The Stigma of Obesity: The Consequences of Naive Assumptions Concerning the Causes of Physical Deviance

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It is proposed that whether or not a physically deviant person is derogated will depend on the extent to which that individual can be blamed or held responsible for his or her appearance. In line with this proposition, two experiments were conducted to examine how adolescent girls' opinions of an obese peer would be influenced by their beliefs about the cause of her obesity. In both studies, subjects were asked to look at a folder containing a photograph and a statement of introduction that a girl from a previous experiment had supposedly written. It was demonstrated that unless the obese target could offer an "excuse" for her weight, such as a glandular disorder, or could report recent successful weight loss, she was given a less positive evaluation, and was less liked, than was a normal-weight target.

Physical deviance has been conceptualized as a "stigma"—what Goffman (1963) defines as any attribute that is deeply discrediting to its possessor. Like other writers (e.g., Sagarin, 1975), Goffman distinguishes between three types of stigmata. In addition to what he calls the "abominations of the body" or the "physical deformities," he lists the "tribal stigmata" of race, religion, and social class, and what he calls the "blemishes of individual character," such as mental illness, addiction, alcoholism, and homosexuality.

For those who possess a "spoiled identity" as a result of their stigma, the consequences can be severe, regardless of the particular nature of the stigma. According to Goffman, such persons are viewed as "not quite human" and are subject to discrimination and outright rejection or avoidance. Day-to-day encounters with "normals" are a cause of great difficulty, being anxiety-producing and discomforting for both interactants (Comer and Piliavin, 1972; Farina et al., 1971; Kleck, 1969; Kleck et al., 1966). As a result, the stigmatized learn to continually monitor their self-presentation and to consciously devise strategies of interaction. In spite of those efforts, however, a stigma can continue to intrude itself into the interaction, and its possessors may come to feel that their identity is strictly defined in terms of it (Davis, 1961).

The Stigma of Obesity

Surprisingly, Goffman fails to list obesity among the physical stigmata. There is a certain irony in that fact, for some (e.g., Cahnman, 1968; Mayer, 1968) have argued that the obese are subject to a particularly severe degree of ridicule, humiliation, and discrimination. Some experimental evidence exists, in fact, for the view that public attitudes toward the obese in our society are extremely negative.

In one such series of studies, Richardson and his colleagues (Richardson et al., 1961) asked 10- and 11-year-olds to rank-order six drawings of children according to how much they liked them. The child pictured with no physical handicap was consistently preferred; quite surprisingly, the other drawings were ordered...
in the same sequence by all of the subject
groups examined: The child with the leg brace
and crutches was ranked second, followed by
the child confined to a wheelchair, a hand am-
putee, a child with a facial disfigurement, and,
finally, an obese child. The same sequence
emerged across the demographic variables of
sex, race, socioeconomic status, and rural ver-
sus urban residence. Almost all of the studies
stimulated by Richardson et al.’s intriguing
findings show the nonhandicapped child to be
preferred over the other children, but the exact
order of preferences for the drawings of the
physically deviant children has not proven to
be immutable. It is important to note, however,
that the drawing of the obese child is almost
always ranked last or next to last (e.g., Alessi
and Anthony, 1969; Goodman et al., 1963;
Maddox et al., 1968; Matthews and Westie,
1966; Richardson, 1970; Richardson and Emer-
son, 1970; Richardson and Green, 1971).

Further evidence for rejection of the obese
comes from sociometric data collected at an
elementary school by Staffieri (1967). Boys and
girls from grades one through five were asked
to indicate who in their particular class were
their five best friends. Students classified as
“endomorphic” on the basis of the ponderal
index were chosen least often as first or second
best friends.

A sample of 90 boys chosen from that same
school were shown full-body silhouettes of a
mesomorph, an endomorph, and an ec-
tomorph. Each boy was asked to assign 39
adjectives to the silhouette each described the
best. The endomorph was least frequently de-
scribed as “best friend” and as having “lots of
friends,” but he was the one most frequently
described as “gets teased.” In addition, the
endomorph received the most frequent en-
dorsement for the descriptors “lazy,” “
cheats,” “forgets,” “argues,” “mean,”
“sloppy,” “ugly,” “dirty,” and “stupid.”
Equally negative evaluations of endomorphic
silhouettes or pictures by both children and
adult subject populations have been reported
by Lerner (1969), Lerner and Korn (1972), and
Felker (1972).

Stigma and Responsibility

Although recognizing that the responses of
normals have common elements across the
different types of stigmata, Langer and her
associates point out that those with a so-called
characterological stigma are often explicitly
derogated, whereas those with a physical
stigma typically are not (Langer et al., 1976).
The fact is that those who possess a char-
acterological stigma typically have acquired
their deviant status through the commission of
deviant acts. Behavior—especially extraordi-
nary behavior—is perceived as arising out of
intentions (Jones and Davis, 1965; Maselli and
Altrrocchi, 1969). Because of this, those who
possess a characterological stigma are almost
always seen as having responsibility for ac-
quiring and controlling their deviant status.

In contrast, it is rare for those with a physi-
cal stigma to be held personally responsible for
their condition (Wright, 1960). Most physical
attributes are viewed as “determined” by ge-
etic and environmental forces beyond an in-
dividual’s personal control. These char-
acteristics, such as skin color or the shape and
size of prominent facial features, are seen as
permanent, changing only under unusual cir-
cumstances, such as radical surgery or severe
accident.

