OBESITY IN THE LABOR MARKET:

IMPLICATIONS FOR THE LEGAL SYSTEM

By

Jennifer Hope Bennett Shinall

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Approved:

Professor James Blumstein

Professor Joni Hersch

Professor Larry Van Horn

Professor W. Kip Viscusi

To my yoga students, who inspired me to think about how weight affects our everyday lives;

To my Mom, who has read every essay, term paper, thesis, and now dissertation that I have ever written;

To my Dad, who taught me the math skills necessary to complete this dissertation;

and

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TABLE OF CONTENTS

Appendix

LIST OF TABLES

APPENDIX B

LIST OF ABBREVIATIONS

ADA: Americans with Disabilities Act

ADAAA: Americans with Disabilities Act Amendments Act

ADEA: Age Discrimination in Employment Act

ALJ: Administrative Law Judge

ATUS: American Time Use Survey

BMI: Body Mass Index

BLS: Bureau of Labor Statistics

BRFSS: Behavioral Risk Factor Surveillance System

BFOQ: Bona Fide Occupational Qualification

CDC: Centers for Disease Control and Prevention

CPS: Current Population Survey

CPS-ATUS-EHM: Data file combining the CPS, ATUS, and EHM

CPS-ATUS-EHM-O*NET: Data file combining the CPS, ATUS, EHM, and O*NET

DOT: Dictionary of Occupational Titles

EEOC: U.S. Equal Opportunity Employment Commission

EHM: Eating and Health Module

FMLA: Family and Medical Leave Act

GLF: Gay Liberation Front

LGBT: Lesbian, Gay, Bisexual, and Transgendered

MEOC: Madison Equal Opportunities Commision

MIDUS: National Survey of Midlife Development in the United States

NAAFA: National Association to Advance Fat Acceptance

NHANES: National Health and Nutrition Examination Survey

NLSY: National Longitudinal Survey of Youth

OHR: Office of Human Rights

OLS: Ordinary Least Squares

SFHRC: San Francisco Human Rights Commission

SOC: Standard Occupational Classification

SOS: Swedish Obese Subjects Study

UHRO: Urbana Human Relations Officer

INTRODUCTION

In 2011, the British medical journal *The Lancet* referred to the rising obesity rates across the world as a "pandemic."[1] Here in the United States, the pandemic's global epicenter, obesity has been associated with many negative health outcomes, such as hypertension, high cholesterol, type two diabetes, respiratory problems, and osteoarthritis.[2] But as with any pandemic, obesity's effects extend far beyond health outcomes.

This dissertation considers just one element of obesity's far-reaching effects: the impact of obesity on the labor market. Many scholars have previously examined this relationship, and this dissertation certainly builds on the previous work. What makes this dissertation different, however, is that it reconsiders obesity in the labor market from a legal point of view. Like previous authors, I examine how obesity has impacted the labor market. But unlike previous authors, I am also able to consider how the legal system has responded to obesity in past, and how the legal system should respond to obesity in the future.

Much of the previous work on obesity in the labor market comes from economists. These economists have demonstrated that obese workers earn less than non-obese workers, but they have not been able to explain why—especially for women.[3] The poor labor market outcomes of the obese could result from obese people keeping

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[1] Editorial, "Urgently Needed: A Framework Convention for Obesity Control," *The Lancet* 378 (27 Aug. 2011): 741.
[2] National Institutes of Health, *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report*, NIH Publication No. 98-4083, last modified Sep. 1998, http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf.
[3] See Chapter I for a discussion of these papers.

themselves out of certain jobs (a labor supply issue). On the other hand, the poor labor market outcomes of the obese could result from employers keeping obese people out of certain jobs or paying obese people less money to perform the same jobs (a labor demand issue).

Chapter I addresses this question. Previous papers have compared the occupation and industry breakdowns of obese workers to non-obese workers. Chapter I goes a step further and looks at occupational characteristics. Specifically, Chapter I examines two types of occupational characteristics, physical activity requirements and communication requirements, and examines how obese workers sort into and out of jobs with these characteristics. Men show no signs of sorting by weight into and out of jobs with these characteristics. But women do: the heaviest women are less likely to work in jobs requiring communication but more likely to work in jobs requiring physical activity. Furthermore, the heaviest women are paid less than lighter women for working in jobs requiring communication. For reasons discussed in Chapter I, these results indicate that labor demand is driving the poor labor market outcomes of obese women. Moreover, these results are consistent with the existence of discrimination against obese women.

Chapter II shifts focus to the legal system. Although the question of whether the obese face discrimination has not been resolved, one U.S. state and six cities have already passed laws protecting the obese in the labor market. In addition, one Federal circuit recognizes obesity as a disability for the purposes of the Federal Rehabilitation Act (FRA), which protects individuals who work for the Federal government, Federal contractors, and entities receiving Federal funds,[4] and the Americans with Disabilities

[4] *Federal Rehabilitation Act*, *U.S. Code*, vol. 29, secs. 705-794a (2012).

Act (ADA), which protects individuals who work anywhere else.[5] Chapter II asks if any of these laws have been effective in improving employment outcomes for the obese. The results in this Chapter indicate that only two cities have successfully enforced their laws. Weak enforcement processes have paralyzed the other five local laws and the Federal disability laws.

After examining how the law has previously responded to obesity in Chapter II, Chapter III considers how the law should respond to obesity in the future. Chapter III argues that the new evidence from Chapter I combined with previous evidence from the economics and psychology literature strongly supports the hypothesis that the obese face discrimination in the labor market. For this reason, Chapter III advocates making weight the next protected class under Title VII of the Civil Rights Act. Since its passage in 1964, Title VII has recognized five protected classes: race, sex, color, religion, and national origin.[6] Chapter III argues that weight should be the sixth protected class. Nevertheless, Chapter III recognizes that passing another Federal anti-discrimination law may fail to help the obese as long as Federal discrimination claims continue to be enforced in their current manner. As a result, Chapter III also proposes major changes to the current Federal administrative and adjudicative processes. These changes will not only help future protected classes seek redress for their claims, but they will also help currently protected classes seek redress for their claims. Thus, this chapter advocates these administrative changes regardless of whether Congress decides to make weight the next protected class.

[5] *Americans with Disabilities Act*, *U.S. Code*, vol. 42, secs. 12101-12213 (2012).
[6] *Title VII of the Civil Rights Act of 1964*, *U.S. Code*, vol. 42, sec. 2000e (2012).

