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Implications of the Fast Food Lawsuits: A Test of Implicit and Explicit Attitudes toward Obese People

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Abstract

The current study observed how social information regarding obese people affects individuals' implicit and explicit attitudes toward the obese. The effect of experimenter appearance on implicit and explicit attitudes was also addressed. Social information was provided in the form of mock editorials relating to lawsuits taking place in New York suggesting the fast food industry is partially responsible for rising obesity rates in the United States. Implicit attitudes were measured using the Implicit Association Test (Greenwald, McGhee & Schwartz, 1998). Explicit attitudes were measured using the Crandall Anti-fat Attitudes Scale (Crandall, 1994); explicit attitudes were compared from pretest to post-test. All participants had markedly negative implicit attitudes toward obese and overweight people while explicit attitudes were more positive at post-test. Participants who read articles in support of the fast food lawsuits showed the least amount of explicit change in anti-fat attitude. Implicit attitudes showed no differences as a function of what type of mock editorial they read. There was no evidence of social desirability in an experimenter effect. Negative attitudes toward the obese were related to internal health locus of control.

Implications of the Fast Food Lawsuits: A Test of Implicit and Explicit Attitudes toward Obese People

In 2002 two teenage girls from New York, Ashley Pelman and Jazlyn Bradley, brought a class-action lawsuit against the fast food industry. They accused McDonald's and other fast food restaurants of deceiving customers about levels of fat, sugar, salt and cholesterol content in their products. Pelman and Bradley's lawyer, Samuel Hirsch, based his argument on the tobacco lawsuits that forced the tobacco industry to reimburse the government for incurred health care costs. Hirsch stated similar contentions as the tobacco litigation, arguing that obesity costs $117 billion dollars annually to the national economy and should be compensated for by the industry. In 2003 Federal Judge Robert W. Sweet of the Federal District Court in Manhattan dismissed the lawsuit, claiming that fast food was not addictive and the law could not save individuals from their own excess (Peters, 2002; Weiser, 2003). The lawsuit raised questions of whether companies trying to sell calorie dense food can be held responsible for the explosion of obesity rates, or whether individuals are solely responsible for their weight regardless of social influence. Currently, attitudes toward overweight and obese people are negative in the United States. The current study asks if these lawsuits are increasing or decreasing negative attitudes toward obese or overweight people. Can information about these lawsuits affect attitudes toward overweight people?

According to the Center for Disease Control, the majority of people in the United States are overweight or obese (Center for Disease Control, 2000). In general, excess weight is seen to be caused by the over-consumption of food with few physical exceptions. The cause of obesity is different for every obese individual (Allon, 1982). Factors related to obesity include genetics, over-consumption of food as well as environmental factors such as income level. It is worth

noting that wealthy cultures such as the United States are more likely to have a larger overweight population. These cultures value thinness because of food overabundance (DeJong & Kleck, 1986); a cultural valuing of thinness can lead to negative attitudes toward overweight and obese people. With the beginning of the fast food lawsuits, American society is faced with considering the social causes of obesity. In the present study, social causes of obesity are defined as the current changes in society promoting sedentary lifestyles and over-consumption of food. These influences include advertising, widespread availability of high-fat, calorie dense food, poverty and social status. The current study was designed to discover if information related to the social causes of obesity in the form of arguments in support of or against the fast food lawsuits can influence implicit and explicit attitude toward overweight and obese people. Information in this area may explain increased incidence rates of size discrimination and aid in their surcease.

In the last thirty years the scientific community has begun to recognize that prejudice against obese individuals is a concern (Allison, Basile, & Yuker, 1991; Crandall, 1991; DeJong, 1980; Robinson, Bacon, & O'Reilly, 1993). Is obesity a social disease (Orbach, 1979) or primarily a self-control issue? What separates obesity from being an issue of self-control to a social disease is the concept of personal responsibility. Because weight is considered a controllable attribute in general, overweight people are held personally responsible for their weight. Because of the responsibility attribution combined with a high value for thinness, negative characterizations are made of overweight and obese people who are assumed capable of personally controlling their size (DeJong & Kleck, 1986). Even health care professionals have been found to discriminate against the obese and attribute negative character traits to them (Breytspraak, McGee, Conger, Whatley & Moore, 1977; Ingram, 1976; Maddox, Anderson & Bogondoff, 1966; Maddox & Lieberman, 1969; Maiman, Wang, Becker, Finlay & Simonson,

1979; Rubin 1978; Stunkard & McLaren-Hume, 1959; Schwartz, Chambliss, Brownell, & Billington, 2003). Individuals having a non-normative trait seen as controllable, such as obesity, are more likely to be socially stigmatized than those who have a trait that is seen as uncontrollable such as unusual height, (Langer, Taylor, Fiske & Chanovitz, 1976).

In an experiment to see how overweight people are rated compared to persons with other disabilities, Maddox, Back and Liederman (1968) asked participants to rate whether or not people were responsible for a condition such as obesity or blindness; they also asked if the condition made a difference in whether or not the participants could like that person. The results showed approximately 70% of participants saw overweight people as responsible for their condition. Between 22-28% of participants stated the condition made a difference in whether or not they could like the person. These participants rated overweight people as having a 'personally induced' condition. Of this sample, only 2% found blind people responsible for their lack of sight; and 8% felt that a person's blindness makes a difference in whether or not they like that person. Maddox et al. showed how a person having a culturally devalued controllability-based attribute influences how others perceive and like that person.

Expanding on Maddox et al. (1968), in 1976 Vann (as cited in DeJong & Kleck, 1986) conducted an elaborate experiment designed to determine if, relative to a person's reasons for being overweight, participants would affect a participant's reaction. Vann's experiment was a learning scenario asking participants to 'teach' overweight confederates a sequence of lights using electric shocks. The confederate pupil was given an opportunity to discuss himself and describe his reasons for being overweight—saying he either consciously chose to be overweight or he had a medical condition outside his personal control. Vann found that confederates stating they had purposefully chosen to be overweight elicited more punishment for mistakes in the form

of simulated shocks than those confederates who gave reasons for being overweight that were outside of their personal control. According to Vann overweight people who 'chose to be fat' are evaluated more strictly than people who explain their weight as being outside of their control. The issue of personal responsibility for weight is controversial in the public eye. Vann's research determined that negative attitudes toward obesity are affected by the perception that obesity is controllable condition. This is an important considering the lawsuits against the fast food industry that are being fought on the issue of personal responsibility.

More recently, Teachman, Gapinski, Brownell, Rawlins and Jeyaram (2003) explored whether or not exposure to information about genetic influences, which are considered an uncontrollable aspect of obesity, would decrease negative attitudes toward overweight and obese individuals. Their study took place on a public beach; they asked random beachgoers to read a 'recently published news article', perform a pen and paper Implicit Association Test (Greenwald et al., 1998) and an explicit obesity attitude measure, the Fat Phobia Scale (Robinson et al., 1993). Of two 'news' articles read by the participants, one article suggested the cause of obesity was behavioral, or due to overeating. The second article suggested obesity was primarily genetic, or due to factors outside of the individual's control. There was also a control group who read no article before performing IAT implicit measure. Next, participants were asked to complete an IAT, measuring implicit attitudes and stereotypes of obese people. The IAT measures implicit attitudes by recording differences in time it takes to categorize differing pairs of stimuli. For instance the time it takes to categorize the words "fat" with "bad" or the words "fat" with "good." Persons higher in anti-fat/pro-thin bias would take longer to categorize words that weren't strongly associated such as fat-good or thin-bad. The study looked at stereotypes as well as attitudes; therefore they measured difference in pairing times between stereotype associates

such as "fat people" and "lazy" to non-stereotype pairs such as "thin people" and "lazy." Teachman et al. found that participants who read articles suggesting weight was primarily related to behavioral choices were more likely to have negative implicit attitudes toward overweight and obese people than the participants who were not primed. Participants who read the article discussing genetic causes of obesity didn't experience any attitude differences compared to the control group. Overall, they found it easier for participants to express more negative attitudes toward obese people than to express positive attitudes.

Teachman et al. (2003) found explicit attitudes weren't directly related to implicit attitudes. Overall, explicit attitudes toward overweight people were pro-fat as compared with the overwhelmingly anti-fat implicit attitudes. Teachman et al. felt that this lack of relationship was due to the influence of participants' desires to appear non-prejudiced, or social desirability. According to Johnson and Fendrich (2002) social desirability is the tendency for people to portray themselves more favorably when they are interacting with others. Because bias against racial minorities has become less socially acceptable, people are likely to respond more favorably toward racial minorities in the presence of others despite any true negative feelings. In the current social climate it is still socially acceptable to hold negative attitudes toward overweight people; therefore measurements of attitudes about obesity wouldn't theoretically be affected by social desirability. Fazio, Jackson, Dunton and Williams (1995) measured attitudes towards Black Americans in a large sample of students using the Modern Racism Scale (McConahay, 1986) and found evidence for social desirability. Students were pretested in a large group using the Modern Racism Scale and later asked to return to be measured again (along with several other questions as to ensure ambiguity). Either a White or Black female experimenter tested participants. The experimenter stressed to the participants that she would personally be

scoring the results of the questionnaires. Fazio et al. found that participants who interacted with the Black experimenter reported more pro-Black attitudes compared to the pretest than the group with the White experimenter. This suggested that the Modern Racism Scale was reactive. Teachman et al. suggested they found social desirability overall but not necessarily due to an experimenter effect as found in Fazio et al.