Of course, some physical characteristics are
presumed to be under a person’s direct control.
These characteristics, like the char-
acterological stigmata, are assumed to reflect
the person’s intentions, unless exculpatory
information about coercive situational forces
or uncontrollable internal forces, such as dis-
eease or bodily dysfunction, can be presented.
Such matters as personal hygiene, hairstyle,
and the growth of facial hair are believed to
reflect conscious and freely made choices. This
suggests, then, that whether or not a physically
deviant person is derogated will depend on the
extent to which he or she can be blamed or held
responsible for the possession of that char-
acteristic. If the person can be blamed, that
characteristic will be seen not as a misfortune,
but as a defect.

Because the perception of responsibility fig-
ures so prominently in person perception, it is
surprising that so little attention has been di-
rected toward its role in reactions to stigmata.
Some studies have examined the role of
presumed personal responsibility in reactions
to the characterological stigma of mental ill-
ness (e.g., Calhoun et al., 1974; Farina et al.,
1966). Levine and McBurney (1977) tested the
hypothesis that a person’s reaction to an individual with unpleasant body odor would be mediated by the extent to which that individual was aware of the odor and the extent to which it could be controlled. As expected, when a stimulus person was aware of the odor, he was evaluated much more negatively when its origin was attributed to poor personal hygiene than when it was attributed to a metabolic imbalance. Remarkably, the role of causal attributions in the perceptions of other types of stigmata, especially the physical stigmata, remains unexamined.

The case of obesity. It has frequently been noted that the extremely negative attitudes expressed toward the obese seem to arise from the belief that obesity is caused by self-indulgence, gluttony, or laziness. In short, the obese do seem to be held personally responsible for their physical condition. A simple experiment conducted by Maddox et al. (1968) supports this point. Their subjects were asked to indicate the degree to which an individual would be responsible for each of 24 characteristics. Seventy-six percent felt that a “man with a flabby body” was personally responsible for his condition, and 84% said that a “woman needing a girdle” was responsible. In contrast, only 2% held a “blind person” accountable for his or her lack of sight.

This naive “stigma theory” (Goffman, 1963) leads normal-weight and overweight persons alike to believe that the obese can easily change their condition. Kurland (1970) and Cahnman (1968) both chastise the medical profession for its subscription to this kind of “moralistic diagnosis,” a diagnosis that ignores completely the complex etiology of obesity and needlessly reduces the probability of successful treatment (Mayer, 1968). Sadly, in a survey of physicians and student clerks at a public outpatient medical clinic, Maddox and Liederman (1969) found that a large majority described their obese patients as “ugly” and “weak-willed.”

**EXPERIMENT 1**

The following study was conducted to examine how adolescent girls’ opinions of an obese peer would be influenced by their beliefs about the cause of her obesity. In the context of an experiment concerning “first impressions,” the subjects were asked to look at a folder containing a photograph and a personal statement of introduction that a girl from a previous study supposedly had written. The subjects were asked to look at the folder and then fill out a questionnaire in which they gave their first impressions of that girl.

The content of the folders was varied systematically according to a simple $2 \times 2$ factorial design. Half of the subjects were shown a photograph of an overweight peer; the other half saw a picture of a normal-weight girl. As a cross-dimension, half of the subjects were told that the girl had a thyroid condition; the others were not. When the girl was obese, the thyroid condition was said to be the cause of her weight problem. When the girl was normal-weight, the thyroid condition was said to be responsible for her slight “paleness.”

The questionnaire that subjects filled out asked them to rate the girl on a number of personality dimensions (e.g., warmth, self-discipline, happiness) and to indicate how much they liked her. It was predicted that the obese girl would be more positively evaluated and better liked when her obesity was beyond her personal control, but that the presence of the thyroid problem would have little impact on the evaluation of the more highly regarded normal-weight target girl.

**Method**

**Subjects.** The subjects were 64 high school girls from the Sequoia School District in San Mateo County, ranging in age from 14 to 18 years. Sixty of the subjects were normal-weight, according to criteria derived from standard pediatric charts (Vaughan et al., 1975). All of the subjects were paid for their participation in the study.

**Procedure.** The subjects were scheduled in groups consisting of up to eight persons. Each subject was seated in an isolation booth so that she could not see the materials examined by the others.

A female experimenter explained to the subjects that she had previously conducted a “getting acquainted” study involving girls their age, the purpose of that study being to examine “how two individuals who had never met before get to know one another.” In the course of that previous experiment, it was ex-
explained, each girl had brought in a photograph and had provided a short personal statement about herself for her partner to look over before their first meeting. The subjects were then told that their job was to examine the photographs and personal statements for two girls from that earlier experiment and to fill out questionnaires on their first impressions of them. In fact, no such earlier study had been conducted, and specially prepared materials were used.

The experimenter first distributed a copy of the same standard folder to all of the subjects. Inside the folder was a picture of a moderately attractive, normal-weight girl, her written personal statement, and a “fact sheet” giving her name, age, high school, height, and weight. The subjects were asked to give their first impressions of this “non-target” girl in order to familiarize them with the experimental task and the questionnaire and to lend credence to the cover story for the experiment.