Before proceeding with this study of obesity's interaction with the labor market and the legal system, I pause briefly to introduce the measurement of obesity upon which this entire dissertation relies: body mass index (BMI). BMI is the most commonly used measurement of an individual's relative size; it is calculated using the following formula:

$$BMI = \frac{weight(kg)}{(height(m))^2} = \frac{weight(lb) \times 703}{(height(in))^2}. \quad (1)$$

In medical, economics, and psychology research, authors who use BMI as a measure of relative size group individuals into five standardized groups. These standardized groups classify individuals with a BMI of less than 18.5 as underweight, between 18.5 and 24.9 as normal weight, between 25.0 and 29.9 as overweight, between 30.0 and 39.9 as obese, and 40 or greater as morbidly obese.[7] I adopt these standardized BMI classification groups throughout the empirical studies presented in Chapters I and II. With these BMI classification groups in mind, I turn now to my study of obesity and occupational characteristics presented in Chapter I.

[7] Mayo Clinic Staff, "Obesity: Definition," *Mayo Clinic Online*, last modified 2012, http://www.mayoclinic.com/health/obesity/DS00314.

CHAPTER I

WHY OBESE WORKERS EARN LESS: NEW EVIDENCE OF OCCUPATIONAL SORTING

Introduction

It is well documented that obese individuals earn less than non-obese individuals in the labor market. Gortmaker et al. (1993), Sargent and Blanchflower (1994), Averett and Korenman (1996), Pagan and Davila (1997), and Behrman and Rosenzweig (2001) were among the first to identify the disparity between the wages of the obese and the non-obese. These papers all demonstrated that a wage disparity remained for obese workers, particularly female obese workers, after controlling for a wide range of potentially confounding factors such as age and educational attainment.[8] Cawley (2004) extended these results, demonstrating that the wage disparity remained for obese women even after controlling for genetic predisposition (using sibling BMI) and after addressing endogeneity concerns that wages may affect BMI (in case lower wages lead workers to consume cheaper, more fattening foods).[9] Not even Cawley, however, could determine what lay behind the remaining wage disparity.

For that reason, most of the recent research on obesity in the labor market has focused on why the obese earn less than the non-obese. Several explanations, mostly

[8] Steven L. Gortmaker et al., "Social and Economic Consequences of Overweight in Adolescence and Young Adulthood," *New England Journal of Medicine* 329 (30 Sept. 1993): 1008-1012; J. D. Sargent and D. G. Blanchflower, "Obesity and Stature in Adolescence and Earnings in Young Adulthood: Analysis of a British Birth Cohort," *Archives of Pediatrics and Adolescent Medicine* 148 (1994): 681-87; Susan Averett and Sanders Korenman, "The Economic Reality of the Beauty Myth," *Journal of Human Resources* 31 (1996): 304-30; Jose A. Pagan and Alberto Davila, "Obesity, Occupational Attainment, and Earnings," *Social Science Quarterly* 8 (1997): 756-70; Jere R. Behrman and Mark R. Rosenzweig, "The Returns to Increasing Body Weight," working paper, Penn Institute for Economic Research, Philadelphia, Pa., 2001.
[9] John Cawley, "The Impact of Obesity on Wages," *Journal of Human Resources* 39 (2004): 451-74.

related to employer demand, have been posited. Cawley et al. (2007), Finkelstein et al. (2005), and Pronk et al. (2004) have all offered evidence that obese workers are more likely to miss work.[10] On the other hand, Bhattacharya and Bundorf (2009) have found that obese workers have higher expected medical costs, and as a result, may drive up their employer's health insurance premiums.[11] While these explanations may account for some of the discrepancy between the wages of the obese and the non-obese, none of these authors have been able to fully account for the discrepancy. Why obese workers earn less than non-obese workers—and particularly why female obese workers earn less than female non-obese workers—is still very much an open question.

As a result, this chapter posits a new explanation for the obesity wage discrepancy: occupational sorting. I present evidence that obese workers are more likely to work in certain types of occupations, and this occupational sorting is most pronounced for women. In order to identify this weight-based occupational sorting, I go beyond simply looking at the names of workers' occupations. Indeed, I look at the particular characteristics and job requirements associated with each occupational classification. The differences in the occupational characteristics of the obese and the non-obese can go a long way in explaining the lower hourly wages of the obese. In particular, morbidly obese female workers, who experience the greatest wage discrepancy in the labor market, sort into occupations with characteristics associated with lower hourly wages. Of course, a variety of supply- and demand-side explanations may underlie this occupational sorting.

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[10] John Cawley et al., "Occupation-Specific Absenteeism Associated with Obesity and Morbid Obesity," *Journal of Occupational and Environmental Medicine* 49 (2007): 1317-24; Eric A. Finkelstein et al., "The Costs of Obesity Among Full-Time Employees," *American Journal of Health Promotion* 20 (2005): 45-51; Nicolaas P. Pronk et al., "The Association Between Work Performance and Physical Activity, Cardiorespiratory Fitness, and Obesity," *Journal of Occupational and Enviornmental Medicine* 46 (2004): 19-25.

[11] Jay Bhattacharya and M. Kate Bundorf, "The Incidence of the Healthcare Costs of Obesity," *Journal of Health Economics* 28 (2009): 649-658.

Although I cannot definitively pinpoint one explanation as the true cause of this occupational sorting, my evidence is able to dismiss some of these explanations and strongly favor others.

This chapter will proceed as follows. I will begin by presenting two models of why obese workers may sort into different occupations than non-obese workers. The first model presents a supply-side explanation, where obese workers wish to avoid occupations with certain characteristics and, as a result, require a sufficient compensating differential in order to accept jobs with these characteristics. In contrast, the second model presents a demand-side explanation, where employers do not want to employ obese workers in occupations with certain characteristics. I then give an overview of the data and methodology necessary to test the validity of these two models. Next, I present the evidence of weight-based sorting by occupational characteristic, and I demonstrate how accounting for this occupational characteristic sorting can help explain the wage discrepancy between the obese and non-obese. After presenting four robustness checks, I conclude by comparing the occupational sorting evidence to the supply- and demand-side explanations presented at the beginning of the paper and by determining which of these explanations are consistent with the data presented.

