CHAPTER 7

HOW THE BODY TYPE OF OTHERS IMPACTS OUR FOOD CONSUMPTION

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Obesity and unhealthy food consumption are major public health issues, especially in North American society. In the United States, an estimated 66 percent of adults and nearly one-third of preschoolers are overweight or obese (National Health and Nutrition Examination Survey [NHANES] 2004), and increasingly similar numbers exist in the United Kingdom (Pfanner 2008) and around the globe. This epidemic has serious consequences, as people who are overweight are at a greater risk of cardiovascular disease, sleep apnea, hypertension, gallbladder disease, type 2 diabetes, osteoarthritis, and various cancers (Bianchini, Kaaks, and Vainio 2002; U.S. Department of Health 2000). The economic cost of obesity to the U.S. health-care system is more than $92.6 billion dollars annually (Finkelstein, Fiebelkorn, and Wang 2003). According to the World Health Organization (WHO), by 2030 obesity will be the number one cause of death among the world's poor (see Kielburger and Kielburger 2008). Although a relatively recent problem, obesity is rapidly becoming a preeminent public concern. Data show that among adults, the percentage of those either overweight or obese doubled from 1980 to 2004, and rates for children exceeded those of adults (NHANES 1980, 2004), foreshadowing even more dire problems to come. Worldwide, the United Nations indicates that for the first time, there are now more overweight people in the world than people who are starving.

What has caused such a sharp rate of increase in the prevalence of obesity? While some authors point to an increasingly sedentary lifestyle (Blair and Brodney 1999) or genetics (Comuzzi and Allison 1998), most research tends to point to a marked increase in consumption of energy as the main driver of obesity (Dehghan, Akhtar-Danesh, and Merchant 2005; Young and Nestle 2002). While the human body has developed excellent responses to being underfed, it has comparatively weak systems to cope with overconsumption (Hill and Peters 1998). Human genes are not changing at such a rate that could possibly explain the increase in overweight and obesity rates in recent decades (Hill, Pagliassotti, and Peters 1994; Stunkard

et al. 1990), and people's activity levels have remained stable over decades while obesity rates have increased (Young and Nestle 2002). What has changed is society's food choices.

Making healthy food choices is clearly an important part of maintaining a healthy body weight. Today, Americans eat at least 200 more calories a day than they did in 1980 (e.g., Chandon and Wansink 2007; NHANES 2004), often at increasingly available establishments offering relatively inexpensive, convenient, and calorically dense foods (Hill and Peters 1998). Consumers make over 200 food choices per day (Wansink 2006), and thus it is important to understand the antecedents to unhealthy food choices. However, little research in marketing has examined why consumers make the food choices they do. For instance, once inside a restaurant, what causes them to purchase the burger instead of the salad, or the large fries over the small ones? Such small decisions actually have large caloric consequences, as the difference between a sixteen-ounce McDonald's Swamp Sludge McFlurry and a McDonald's Low Fat Ice Cream Cone is 560 calories (McDonald's 2006). Portion size and unhealthy choices are linked to obesity (Young and Nestle 2002), and people who select larger portions tend to eat more than those given small portions. This is true even when the food is of poor taste or consumers are not even hungry (Wansink 2006).

In the domain of food consumption, the presence and behavior of other people (also known as social influence) have been argued to be a "major, if not the preeminent, influence on eating behavior" (Johnston 2002, 21; see also de Castro 1994; Goldman, Herman, and Polivy 1991). This research will review how the choices of other people may influence consumers' own choices in terms of the quantity they select and ultimately consume. We will also review recent research examining how the effect of social influence on consumption is moderated by the body type of the other consumer. In other words, observing an obese versus a thin consumer order food, or overhearing such a server make a recommendation, will have differential effects on the quantity of food a consumer chooses and consumes. In general, we focus on quantity of food eaten, rather than on specific (healthy versus unhealthy) food choices, although in a final study we do examine choice. Across a series of studies, we demonstrate

1. that people are sensitive to the quantity choices made by others, eating more food as those around them select larger portion sizes;
2. that these effects depend on the body type of the others around them, such that consumers are more influenced by food selections of thin companions than they are of obese ones;
3. that these effects are particularly pronounced for those dissatisfied with their physical appearance and when cognitive resources are not constrained; and
4. that noneating others' body types can also affect consumption, but that these effects are moderated by the eater's propensity toward restrained eating.