The Current Experiment

The current experiment's primary question was if participants reading articles discussing social contributions to obesity would respond in a similar way as those who read the genetic article or the behavioral article in the experiment conducted by Teachman et al. (2003). We developed three articles related to the fast food lawsuits in New York occurring concurrent to the experiment. One article was pro-industry, defending the fast food industry and citing behavioral causes for obesity, such as lack of willpower. Another article was anti-industry and in support of the plaintiffs; this article discussed social responsibility and social influences of obesity. A third, control article, discussed an unrelated topic. Like the results found by Teachman et al. we expected to see more favorable attitudes toward obese people in the control group compared to the experimental groups; in addition, we expected to see more favorable attitudes toward obese people in the group reading the anti-industry article discussing social causes of obesity compared to those participants reading the pro-industry article discussing behavioral causes of obesity. We expected to see these differences both implicitly and explicitly similar to results found by Teachman et al.

The current study sought not only to describe attitudes toward the obese and how social information affects those attitudes, but how motivation regarding attitude responses interacts with implicit and explicit expression of attitudes. Devine, Plant, Amodio, Harmon-Jones and

Vance (2002) found that people for whom it was personally important to respond without prejudice toward Black people and not that important that others not perceive them as being prejudiced were most likely to respond with low prejudice on implicit tests. Using Plant and Devine's (1998) Motivation to Respond without Prejudice Scale, we expected to see similar results when testing obesity prejudice.

The current experiment also considered the effect of experimenter appearance—in particular experimenter weight—on implicit and explicit attitudes toward obese people. We sought to determine if the social desirability effect found by Teachman et al. (2003) was a general effect or could be mediated by experimenter appearance. In the current study we explored the effect of experimenter appearance utilizing an obese experiment administrator—above a BMI of 30—as well as a normal weight experimenter during the post-test. Body Mass Index (BMI) is a measurement of body composition that takes into consideration the height, weight and gender of the individual; persons with a BMI over 25 are considered overweight. We predicted that participants would be influenced by social desirability and show differences on explicit tests more with an obese experimenter compared to a non-obese experimenter. The same results were not expected on the IAT because it measures implicit attitudes which are not easily controllable (Devine et al., 2002).

The current study was designed to show how implicit and explicit attitudes are different and similar in relation to different kinds of information provided about the fast food lawsuits. The IAT (Greenwald et al., 1998) was chosen because participants cannot to fake their answers to appear more socially desirable. The Crandall Anti-fat Attitudes Test (Crandall, 1994) was chosen because of its use in other studies (Glenn & Chow, 2002; Hebl & Mannix, 2003; Ojerholm & Rothblum, 1999). In addition to examining how attitudes about controllability

affected weight prejudice, we used the Health Locus of Control Scale (Wallston, Wallston, & DeVilles, 1978) to see if the degree to which participants felt they had control over their health would mediate their attitudes toward obese people. We expected to find attitudes regarding personal locus of control to be related to attitudes toward the obese. More specifically, we expected that those participants who felt they were personally in control over their lives, especially in control over their health, would have more negative attitudes toward obese people.

Overall, we predicted there would be a difference between all three of the article conditions similar to those results found by Teachman et al. (2003). We expected to find that people who were high internal and low external motivation to respond without prejudice—for whom it was personally important to them to respond without prejudice not important how others saw them—would respond with the lowest rates of bias against overweight people similar to results found by Devine et al. (2002). We also expected, similar to Fazio et al. (1995), that participants who had an obese experimenter would respond with lower levels of bias against overweight people compared to participants who had an experimenter with a normal BMI. Finally, we expected there to be some relationship between locus of control both generally and specifically related to health to have more negative attitudes toward overweight people.

Method

Participants

Participants were self-selected from an introductory psychology class at Western Washington University. Four hundred and three students from the class took a pretest. Out of this sample, 130 came back for the main study. There were 89 women (67.4%) and 35 men (26.5%). The mean age was 18.93 (SD = 2.09) ranging from 17 to 40. The sample consisted of 1.5% African Americans, 9.1% Asians, 1.5% Hispanics, 81.8% Caucasians and 2.3% identified as

other. Participants were asked to provide their weight and height in order to calculate an estimate of their BMI. Of all participants, 7% had a BMI less than 18 suggesting they were underweight, 70.5% had a normal BMI between 18 and 24, 27% had a BMI of 25 or over meaning they were considered overweight or obese. Data from two participants were dropped due to computer errors while performing the Implicit Association Test. Data from seven participants who had over a 20% error rate on the Implicit Association Test were dropped from analyses because such a high error rate indicates the participant may have been making judgments arbitrarily.

Pretest Measures

The larger group of participants (n = 403) was pretested at least two weeks prior to the actual experiment in order to prevent pretest measures from influencing the experimental measures. Testing the larger group also allowed for a broad determination of attitudes toward obese people and the relationship these attitudes have toward locus of control. Pretest measures included the Plant and Devine External and Internal Motivation to Respond Without Prejudice Scale (Plant & Devine, 1998), Rotter's Locus of Control Scale (Rotter, 1966), the Health Locus of Control Scale (Wallston et al., 1978), and the Crandall Anti-fat Attitudes Test (Crandall, 1994).

The Plant and Devine External and Internal Motivation to Respond without Prejudice Scale (EMS and IMS, respectively) were originally developed to measure an individual's motivation to respond without prejudice against African Americans. For the present study, the scale was modified to address overweight people. For a version of the modified scale, see Appendix A. It is composted of ten statements relating to internal and external motivators to respond without prejudice. The scale is composed of two subscales. One subscale measured internal motivation to respond without prejudice, or the extent to which responding without

prejudice toward an overweight person is personally important to the individual. The internal motivation subscale had such statements as: "I attempt to act in non-prejudiced ways toward overweight people because it is personally important to me," and "according to my personal values, using stereotypes about overweight people is OK." The internal motivation subscale had a Cronbach's Alpha reliability of .82 in the pretest group suggesting the scale is reliable in this sample. The second subscale measured external motivation to respond without prejudice or whether or not responding without prejudice toward the targeted group is important to the individual because of how their peers see them. The external motivation subscale had such statements as: "I attempt to act in non-prejudiced ways toward overweight people because of pressure from others," and "I try to hide any negative thoughts about overweight people in order to avoid negative reactions from others." The External Motivation subscale had a Cronbach's Alpha reliability of .74 suggesting a little less reliability than the IMS. Each participant was asked on a scale of 1 *(strongly disagree)* to 6 *(strongly agree)* the extent to which each statement applied to them.

Rotter's Internal/External Locus of Control Scale (Rotter, 1966) measures how likely an individual is to attribute the results of a situation to an outside factor beyond their control or an internal factor within their control (See Appendix B). The scale presented participants with two statements and asked them to choose the statement with which they most agreed. One such set of statements read: "In the long run people get the respect they deserve in this world," (an internal choice) or "Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries" (an external choice). The Rotter scale had a Cronbach's Alpha reliability score of .71 in the pretest sample; this suggests the Rotter scale was not very reliable in this sample. Higher scores on this scale indicate more external choices.

Participants were pretested on how negative their attitudes toward fat and overweight people were by using Crandall's (1994) Anti-fat Attitudes Test (Appendix C). The scale consists of 13 statements referring to how one may feel about fat or fat people. The measure contains three sub-scales relating to dislike of fat people, personal fear of fat and attitudes about willpower—specifically the willpower of a fat person. The dislike sub-scale had statements such as "I don't really like fat people that much," and "fat people make me feel somewhat uncomfortable." The fear of fat sub-scale had statements relating to how the participants felt regarding their relationship with their body; statements included "I feel disgusted with myself when I gain weight," and "I worry about becoming fat." The willpower subscale had statements such as "some people are fat because they have no willpower," and "people who weigh too much could lose at least some part of their weight through a little exercise." Participants were asked to rate on a scale from 0 *(strongly disagree)* to 5 *(strongly agree)* if they agreed with the statements. The entire Crandall Anti-fat Attitudes Scale had a Cronbach's Alpha reliability of .79 on the pretest measure. The subscales had Cronbach Alpha reliability values as follows: Dislike subscale, .79, Fear of Fat subscale, .84, Willpower subscale, .75. The Dislike and Fear of Fat subscales appear reliable. However, the willpower subscale was less reliable in the pretest.

The Multidimensional Health Locus of Control Scale (MHLOC) created by Wallston et al., (1978) was used to determine the degree participants felt that personal health was a controllable state (see Appendix D). In its entirety the scale consisted of three subscales: the internal health locus of control, the powerful others health locus of control and the chance health locus of control. The internal locus of control subscale measured the degree to which participants see their health as being the result of their behavior and choices. Some examples are: "when I get sick I am to blame," and "if I take care of myself I can avoid illness." The powerful others locus

of control subscale measured the degree to which participants felt other people were responsible for their health. Some examples are: "health professionals keep me healthy," and "if I see an excellent doctor regularly, I am less likely to have health problems." The chance locus of control subscale measured the degree to which participants felt that their health was related to chance. Some examples are: "no matter what I do, if I am going to get sick, I will get sick," and "my health is greatly influenced by accidental happenings." Participants were presented with 36 statements and asked to rate on a scale of 1 *(strongly disagree)* to 6 *(strongly agree)* the degree to which the statement applied to them. The MHLOC pretest showed an overall reliability value of Cronbach's Alpha .84 on the pretest measure suggesting the scale is reliable.