Two Models of Occupational Sorting

Before exploring whether workers sort into occupations based on weight, this chapter must first answer a more basic question: Why would workers ever sort into different occupations on the basis of weight? Trends in occupational choices on the basis

of weight may be the result of supply-side effects, demand-side effects, or a combination of the two. This section presents a simple model of both effects and offers examples of how these effects might manifest themselves in the labor market. I begin with an investigation of supply-side effects.

Supply-Side Effects

To model potential supply-side effects, I look to the standard compensating differentials model outlined by Rosen (1986) and adapted to include considerations of specific job characteristics by Krueger and Schkade (2007).[12] Occupations have many characteristics that may or may not depend on weight. This model will focus solely on the job characteristics that do depend on weight. Define c as such a job characteristic, where b represents a worker's BMI:

$$c = f(b). \tag{1}$$

For simplicity, assume that workers derive utility, u, from only two sources: their wages, w, and the characteristics of their job, so that u is a function of w and c (u(w,c)). In this model, workers do not save and consume the entirety of their wages. Thus, w always generates positive utility. For further simplicity, suppose that c takes only two values, 0 (for jobs that lack the characteristic) and 1 (for jobs that have the characteristic).

Now define obesity, O, as the critical value that determines whether c generates positive or negative utility. Note that as a critical value, O need not equal the traditional BMI threshold for obesity (i.e. a BMI of thirty). In reality, the BMI where the relationship between c and b changes signs may be greater or less than thirty. For

[12] Sherwin Rosen, "The Theory of Equalizing Differences," in *Handbook of Labor Economics*, vol. 1, ed. Orley Ashenfelter and Richard Layard (Amsterdam: Elsevier Science Publishers, 1986), 641-92; Alan B. Krueger and David Schkade, "Sorting in the Labor Market: Do Gregarious Workers Flock to Interactive Jobs?" working paper, National Bureau of Economic Research, Cambridge, Mass., 2007.

occupational characteristics that are inversely related to weight (i.e. characteristics that are disfavored by the obese and favored by the non-obese):

$$u(w,1) > u(w,0) \quad if\ b < O, \tag{2}$$

and

$$u(w,1) < u(w,0) \quad if\ b \geq O. \tag{3}$$

Because workers will always choose the job that maximizes their utility, obese workers will choose the job that lacks the characteristic (c=0) unless they are compensated enough to overcome the disutility generated by c=1. Let z be this compensating differential for an individual worker, so that

$$u(w_0,0) = u(w_0 + z,1). \tag{4}$$

Thus, if $w_1 > w_0+z$, an obese worker will accept a job for which c=1, and if $w_1 < w_0+z$, an obese worker will accept a job for which c=0.

Broadening from the individual worker to the entire labor market, let $\Delta W = w_1 - w_0$, or the actual difference in wages between jobs with the characteristic (c=1) and jobs without the characteristic (c=0). Note that ΔW is the same for all workers, regardless of their BMI, but z varies by a worker's BMI. In other words, ΔW is the market-wide compensating differential that is set by the marginal worker. Let the probability density function of z across workers (both obese and non-obese) equal g(z) and the cumulative density function equal G(z). Then the fraction of workers who apply to jobs for which c=1 is

$$\int_0^{\Delta W} g(z)dz = G(\Delta W), \tag{5}$$

and the fraction of workers who apply to jobs for which c=0 is

$$\int_{\Delta W}^{\infty} g(z)dz = 1 - G(\Delta W). \tag{6}$$

In equilibrium, only workers whose z is less than ΔW will work in occupations with the job characteristic c=1. Since z is positive for obese workers, then obese workers will be less likely to work in c=1 occupations than non-obese workers (since not every obese worker's z will be less than ΔW). Of course, this model can be made more complex by allowing c to take a range of values, with higher values of c still inversely related to b. In other words, the more important that characteristic c is to the occupation in question, the more disutility generated for workers in this occupation whose BMI is greater than O. Even with this additional complexity, however, the predictions are quite similar: the higher the value of c, the higher the z required to compensate obese workers for working in that occupation, and as a result, the fewer obese workers in that occupation.

Not only has this idea of compensating differentials been around since the time of Adam Smith,[13] but it also makes intuitive sense: of course, everyone wants additional compensation in return for performing unpleasant tasks. But do compensating differentials really exist in the labor market? Do workers actually enjoy a wage premium for enduring job conditions and characteristics that generate disutility? For many job characteristics, the evidence supports the theory of compensating differentials. The earliest studies confirming the existence of compensating differentials often focused on the tradeoff that workers faced between wages and job risk, as measured by variables such as injury rate and fatality rate.[14] Some of the most thorough analyses in the job risk

[13] Adam Smith, *An Inquiry into the Nature and Cases of the Wealth of Nations*, ed. R. H. Campbell, Glasgow ed., *The Works and Correspondence of Adam Smith* (London: Oxford University Press, 1976), 111.

[14] Note that some earlier studies of compensating differentials found "some clear support for the theory" but with "an uncomfortable number of exceptions," as noted in the literature review by Charles Brown in

compensating differential literature include Smith (1979), Viscusi (1979), Moore and Viscusi (1990), and Viscusi (1998).[15] More recent literature has moved beyond traditional studies of injury and fatality rates and looked for evidence of compensating differentials in exchange for other "disagreeable job characteristics."[16] For example, Hirsch (2005) found evidence that the "large supply of workers preferring part-time hours" and the more pleasant job characteristics of part-time jobs led to a compensating differential for full-time workers (on top of the additional wages they earned by virtue of working more hours than part-time workers).[17] Interestingly, Hersch (2011) even found compensating differentials present in industries with high sexual harassment rates, indicating that workers receive a wage premium in return for a higher probability of encountering sexual harassment in the workplace.[18]

Since previous literature supports the theory that workers will require additional compensation for unpleasant working conditions, the next step becomes identifying the specific occupational characteristics that are unpleasant for obese workers. Two obvious candidates come to mind. The first candidate is an emphasis on physical activity. Obesity is associated with a host of health problems, including higher risks of hypertension, high

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"Equalizing Differences in the Labor Market," *Quarterly Journal of Economics* 94 (Feb. 1980): 118. However, and Greg J. Duncan and Bertil Holmlund demonstrated that many of these "exceptions" were the result of omitted variable bias and measurement error in "Was Adam Smith Right After All? Another Test of the Theory of Compensating Wage Differentials," *Journal of Labor Economics* 1 (Oct. 1983): 366-79.