Upon completion of the first questionnaire, the subjects were then given a second folder and a second questionnaire to fill out. This second folder also contained a photograph, a short personal statement, and a “fact sheet” listing the girl’s name, school, age, height, and weight. The subjects were randomly assigned to see one of four folders, which varied according to a simple 2 x 2 factorial design. Half of the subjects were asked to evaluate an overweight peer; the other half were shown a second normal-weight girl. As a cross-dimension, half of the subjects were told that the girl had a thyroid condition which accounted for either the weight problem or, in the case of the normal-weight target, her slight “paleness.” Sixteen subjects were assigned to each of the four experimental conditions.

The handwritten personal statements that appeared in the folders were similar in structure and content across the four conditions. Each target girl first expressed dissatisfaction with her picture and indicated that her appearance was now worse than it had once been. She then described the steps she would take to improve her appearance and expressed the hope that it would change in the near future. The first paragraph of each of the four personal statements is given below:

Obese/Thyroid Target (OT):
Hi! My name is Janet, and I’m a junior at Awalt High School. I wish you had a better picture of me. I think I look pretty chunky in that picture, but I am on the overweight side. I’ve been having a medical problem with my thyroid, and I’ve gained about 25 pounds in the last year alone. But I’m seeing a Dr. Schachter at the Metabolism Disorder Clinic here at Stanford, and maybe with a new drug I’ll be able to lose weight.

Obese/Non-Thyroid Target (ON):
Hi! My name is Janet, and I’m a junior at Awalt High School. I wish you had a better picture of me. I think I look pretty chunky in that picture, but I am on the overweight side. I’ve gained about 25 pounds in the last year alone. But I’m going to try a new diet program, so maybe I’ll be able to lose weight.

Normal-Weight/Thyroid Target (NT):
Hi! My name is Janet, and I’m a junior at Awalt High School. I wish you had a better picture of me. I think I look pretty washed out in that picture, but I am on the pale side. I’ve been having a medical problem with my thyroid, and I look more pale than I used to. But I’m seeing a Dr. Schachter at the Metabolism Disorder Clinic here at Stanford, and maybe with a new drug I’ll be able to get some color in my face.

Normal-Weight/Non-Thyroid Target (NN):
Hi! My name is Janet, and I’m a junior at Awalt High School. I wish you had a better picture of me. I think I look pretty washed out in that picture, but I am on the pale side. I look more pale than I used to. But I’m going to try to get some sun, so maybe I’ll be able to get some color in my face.

The next paragraph of the personal statement was identical across the four conditions of the experiment and described the girl’s interests and hobbies.

Four photographs were used, two for each level of target weight. All four girls were casually dressed and had a pleasant facial expression; the photographs were taken against a neutral background. Within each condition, an equal number of subjects saw each of the two pictures. Preliminary analyses showed no significant interactions between the experimental conditions and the photographs used, and so the data were collapsed across the latter variable.

Dependent measures. The questionnaire that subjects were asked to use in giving their first impressions consisted of a series of 13-centimeter, continuous-line rating scales, the
placement of the subjects' checkmarks subsequently being measured to the nearest centimeter. In addition to explaining how the scales should be used, the instructions to the questionnaire emphasized that all answers would remain completely confidential.

The first part of this questionnaire asked the subjects to rate the target on seven traits. Three traits were associated with a dimension of self-control: self-indulgence, self-discipline, and laziness. The other dimensions were warmth, friendliness, happiness, and self-confidence. For each of the traits, the endpoints were labeled "very" and "not very."

In the second section, three questions were included as measures of liking for the target: (1) "Do you think you would like this person?" (2) "If you met this person at a party or in a class, do you think you would become close friends?" (3) "Do you think you would want to introduce this person to your friends?" For each question, the endpoints of the scales were labeled "definitely yes" and "probably not."

Finally, subjects were asked to assess how similar the target was to themselves and to rate her physical attractiveness.

At the conclusion of each experimental session, the subjects were debriefed, and the importance of not disclosing the true purpose and hypotheses of the experiment was discussed.

Results

Self-control measures. The subjects were asked to rate the targets on three traits related to a dimension of self-control: laziness, self-indulgence, and self-discipline. Unexpectedly, these three measures did not correlate very highly with one another; the self-discipline and laziness ratings were moderately correlated ($r_{xy} = -.36$), but neither of those two was correlated with the assessment of the targets' self-indulgence ($r_{xy} = -.05$ and .08 respectively).

The mean ratings assigned each of the four targets on these three self-control measures are listed in Table 1, as well as results for analyses of variance conducted on those data. Examination of that table shows that the Obese/Non-Thyroid (ON) target was rated consistently more negatively than the Normal-Weight/Non-Thyroid (NN) target. This difference was fairly large for the ratings of both laziness ($t (df=60) = 2.67, p <.01$) and self-discipline ($t (60) = 1.88, p <.065$), but not for self-indulgence ($t< 1$), since the NN target was seen as fairly self-indulgent. Overall, the evidence shows that subjects did derogate the obese target, attributing a greater lack of will-power and less self-control to her.