Experiment Materials

Two articles were developed based on the lawsuits against the fast food industry that were occurring simultaneously with the study. The pro-industry article (See Appendix E) supported the fast food industry's right to advertise their food to children and adults. It suggested that obese people were responsible for their weight and could choose not to be overweight. It also suggested that food was a non-addictive substance and therefore the fast food industry could not be held responsible in the same way the tobacco lawsuits held tobacco companies liable for health issues related to tobacco use. The anti-industry article (See Appendix F) supported the plaintiffs' suggestion that the fast food industry was being irresponsible with their advertising. It also discussed the social causes of obesity suggesting weight was not a factor under personal control but is the result of social influence and other factors. It also said, paralleling the other opinion article that, food can be addictive—especially sugar and fat. A third article, which served as a control (See Appendix G), was designed to be unrelated to the fast food lawsuits and not influence the participants either way. The control article discussed whether or not college

athletes should be limited in the hours they practice their sport in order to ensure their academic successes well as athletic.

In a pilot test, participants read the three articles and rated them regarding quality as well as persuasiveness. All pilot test ratings were from 1 *(less characteristic)* to 5 *(extremely characteristic)* if they were high in quality and persuasiveness. Results showed that the lawsuit opinion articles were equally well written, forceful, persuasive and controversial. The article discussing the regulation of the practicing of college athletes had neutral ratings. See Table 1 for mean ratings.

To facilitate participants' understanding of the opinion article, a series of open-ended questions were developed (see Appendix H). The questions asked if participants had known about the lawsuits before reading the article, what their opinion was and what they felt was the true cause of obesity. Specifically, participants who read the experimental articles were asked: "Did you know about these lawsuits before you read this editorial? What did you know? What was your opinion?" Also asked were: "Do you agree with the editorial you just read? If so what do you agree with? If not, what do you disagree with?" These questions were designed to have the participant conscientiously think about what their opinion was. Participants who read the control article about college athletics activity levels were asked if they knew about the issue they had read about, if they agreed and if their opinion has changed. They were not about the fast food lawsuits in order to maintain the control condition.

The Implicit Association Test (IAT) used in the current experiment was modeled after the original IAT developed by Greenwald et al. (1998). The IAT is a reaction time test designed to measure implicit attitudes toward a specific group. The IAT used in the current study was a computerized version designed to assess related attitudes and stereotypes regarding obese people.

We presented two different attitude IATs; one asked participants to categorize photos and another asked participants to categorize words. Attitudes were measured by presenting participants with a pair of categories: fat/thin and good/bad. In the picture IAT a series of photos appeared on the computer screen; these would be of either an overweight or thin person or either a pleasant or unpleasant photo (See Appendix I for examples). The photos of the overweight and thin people were picked from various free access websites such as dating services. The experimenters selected the stimulus pictures based on the unambiguity of their weight category (overweight vs. thin). The experimenters matched the overweight and thin targets on gender, overall appearance and photo quality. The pleasant or unpleasant photos included of kittens and puppies or bugs, car accidents and sinking ships. When the photo appeared on the screen the participant was asked to judge if the picture was either an overweight or thin person or a pleasant or unpleasant picture.

The IAT asks participants to categorize pictures or words that are placed on the screen into one of four categories provided in the upper two corners of the computer screen (See Appendix J for the screen layout). The two pairs of words in the screen corners are assigned a categorizing key on the computer keyboard. Depending on the individual, some stimuli are easier to categorize than others. For instance if one button is assigned the pair 'fat' and 'pleasant' and the other is assigned 'thin' and 'unpleasant' it should be more difficult, or take longer, for higher anti-fat/pro-thin biased individuals to correctly categorize a stimuli because the pairs are incongruent to the ideas they have already internalized.

The final IAT measured implicit stereotyping by asking participants to pair words such as "fat and lazy" or "fat and motivated." Degree of implicit prejudice was determined by the difference in time between the two pairing conditions in milliseconds. More implicitly

prejudiced individuals would show larger differences in pairing times between incongruent pairs. For instance, individuals with high implicit prejudice would take longer categorizing the words "fat" and "motivated" compared to the word pair "thin" and "motivated".

A demographic questionnaire (Appendix J) was developed modeling those used by Harris, Walters and Waschull (1991). The participants' weight, height and gender were asked in order to calculate their BMI. It also asked for their racial identity.

Procedure

Participants who completed the pretest and chose to participate in the main experiment came individually to a small room with a desk and computer where they read and signed the consent form. After signing the consent form participants read one of the three opinion articles and completed the article opinion questions. The participants had direct one-on-one contact with the experimenter who entered the small room to instruct them in filling out the scales and completing the computerized task.

Participants were administered the IAT after answering the article questions. After completing the IAT, participants were given Crandall's (1994) Anti-fat Attitudes Test and the demographics questionnaire.[1] Crandall's Anti-fat Attitudes Test was the only measure used in the pretest as well as the main experiment. Participants were debriefed and thanked.

Results

Story Condition Effects—Differences between Explicit and Implicit Measures

As can be seen in Table 2 the post-test of the Crandall Anti-fat Attitudes tests revealed that the sample had significantly less negative attitudes compared to the mid-point of the scale. The pretest was not significantly different from the neutral point. Between the pretest ($M = 2.63$) and the post-test ($M = 1.79$) all participants' attitudes became less anti-fat, $t\,(112) = -13.77$, $p < 0.001$.

Data collected during the main experiment were linked with participants' pretest scores. To assess the effect of story condition on anti-fat attitudes an Analysis of Variance (ANOVA) was performed with mean post-test anti-fat attitude scores as the dependent variable and story condition as the between subjects independent variable ($F\,(2, 123) = 3.731$, $MSE = 1.415$, $p = .027$). Follow-up tests were conducted and differences between the anti-industry condition ($M = 1.74$) and pro-industry condition ($M = 2.00$) were found to be significant, $t\,(84) = -2.06$, $p = .04$. The control group ($M = 1.64$) was not different from the anti-industry ($t\,(84) = 0.781$, $p = .44$) but was from the pro-industry, ($t\,(80) = -2.56$, $p = .01$). To control for an effect due to prior attitudes, a 3 x 2 mixed-model ANOVA with story condition (3 levels: pro-industry, anti-industry or control) manipulated between participants and time of test (2 levels: pretest vs. posttest) as a repeated measure was performed. Tests revealed an interaction between testing time and condition $F\,(2,113) = 3.84$, $MSE = 0.39$, $p = 0.02$. Figure 1 shows the difference scores between pretest and post-test by group. Explicit anti-fat attitudes as reported by participants reading the pro-industry article remained the most negative toward overweight people from pretest to post-test compared to participants who read the anti-industry article. The most positive change in anti-fat attitudes came from the group reading the control article (changed 1.06 mean points between pretest and post-test).

Unlike the explicit tests, implicit test results revealed an overwhelmingly negative attitude toward overweight people relative to thin people. Word (M =-.423) and picture (M = -.384). IAT results were correlated (r (121) = .421); this justified their combination into a word/picture IAT score separate from the stereotype IAT. By comparing the combined word and picture IAT (M = -.404) scores to the neutral score of 0, attitudes were found to be negative overall (t (120) = -26.70, p < .0001). As well, the stereotype IAT (M = -.370) was found to be negative compared to the neutral point, (t (120) = -19.33, p < .0001). Because the measure is relative, we can conclude that the participants had more favorable attitudes toward thin than fat. In contrast to results with explicit tests noted above, story condition had no significant effect on implicit attitudes F (2,115) = 0.297, MSE = 8.301E-03, p = .744.

Motivation to Respond without Prejudice on Explicit Measures

Examining motivation to respond without prejudice, we found a main effect of external motivation (F (1,114) = 16.840, MSE = 3.262, p = < .0001) on the Crandall Anti-fat Attitudes Scale. This effect was such that those participants with lower external motivation to respond without prejudice (M = 2.36) had less negative attitudes toward overweight people than participants with higher external motivation to respond without prejudice (M = 2.88). Figure 2 shows there was a trend suggesting that there was a difference between high and low internally motivated participants, (F (1,114) = 3.262, MSE = 1.651, p = .074). This trend suggested that participants who were highly internally motivated to respond without prejudice responded with less negative attitudes toward overweight people (M = 2.53) than those who were low internally motivated to respond without prejudice (M = 2.75). Because there was no interaction (F (1,114) = 1.143, MSE = 0.579, p = .287) between internal and external motivation to respond without prejudice on the explicit measure, participants with lower internal motivations showed more

negative explicit attitudes toward the overweight regardless of external motivation. As well, participants with higher external motivation showed more negative explicit attitudes toward the overweight regardless of implicit attitudes. These results suggest that internal and external motivation to respond without prejudice operate in different ways. Higher external motivation is actually associated with increased prejudiced responses whereas higher internal motivation is associated with lower prejudiced responses. Internal and external motivation to respond without prejudice is not the same—external pressure to respond without prejudice does not reduce prejudice.