SOCIAL INFLUENCES AND SELECTION OF PORTION SIZE

Past research has shown that consumption decisions are influenced by those who are physically present. People are sensitive to the behavior of others in a retail context (Argo and Main 2008; Bearden and Etzel 1982; Dahl, Manchanda, and Argo 2001; Moschis 1976). Given that people eat many meals in the company of others and research shows that people's behavior is subject to social influences, understanding how others and their body types affect people's consumption choices is essential to understanding why consumers make the food choices they do.

Studies have found that social influence can have either a facilitating or attenuating effect on eating behavior, depending on the context (see Herman, Roth, and Polivy 2003 for an excellent review). On the one hand, the social facilitation literature has found that the presence of others leads to an increase in consumption (e.g., de Castro 1994; see also Conger et al. 1980; Johnston 2002; Rosenthal and Marx 1979) because the duration of the meal increases. De Castro (1990, 1994) finds that people eat about 35 percent more calories if they eat with just one other person and nearly twice as much in a group of seven or more, and more with friends and family than with other companions. The length of time people sit at the table strongly predicts how much they intake. If they spend a long time at the dinner table, they tend to eat more food. One need only imagine a Thanksgiving dinner or wedding reception that goes on for hours, while all the guests complain that they ate too much. More time spent with food results in increased consumption. Additionally, attenuation effects are also realized if people justify that they can eat more and still not be excessive when the other person eats a very small amount (Nisbett and Storms 1974) or is in some way not like them (Rosekrans 1967).

On the other hand, Herman, Roth, and Polivy (2003) argue that food choice is influenced by a desire to convey a certain impression or adhere to social norms (Leary and Kowalski 1990; Roth et al. 2001). Making a good impression usually means eating less, rather than more, when in the company of others. Indeed, people who suffer from eating disorders often binge while alone, but eat minimally in the company of others (Herman and Polivy 1980). In a social setting, few want to be the person who orders a steak for lunch when everyone else goes with the salad. This line of reasoning has led to a series of important experiments, known as the modeling or mimicry studies, in which the social other's choices are directly manipulated. In these studies (see Herman, Roth, and Polivy 2003), the participants' behavior is observed after they overhear or see another person (a confederate) choose her portion. The results of these studies consistently show that social influence can have either a facilitating or attenuating effect on consumption, depending on how much the confederate eats. Participants in these studies follow the norms the confederate sets, eating more (or less) in parallel with the confederate. These norm effects are particularly poignant: the confederate does not even have to be physically present (Roth et al. 2001); those who are naturally inclined to eat large portions sometimes eat less in the presence of others, while those who normally eat very little eat more.

In other words, as the group size increases, no one wants to stand out, and people increasingly conform to the group average (Bell and Pliner 2003). Following this logic, Wansink (2006) recommends that if you are a light eater, you should eat by yourself, and if you eat heavily, you should seek out a group to eat with if your goal is to lose weight, so as to avoid consuming too many calories.

According to the research discussed, there is an effect on eating behavior as a function of social influence; however, the literature is relatively agnostic with respect to who the "other" person or people are that one might be ordering (thereby choosing a portion) or eating alongside. According to theory from this literature, it should make no difference if the people one might be sharing a meal with are very thin or very obese, so long as they eat the same amount. However, research suggests that a consumer does not perceive obese individuals and normal-weight individuals in the same way and thus may not react in the same manner to their food choices.

OBESITY AND CONSUMPTION

While many of the social influence studies (see De Luca and Spigelman 1979; Johnston 2002 for exceptions) focus on the quantity, rather than the body type of the social other, the obesity studies take the opposite approach: ignoring what choices the other people have made and focusing only on their body type, concluding that eating with those who are overweight will lead to an increase in one's food consumption or that people emulate others they are close to.

For example, priming people with images of overweight consumers has been shown to lead to an increase in quantity consumed (Campbell and Mohr 2008). Using assimilation/contrast as a theoretical framework, these authors reported that people eat more when primed with overweight, but not obese consumers.

In a very interesting study, Christakis and Fowler (2007; see Cohen-Cole and Fletcher 2008 for a rebuttal) found that a person's chance of becoming obese significantly increased when a close other (e.g., friend, sibling, spouse) became obese. Moreover, the effect persisted even if the two people were not living in the same city, suggesting that social distance was a better predictor of influence than physical distance. Effects were not seen in neighbors in the same area. The authors' calculations show that a person who became obese gained seventeen pounds and this newly obese person's friends gained five on average.