[15] Robert P. Smith, "Compensating Differentials and Public Policy: A Review," *Industrial and Labor Relations Review* 32 (1979): 572-86; W. Kip Viscusi, *Employment Hazards: An Investigation of Market Performance* (Cambridge, Mass.: Harvard University Press, 1979); W. Kip Viscusi and Michael J. Moore, *Compensation Mechanisms for Job Risks: Wages, Workers' Compensation, and Product Liability* (Princeton: Princeton University Press, 1990); W. Kip Viscusi, *Rational Risk Policy* (Oxford, U.K.: Clarendon Press-Oxford University Press, 1998).

[16] Robert P. Smith, "Compensating Differentials and Public Policy: A Review," *Industrial and Labor Relations Review* 32 (1979).

[17] Barry T. Hirsch, "Why Do Part-Time Workers Earn Less? The Role of Worker and Job Skills," *Industrial and Labor Relations Review* 58 (July 2005): 525-51.

[18] Joni Hersch, "Compensating Differentials for Sexual Harassment," *American Economic Review: Papers and Proceedings* 101 (2011): 630-34.

cholesterol, type two diabetes, respiratory problems, and osteoarthritis.[19] Therefore, being obese may make it more difficult for a worker to perform physical tasks because of reduced stamina, mobility, or reaction time. The toll that physical activity takes on the body may increase with weight, and thus the disutility generated by physical activity may also increase with weight. If true, the amount of money required to compensate obese workers for physical activities on the job would increase with weight, resulting in fewer obese workers in physical occupations.

The second candidate is an emphasis on communication and contact with others. How jobs that place great importance on communication could generate disutilty for obese workers may not be immediately obvious, but in fact some psychology studies have suggested that the obese prefer to avoid social situations. Rothblum et al. (1990) found that being obese was associated with lower self-confidence, which could plausibly lead an obese worker to avoid jobs emphasizing contact and communication with others.[20] Similarly, Miller et al. (1995) discussed the "self-fulfilling prophecy" of weight: the results of surveys such as Tiggeman and Rothblum (1988) and Rothblum et al. (1990) suggested that the obese may avoid interacting with anyone who they fear could react negatively toward their weight as a "self-protective strateg[y]."[21] Myers and Rosen (1999) also reported that the obese may cope with potentially stigmatizing

[19] National Institutes of Health, *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report*, NIH Publication No. 98-4083, last modified Sep. 1998, http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf.
[20] Esther D. Rothblum et al., "The Relationship Between Obesity, Employment Discrimination, and Employment-Related Victimization," *Journal of Vocational Behavior* 37 (1990): 251-66.
[21] Carol T. Miller et al., "Compensating for Stigma: Obese and Nonobese Women's Reactions to Being Visible," *Personality and Social Psychology Bulletin* 21 (1995): 1093-1106; Marika Tiggeman and Esther D. Rothblum, "Gender Differences in Social Consequences of Perceived Overweight in the United States and Australia," *Sex Roles* 18 (1988): 75-86; Esther D. Rothblum et al., "The Relationship Between Obesity, Employment Discrimination, and Employment-Related Victimization," *Journal of Vocational Behavior* 37 (1990): 251-66.

situations through "negative self-talk, isolation and avoidance."[22] Kirkland (2008) found that many of the fat rights activists who responded to her survey reported using the "scanning technique for assessing, surveilling, and planning one's movements through the world to avoid discomfort and humiliation."[23] Some of her respondents even reported not applying for new jobs or switching jobs to avoid a co-worker or boss who made their weight an issue.

Of course, not every obese person runs away from potential problems; the Rothblum et al. (1990) survey also reported that at least some respondents practiced "self love/self-acceptance" and "being visible despite stigma."[24] Similarly, many of the respondents to the Kirkland (2008) survey reported using "positive self-presentation" and "snappy comebacks" to anyone who attacked their weight.[25] In sum, it is unclear from current evidence how many obese people avoid social situations on the basis of their weight (or how many confront social situations head-on). But the evidence suggests that at least some obese people may experience disutility from frequent contact with others, so exploring whether they also avoid frequent contact with others in an employment setting is worth exploring.

If the obese are sorting into certain occupations but not others, the sorting could be the result of pressure from one of two sides. This section has explored the potential pressures of the supply side—that is, why the obese may keep themselves out of certain

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[22] Anna M. Meyers and James Rosen, "Obesity Stigmatization and Coping: Relation to Mental Health Symptoms, Body Image, and Self-Esteem," *International Journal of Obesity* 23 (1999): 221-30.
[23] Anna Kirkland, "Think of the Hippopotamus: Rights Consciousness in the Fat Acceptance Movement," *Law & Society Review* 42 (June 2008): 411.
[24] Esther D. Rothblum et al., "The Relationship Between Obesity, Employment Discrimination, and Employment-Related Victimization," *Journal of Vocational Behavior* 37 (1990): 251-66.
[25] Anna Kirkland, "Think of the Hippopotamus: Rights Consciousness in the Fat Acceptance Movement," *Law & Society Review* 42 (June 2008): 410-412

occupations. In the next section, I will explore the potential pressures of the demand side, or why the obese may be kept out of certain occupations.

Demand-Side Effects

According to the pure supply-side theory, an obese worker requires additional compensation to work in occupations with certain characteristics, which effectively reduces the number of obese people in these occupations. In contrast, the pure demand-side theory assumes that obese workers do not avoid occupations with certain characteristics like an emphasis on physical activity or communication. The demand-side theory instead posits that employers are less willing to hire obese people into occupations with certain characteristics (or at least are not willing to pay obese people as much as non-obese people for the same occupations).