Implicitly, those participants who were high in external motivation to respond without prejudice had more negative picture IAT scores (M = -.439) , F (1,109)= 6.44, MSE = .184, p = .013 than those who were low in external motivation (M = -.366). Analyzing both internally and externally motivated participants showed a trend, as can be seen in Figure 3, suggesting those participants who had low internal motivation and high external motivation to respond without prejudice were the most prejudiced group as shown by the IAT, F (1,106) = 3.60, MSE = 0.103, p = .061.

Experimenter Effects

There was no difference between participants in either the obese BMI experimenter condition (M = 1.75) or the normal BMI experimenter (M = 1.84) on the Crandall Anti-fat Attitudes Test (t (124) = -0.77, p = .44). As well, there was no difference between participants in the obese BMI experimenter condition (M = -0.40) and participants in the normal BMI experimenter condition (M = -0.41) on the combined word and picture IAT (t (119) = 0.438, p .32). There was no evidence to suggest the scales and implicit measures used were reactive.

Controllability Results

Overall there were few significant correlations between locus of control and anti-fat attitudes. Most relationships were non-significant and the significant ones were small. However, the pattern of results suggests that there is some support to previous research linking perception of controllability to negative attitudes regarding weight. As can be seen in Table 4, the Health Locus of Control Internal subscale was positively correlated with both the Crandall Anti-fat Attitudes pretest and post-test. The more the participants felt their health was controllable internally, the more negative their attitudes toward overweight people were. The pattern of results suggests that dislike of overweight people based on willpower attributions is not related to locus of control in general but is specifically related to health locus of control.

Discussion

How would opinions in support of and against the fast food lawsuits affect how people feel toward others who are overweight? Considering that lawmakers in the United Sates are currently debating the issue of social responsibility for the increased rates of obesity, this issue is important and may affect general attitudes toward overweight people in the future.

Our findings were similar to those found by Teachman et al. (2003); we found highly negative implicit attitudes toward obese people on the Implicit Attitude Test (Greenwald et al., 1998). As well, we found positive explicit attitudes toward overweight people using the Crandall Anti-fat Attitudes Scale (Crandall, 1994).

Participants' explicit attitudes became positive from pretest to post-test on the explicit measure in all article conditions. This is probably due to the difference in environment—the pretest was held in a large, anonymous atmosphere whereas the post-test was conducted in a one-on-one environment with an experimenter close-by. The large difference between pretest and post-test suggests the measure may be reactive; when there is a possibility that their attitudes will

be known by someone else, participants appear to act in a way that portrays them as more socially desirable with less negative anti-fat attitudes. The evidence can be interpreted that when interacting one on one with another person, one is more likely to try to appear non-prejudiced. But the evidence does not suggest that if measurements of anti-fat attitudes are being taken that persons are more likely to try and appear pro-fat when in the presence of an overweight or obese person.

There were differences found among the groups reading the different fast food lawsuit articles. Like Teachman et al. (2003), the article discussing behavioral causes of obesity allowed participants to maintain more negative attitudes between pre- and post-test compared to the control group. As well, the article suggesting overweight people were less responsible for their weight was related to more positive attitudes on explicit measures from pre- to post-test. Since the articles were rated equally forceful on the pilot tests this difference was not created by any discrepancy in the articles themselves. Perhaps by suggesting to the participants that overweight people have control over their weight and that society is not responsible for increased rates of obesity we activated negative attitudes toward overweight people. Perhaps this article induced participants to consider their own personal locus of control, which is related to negative attitudes toward overweight people. The anti-industry article was meant to parallel the article Teachman et al. presented about genetic causes of obesity. Because they found implicit differences between the two groups and we found none, this may indicate that the mere mentioning of the fast food lawsuits, which by nature of the argument they present discuss personal responsibility serves to maintain implicit anti-fat attitudes.

Unlike what we found regarding explicit attitudes, we did not find differences in implicit attitudes for the groups reading the three different articles. We expected to find results similar to

Teachman et al. (2003), who found differences between articles citing either genetic causes or behavioral causes of obesity on implicit tests as well as explicit tests. What the implicit tests showed us was that regardless of what people are exposed to their attitudes toward overweight people do not change—these attitudes cannot be controlled.

The implications of these results are ambiguous. Overall, we found that implicating the fast food industry as a social cause of obesity can influence expression of negative attitudes toward obese people. However it does not affect how people feel unconsciously, as can be seen by the implicit tests. In order to truly change negative attitudes toward overweight people, it is important to find a mediating variable in implicit attitudes. In order to alter attitudes permanently, they must change to the degree that people can respond without prejudice without hesitation—meaning that they have internalized their positive attitudes (Devine et al., 2002).

Using the Plant and Devine Motivation to Respond without Prejudice Scale (Plant & Devine, 1998) as adapted for prejudice against overweight people, we were able to see how participants' internal and external motivations to respond without prejudice interacted with their attitudes toward overweight people. Participants who did not find it personally important to respond without prejudice were more likely to respond with both implicit and explicit bias against overweight people than those participants who did feel it was personally important to them. As well, participants who felt it wasn't important for them to appear unprejudiced around others had less bias than those who felt it was important to appear unbiased around others. It's uncertain why internal and external motivation to respond without prejudice did not interact in this study similarly to motivations to respond without racial bias found by Devine et al. It is important to keep in mind when analyzing results from the Plant and Devine Motivation to Respond without Prejudice Scale that it uses median splits in their data analysis—separating

persons into four different groups based on their scores originally set onto a continuum. This reduces the original variability of the scores, limiting the meaningfulness of its interpretation. A regression of this data would be more useful in analyzing the meaningfulness behind it—by maintaining the original variability of the data we can more fully extrapolate the results of the experiment into the real world.

There was no effect of experimenter BMI on implicit or explicit attitudes. People who had the obese research assistant administer their IAT and explicit post-tests showed no attitude difference than the participants who had an administrator of normal weight. This may suggest that, unlike tests measuring racism (Fazio et al., 1995), negative attitudes and feelings toward overweight people are socially acceptable to express around those who are overweight or obese. We know it is not socially acceptable to express racism in the presence of African Americans as shown by differences in explicit and implicit tests in Fazio et al. When it can be shown that there is a difference between expressed attitudes and actual implicit attitudes toward overweight and obese people, one could say there is social pressure not to be prejudiced against them.

A tertiary finding was the relationship between attitudes towards obesity and locus of control. We predicted that negative attitudes toward overweight and obese people would be related to an internal locus of control. However, negative attitudes were not related to a general locus of control but were strictly related to one's health locus of control. The more people felt their health was an internal, controllable attribute, the more negative their attitudes were toward people who were overweight or obese. So obesity prejudice isn't necessarily related to how controllable one sees their whole life—but just specifically their health.

Looking back at some of the responses to the opinion articles, the majority of participants were in favor of the fast food industry and felt personal choice was a cause of obesity. Future

research should examine how persons 'not sure' or 'in support' of the fast food lawsuits respond to implicit tests. We found that implicit tests showed no differences between groups exposed to differing views. However, if the participants were unsure of their attitudes or took a less popular viewpoint—supporting the lawsuits is less popular than not supporting them—implicit attitudes may change when exposed to contrasting information. With this test we could determine if pre-existing attitudes are more important in determining attitudes than the information participants are exposed to.

Overall, we can say we know that negative attitudes toward obese people are related to beliefs about personal responsibility—especially when discussing how responsible the food industry is in relation to rising incidence rates of obesity. We can conclude that discussion of the lawsuits can exacerbate anti-fat attitudes. In future debates regarding the responsibility of the food industry it is important to remember how these opinions reinforce negative attitudes about people of larger size.

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[1] An additional measure modeled after Harris, Walters and Waschull (1991) was given during the experiment as an exploratory measure. We did not have any a priori predictions regarding this measure. The results were not easily interpretable so this measure was not discussed further.

Appendix A

Motivation to respond without prejudice toward overweight people. Modified from Plant and Devine, 1998.

Instructions: The following questions concern various reasons or motivations people might have for trying to respond in nonprejudiced ways toward the overweight. An overweight person is someone who can be considered 30% above their ideal weight. Some of the reasons reflect internal-personal motivations whereas others reflect more external-social motivations. Of course, people may be motivated for both internal and external reasons; we want to emphasize that neither type of motivation is by definition better than the other. All of your responses will be completely confidential. Please give your response according to the scale below:

1	2	3	4	5	6
strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree

		strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1.	Because of today's PC (politically correct) standards, I try to appear nonprejudiced toward overweight people.	1	2	3	4	5	6
2.	I attempt to act in nonprejudiced ways toward overweight people because it is personally important to me.	1	2	3	4	5	6
3.	I try to act nonprejudiced toward overweight people because of pressure from others.	1	2	3	4	5	6
4.	According to my personal values, using stereotypes about overweight people is OK.	1	2	3	4	5	6
5.	I try to hide any negative thoughts about overweight people in order to avoid negative reactions from others.	1	2	3	4	5	6
6.	Being nonprejudiced toward overweight people is important to my self-concept.	1	2	3	4	5	6
7.	I attempt to appear nonprejudiced toward overweight people in order to avoid disapproval from others.	1	2	3	4	5	6
8.	Because of my personal values, I believe that using stereotypes about overweight people is wrong.	1	2	3	4	5	6
9.	If I acted prejudiced toward overweight people, I would be concerned that others would be angry with me.	1	2	3	4	5	6
10.	I am personally motivated by my beliefs to be nonprejudiced toward overweight people.	1	2	3	4	5	6

Appendix B

Rotter Locus of Control Scale

Please choose the statement, either *a* or *b*, which you agree with the most.