However, it is important to note that obesity is something most people wish to avoid, so it seems counterintuitive that in the presence of conscious thought consumers would choose to mimic portion choices of someone who is overweight when they themselves (presumably) do not consciously desire to be overweight. Most cultures currently place a high value on thinness, and those who are overweight or obese are often victims of stereotyping or stigmatization (Shapiro, King, and Quinones 2007). Research shows that the obese are stereotyped as less hardworking, lacking self-control and restraint, slower, sloppier, and lazier than individuals

who are not obese (Bacon, Scheltema, and Robinson 2001; Ryckman et al. 1989; Shapiro, King, and Quinones 2007). However, unlike some stigmas, blame for being obese is attributed directly to individuals, the assumption being that they are in full control of their weight (e.g., Crandall 1994; DeJong 1993; Rothblum 1992; Weiner, Perry, and Magnusson 1988). This bias exists even among physicians, resulting in a reluctance to solicit treatment, a higher likelihood of being denied treatment, and vulnerability to depression, anxiety, low self-esteem, social rejection, and suicidal thoughts (Kirkey 2008; Puhl and Bronwell 2001).

In the social influence literature more generally, the effects of the social "other" have been shown to be moderated by whether that individual is a member of an aspirational or dissociative group (Berger and Heath 2007, 2008; Berger and Rand 2008; Escalas and Bettman 2003, 2005; White and Dahl 2006, 2007). Given the stigmatization that the obese endure, it seems unlikely that people would intentionally model the eating patterns of obese people, but that is precisely what some research suggests. But are you really equally likely to order the cheeseburger after first hearing it ordered by someone who is obese (vs. thin)? Does seeing an obese person order a large amount of food really influence you to order more food yourself, or might it put you off? What if you see a thin girl order a very small salad for lunch? Or what if an obese server recommends something unhealthy? Past research suggests that the extent to which one is a chronic dieter might make a difference in answering these questions.

THE ROLE OF RESTRAINED EATING

As concerns over their weight and physical appearance increase, many people seek to manage their eating through dieting. The dieting industry is now worth over $40 billion annually in the United States alone (Reisner 2008; Sherrid 2003), and one out of three women and one out of every four men are on a diet at any given time (Crossen 2003; Fetto 2002).

In academic research, investigations of chronic dieting commonly use a measure of restrained eating developed by Herman and Polivy (1980). Restrained eating is defined as "the deliberate effort to combat the physiologically based urge to eat in order to lose weight or maintain a reduced weight" (Fedoroff, Polivy, and Herman 1997, 34). Their scale captures consumers' concern for dieting ("How often are you dieting?"), weight fluctuation ("In a typical week, how much does your weight fluctuate?"), and social eating behavior (e.g., "Do you eat sensibly in front of others and splurge alone?"). Restrained eaters, compared to unrestrained eaters, are continuously aware of their eating behavior (Herman and Mack 1975). Past research has shown that dieters (restrained eaters) and nondieters differ substantially in their food choices, with dieters sometimes exhibiting backfire effects, eating more (rather than less) following a "preload" of calories, more in anticipation of an impending diet (or anticipating a preload), or more after exposure to a food aroma (see Herman and Polivy 2004). Restrained eaters are also more likely to increase

their consumption in high-stress situations (Heatherton and Baumeister 1991) or those that raise anxiety levels (Herman et al. 1987).

In one recent study, Scott et al. (2008) found that food size and package size also influenced how restrained eaters consumed. While both restrained and unrestrained eaters tend to label bite-sized food in small packages as "diet" as well as "high-calorie," these foods (e.g., 100-calorie minipacks) can cause high levels of stress among restrained eaters. The researchers found that restrained eaters consumed more calories from small food in small packages, while unrestrained eaters consumed more (or at least as many) calories from large food in a large package. Importantly, the restrained eaters could reduce their consumption by engaging their cool system (i.e., by thinking about food in terms of surrounding objects and spatial dimensions), rather than focusing on the emotions and feelings that food normally triggers for this group.

In a series of studies, we examine the roles of each of these factors in turn. We first report results of a pilot study we conducted that was designed to examine if consumers ever recall altering their food portions as a result of the choices of other consumers and/or their body type. We then extend this research to examine how the extent to which people are dissatisfied with their physical appearance or are dieting might moderate the effects.