It had also been predicted that the OT target, whose obesity could be blamed on an internal disorder beyond her control, would be rated more favorably than the ON target on these items. As can be seen in Table 1, this difference was found for both self-indulgence ($t (60) = 1.83, p <.07$) and self-discipline ($t (60) = 1.98, p <.05$), but the difference in rated laziness was quite small ($t< 1$).

Surprisingly, the NN target was seen as more self-indulgent than the NT target ($t (60) = 1.94, p < .06$). However, no difference was found between the two normal-weight targets on the measures of laziness and self-discipline ($t< 1$ in each instance).

<p>| TABLE 1. Mean Ratings of Target Girls for Measures of Self-Control and the Liking Index (Experiment 1) |
|-------------------------------------------------|---------------------------------|-----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>Measures</th>
<th>ON</th>
<th>OT</th>
<th>NN</th>
<th>NT</th>
<th>Analyses of Variance^d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-indulgence^a</td>
<td>8.62</td>
<td>6.50</td>
<td>8.31</td>
<td>6.06</td>
<td>&lt;1         7.13       &lt;1</td>
</tr>
<tr>
<td>Self-discipline^a</td>
<td>6.38</td>
<td>8.94</td>
<td>8.81</td>
<td>7.56</td>
<td>&lt;1         &lt;1          4.34</td>
</tr>
<tr>
<td>Laziness^a</td>
<td>6.88</td>
<td>6.38</td>
<td>3.94</td>
<td>5.00</td>
<td>7.66       &lt;1          1.01</td>
</tr>
<tr>
<td>Liking index^b</td>
<td>17.19</td>
<td>23.19</td>
<td>25.00</td>
<td>18.31</td>
<td>&lt;1         &lt;1          9.43</td>
</tr>
</tbody>
</table>

^a Subjects' responses were measured on a continuous-line rating scale to the nearest centimeter: 1 = "not very"; 13 = "very."

^b Scores are the sums of three liking measures: 3 = "probably not"; 39 = "definitely yes."

^c ON = Obese/Non-Thyroid; OT = Obese/Thyroid; NN = Normal-Weight/Non-Thyroid; NT = Normal-Weight/Thyroid.

^d F-values for 2 x 2 analyses of variance with variables Weight (Obese vs. Normal-Weight) and Thyroid (Condition Present vs. Absent): df = 1,60. $F_{obs} = 4.00; F_{nt} = 7.08$. 

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Liking measures. Three items on the questionnaire were designed to assess the subjects' liking for the targets, and it was predicted that the ON target would be liked less than either the NN or the OT target. This pattern did, in fact, emerge across all three measures. Since the liking measures were highly correlated (alpha coefficient = .81), a single liking index was formed by taking their sum. The expected pattern of results is clearly seen by examining this overall index (see Table 1). First, the ON target was given a liking score significantly lower than that given the NN target (t (60) = 2.67, p < .01). Second, the two obese targets also differed significantly from one another, the OT target being assigned a higher liking score than the ON target (t (60) = 2.06, p < .04). One surprising aspect of the results for these liking measures was the difference between the NN and NT targets, the NT target having been given a fairly low score on the index. A post hoc comparison showed this difference to be significant (t (60) = 2.29, p < .03).

Other measures. The subjects were asked to rate the girls on the traits of warmth and friendliness. Results show that the ratings of the four targets did not differ significantly on either dimension (F<1 in all cases). Thus no evidence was found to suggest that this group of high school-aged girls subscribes to the stereotype of the "outgoing" and "jocular" fat person.

Ratings of the target girls' happiness and self-confidence were also obtained. No significant differences between any of the targets were found on the measure of self-confidence. Interestingly, the subjects indicated that they believed the normal-weight girl to be happiest, regardless of whether or not that girl had a glandular problem; this main effect was statistically significant (\( \text{F}(1,60) = 9.31, p < .005 \)). No meaningful difference was found between the two obese targets or between the two normal-weight targets on that dimension (t<1 in each case).

As expected, subjects judged the obese targets to be less physically attractive than their normal-weight counterparts (F (1,60) = 3.40, p<.07). It is important to note, however, that this main effect was due entirely to the low rating for the ON target. The OT, NT, and NN targets were rated nearly the same in physical attractiveness, thus producing a significant target-weight-by-thyroid-condition interaction (F (1,60) = 6.66, p < .02).

Finally, the subjects were asked to indicate how similar to themselves the target was. A significant two-way interaction was found for this variable (F(1,60) = 9.23, p < .004). The OT target was perceived to be more similar to the subjects than was the ON target (t (60) = 2.17, p<.04). But the presence of the thyroid condition had an opposite effect on the similarity ratings for the two normal-weight targets, the NT target being seen as less similar than the NN target (t (60) = 2.12, p < .04). Finally, the NN target was seen to be more similar than the ON target; this difference was only slight, however (t (60) = 1.49, p < .15).

**Discussion**

This study provides clear evidence that the high school girls' negative evaluation of the obese target resulted from their naive assumption that her obesity was caused by a lack of self-control. The obese (ON) girl was seen to be less self-disciplined than the normal-weight (NN) girl. But when her overweight could be attributed to a glandular disorder (OT), the target was not derogated in that way. As predicted, the subjects also reported liking the ON target less than the NN target. But examination of the overall liking index shows that the obese girl with the thyroid problem (OT) was liked almost as much as the NN target and was significantly better liked than the ON target.