1.	a. Children get into trouble because their parents punish them too much.	b. The trouble with most children nowadays is that their parents are too easy on them.
2.	a. Many of the unhappy things in people's lives are partly due to bad luck.	b. People's misfortunes result from the mistakes they make.
3.	a. One of the major reasons why we have wars is because people don't take enough interest in politics.	b. There will always be wars, no matter how hard people try to prevent them.
4.	a. In the long run people get the respect they deserve in this world.	b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5.	a. The idea that teachers are unfair to students is nonsense.	b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
6.	a. Without the right breaks one cannot be an effective leader.	b. Capable people who fail to become leaders have not taken advantage of their opportunities.
7.	a. No matter how hard you try some people just don't like you.	b. People who can't get others to like them don't understand how to get along with others.
8.	a. Heredity plays the major role in determining one's personality.	b. It is one's experiences in life which determine what they're like.
9.	a. I have often found that what is going to happen will happen.	b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10.	a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.	b. Many times exam questions tend to be so unrelated to the course work that studying is useless.
11.	a. Becoming a success is a matter of hard work, lucks has little or nothing to do with it.	b. Getting a good job depends mainly on being in the right place at the right time.
12.	a. The average citizen can have an influence in government decisions.	b. The world is run by the few people in power, and there is not much the little guy can do about it.
13.	a. When I make plans, I am almost certain that I can make them work.	b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
14.	a. There are certain people who are just no good.	b. There is some good in everybody.
15.	a. In my case getting what I want has little or nothing to do with luck.	b. Many times we might just as well decide what to do by flipping a coin.

16.	a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.	b. Getting people to do the right thing depends upon ability; luck has little or nothing to do with it.
17.	a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.	b. By taking an active part in political and social affairs the people can control world events.
18.	a. Most people don't realize the extent to which their lives are controlled by accidental happenings.	b. There really is no such thing as "luck."
19.	a. One should always be willing to admit mistakes.	b. It is usually best to cover up one's mistakes.
20.	a. It is hard to know whether or not a person really likes you.	b. How many friends you have depends upon how nice a person you are.
21.	a. In the long run the bad things that happen to us are balanced by the good ones.	b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
22.	a. With enough effort we can wipe out political corruption.	b. It is difficult for people to have much control over the things politicians do in office.
23.	a. Sometimes I can't understand how teachers arrive at the grades they give.	b. There is a direct connection between how hard I study and the grades I get.
24.	a. A good leader expects people to decide for themselves what they should do.	b. A good leader makes it clear to everybody what their jobs are.
25.	a. Many times I feel that I have little influence over the things that happen to me.	b. It is impossible for me to believe that chance or luck plays an important role in my life.
26.	a. People are lonely because they don't try to be friendly.	b. There's not much use in trying too hard to please people, if they like you, they like you.
27.	a. There is too much emphasis on athletics in high school.	b. Team sports are an excellent way to built character.
28.	a. What happens to me is my own doing.	b. Sometimes I feel that I don't have enough control over the direction my life is taking.
29.	a. Most of the time I can't understand why politicians behave the way they do.	b. In the long run the people who are responsible for bad government on a national as well as on a local level.

Appendix C

Crandall Anti-fat Attitudes Scale

Instructions: Please answer the following questions as honestly as you can using the scale below.

0	1	2	3	4	5
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

	strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1. I really don't like fat people that much.	0	1	2	3	4	5
2. Fat people tend to be fat pretty much through their own fault.	0	1	2	3	4	5
3. I feel disgusted with myself when I gain weight.	0	1	2	3	4	5
4. Although some fat people are surely smart, in general, I think they tend not to be quite as bright as normal weight people.	0	1	2	3	4	5
5. If I were an employer looking to hire, I might avoid hiring a fat person.	0	1	2	3	4	5
6. I worry about becoming fat.	0	1	2	3	4	5
7. Some people are fat because they have no willpower.	0	1	2	3	4	5
8. I don't have many friends that are fat.	0	1	2	3	4	5
9. People who weight too much could lose at least some part of their weight through a little exercise.	0	1	2	3	4	5
10. Fat people make me feel somewhat uncomfortable.	0	1	2	3	4	5
11. One of the worst things that could happen to me would be if I gained 25 pounds.	0	1	2	3	4	5
12. I tend to think that people who are overweight are a little untrustworthy.	0	1	2	3	4	5
13. I have a hard time taking fat people too seriously.	0	1	2	3	4	5

Appendix D

Health Locus of Control Scale

This questionnaire is designed to find out how certain events affect people. Below is a list of events; using the six possible choices, please select the statement that is most descriptive of your feelings in the stated event. Please note that the scale is different from the other scales you are being asked to use.

1 strongly agree	2 moderately agree	3 slightly agree	4 slightly disagree	5 moderately disagree	6 strongly disagree

	strongly disagree	Moderately disagree	slightly disagree	slightly agree	Moderately agree	strongly agree
1. I get sick, it is my own behavior which determines how soon I will get well again.	1	2	3	4	5	6
2. I am in control of my health.	1	2	3	4	5	6
3. When I get sick, I am to blame.	1	2	3	4	5	6
4 . The main thing which affects my health is what I myself do.	1	2	3	4	5	6
5. If I can take care of myself, I can avoid illness.	1	2	3	4	5	6
6. If I take the right actions, I can stay healthy.	1	2	3	4	5	6
7. Having regular contact with my physician is the best way for me to avoid illness.	1	2	3	4	5	6
8. Whenever I don't feel well, I should consult a medically trained professional.	1	2	3	4	5	6
9. My family has a lot to do with my becoming sick or staying healthy.	1	2	3	4	5	6
10. Health professionals control my health.	1	2	3	4	5	6
11. When I recover from an illness, it does usually because of other people (e.g. nurses, doctors, family, and friends) have been taking good care of me.	1	2	3	4	5	6
12. Regarding my health, I can only do what my doctor tells me to do.	1	2	3	4	5	6
13. No matter what I do, if I am going to get sick, I am going to get sick.	1	2	3	4	5	6
14. Most things that affect my health happen to me by accident.	1	2	3	4	5	6
15. Luck plays a big part in determining how soon I will recover from illness.	1	2	3	4	5	6
16. My health is largely a matter of good fortune.	1	2	3	4	5	6

	strongly disagree	Moderately disagree	slightly disagree	slightly agree	Moderately agree	strongly agree
17. No matter what I do I am likely to get sick.	1	2	3	4	5	6
18. If it's meant to be, I will stay healthy.	1	2	3	4	5	6
19. If I become sick, I have the power to become well again.	1	2	3	4	5	6
20. I am directly responsible for my health.	1	2	3	4	5	6
21. Whatever goes wrong with my health is my own fault.	1	2	3	4	5	6
22. My physical well being depends on how well I take care of myself.	1	2	3	4	5	6
23. When I feel ill, I know it is because I have not been taking proper care of myself.	1	2	3	4	5	6
24. I can pretty much stay healthy by taking care of myself.	1	2	3	4	5	6
25. If I see an excellent doctor regularly, I am less likely to have health problems.	1	2	3	4	5	6
26. I can only maintain my health by consulting health professionals.	1	2	3	4	5	6
27. Other people play a big part in whether I stay healthy or become sick.	1	2	3	4	5	6
28. Health professionals keep me healthy.	1	2	3	4	5	6
29. The type of care I receive from other people is what is responsible for how well I recover from an illness.	1	2	3	4	5	6
30. Following the doctor's orders to the letter is the best way for me to stay healthy.	1	2	3	4	5	6
31. Often I feel that no matter what I do, if I am going to get sick, I will get sick.	1	2	3	4	5	6
32. It seems that my health is greatly influenced by accidental happenings.	1	2	3	4	5	6
33. When I am sick, I just have to let nature run its course.	1	2	3	4	5	6
34. When I stay healthy, I am just plain lucky.	1	2	3	4	5	6
35. Even when I take care of myself, it's easy to get sick.	1	2	3	4	5	6
36. When I become ill, it's a matter of fate.	1	2	3	4	5	6

Appendix E

Pro-Industry Fast Food Lawsuit Article

Editorial

Want a class action lawsuit with that burger?

The great debate over how silly we all are and who we can blame for it began in earnest in August, with three obese teenage girls—how obese? Well, one of them stands 5'9" and tips the scales of justice at 270 pounds—sued McDonald's on the grounds that the fast-food giant's high-calorie, high-fat, high-sodium food made them obese.

Rumor now has it that an impending class action lawsuit is about to be waged against fast food chains for making America obese. Caesar Barber, a 56-year-old, 5-foot-ten-inch, 272-pound maintenance worker from the Bronx is suing fast food restaurants like KFC, McDonalds, Wendy's and Burger King for making him fat.

It seems that there this case is a disregard for self-accountability. Barber and his lawyer intend to cite unfair advertisements that subconsciously compel people to eat fast food, therefore making America fat.

On the face of it, these made-for-talk-show lawsuits appear frivolous. We don't sue razor-blade makers for teen suicides and we wouldn't sue Black and Decker after a Texas chainsaw massacre, so why should we sue the makers of fatty, high-calorie junk food if its customers eat too much of it?