PILOT STUDY

Method, Stimuli, and Procedures

To examine this question, critical incident analysis was used. Critical incident analysis, which has been used in emotion research (e.g., Keltner and Buswell 1996) as well as in marketing (e.g., Dahl, Honea, and Manchanda 2003), generally asks participants to write about a single incident that deals with a particular research question. For our study, 318 respondents from a large western university participated in the study, which was administered as a short survey instrument for partial course credit.

The instrument first asked participants the following question: "When at a restaurant or food establishment (an ice cream shop, pretzel stand, etc.) of any kind, have your choices of food items ever been influenced by what the person in front of you ordered, the size or weight of the person in front of you, or a combination of the two?" Participants indicated yes or no if they had experienced such a scenario, followed by some basic demographic information (age, gender, major, country of birth, height, weight). One hundred and fifty-seven participants (49 percent) indicated that they had experienced such a situation, and only data from their responses were analyzed. Sixty-six of these (42 percent) were female, and the average age of respondents was 21.53. Two trained research assistants, blind to the purposes of the study, coded the open-ended responses. Initial inter-rater agreement was 93.2 percent and disagreements were resolved by one of the authors.

Results and Discussion

While people claimed their choices were influenced by both heavy ($n = 37$) and thin ($n = 23$) others, the common response to seeing this other person order was to change their order to something smaller ($n = 21$) or healthier ($n = 37$). It seems from the critical incidents participants recalled, generally the presence of others led to a more modest portion choice, albeit for different reasons. In the case of a thin other, people reported ordering less ($n = 6$) or a healthier menu option ($n = 13$) as a result. Common reasons cited were that they envied the other person's figure and this reminded them that in order to lose weight, they needed to make smaller or healthier choices, not because she ordered something unhealthy or large (e.g., "I saw a skinny person ordering [a] lunch size salad that really [motivated] me to order the salad instead of pasta"; "I was going to order a regular soda drink even though I am [used] to ordering diet but a little skinny person in front of me ordered diet so I did too"; "If someone very thin orders something really healthy, I feel guilty for ordering something less healthy"; "I really wanted a Blizzard [ice-cream treat from Dairy Queen], but a very tiny person in front of me ordered just a small ice cream cone, and when it came my time to order, I ordered the same").

The most frequent situation participants recalled was seeing an obese other person order either a large quantity ($n = 11$) or an unhealthy menu option ($n = 20$). This resulted in participants reporting a worry about becoming obese (e.g., "at McDonald's a heavier person ordered an enormous amount of food and I have ordered less because I didn't want to end up that size"; "When I see an overweight person order something unhealthy it reminds me to stay healthy"). Consistent with research on dissociative groups, the choices of the obese were deliberately avoided (e.g., "if the person in front of me is overweight I will not get what they get"; "I might think I would then look like them if I ate that too"; "I think, 'don't order that or you'll end up like them'"). As a result, participants commonly chose a smaller ($n = 14$) or less indulgent ($n = 26$) menu item (e.g., "One time, at the movie theatre, the most gigantically obese woman I had ever seen ordered the XXL popcorn with extra butter, two large Coca Cola classics (not diet), a box of cookie dough bite sized candies, and a cinnamon sugar pretzel. When she finished paying and it was my turn to order, I asked for a water cup instead of getting concessions"; "I was at a restaurant last night and the table next to me had an overweight lady and man who ordered a whole bunch of food and I decided not to get dessert because of them"; "I went to McDonald's once and I noticed a man close to 300 lbs ordering a lot of food. He supersized his meal and I was unsure if all the food was for him or for others as well. Nevertheless, I did not order nearly as much as I would have. I was afraid that if I supersized my meal, I might end up eating too much and increase my weight size"; "if an overweight person orders something really fattening that may steer me to order something healthy"; "there was a rather large person in front of me who basically ordered the whole menu. I did not want to end up looking like them so I ordered less").

Interestingly, consumers' perceptions of how healthy a specific food choice is were influenced by the person choosing the item (e.g., "if it was a large person, I would order something different because I would perceive what they ordered as having the possibility of making me fat"; "If a skinny person ordered something, I kind of wanted to order it too because I associate that menu choice with being skinny"; "If I see an overweight person eating a sundae at McDonald's it is a turn off to those establishments. I don't want to be fat").

