F
Covariate			
Unattractive	1	10628.99	.47
Main Effect			
Weight	1	93502.67	4.13*
Error	69	22734.76	

*Notes: N = 72; * $p < .05$; weight (0 = average weight, 1 = overweight).*

Table 3

Study 1: ANOVA summary table for the influence of weight bias on message tone

Source of variance	df	MS	F
<hr/>			
Covariate			
Unattractive	1	.54	.59
Main Effect			
Weight	1	5.40	5.91*
Error	69	.91	

*Notes: N = 72; * $p < .05$; weight (0 = average weight, 1 = overweight).*

Table 4

Study 1: ANOVA summary table for the influence of weight bias on positive partner perception

Source of variance	df	MS	F
Covariate			
Unattractive	1	1.64	1.05
Main Effect			
Weight	1	7.98	5.12*
Error	64	1.56	

*Notes: N = 67; * $p < .05$; weight (0 = average weight, 1 = overweight).*

Table 5

Study 2: Descriptive Statistics

Measure	M	SD	1	2	3
1 Weight Condition	.50	.50			
2 Total Offers	823.3	206.1	0.15*		
3 Negative Messages	5.15	1.07	0.24**	0.34**	
4 Partner Perceptions	4.13	1.67	-0.11	-0.54**	-0.48**

Notes: N = 200; * $p < .05$, ** $p < .01$; weight condition (0 = average weight, 1 = overweight).

Table 6

Study 2: ANOVA summary table for the influence of weight bias on total offers

Source of variance	df	MS	F
Covariate			
Unattractive	1	665255.13	17.24***
Main Effect			
Weight	1	420507.10	10.90***
Error	197	38594.71	

*Notes: N = 200; *** $p < .001$; weight (0 = average weight, 1 = overweight).*

Table 7

Study 2: ANOVA summary table for the influence of weight bias on message tone

Source of variance	df	MS	F
Covariate			
Unattractive	1	4.33	4.00*
Main Effect			
Weight	1	16.62	15.35***
Error	197	1.08	

*Notes: N = 200; * $p < .05$, *** $p < .001$; weight (0 = average weight, 1 = overweight).*

Table 8

Study 2: ANOVA summary table for the influence of weight bias on positive partner perception

Source of variance	df	MS	F
Covariate			
Unattractive	1	11.16	4.05*
Main Effect			
Weight	1	11.81	4.29*
Error	197	2.76	

*Notes: N = 200; * $p < .05$; weight (0 = average weight, 1 = overweight).*

Appendix A

Participants' Payoff Matrix

Start date		Rent %		Utilities %	
May 10	(80)	75	(175)	85	(45)
May 17	(60)	70	(150)	80	(35)
May 21	(40)	65	(125)	75	(25)
May 31	(20)	60	(100)	70	(15)
June 7	(0)	55	(75)	65	(5)

Point value to participants in parentheses.

Appendix B

Study 1 & 2: First Four Offers and Statements from the Simulated Computer Program

Round	Start Date	Rent	Utilities	Total Offer	Statements
1	June 7	55%	65%	80	Here it is.
2	June 7	55%	70%	90	Thanks for your last offer. How about this?
3	June 7	60%	70%	115	Let's keep going.
4	May 31	60%	75%	145	I'm getting close to my maximum.

Appendix C

Example photograph for the obesity manipulation

Average Weight



Overweight

Note: Consistent with previous research (Levine & Schweitzer, 2015), given we did not have permission to publish the actual photographs used in the study, we provide an example of a photograph that was manipulated to appear overweight using photo editing software. Full materials are available from the authors upon request

Appendix D

Study 2: Message Options for Negotiators

1. Here it is.
2. Let's keep going.
3. Thanks for your last offer. How about this?
4. It feels like we're making progress.
5. I'm enjoying working with you.
6. You are really good at this!
7. You really need to improve your offer if we're going to find a deal.
8. I'm sure you can do better than that.
9. If you don't make more concessions, I'm not going to continue negotiating with you.
10. I'm getting close to my best offer.
11. It does not feel like we are making much progress.