It had been predicted that the presence of the thyroid condition would have little influence on subjects' ratings of the two normal-weight targets. However, the data show that the NT target was less liked than the NN target; indeed, the NT target's rating does not differ very much from the extremely low liking reported for the ON target. Why this occurred is not clear. One possibility is that the subjects may have been suspicious of the NT target's "excessive" self-disclosure. Since the thyroid condition affected her physical appearance only in a small way, they may have wondered what prompted her to describe it in such detail. This possibility was addressed by means of a second experiment.
EXPERIMENT 2

A second experiment was conducted to test again the hypothesis that the evaluation of an obese girl by her peers would depend on the explanation they had for the origin of her obesity. The reasons for this were twofold. First, each target girl in Experiment 1 had engaged in high levels of self-disclosure in the personal statement. It was important to see if the same pattern of results would be produced if this were not the case. Second, the obese (ON) target in Experiment 1 painted a rather vivid portrait of obesity in her statement of introduction. Would derogation of this target occur when she simply reported being overweight?

As in Experiment 1, the subjects in this second study were asked to look at an information folder for a participant from an earlier "getting acquainted" study. There were three important differences in procedure between Experiments 1 and 2: (1) In addition to a photograph of the target girl, the folder contained a brief "background information" questionnaire that the girl had supposedly filled out. One question asked about the girl's health; consequently, the information she provided in answer to it could not be seen as reflecting inappropriate self-disclosure. (2) In contrast to the first study, the obese girls reported no recent weight gain, and they did not label themselves in a pejorative way. Instead, they matter-of-factly pointed out that they were extremely overweight. (3) The normal-weight targets did not describe themselves to be pale or "washed out." Thus the NT target simply reported the fact of her glandular disorder, but then described her health as generally excellent.

The design of the first experiment was replicated with the addition of two other conditions. To examine further the hypothesis that derogation of the obese results from assumptions about their inability to exert self-control, some subjects were asked to give their first impressions of an overweight girl who reported a recent 25-pound weight loss over the course of a four-month diet program. Half of those subjects were informed that the obesity had originated with a thyroid condition. Thus the final design was a $2 \times 3$ factorial, with three levels of target weight (Obese, Obese/Losing Weight, Normal-Weight) and presence versus absence of a thyroid condition as the second factor. It was predicted that the obese targets reporting a thyroid problem or a recent weight loss would be more positively evaluated and better liked than the ON target. Given the unexpected results in Experiment 1, no prediction about the impact of the thyroid condition on the ratings of the two normal-weight targets was made.

Method

Subjects. The subjects were 162 high school girls from the Palo Alto School District, ranging in age from 14 to 18 years. As in the first study, almost all of the subjects were normal-weight, only three being at the 97th percentile of weight for their age or higher. Interestingly, most of the girls in the study felt that they needed to lose some weight. In a background information questionnaire given at the end of the study, 87% listed their ideal weight to be lower than their current weight (cf. Dwyer et al., 1967; Dwyer and Mayer, 1968–1969). Again, subjects were paid for their participation.

Procedure. The subjects were run in groups consisting of up to five persons; as in the first study, each subject was seated in an isolation booth during the experiment. A female experimenter introduced the experiment as a study of first impressions, the subjects' job being to give their opinions of two participants from an earlier "getting acquainted" study. As in Experiment 1, the subjects were asked first to examine a standard folder for a normal-weight girl. Enclosed in the folder was a photograph of the girl and a one-page questionnaire that she had supposedly filled out. One of three available photographs was used, one-third of the subjects being assigned randomly to see each one; the answers the girl ostensibly provided were designed to portray her as an average high school student. Again, subjects were asked to give their impressions of this non-target girl to make the cover story for the experiment more believable and to give the subjects practice with the questionnaire.

After completing the first questionnaire, the subjects were given a second folder to examine. This folder also contained a photograph of a high school-aged girl and a completed back-
ground questionnaire that she supposedly had filled out. The subjects were assigned randomly to see one of six folders that varied according to a 2 x 3 factorial design. One-third of the subjects were asked to look at a folder for an obese peer; her height was listed at 5'5", and her weight was said to be 190 pounds. Half of the subjects seeing this folder were told that the girl had a thyroid problem which had caused her weight problem. One-third of the subjects also saw a folder for an obese girl, but the girl mentioned that she had lost 25 pounds in the last four months, bringing her down to her present weight of 190 pounds. Again, half of the subjects seeing this folder learned of the girl's glandular problem and its effect on her weight. Finally, one-third of the subjects were shown a folder for a normal-weight girl, 5'5" tall and weighing 110 pounds. Half of the subjects seeing this folder were told that the girl had a thyroid problem, but that it caused no serious health problems for her. Twenty-seven subjects were assigned to each experimental condition.

The manipulation of presence versus absence of the thyroid condition was introduced through the girl's response to a question about the present state of her health. Aside from height and weight, the target girl's responses to all other questions were identical across the six experimental conditions. The target girl's description of her health for each of the conditions is listed below:

Obese/Non-Thyroid Target (ON):
I have become extremely overweight, but otherwise my health is excellent.