While the most common scenario participants recalled was paring back potentially indulgent choices, a few participants ($n = 6$) mentioned ordering more or something less healthy as a result of the thin other person, demonstrating a licensing effect: ("If the person is skinny and they order something fattening there is a good chance I will also. However if they are heavy then I probably will not"; "I wouldn't normally eat a lot of fatty foods [ice cream, muffins, etc.] but if a slender person orders it I usually follow suit. I never buy snacks at a gas station but during my spring break I broke my rule because my friend who was itzy bitzy bought a ton of candy"; "Also I can be influenced the opposite way [if a thin person orders something less healthy] to a less healthy choice because I feel like it is more justified").

Only one participant reported intentionally eating something more indulgent as a result of the obese person's order ("I saw a small but heavy-set guy in front of me order 4 foot-long subs. I was [deciding] between ordering one sandwich or two. After looking at this man I concluded that since he ordered 4, it wouldn't hurt for me to order half of what he did. So I did!"), and only one person claimed that thin people cause her to order more rather than less regardless of what they order ("I become jealous of good metabolism. If the person is skinny yet ordered a lot . . . I generally order a heavier meal because I want to show how I don't care about my weight . . . I can do it too").

The pilot study provides initial evidence that people were able to recall a situation in which they changed their food order as a function of the body type of others. The events participants recalled provide evidence for social comparison processes. The most frequent response centered on participants choosing to order a smaller or healthier food after overhearing a heavy person order an indulgent portion of food or a thin person ordering something modest. People recalled consciously deciding to pare back, stating that they wanted to avoid having a figure like the other person. The heavy person's choice was associated with the outcome of becoming overweight, and the thin person's choice reminded participants that they need to make healthy choices if they are to achieve their desired figure.

However, there remains a natural confound in our data: participants more often reported behaviors that were stereotype consistent (versus inconsistent), namely heavy people ordering a large or unhealthy portion or thin people ordering less. What would happen if the heavy other ordered a small salad for lunch? Perhaps this does happen less in practice (and thus participants were less likely to recall it), or when it happens it is just less conspicuous. The results of this study extend the research outlined above, which has tended to focus either on consumers' reac-

tions to how much others eat or on how the body type of others impacts consumption, but not on the influence of the two jointly. Our recent work (McFerran et al. 2010a) has sought to examine how people react to another consumer's body type and food order by explicitly manipulating these factors in a controlled laboratory setting, with the aim of showing that people's choices are shaped by the selections of others (consistent with the social influence literature), but also that such effects are moderated by the body type of these other people (consistent with the obesity and reference group literature).

I'LL HAVE WHAT SHE'S HAVING

While some scholars (De Luca and Spigelman 1979; Johnston 2002) have looked at how obese others might impact participants' consumption, what has been lacking are tighter empirical controls and a strong theoretical explanation for such effects (as suggested by Herman, Roth, and Polivy 2003). We (McFerran et al. 2010a) sought to advance this quest by experimentally manipulating the weight of a single confederate, achieved with a professionally constructed obesity prosthesis, custom-designed for the confederate's body by an Academy Award–winning costume studio. Identical clothes were tailored in large (16) and small (00) sizes along with the prosthesis. This novel methodology allowed a single confederate to portray both a thin and obese consumer, thus controlling for any possible third variables that may have been operating in other research that used thin and heavy confederates.

In this series of studies, we had the confederate (portraying either a thin or heavy patron) first take a food selection, and then we measured what the participant subsequently took (and ate). Sometimes the confederate was instructed to choose a large portion, other times a small one, and sometimes there was no confederate at all (to establish a baseline). We then compared whether people's consumption differed as a function of (1) the choice, and (2) the body type of the confederate.

Theoretically, we presented and tested a parsimonious model based on anchoring and adjustment (Wansink, Kent, and Hoch 1998). What we found was that consumers anchor on the quantities others around them select, but that these portions are adjusted according to the body type of the other consumer. Study 1 first documented the effect, showing that people choose a larger portion following another consumer who first selects a large quantity, but that this portion is significantly smaller if the other is obese than if she is thin. However, we also tested whether this pattern would differ between foods perceived to be healthy versus those that are perceived as unhealthy. To test this, we used a manipulation borrowed from Wansink and Chandon (2006), where the experiment was run with half of the participants given granola as a snack, and half given M&Ms. These foods are similar in caloric density but differ strongly in health perception. Results showed that although obesity is linked more strongly to unhealthy foods (Weiner, Perry, and Magnusson 1988), the effect replicated with both types of food: participants took significantly less when the other consumer was obese than when she was thin.