Barber claims that the fast food industry 'misled' him about the nutritional value of their food. Barber says he has been eating fast food 'four or five times a week' since the 1950's and blames it for his diabetes, high blood pressure and series of heart attacks. In our opinion this man and his lawyer ought to be rebuked for filing this suit—and perhaps forced to reimburse the companies for any legal expenses incurred.

First of all, fast food is not *(chemically)* addictive. There is no chemical inside these foods that can make us crave it. This suggests that Barber may be trying to use a loophole created in our justice system from the Big Tobacco Lawsuits to extort the fast food industry. Relying on fast food for the majority of your meals is based on habit, not addiction.

In our opinion, these lawsuits seem to be an attempt on Caesar Berber's part to find an excuse for his being fat. Food isn't *chemically* addictive; therefore we have to assume that Mr. Barber can't control himself. We're sorry Mr. Barber but you're going to have to accept that your physical problems aren't the fault of Ronald McDonald.

Secondly, advertisement is a basic function of capitalism. It's not an evil plot to make America eat more; it's just a tool used by companies trying to do business. And as Americans they have a right to make money. This lawsuit seems like an attempt to get money out of big business. And if businesses can be punished every time someone abuses their products, eventually they will go bankrupt, their employees will be jobless, and responsible consumers won't have

access to their products. Not to mention that a majority of American companies will be out of business!!

Fortunately the Center for Consumer Freedom is advertising against this frivolous use of tort law. "You are you too stupid ... to make your own food choices," began the Consumer Freedom ad, "at least according to the food police and government bureaucrats, who have proposed 'fat taxes' on foods they don't want you to eat. Now the trial lawyers are threatening class-action lawsuits against restaurants for serving America's favorite food and drinks. We think they're going too far. It's your food. It's your drink. It's your freedom." Thankfully somebody is speaking out against this injustice to the American law system.

What's the skinny? So they're telling us that 30 million people a year die of obesity related health issues. But the real question is why are people letting themselves get obese if they know it is a health risk? Obesity *is* a real problem and threat to health but it's not due to social pressure from advertising. It's simply a lack of self-control and self will. If these people wanted to, they could just eat less and exercise; they'd just have to take responsibility for themselves and try.

The statistics have been telling us that obesity is on the rise. Over 50% of the United States can be considered overweight or obese. We are becoming more and more aware of this health fact as we look around us. We need to take advantage of this new knowledge and start doing something about America's increasing waistline. But we can't allow people to take advantage of America's failing ability to push away from the table by extorting the fast food business to pay for their health care bills.

This lawsuit isn't just an attack on Burger King and McDonald's; it's an attack on the very notion of personal responsibility and our right to eat whatever we want without government regulation.

The court should throw this lawsuit out immediately—before Mr. Barber makes a meal out of the entire restaurant industry.

Appendix F

Anti-Industry Fast Food Lawsuit Article

Editorial

David vs. Goliath: Caesar Barber vs. Fast Food

Caesar Barber is fighting the good fight against Big Food for what they have done to him and our country.

Businesses like McDonald's and Burger King spend an estimated $13 billion a year marketing food and drinks to U.S. children and their parents. Most ads are for low-nutrition items like burgers and fries. And it's no secret that unhealthy diets are partly to blame for a growing weight problem among U.S. kids: obesity rates in children have doubled over the past 20 years, and overweight children are being diagnosed with obesity-related illnesses such as diabetes, sleep apnea and respiratory illnesses that in the past have only afflicted adults. It's estimated that one in five Americans is overweight or obese.

Facing fiercer competition for customer loyalty, fast food chains have promoted their over-sized burgers, extra-large servings of fries, and buckets of soda, all at low prices. Busy and cash-strapped families increasingly rely on take-out food for family dinners and regular consumption of over-sized portions of fatty foods can lead to widespread obesity. Is it really a coincidence that the rates of obesity are the highest in the lower income brackets?

As the health care costs of treating obesity-related illnesses mount, some people are looking for accountability from the purveyors of fast food for the huge burden these illnesses are becoming on the health care system.

Following the tobaccos lawsuit model, some argue that these companies should be held liable for the health care costs of treating illnesses associated with obesity, since they peddle dangerously unhealthy foods to unwitting consumers.

Of course, one may think: sure tobacco is addictive, but fast food is not. Is this really true? We once thought that smoking was just a 'bad habit.' Our bodies are naturally designed to crave high fat and high calorie foods. Does our culture foster an environment where everyone can feel comfortable eating until they're full and stopping when they are full? We think not. Eat more and more, our culture tells us. Just look at what kind of advertising is being directed at our children. About half of all food advertising is aimed at kids. Four out of five of those ads are for sugary cereal, soft drinks, fast food or salty snacks. And what about the products being advertised in schools? Soft drink companies have the corner market on funneling sugary soda and caffeine directly into our education system with every pop machine you see at your child's school.

The tobacco industry got caught advertising their unhealthy products to children, what makes us think that the food industry is doing anything different? And why shouldn't they also be held responsible for it?

The battle is in who is to blame. In fact, a battle over that question was waged in some of the nation's top newspapers last week as the forces of "personal responsibility" took on those who would sue McDonald's.

One ad was taken out by the Center for Science in the Public Interest—a group that made headlines by exposing such diet-busters as Chinese food (1993) and movie theater popcorn (1994), but is now often mocked as killjoys or "the food police." Their ad—which was festooned with a frosting-encrusted donut, a Flintstones-sized hamburger and a piece of pizza so covered with pepperoni that it's

tough to remember which is the food and which is the topping—made it clear who's to blame and what should be done about it.

"McDonald's spends more than half a billion dollars a year on advertising—four times more than the Marlboro Man," the ad said, linking fast food companies to Big Tobacco. "Portions are 'supersize.' Gas stations have become 24-hour candy stores. No wonder obesity is up 50 percent since 1991! It's time for the federal government to step up to the plate on nutrition issues. For starters, Congress should provide a minimum of $30 million to Centers for Disease Control for effective campaigns promoting healthy eating and physical activity ... If more money is needed, let's charge a penny or two tax on soft drinks or other junk foods ... to fund public-health campaigns."

The staff of this newspaper has agreed that if we cannot stop the fast food industry from selling the high calorie, sugar laden foods that are socially contributing to the upsizing of America, the least that can be done is forcing the fast food industry to reimburse for the health care costs expedited by their product and promote healthy lifestyles for Americans. The forces of "personal responsibility" like to make it sound as if pro-active government is some newfangled invention of "bureaucrats." But there's nothing new about lawmakers trying to use the tax code to encourage behavior that benefits society as a whole. After all, cigarette taxes fund health-care programs, bridge tolls subsidize mass transit, lottery money is often earmarked for education and some states even tax developers and use the money to preserve open space elsewhere in the state.

If you want to pretend that this issue does not exist, ask any child you know if they have ever been to McDonald's and the probability is high that they will say yes. Do you think those toys in Happy Meals are there for altruistic reasons? Advertising geared to children are really vicarious advertisements to children's' parents who are pressured to buy these products for their kids.

Caesar Barber is trying to bring a class action lawsuit against food companies similar to the successful lawsuits in recent years by cancer patients against tobacco companies. He is bound to face strong opposition, but he is fighting the good fight. Unhealthy eating habits along with inactivity kill as many people if not more than tobacco does.

Appendix G

Control Article

Editorial

Regulating Sports is Prevention, not Punishment!

Recently several Ivy League schools have required students involved in sports teams to take a total of seven weeks off of practices, not to be concurrent with regularly scheduled vacations. There has been a large resistance held by students to comply with these new regulations.

However, it seems possible in this go fast get there now world that student athletes have been pushing themselves too far. Without the proposed regulations, athletes practice all year round; sometimes under what they call 'captain's practices' without being overseen by coaches and sometimes more official practices.

Amanda Leonetti, who plays first base on Brown's softball team, feels that the league is punishing them for trying to be successful at more than just academics stating, "We athletes wouldn't have chosen to go to an Ivy League college if we didn't care about our academics."

The question at issue is, how much is too much? Some dedicated athletes practice seven days a week with teammates, while still making time for their own personal workouts. Dedicating all of that time to fitness and practice inevitably takes time away from trying new things on campus or getting to know peers who are not athletes. If the goal of college is to create well-rounded individuals, focusing excessively on athletics could misguide individuals.

There is also the question of whether or not the captain's practices, which at face value are considered voluntary, are truly voluntary for all members of the team. Many teams are pushing to defend or conquer titles within their sports. Such goals require dedication and hard work. Is it possible that a student who may choose to miss a voluntary practice could be chastised by teammates? Or perhaps their own internal pressure to be involved in every aspect of the team could guide their focus away from academics. Colleges are setting students up by allowing these 'captain's practices' to happen. There is always somebody who could be thinking, "I want to be doing x, y, and z, but I'd be a bad member of the team if I don't go along with everyone."

Another concern leading to this new regulation of athletics is the creation of new culture on campus. Norman Fainstein, of Connecticut College, admits that excessive practices and unscheduled games can create a subculture. "We don't want two cultures on our campus—an athletics culture and all the other students in some other world. We don't believe that's healthy."

This issue first became a concern with the publication of *The Game of Life: College Sports and Educational Values*. The book argued that colleges often recruit a disproportionately large number of athletes relative to their overall student populations, and that athletes tend to cluster in certain majors, to earn lower grades and not take on leadership roles after they graduate.