Obese/Thyroid Target (OT):
I have a minor glandular problem (my thyroid), and this has made me become extremely overweight, but otherwise my health is excellent.

Obese (Losing Weight)/Non-Thyroid Target (LN):
I am extremely overweight, but with this new diet, I've lost 25 pounds in the last four months. Otherwise, my health is excellent.

Obese (Losing Weight)/Thyroid Target (LT):
I have a minor glandular problem (my thyroid), and this causes me to be extremely overweight. But with this new diet, I've lost 25 pounds in the last four months. Otherwise, my health is excellent.

Normal-Weight/Non-Thyroid Target (NN):
My health is excellent.

Normal-Weight/Thyroid Target (NT):
I have a minor glandular problem (my thyroid), but otherwise my health is excellent.

Photographs of three obese girls and three normal-weight girls were available; within each condition, one-third of the subjects were assigned randomly to see one of the three pictures appropriate to that condition. As in Experiment 1, a preliminary analysis was conducted to check for differences between the three pictures of the obese target and between the three pictures of the normal-weight target. For both sets of photographs, no statistically significant interactions between the experimental conditions and the photographs used were found. Thus, for ease of presentation, the data were collapsed across the variable of photograph used.

Dependent measures. The questionnaire that subjects were instructed to use in giving their first impressions of the target girls was divided into three parts. In the first part, subjects were asked to use 14-centimeter, continuous-line scales to rate the girls on eight dimensions: warmth and friendliness; happiness and self-confidence; self-indulgence, self-discipline, and laziness; and, finally, physical attractiveness. For each trait, the endpoints were labeled "very" and "not very."

In the second section of the questionnaire, four questions were included to assess the subjects' liking for the target girls. Three of the questions were identical to those used in the first study; the additional question included was: "Do you think you would enjoy being in a 'getting acquainted' study with this person?"

In addition, subjects were asked to say how similar they believed the targets were to themselves.

In the third section, subjects were asked to evaluate the targets using nine semantic differential scales (Osgood et al., 1957), which had been selected to load on the factors of evaluation (clean–dirty, good–bad, and sweet–sour); potency (masculine–feminine, strong–weak, and severe–lenient); and activity (active–passive, fast–slow, and sharp–dull).

After completion of that questionnaire, the
Subjects were asked to describe the true purpose of the experiment as a check for suspicion about the cover story. They also were asked to provide their age, height, weight, and what they considered to be their "ideal weight." Finally, the subjects were instructed not to discuss the experiment with their friends at school. Two months after all of the subjects had been run, they received a letter explaining the experimental hypotheses and the need for the relatively mild deception that had been employed.

Results

Self-control measures. The subjects were asked to rate the targets on the dimensions of laziness, self-indulgence, and self-discipline. These measures were more highly correlated than in Experiment 1, but the strength of those relationships was still surprisingly low. Again, the laziness and self-discipline measures were moderately correlated (r_{xy} = -.37), and their relationship to the rating of the targets' self-indulgence was quite modest (r_{xy} = .21 and -.15 respectively).

The mean ratings assigned each of the six targets on these three measures are listed in Table 2; results for analyses of variance on the measures are reported in Table 3. Examination of Table 2 first reveals that the ON target was seen as having less self-control than the Normal-Weight/Non-Thyroid (NN) target. Planned comparisons were found to be significant: laziness, t (156) = 3.48, p<.001; self-indulgence, t (156) = 1.90, p<.06; and self-discipline, t (156) = 3.45, p<.001.

It had been predicted that the obese targets who were losing weight or who had a thyroid condition would be more favorably evaluated on these measures of self-control than would the ON target. To test this prediction, a series of planned contrasts that compared the ON target to the other obese targets was executed (df = 1,156): self-indulgence, F = 7.09, p<.009; self-discipline, F = 8.90, p<.004; and laziness, F = 2.12, p < .15. No specific predictions about possible differences between the two normal-weight targets had been made; in fact, ratings of those two targets' self-control did not differ significantly (t<1 in all instances).

Liking measures. Four items on the first-impression questionnaire were designed to assess the subjects' liking for the targets. It was predicted that (1) the ON target would be liked less than the NN target, and (2) the ON target would be liked less than the other three obese targets (OT, LN, and LT). All four liking measures were highly correlated (alpha coefficient = .88); because of this, an overall liking index was formed by taking their sum. The mean scores for this index are listed in Table 4; results of the analysis of variance are reported in Table 3. The ON target received the most unfavorable overall liking score, but it was not significantly different from that given the NN target (t<1). Furthermore, a planned comparison between the scores for the ON target and the three other obese targets also failed to reach significance (F<1). Examination of Table 4 shows that the NT target was the most liked; in fact, a post hoc comparison between

### TABLE 2. Mean Ratings of the Target Girls for Measures of Self-Control (Experiment 2)

<table>
<thead>
<tr>
<th>Measures</th>
<th>ON</th>
<th>OT</th>
<th>LN</th>
<th>LT</th>
<th>NN</th>
<th>NT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-indulgence</td>
<td>10.56</td>
<td>7.26</td>
<td>9.44</td>
<td>9.11</td>
<td>8.85</td>
<td>8.00</td>
</tr>
<tr>
<td>Self-discipline</td>
<td>6.04</td>
<td>9.44</td>
<td>7.15</td>
<td>8.67</td>
<td>9.41</td>
<td>8.93</td>
</tr>
<tr>
<td>Laziness</td>
<td>8.37</td>
<td>7.44</td>
<td>7.63</td>
<td>6.96</td>
<td>5.37</td>
<td>5.85</td>
</tr>
</tbody>
</table>

a Subjects' responses were measured on a continuous-line rating scale to the nearest centimeter: 1 = "not very"; 14 = "very."