But why would employers care about a person's weight when making hiring decisions and wage determinations? Employers would care if obese people are less productive or cost more to employ. The classical model of wage determination holds that in a perfectly competitive market, the wage rate is set where the marginal cost of labor, wage, is equal to the marginal revenue product of labor. If obese and non-obese workers have the same marginal revenue product and cost the same amount to employ, then employers should be indifferent about whether they hire an obese or a non-obese worker for the job. However, if marginal revenue product of labor for obese workers were actually less than the marginal revenue product of labor for non-obese workers in occupations with certain characteristics, then employers should refuse to hire obese workers for these occupations at the same wage rate as non-obese workers. As long as employers believed that obesity was a sign of lower productivity (whether or not this

belief was erroneous), employers would refuse to hire obese workers for these occupations at the same wage rate as non-obese workers, as shown in the models of statistical discrimination by Phelps (1972), Arrow (1972, 1973), and McCall (1972).[26] Of course, if employers' beliefs about obese workers' productivity were erroneous, then their beliefs (and as a result, the statistical discrimination) would disappear in the long run.[27]

Suppose instead that the marginal revenue product of labor is exactly the same for obese and non-obese workers in all occupations, yet the marginal cost of employing obese workers is higher in occupations with certain characteristics than employing non-obese workers. In mathematical terms, let

$$w_{NO} \leq w_O = w_{NO} + a, \tag{7}$$

where w_{NO} is the marginal cost of employing a non-obese worker, w_O is the marginal cost of hiring an obese worker, and a represents the increase in marginal cost from employing an obese worker in occupations with certain characteristics. For occupations without any of the characteristics in question, a=0, and obese and non-obese workers are interchangeable—they have the same marginal revenue product and the same marginal cost. For occupations with the characteristics, however, a>0, and obese workers are more expensive to employ than non-obese workers. Note that occupations may have both

[26] Edmund S. Phelps, "The Statistical Theory of Racism and Sexism," *American Economic Review* 62 (1972): 659-61; Kenneth Arrow, "Models of Job Discrimination," and "Some Mathematical Models of Race in the Labor Market," in Anthony H. Pascal, ed., *Racial Discrimination in Economic Life* (Lexington, Mass. Lexington Books, 1972): 83-102, 187-204; Kenneth Arrow, "The Theory of Discrimination," in Orley A. Ashenfelter and Albert Rees, eds., *Discrimination in Labor Markets* (Princeton, N.J.: Princeton University Press, 1973), 3-33; John J. McCall, "The Simple Mathematics of Information, Job Search, and Prejudice," in Anthony H. Pascal, ed., *Racial Discrimination in Economic Life* (Lexington, Mass. Lexington Books, 1972): 205-224.

[27] For a discussion of statistical discrimination models, see Glen G. Cain, "The Economic Analysis of Labor Market Discrimination: A Survey," in *Handbook of Labor Economics*, vol. 1, ed. Orley Ashenfelter and Richard Layard (Amsterdam: Elsevier Science Publishers, 1986), 693-785.

characteristics for which weight does matter (and creates an additional cost, a) and characteristics for which weight does not matter. The more characteristics an occupation has for which weight does matter, the higher that a becomes. Firms would not be willing to hire obese workers at as high of a wage rate as non-obese in any occupation where a is positive.

Whether obese workers are less productive in certain occupations or whether they are just more costly to employ, the result is the same: employers will not be willing to pay obese workers as much as non-obese workers for performing these occupations. As a result, obese workers will sort out of occupations that place an emphasis on the characteristics in question and into occupations where these characteristics are less important.[28]

So far, this section has vaguely referred to the occupational characteristics for which weight might matter as "certain characteristics." But what are these certain characteristics? The same two characteristics discussed in the supply-side section, physical activity requirements and communication requirements, could easily create an issue for the obese on the demand side as well. These occupational characteristics could plausibly create issues for the obese in either of the ways described above: obese workers might be less productive in jobs that emphasize these characteristics, or obese workers might be more costly to employ in occupations that emphasize these characteristics.

If obesity lowers a worker's marginal revenue product, then obesity becomes an activity limitation, and thus, resembles a disability. Empirical studies of disability largely confirm the economic theory that, like obese workers, individuals with disabilities have

[28] This demand-side model is loosely based on Gary Becker's model of taste-based discrimination in *The Economics of Discrimination*, 2d. ed. (Chicago: University of Chicago Press, 1971).

worse economic outcomes than individuals without such limitations. For example, Famulari (1992) used a sample of individuals with epilepsy to demonstrate that physical limitations were largely responsible for their lower educational attainment, employment rates, and earnings.[29] Both Loprest and Maag (2003) and Hollenbeck and Kimmel (2008) further demonstrated the direct connection between activity limitations and poor economic outcomes by demonstrating that individuals with late-onset disabilities had a smaller wage gap than individuals with early-onset disabilities. Not only were late-onset disabilities generally less severe, but they also had less potential to interfere with human capital accumulation.[30] Nevertheless, some disability research such as Baldwin and Johnson (1994, 1995, 2000), DeLeire (2001), and Jones et al. (2006) has questioned whether the poor economic outcomes of the disability can be solely attributed to the activity limitations and has attributed at least some of the disability penalty to discrimination.[31] But a recent article by Longhi et al. (2012) attempts to refute these discrimination claims, demonstrating that the disability wage gap in the United Kingdom can largely be explained by lower productivity, and the residuals that remain can mostly be explained by differences in education and occupation.[32] Whether discrimination plays

[29] Melissa Famulari, "The Effects of a Disability on Labor Market Performance: The Case of Epilepsy," *Southern Economic Journal* 58 (Apr. 1992): 1072-1087.
[30] Pamela Loprest and Elaine Maag, *The Relationship Between Early Disability Onset and Education and Employment* (Washington, D.C.: The Urban Institute, 2003); Kevin Hollenbeck and Jean Kimmel, "Differences in Returns to Education for Males by Disability Status and Age of Disability Onset," *Southern Economic Journal* 74 (2008): 707-24.
[31] Marjorie L. Baldwin and William G. Johnson, "Labour Market Discrimination Against Men with Disabilities," *Journal of Human Resources* 29 (1994): 1-19; Marjorie L. Baldwin and William G. Johnson, "Labour Market Discrimination Against Women with Disabilities," *Industrial Relations* 34 (1995): 555-77; Marjorie L. Baldwin and William G. Johnson, "Labour Market Discrimination Against Men with Disabilities in the Year of the ADA," *Southern Economic Journal* 66 (2000): 548-66; Thomas DeLeire, "The Wage and Employment Effects of the Americans with Disabilities Act," *Journal of Human Resources* 35 (2000): 693-715; Melanie K. Jones et al., "Disability, Gender, and the British Labour Market," *Oxford Economic Papers, New Series* 58 (2006): 407-49.
[32] Simonetta Longhi et al., "Interpreting Wage Gaps of Disabled Men: The Roles of Productivity and Discrimination," *Southern Economic Journal* 78 (Jan. 2012): 931- 53.

any role or not, the disability literature does agree that, as economic theory predicts, activity limitations explain a large portion of the lower wages, employment rates, and educational outcomes of the disabled.