The book caused such a stir that New England conference presidents conducted a study on their institutions to investigate its allegations. Findings were similar to those predicted by the authors of *The Game of Life.*

These new regulations then are most likely reactions to the findings that Ivy League athletes aren't focusing on academics as much as on athletics.

The reality is, with almost anything that too much is a good thing. Spending too much time at one thing naturally limits the amount of time available for other activities. Imagine if someone spent as much time just watching television or video games as a college athlete spends practicing their sport. Would we worry about them spending excessive time at something? Of course.

The argument has been made that athletes are being targeted for one reason or the other. These arguments often cite other activities such as music programs and student newspapers as being guilty of the same problem but not being held accountable for it.

Well-roundedness then, between a student's extracurricular activities, activities and social life, whether enforced or voluntary can only be of benefit for the student. These new regulations are in place in order to protect students from hurting themselves whether or not their self-inflicted grueling schedule is intentional or not.

Appendix H

Facilitation Questions

Facilitation Questions for the Experimental Groups

1. Did you know about these lawsuits before you read this editorial? What did you know? What was your opinion?
2. Do you agree with the editorial you just read? If so what do you agree with? If not, what do you disagree with?
3. Has your opinion changed from reading this editorial? What is your opinion now?
4. Do you think that Caesar Barbar's lawsuit against the fast food industry is justified? Why?
5. What do you feel is the primary cause of obesity?

Facilitation Questions for the Control Group

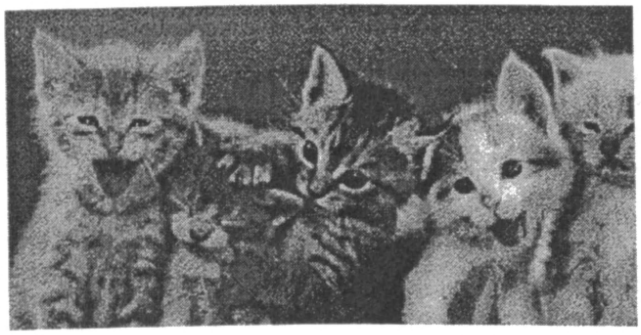
1. Did you know about this before you read this editorial? What did you know? What was your opinion?
2. Do you agree with the editorial you just read? If so what do you agree with? If not, what do you disagree with?
3. Has your opinion changed from reading this editorial? What is your opinion now?

Appendix I

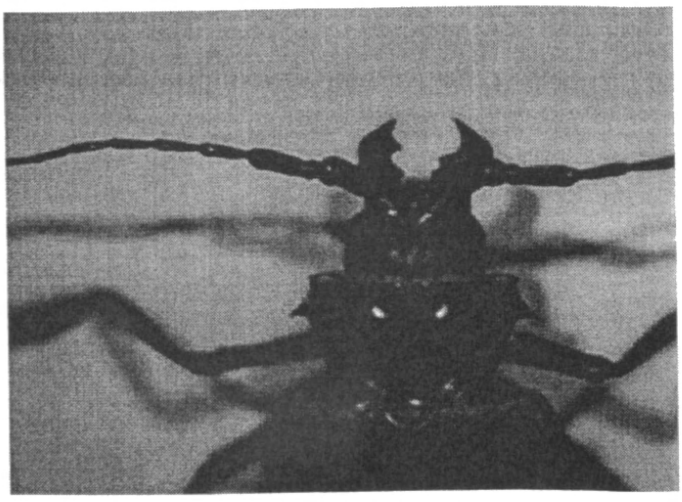
Examples of Fat/Thin and Pleasant/Unpleasant Photos used in the Implicit Attitude Picture Measure

Thin Example

Fat Example



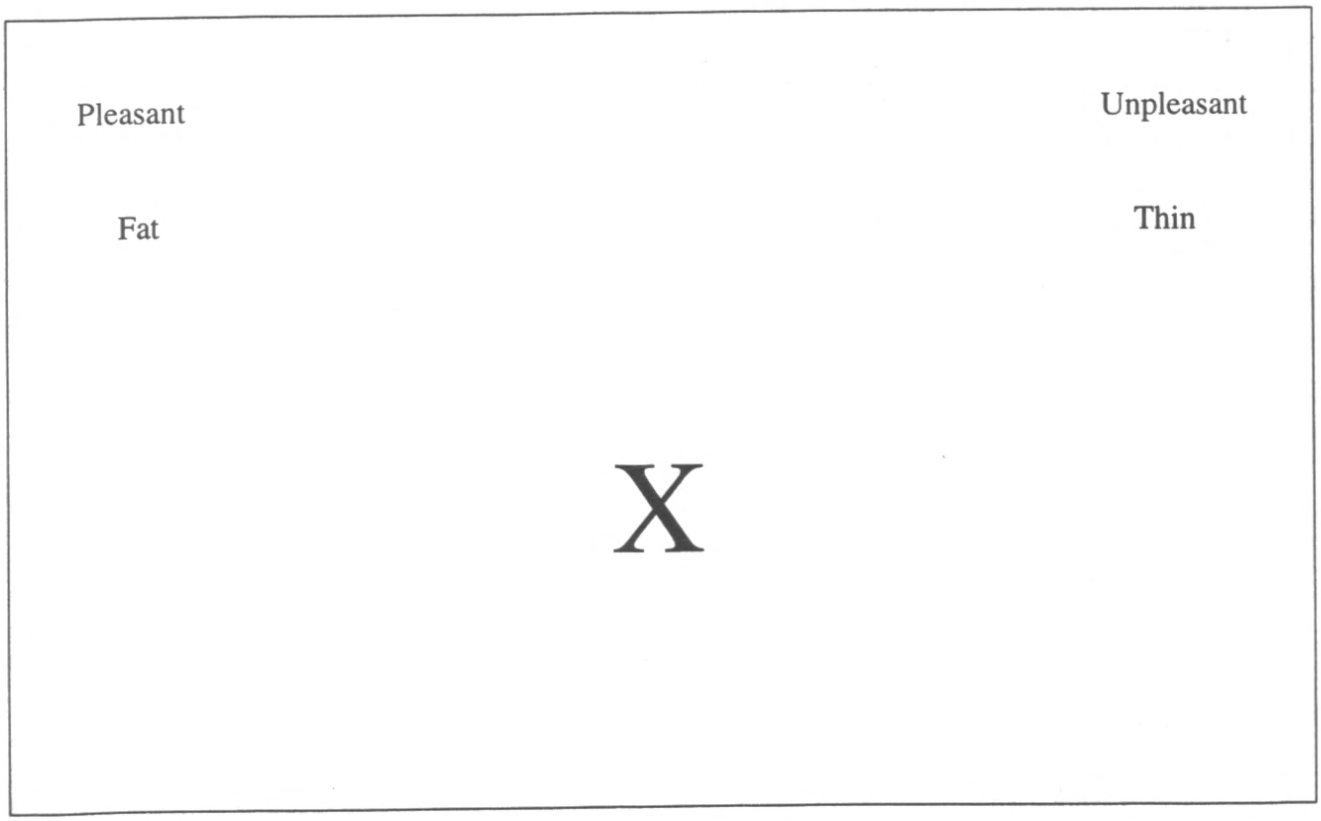
Pleasant Example



Unpleasant Example

Appendix J

Layout of the Computerized Implicit Attitude Test



Appendix I

Demographics Questionnaire

Instructions: Please answer these questions as honestly as possible. Your answers are completely anonymous.

What is your:

Height: _____ Age: _____

Circle which sex you identify with: Male Female

Do you identify as one of the following? Please pick only one.

African American
Asian
Hispanic
Native American
Caucasian
Other

Your current weight: _____

Circle the selection that best fits your answer:

What weights have you been in the past two years?

Over 20lbs less than my current weight	No more than 20 lbs under my current weight	I have always been this weight for the past 2 years	No more than 20 lbs more than my current weight	Over 20 lbs more than my current weight

What weight would you prefer to be?

Over 20lbs less than my current weight	No more than 20 lbs under my current weight	I have always been this weight	No more than 20 lbs more than my current weight	Over 20 lbs more than my current weight

On average how would you describe yourself?

1	2	3	4	5
Very Underweight	Underweight	Average	Overweight	Very Overweight

How satisfied are you with your current weight?

1	2	3	4	5
Extremely satisfied	Satisfied		Unsatisfied	Extremely unsatisfied

Table 1
Article Instrument Pilot Test Results

	Pro-Industry	Control	Anti-Industry
How well written	3.07 (0.21)	2.50 (0.27)	2.21 (0.21)
Based on fact or opinion	0.57 (0.14)	0.71 (0.29)	0.36 (0.23)
Forcefulness	2.14 (0.14)	2.79 (0.28)	2.46 (0.31)
Persuasiveness	2.29 (0.19)	5.82 (3.19)	2.50 (0.33)
Controversial	2.00 (0.31)	2.43 (0.29)	2.36 (0.37)

Note: higher ratings equal more of the characteristic. Standard deviations are in parentheses.

Table 2

Crandall Anti-fat Attitudes Test Scores

Crandall Test	*M*	*SD*	*T for difference from neutral point (4)*	*Df*
Pretest	2.63	0.762	117	117
Posttest	1.79	0.629	125	125

Note: lower scores indicate more positive attitudes toward obese people.

Table 3

Negativity of All IAT tests compared to zero.