b ON = Obese/Non-Thyroid; OT = Obese/Thyroid; LN = Obese (Losing Weight)/Non-Thyroid; LT = Obese (Losing Weight)/Thyroid; NN = Normal-Weight/Non-Thyroid; NT = Normal-Weight/Thyroid.

df = 2,156. F_{156} = 3.06; F_{156} = 4.75.

c df = 1,156. F_{156} = 3.90; F_{156} = 6.80.
TABLE 4. Mean Scores for the Target Girls on the Overall Liking Index (Experiment 2)

<table>
<thead>
<tr>
<th>Thyroid Condition</th>
<th>Target Weight</th>
<th>Obese</th>
<th>Obese/Losing Weight</th>
<th>Normal-Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td></td>
<td>28.70</td>
<td>31.07</td>
<td>29.11</td>
</tr>
<tr>
<td>Present</td>
<td></td>
<td>30.89</td>
<td>29.41</td>
<td>36.04</td>
</tr>
</tbody>
</table>

Note: Scores are sums of the four liking measures: 4 = "probably not"; 56 = "definitely yes."

the two normal-weight targets was significant (t (156) = 1.97, p<.05).

Semantic differential items. Subjects had been asked to assess the targets using nine semantic differential scales that had been preselected to load on the three orthogonal factors of evaluation, potency, and activity. However, when the targets' ratings on these scales were subjected to a factor analysis (varimax rotation), only two principal factors emerged; based on that result, two indices were formed. First, a "goodness" index was calculated by taking the sums of the three evaluation items (good-bad, clean-dirty, and sweet-sour), plus the masculine-feminine score (corrected for direction of scoring); alpha coefficient for this index equals .74. Second, a "dynamism" index (cf. Osgood et al., 1957) was formed by taking the sums of four items: active-passive, fast-slow, sharp-dull, and strong-weak; alpha coefficient for this index equals .81. The severe-lenient scale did not load highly on either of these two factors.

The mean scores on the goodness index for each of the six targets are presented in Table 5; the analysis of variance is reported in Table 3. These findings emerge: (1) The ON target was rated somewhat more negatively than the NN target (t (156) = 1.56, p<.12). (2) The ON target was evaluated more negatively than the other three obese targets; this planned comparison was significant (F (1,156) = 6.89, p<.01). (3) The NT target was rated more positively than the NN target, though this difference was very small (t (156) = 1.22, NS).

The ON target was seen as less "dynamic" than the NN target (t (156) = 2.23, p<.03), but did not differ significantly from the other three obese targets (planned comparison F<1). Importantly, a two-way analysis of variance revealed a significant main effect due to the variable of target weight (F (2,156) = 5.43, p<.01); a specific post hoc comparison between the four obese and the two normal-weight targets was significant (F (1,156) = 10.33, p<.002). These results indicate that subjects perceived the physical limitations of obesity to be the same, regardless of its underlying causes.

Other measures. Again, no evidence was found to suggest that high school-aged girls subscribe to the popular stereotype of the "jolly" fat person. On ratings of both warmth and friendliness, a specific comparison between the four obese and the two normal-weight targets proved to be nonsignificant (F<1 in both instances). It is interesting to note a tendency to see the ON target as the least warm of the four obese targets (F (1,156) = 3.09, p<.08), but this was not the case for the ratings of friendliness (F<1).

As in Experiment 1, the normal-weight targets were believed to be happiest, regardless of whether or not a thyroid problem was reported. A two-way analysis of variance showed a main effect for target weight (F (2,156) = 5.63, p<.005); a specific comparison between the two normal-weight and the four overweight target girls was significant (F (1,156) = 11.23, p<.001).

As expected, subjects judged the four obese targets to be less physically attractive than the targets who were normal-weight, the weight main effect being significant (F (2,156) = 7.91, p<.001). However, the two-way analysis of variance revealed an unexpected main effect for presence of a thyroid condition, such that girls with the glandular disorder were rated more attractive (F (1,156) = 8.14, p<.005). This effect was consistent across all three levels of the target weight variable.

Finally, the subjects were asked to indicate how similar to themselves the targets were.

TABLE 5. Mean Scores for the Target Girls on the Goodness Index (Experiment 2)

<table>
<thead>
<tr>
<th>Thyroid Condition</th>
<th>Target Weight</th>
<th>Obese</th>
<th>Obese/Losing Weight</th>
<th>Normal-Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absent</td>
<td></td>
<td>18.67</td>
<td>20.18</td>
<td>20.37</td>
</tr>
<tr>
<td>Present</td>
<td></td>
<td>21.26</td>
<td>21.56</td>
<td>21.70</td>
</tr>
</tbody>
</table>

Note: Scores are sums of the four semantic differential items clean-dirty, sweet-sour, good-bad, and masculine-feminine (corrected for direction of scoring). Higher score means more favorable evaluations; 28 is the highest possible score.
There was a tendency to see the girls with the thyroid condition as more similar than the girls with no such disorder ($F(1,156) = 2.41$, $p < .13$), even for the two nonobese targets. The specific comparison between the NN and NT targets was statistically trivial ($t < 1$), but the difference was in a direction opposite to that reported in Experiment 1.