If obesity is analogous to a disability, then we would expect to see a similar offset in wages and employment rates in occupations for which obesity created the greatest activity limitations. Again, the existing medical evidence on obesity demonstrates that it is most likely to interfere with physical activities. The evidence from the psychology literature presented in the previous section also suggests that obesity may interfere with communication activities. For the same reasons that obese workers may keep themselves out of occupations that emphasize physical and communication activities (the supply-side effect), employers may also wish to keep obese people out of these occupations (the demand-side effect). Consequently, looking at employment and wages in these occupations should provide greater insight as to what is happening to the obese in the labor market.

In contrast, obesity may not interfere with certain activities, and thus hinder productivity, at all. But obese workers would still experience lower wages and lower rates of employment in certain occupations if being obese created an additional cost for employers in these occupations. Fringe benefits, for example, might be more costly to provide for obese employees. When purchasing individual policies, life and health insurance premiums are generally more expensive for the obese since obesity is associated with higher rates of morbidity and mortality. A large employer who provides insurance may not experience an increase in insurance premiums from hiring an obese worker since the greater morbidity and mortality risk is pooled over a large group of

employees. But a smaller employer might see an increase in premiums. Bhattacharya and Bundorf (2009) investigated this issue and found that obese workers who were covered by private health insurance did see a statistically significant offset in wages. They found no evidence of an offset for obese workers covered by life insurance. The authors then used data on average medical expenditures to argue that the difference between these expenditures by condition for the obese versus the non-obese was greater for women than for men, which they believed explained the larger wage discrepancy experienced by obese women in the labor market. In reality, the data demonstrated quite significant differences in medical expenditures by obese men too. Moreover, even after accounting for the higher medical expenditures for obese women, a large unexplained gap still remained between the wages of obese women and non-obese women. In sum, the authors demonstrated that fringe benefits might explain some of the wage gap, but not the entirety of the wage gap.[33]

If the higher cost of fringe benefits cannot fully explain the wage gap between the obese and the non-obese, then what else could create the additional cost, a, for employers? A possibility considered by many previous authors is discrimination. In fact, John Cawley, the author of the definitive 2004 wage study as well as many other works on obesity, noted in an interview with the *New York Times*, "Based on my reading of the evidence, I think that . . . some part of the obesity wage penalty is due to discrimination."[34] The problem with attributing the obesity wage penalty to discrimination, of course, is that discrimination is not provable in this type of study. In a

[33] Jay Bhattacharya and M. Kate Bundorf, "The Incidence of the Healthcare Costs of Obesity," *Journal of Health Economics* 28 (2009): 649-658.
[34] John Cawley, "Why the Overweight Earn Less," *Room for Debate*, *New York Times Online*, last modified 29 Nov. 2011, http://www.nytimes.com/roomfordebate/2011/11/28/should-legislation-protect-obese-people/the-obesity-wage-penalty.

courtroom setting, an employee suing her employer can prove discrimination by presenting both direct and circumstantial evidence of discriminatory remarks, preferential treatment, and other relevant information. But I am not trying to prove an individual instance of discrimination; instead, I am interested in considering discrimination as a possible hypothesis for the society-wide wage gaps experienced by the obese. In this type of study, which examines the causes of these society-wide wage gaps, discrimination is always the residual hypothesis. As a result, the best that this study or any economics study can do is eliminate all other plausible explanations and speculate (with the help of some anecdotes about actual discriminatory incidents).

Nevertheless, the possibility of discrimination is considered in virtually every paper on obesity in the labor market and even advocated in studies from a distinct, but highly related field: beauty. Most famously, Hamermesh and Biddle (1994) found that "plain people" earn less than "average-looking people," and average-looking people earn less than the "good-looking." The authors also found that plain women lose in more areas than just wages: not only do they marry men with low human capital, but they also have lower labor-force participation rates than average-looking women.[35] Hamermesh and Biddle (2001) extended these results to the market for lawyers.[36] In both papers, the authors found evidence of occupational sorting, with attractive people overrepresented in occupations where beauty was likely to be profitable, such as sales occupations and legal jobs in the private sector. Nevertheless, the authors found that the wage penalties still existed after controlling for these differences in occupation as well as differences in other

[35] Daniel S. Hamermesh and Jeff E. Biddle, "Beauty and the Labor Market," *American Economic Review* 84 (Dec. 1994): 1174-94.
[36] Daniel S. Hamermesh and Jeff E. Biddle, "Beauty, Productivity, and Discrimination: Lawyers' Looks and Lucre," *Journal of Labor Economics* 16 (1998): 172-201.

possible explanatory factors such as age and education. As a result, the authors argued in both papers that taste-based discrimination, although untestable, was to blame for the poor labor market outcomes of the unattractive. In an experimental piece, Mobius and Rosenblat (2006) agreed with Hamermesh and Biddle's argument after finding that more attractive employees earned higher wages even though their skill level was exactly the same.[37] Because obesity and attractiveness are intertwined,[38] defaulting to discrimination to explain the obesity wage gap is appealing. But before even considering discrimination, I must first rule out all of the hypotheses for the obesity wage gap presented above.

In sum, this chapter will test a variety of hypotheses about how occupational sorting of the obese may explain their poor labor market outcomes. Whether the obese sort and how the obese sort into different occupations can tell a lot about why they ultimately earn less than their normal-weight counterparts. The next sections introduce the methodology and data necessary to test these hypotheses.

Empirical Methodology

The previous section hypothesized that if obese workers sort into different occupations than non-obese workers, then the sorting would be most evident in occupations that emphasize communication and physical activity. This sorting could

[37] Markus M. Mobius and Tanya S. Rosenblat, "Why Beauty Matters," *American Economic Review* 96 (Mar. 2006): 222-35.

[38] Although the correlation between obesity and attractiveness seems obvious, Dan-Olof Rooth demonstrated empirically that being obese lowered "attractiveness ratings," particularly for women in "Obesity, Attractiveness, and Differential Treatment in Hiring: A Field Experiment," *Journal of Human Resources* 44 (Summer 2009): 710-35. Similar results are presented in Joni Hersch, "Skin Color, Physical Appearance, and Perceived Discriminatory Treatment," *Journal of Socio-Economics* 40 (Oct. 2011): 671-78.

arise from the supply side (obese people keeping themselves out of certain occupations), the demand side (employers keeping obese people out of certain occupations), or both. If the obese are actually sorting into different occupations than the non-obese, this sorting helps to explain the wage gap between the obese and the non-obese.