In Study 2, we manipulated both how much the confederate took and her body type. We found strong evidence of participants' use of the confederate's choice as an anchor—choosing less (or more) as the confederate did first. This is conceptually consistent with what has been found in the modeling studies we reviewed above. However, we extend that research by identifying body type as a moderator of this effect. We replicated the finding that after seeing a large portion chosen by the other, consumers adjusted their consumption downward from the high-quantity anchor to a greater degree when the confederate was obese than when she was thin. However, we also found that rather than further decrease consumption when seeing an obese person choose a small portion, participants *increased* their portion choice. This ironic backfire effect is consistent with a greater upward adjustment from a low anchor when the confederate was obese than when she was thin. In other words, participants consistently followed the anchor that the confederate set more closely when she was thin than when she was heavy.

Study 3 showed further evidence of the process, using a scenario methodology. Results showed that the adjustment from the anchor was more pronounced for consumers low versus high in appearance self-esteem (Heatherton and Polivy 1991) and is attenuated when cognitive processing resources are constrained. In all of the studies, participants' own body mass index (BMI) did not impact results, showing that the effect is driven psychologically by dissatisfaction with one's appearance rather than physiologically by one's actual body type. We also measured and controlled for participants' orientation toward restrained eating (dieting), as numerous studies (outlined above) have shown how the food choices among dieters and nondieters differ.

Our second series of studies examines the role of restrained eating directly. While our earlier paper (McFerran et al. 2010a) examined the situation where one sees another consumer make an order, this paper examines the case where the obese (vs. thin) other is a server, rather than a fellow consumer. We show that dieting orientation moderates consumers' reaction to this situation.

EFFECTS OF NON-EATING OTHERS

While people eat many of their meals with companions (e.g., friends, coworkers), might the body type of a restaurant server alone alter their consumption choices? Research in marketing suggests that such social influences may have an effect, even if such a person is physically present and engages the consumer only in a limited way (Argo, Dahl, and Manchanda 2005; Zhou and Soman 2003). Might an obese (vs. a thinner) server influence diners to consume more (or less) food? What if she recommended an indulgent choice, or something very healthy? Might this influence the diner's choice? In this series of studies, we investigated how people's food choices can be shaped by the body type alone of others around them, and how dieters and nondieters differ. We (McFerran et al. 2010b) also examined how recommendations made by this other (whose consumption is not seen as she is a server) result in consumers making differing choices.

We again used the same prosthesis as we did in our earlier set of studies (McFerran et al. 2010a), but in this instance the confederate played the role of a server in a taste test study, rather than a fellow patron. In Study 1, we manipulated whether the server was obese or thin, and we measured participants' dieting orientation. Since overeating is associated with obesity, it would be reasonable to predict that people would eat less after seeing a heavy server. However, we found that dieters and nondieters exhibited opposite effects. While nondieters ate more when she was thin, dieters ate more snacks when the experimenter was heavy, a finding we claim supports the backfire effect.

In Study 2, we isolated our focus to dieters, manipulating both the servers' body type and the food she recommended (unhealthy cookies or healthy raw carrots). While persuasion research suggests that the thin server would be more persuasive, the backfire effect would predict that dieters would be less likely to choose an item recommended by a thin server than one who is obese. Indeed, this is what we found: when cookies were recommended, dieters chose cookies more often when the server was heavy than when she was thin (73 percent vs. 53 percent), but when carrots were recommended, they selected cookies with a greater frequency when she was thin than when she was heavy (53 percent vs. 79 percent). Instead of shunning the recommendation of the obese server, dieters were *more* persuaded by her recommendation, choosing both the healthy and the unhealthy snack more often when it was recommended to them. Collectively, these studies build on research showing that people's food choices may be shaped not only by what others eat, but also simply by others being physically present.

IMPLICATIONS AND CONCLUSIONS

Drawing on social psychological theories, our research, as well as numerous other excellent papers, explains how social influences, stemming from the choices and body types of others, may impact what people eat themselves. Our results replicate research that shows that people are more likely to eat greater portions when in the presence of others who do likewise; we also extend these results to show that this effect is even greater when the other person is thin rather than heavy.