IAT Test	*M*	*SD*	*T score for difference from neutral point*	*DF*	*p*
Picture	-0.384	0.181	-23.36	120	< 0.001
Word	-0.423	0.213	-21.84	120	< 0.001
Stereotype	-0.369	0.210	-19.33	120	< 0.001

Note: more negative scores indicate more negative attitudes toward obese people.

Table 4

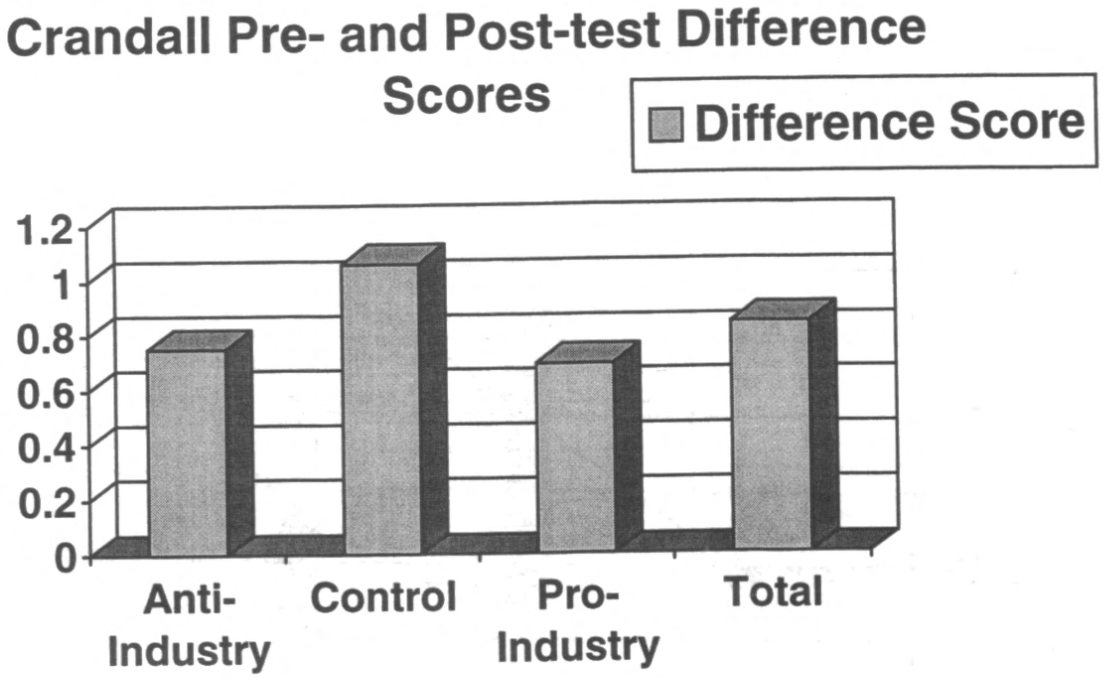
Correlations between Crandall Anti-fat Attitudes Test Pretest and Post-test Results

	Rotter Scale	Health Locus of Control (MHLOC)		
	Mean Score	Mean Score	Internal Subscale	External Subscale
Crandall Pretest	N =	118		
Dislike	ns	ns	ns	ns
Fear of Fat	ns	ns	ns	ns
Willpower	ns	ns	.235*	ns
Total Scale	ns	.182*	.225*	ns
Crandall Posttest	N =	126		
Dislike	ns	ns	.219*	ns
Fear of Fat	ns	ns	ns	ns
Willpower	.221*	ns	ns	-.272*
Total Scale	ns	ns	.190*	ns

* $p < .05$, ** $p < .001$

Figure 1

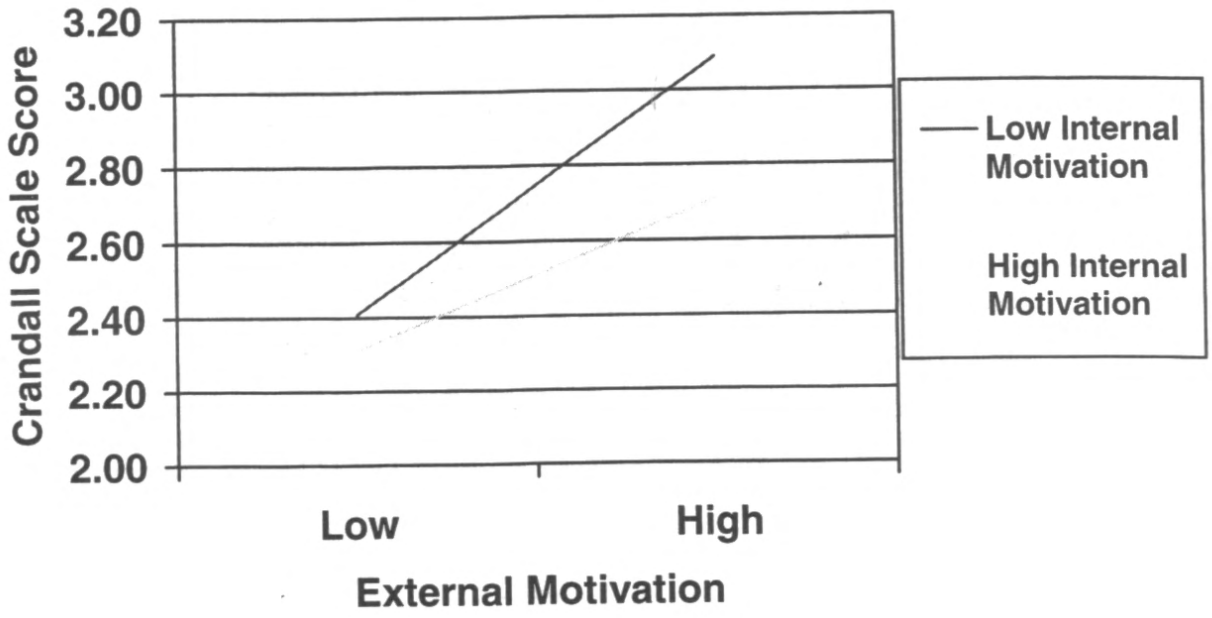
Interaction of Time of Test to Story Condition



Note: higher scores denote more negative attitudes.

Figure 2

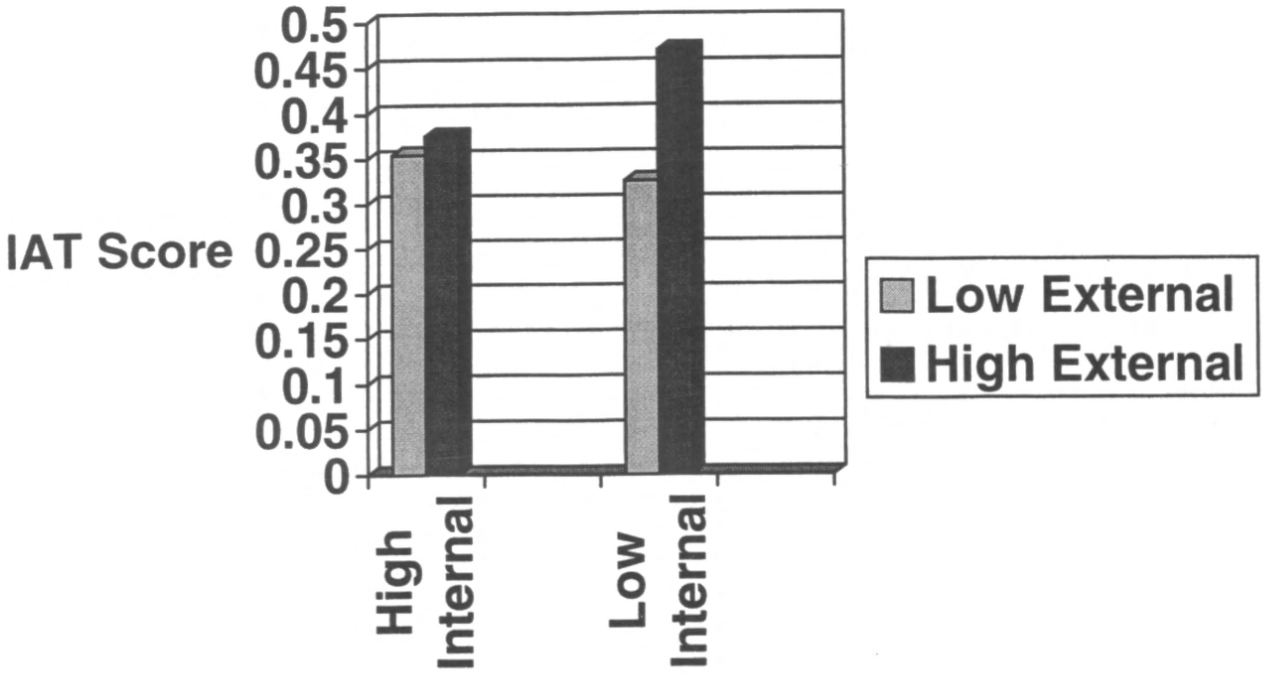
Internal and External Motivation to Respond without Prejudice on the Crandall Anti-fat Attitudes Scale



Note: higher scores indicate more negative attitudes towards fat.

Figure 3

Interaction between Internal and External Motivation to Respond without Prejudice on the Implicit Association Test.



Note: Higher IAT Score denotes more negative attitudes toward overweight people.