This chapter tests these hypotheses in two steps. For simplicity, I explain the two-step model in this section assuming that only two BMI groups, obese and normal weight, exist. Nevertheless, in the actual empirical analysis, I will consider all five medical classifications of BMI: underweight, normal weight, overweight, obese, and morbidly obese. I further assume that two types of job characteristics, communication requirements and physical requirements, exist for the purposes of this section. Later, in the actual empirical analysis, I will consider multiple types of physical and communication characteristics.

For step one, I regress each of the job characteristics on BMI and other controls to determine whether obesity has an effect on occupational choice:

$$J_i = X\beta + \gamma O + \varepsilon . \quad (8)$$

Here, J_i is a rating of how important either physical activity or communication is to the occupation. X is a vector of individual characteristics that commonly play a role in occupational choice, such as education, age, race, and geographical region. O is an indicator variable equal to one when the individual is obese; here, normal weight is the omitted category. Thus, if the theory is correct that obese individuals sort out of occupations that emphasize physical and communication activities, then γ would be less than zero.

If γ is less than zero and evidence of occupational sorting is present, then the next step is to see what role this sorting plays in wage determination. Thus, the second step of analysis requires running the following regression:

$$\ln(wage) = X\beta + \gamma O + \delta_1 J_1 + \delta_2 J_2 + \lambda_1 (O \times J_1) + \lambda_2 (O \times J_2) + \varepsilon . \quad (9)$$

In this conventional wage regression, the dependent variable is the natural logarithm of real wages. X is the same vector of individual characteristics as in equation (8), and O is again an indicator variable equal to one if the individual is obese. The terms J_1 and J_2 are the same ratings used in the first step of how important physical activity and communication are to the occupation. Finally, (OxJ_1) and (OxJ_2) are the interaction terms of obesity with each ratings variable.

In step two, a positive (negative) δ_1 or δ_2 will indicate that occupations that emphasize either physical activity or communication pay more (less) than occupations that do not emphasize these characteristics. A positive (negative) λ_1 or λ_2 will indicate that the obese are paid more (less) than other weight groups for jobs that emphasize physical activity or communication. Finally, a value of γ that is statistically different from zero represents the remaining wage gap for the obese that cannot be explained by variation in individual characteristics or by occupational emphasis on physical and communication activities. In other words, a non-zero value of γ would indicate that obesity (or an omitted variable correlated with obesity) persists as a determinant of wage despite the additional controls for physical and communication activities. With both the wage regression and the job characteristic regression in mind, I now turn to the data necessary to implement them.

Data

Many of the previous studies on obesity and the labor market, including Averett and Korenman (1996), Pagan and Davila (1997), Cawley (2004), and Bhattacharya and Bundorf (2009), have used the National Longitudinal Survey of Youth (NLSY).[39] The reliance on this dataset in the literature has been partially driven by the fact that the NLSY is very comprehensive, collecting data on, among other things, the height, weight, age, education, geographic location, employment status, occupation, wages, and hours worked per week of each respondent and each respondent's siblings. Yet much of the reliance on this dataset has also been driven by the fact that it used to be the only dataset available that collected data on both health and labor market characteristics.

As a result, there has been little documentation of the obesity wage penalty outside of the NLSY. There is no evidence that the NLSY is in any way biased, but it would be nice to show that the obesity wage penalty is not simply an artifact of this dataset. The bigger concern about the NLSY, however, is that most of the respondents are young. The first cohort of the NLSY began in 1979 and included respondents between the ages of fourteen and twenty-one. The oldest respondents are only in their middle ages, and the majority of the observations come from much younger respondents. As a result, it is not known whether the NLSY results are valid for older labor force participants.

[39] Susan Averett and Sanders Korenman, "The Economic Reality of the Beauty Myth," *Journal of Human Resources* 31 (1996): 304-30; Jose A. Pagan and Alberto Davila, "Obesity, Occupational Attainment, and Earnings," *Social Science Quarterly* 8 (1997): 756-70; John Cawley, "The Impact of Obesity on Wages," *Journal of Human Resources* 39 (2004): 451-74; Jay Bhattacharya and M. Kate Bundorf, "The Incidence of the Healthcare Costs of Obesity," *Journal of Health Economics* 28 (2009): 649-658.

Fortunately, a new dataset collects labor market, weight, and height data from respondents of all ages. For over fifty years, the Current Population Survey (CPS) has collected data on employment characteristics (including wages, labor supply, occupation, and industry) and demographic characteristics (including age, sex, race, and education) of randomly selected households. Like the NLSY, the CPS is administered by the Bureau of Labor Statistics (BLS). Although the BLS has administered the CPS since 1940, the BLS began administering an additional questionnaire, the American Time Use Survey (ATUS), to a subset of households participating in the CPS in 2003. The ATUS "provides nationally representative estimates of how, where, and with whom Americans spend their time, …providing data on the full range of nonmarket activities, from childcare to volunteering."[40] Yet even though the ATUS provides all this detail, it still does not provide information on respondents' height and weight.

A supplement to the ATUS, the Eating and Health Module (EHM), opportunely filled in this gap within the ATUS from 2006 to 2008. The EHM asked ATUS respondents additional questions about their eating habits, meal preparation, and overall health. More importantly for this study, the EHM asked respondents for their height and weight. When all three datasets are matched, they provide information on each respondent's weight, height, demographic characteristics, employment status, wages, industry, and occupation. Although all of the relevant information for this study comes from the CPS and the EHM questionnaires, the ATUS data is required to link the CPS

[40] Bureau of Labor Statistics, "Overview," *American Time Use Survey*, last modified 22 June 2011, http://www.bls.gov/tus/overview.htm#1.

and the EHM, so the matched data will be referred to hereafter as the CPS-ATUS-EHM data.[41]

Summary statistics on weight categories and demographic characteristics are presented for the CPS-ATUS-EHM data by gender in Table 1. The sample contains more women than men, but the women and men are almost identically educated (with 71.77 percent of women completing at least some college, and 71.70 percent of men completing at least some college). The men in the sample are generally heavier than the women: almost half of women are normal weight, while almost half of men are overweight. Finally, the age statistics demonstrate that this dataset can adequately address the biggest weakness of the NLSY: the lack of older people. In the CPS-ATUS-EHM, the respondents are almost equally divided between the 18-to-40 age range (the sole focus of the NLSY) and the 41-to-65 age range.