Our findings strongly suggest, counter to other research, that in many cases the most dangerous people to eat with are not those who are overweight, but rather those who are thin but are heavy eaters. A heavy-set colleague who eats a lot is a better lunch partner than a thin colleague who orders the same dish. On the other hand, thin colleagues who eat lightly are more likely to cause others around them to order less. Thus, from the perspective of self-regulation, it is important for consumers to recognize situations in which they are likely to be vulnerable to overconsumption. As a matter of maintaining a healthy body weight, such small food-intake decisions have a larger impact than people realize. For instance, people could lower their caloric intake by 250 calories by eliminating sugared drinks or caloricity-dense liquids alone (e.g., one 591-ml bottle of cola), but would need to cycle for over

an hour just to burn off that one bottle (Nutristrategy 2007, based on a 130-pound person pedaling less than 10 mph). Removing 250 calories a day could allow an obese person to shed thirty pounds in only one year (Wansink 2006).

Our results are also consistent with the recommendations of Wansink (2006), who suggests that small-portion eaters should eat by themselves, but large-portion eaters should seek out a group. Our research finds that, compared to eating alone, large portions chosen by others lead to greater consumption, and smaller portion choices by others are associated with eating less. However, we show this is qualified by the weight of the other person. Indeed, in our studies, the quantity that the confederate selected still overshadowed her body type, predicting what others took to a greater degree.

We also find that, for dieters, recommendations from overweight servers are more persuasive than those of thin servers. Our research suggests that discrimination against the obese may be counterproductive to certain businesses. However, we also find that servers' body types may influence those around them in significant ways, which may result in more or less consumption.

The general question of how the body type of others impacts people's food consumption is clearly a complicated one. We do have some preliminary evidence (from the pilot study) that seeing those who are obese or thin can trigger both self-focused thoughts (heightened concern about becoming obese after seeing an obese person) and other-focused thoughts (about the portion choices a thin person must select in order to stay thin). The latter are attributions made by others that would be an interesting avenue to explore further. For instance, in our studies, perhaps the thin person taking a large portion created an expectancy disconfirmation that led to cognitions focused on licensing (a belief that because she took a lot and is thin, I can too). On the other hand, seeing an obese person take a small portion might suggest that he is on a diet and needs to eat less, and this might similarly allow consumers to cognitively justify a larger selection. It is important to realize that these attributions may be focused on the other consumer's individual characteristics (e.g., "she must have good genes" or "must have just come from the gym" or "must not be hungry"), as well as on the food itself ("it must not be that bad for me, if the thin girl is taking so much"). Of course, in this case the authors constructed the "quotes," and one challenge of this type of research is getting respondents to admit that another person affected their choice, which, we have found, they are generally reluctant to do.

Another limitation of our research paradigm is that the confederate (other consumer or server) could not be known by participants in the research; otherwise the validity of the use of the prosthesis would be compromised. This raises an interesting question: how might social connectedness moderate our effects? Clearly eating with one's boss or a date triggers different impression management concerns than eating with family members. We could imagine a scenario where a person eats more (or less) to make another person feel good (or bad), perhaps depending on whether that other person is thin or heavy-set. It remains very possible (perhaps probable)

that people may eat differently around others depending on who the other is, but scant research (see Herman, Roth, and Polivy 2003) has examined this question in the context of the body types of others.

From a communications perspective, this research also has significant implications for health organizations. While research has shown that people are less likely to overeat if overeating is associated with a dissociative outgroup (see also Chapter 11 in this volume), the fact that an outgroup does the behavior is not a given. For instance, if overeating large quantities of junk food became what the cool peers did (or simply normalized), that behavior could be expected to increase. On the other hand, if cool kids are seen as undereating, that behavior might increase as well. In developing communications, our research would suggest that "normalizing" heavier body types might have the unintended consequence of increasing consumption of those around them. However, the thin spokesperson for an unhealthy fast-food chain may prompt people to believe "because she can eat it and stay thin, so can I," even though their metabolism or exercise patterns are not the same as the spokesperson's. Every body is unique, and looking for cues about what to eat from other people can have mixed outcomes. It is important to note that our research is grounded on the assumption that the obese are a stigmatized group. As body type norms change over time (toward larger BMIs), this stigma may be attenuated. As a result, our research would suggest that eating with such individuals could be detrimental, assuming that they are indeed eating quantities of food that would induce obesity.

While research on body types has begun to emerge, it is still at the point of demonstrating effects rather than developing cogent theoretical explanations for them. Still, being aware of the situational factors that determine consumption, even if the reasons are not fully understood, is important if people wish to lower their caloric intake, given that many findings suggest that having knowledge or a mental awareness of how others might influence their choices may enable correction.

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