**CONCLUSION**

Taken together, the results of these two experiments demonstrate that derogation of the obese results from the presumption that such persons are responsible for their physical deviance. Unless the obese can provide an “excuse” for their weight, such as a thyroid condition, or can offer evidence of successful weight loss, their character will be impugned. In both studies, the ON target was seen as less self-disciplined and more self-indulgent than the obese target who reported having a glandular disorder (OT). In Experiment 2, the obese target who claimed a recent 25-pound weight loss was also viewed more positively on those dimensions of self-control, though not nearly so positively as was the OT target.

In Experiment 1, the results for the overall liking index clearly indicated that the subjects would prefer the company of the OT target to that of the ON target. A similar index was formed in the second study, but while the ON target was the least liked of the four obese girls, this difference was statistically trivial. However, a “goodness” (or evaluation) index formed by taking the sum of four semantic differential items did show the ON target to be significantly more negatively regarded than the other three obese girls, especially the OT and LT targets. The semantic differential items are typically considered to be a less obtrusive way of measuring liking for another person, but why the more direct liking measure was relatively insensitive in Experiment 2 is not completely clear. Perhaps subjects could justify being openly hostile toward the ON target in the first study because she had labeled herself as “chunky,” thereby indicating her own disgust with her weight problem. In Experiment 2, such justification was not provided.

The Normal-Weight/Thyroid (NT) target was less liked than the NN target in the first study, but she emerged as the most liked of the six targets in Experiment 2. It had been speculated that the NT target was disparaged for her inappropriate levels of self-disclosure in Experiment 1; the information about the thyroid condition may have been viewed more sympathetically in the second study because of its having been given in response to a direct question. Also, in the second study, the thyroid condition apparently had no important implications for the NT target’s health, whereas the NT target in Experiment 1 claimed the problem caused her to look “washed out,” making it seem like a much more severe, perhaps even stigmatizing, condition.

It can be concluded, then, that the perception of responsibility does play a large role in reactions to the physical stigma of obesity. It is not the mere fact that obese people are physically deviant which causes them to be derogated, but that they are assumed to be responsible for their deviant status. In this respect, the obese have much more in common with those who possess a characterological stigma than those who are physically handicapped or disfigured.

Because the obese are derogated for their presumed lack of self-control and willpower, at least a vaguely outlined remedy for altering those public attitudes can be suggested. Quite simply, the fact that obesity is a complicated disorder must be better communicated. The naive theory that overeating and lack of exercise are the sole causes of obesity must be replaced by one that recognizes its complex etiology.

**NOTES**

1. All probability values reported for t-tests are for two-tailed tests of significance.
2. Six subjects indicated that they believed the experimenters were interested in impressions of obese people. By decision rules established before the study, these subjects—3 in the ON condition, 2 in the LN condition, and 1 in the LT condition—were replaced. Note: No subjects had to be replaced in Experiment 1.
3. Individual comparisons between ratings for the ON target and for each of the other three obese targets were calculated for completeness. ON vs. OT: self-indulgence, $t(156) = 3.67$, $p < .001$; self-discipline, $t(156) = 3.48$, $p < .001$; laziness, $t(156) = 1.08$, NS. ON vs. LN: self-indulgence, $t(156) = 1.24$, NS; self-discipline, $t(156) = 1.14$, NS; laziness, $t < 1$. ON vs. LT: self-indulgence, $t(156) = 1.61$, $p < .11$; self-discipline, $t(156) = 2.69$, $p < .01$; laziness, $t(156) = 1.63$, $p < .11$. These analyses confirm that of the three other
obese targets, the LN target was viewed most similarly to the ON target on these dimensions of self-control (see Table 2).

4. Subjects in Experiment 2 were administered the Locus of Control Scale (Rotter, 1966), which measures individual differences in the extent to which people believe there is a connection between their efforts and the rewards or punishments they receive. There is some evidence to suggest that "internals," who see themselves as responsible for their own fates, will extend this notion to other persons when judging their responsibility for certain outcomes (Phares and Lamiell, 1975; Phares and Wilson, 1972; Sosis, 1974). This evidence suggests that internals might judge the obese more harshly than externals, especially when there is no compelling information about coercive situational forces or bodily dysfunction offered in explanation of the obesity. However, no strong association between subjects' I-E scores and their evaluation of the ON target emerged: The correlations with subjects' locus of control for the liking index and the goodness index were -.19 and .00 respectively.

5. Individual comparisons between ratings on the goodness index for the ON target and each of the other three obese targets were calculated. ON vs. OT: t (156) = 2.38, p<.02. ON vs. LN: t (156) = 1.39, p<.17. ON vs. LT: t (156) = 2.65, p<.009. Of the three other obese targets, the LN target was viewed most negatively, differing the least from the ON target on the goodness index.

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