Tables 2 and 3 begin to address the subject of this paper: occupational sorting. These tables present the major occupation and industry summary statistics by gender and BMI classification. Appendix A provides additional details on the specific CPS industry and occupation variables used in this chapter. Tables 2 and 3 also present the results of Bonferroni multiple comparison tests of statistical difference between the industry and occupation distribution of each weight group. For men, very few trends emerge, but

[41] A note on interview timing and the matching process: I match the CPS respondent file data to the EHM data using the ATUS-CPS link file. The CPS interviews participants for four consecutive months. After their first four interviews, participants are not contacted for the following eight months and are out of the CPS. Once eight months have expired—a year after being contacted for the initial interview—participants are interviewed again for four consecutive months. The CPS data that I use for the purposes of this paper comes from their exit interview conducted in the final (sixteenth) month. CPS participants are selected randomly after their exit interview to participate in the ATUS and EHM. ATUS and EHM participants respond to the ATUS and EHM two months after completing their CPS exit interview. In sum, two months pass between the collection of the CPS data and the EHM data used in this paper. As a result, it is possible that a respondent could have lost a job, changed jobs, or changed wages in the two months between the CPS exit interview and the EHM, which would introduce measurement error. Yet because only two months pass between interviews, any measurement error should be very small.

perhaps the most noticeable trend is the steep, statistically significant decline in leisure and hospitality industry participation as BMI increases. The occupation and industry distribution for men in the underweight group is often quite different than the distribution for all other weight groups, but much of this difference is likely attributable to the small sample of only forty underweight men. For women, several trends are visible. Interestingly, participation in the educational and health services industry and the public administration industry actually increases with BMI. Participation in service occupations and office and administrative support occupations similarly increases with BMI, but participation in sales occupations declines as BMI increases.

Even though several statistically significant trends emerge from this data, particularly from the women's data, it is still not clear that any occupational or industry sorting occurs by BMI. More importantly, the model section of this chapter argued that if sorting occurred at all, it would be most visible in occupations that emphasized communication and physical activities. The major industry and occupation names reveal very little about the communication and physical requirements of these jobs. A more detailed industry and occupation breakdown have more detailed names, but still these more detailed names would reveal very little about the actual skills required for each job.

The CPS-ATUS-EHM does not contain any information on occupational skill requirements. Fortunately, another dataset does. The Occupational Information Network (O*NET), administered by the Department of Labor, provides objective ratings[42] of a

[42] As in most of the compensating differentials literature, this paper uses objective measures of occupational characteristics to test for the presence of compensating differentials. In reality, whether I use individuals' subjective ratings of their occupational characteristics or more general objective measures like O*NET should not matter, as seen in Joni Hersch and W. Kip Viscusi, "Cigarette Smoking, Seatbelt Use, and Differences in Wage-Risk Tradeoffs," *Journal of Human Resources* (Spring 1990): 202-27. Hersch and Viscusi found evidence of compensating differentials for job risk even though subjective ratings were used.

wide variety of occupational characteristics and skill requirements, including communication and physical activity requirements. O*NET was developed in 1998 as a replacement to the Dictionary of Occupational Titles (DOT). Not only does O*NET include more occupations than the DOT in its job characteristic ratings, but it also boasts more categories of job characteristic ratings. On a scale of one (not important) to five (essential), O*NET rates physical characteristics such as importance of performing general physical activities, importance of speed of limb movement, importance of stamina, importance of explosive strength, importance of dynamic strength, importance of static strength, and importance of trunk strength.[43] Similarly, O*NET rates communications characteristics like importance of communicating with persons outside the organization, importance of communicating with supervisors, peers, or subordinates, how much contact with others is required by the job, importance of establishing and maintaining interpersonal relationships, importance of performing or working directly with the public, and importance of selling or influencing others, all on a scale of one to five.[44]

O*NET ratings are based on occupation, so the only way to match the O*NET ratings to the CPS-ATUS-EHM data is through occupational codes. O*NET uses its own numerical classification system that is closely related to the Standard Occupational

[43] Dynamic strength is the "ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue." Explosive strength is the "ability to use short bursts of muscle force to propel oneself (as in jumping or sprinting), or to throw an object." Static strength is the "ability to exert maximum muscle force to lift, push, pull, or carry objects." Trunk strength is the "ability to use your abdominal and lower back muscles to support part of the body repeatedly or continuously over time without 'giving out' or fatiguing." Department of Labor, "O*NET Data Descriptors: Abilities—Physical Abilities," *O*NET Online*, last accessed 06 Feb. 2012, http://www.onetonline.org/find/descriptor/browse/Abilities/1.A.3.

[44] Notably, the O*NET communications ratings do not distinguish individuals whose job requires a high level of communication in person from individuals whose job requires a high level of communication over the phone or the internet. Determining how method of communication impacts the relationship between obesity and communications job requirements is a ripe area for future research.

Classification System (SOC), while the CPS-ATUS-EHM data uses U.S. Census codes. Thus, matching the datasets requires a crosswalk from one classification system to the other. A direct crosswalk from Census codes to SOC codes does not yet exist, so the matching process required two steps. I first matched the O*NET codes to the 2010 SOC codes using a crosswalk available from the O*NET website.[45] To match the SOC codes to the Census codes, I used a crosswalk available from the Census website.[46] Most of the occupations matched directly; however, I manually matched the few Census occupations that did not match directly to the most closely related O*NET occupation. The summary statistics for the matched CPS-ATUS-EHM-O*NET data are presented by weight group in Table 4 for men and Table 5 for women.

The summary statistics in Tables 4 and 5 present the means of all variables of interest, including the means of the six communication variables and the seven physical activity variables. As in the original O*NET data, I retain the original ordinal rating scale from one to five in accordance with previous authors using the O*NET data, such as Hirsch (2005).[47] For those troubled by treating this ordinal rating scale as an interval scale, however, I present a robustness check of my main results at the end of the chapter using a modified, three-tier rating scale (low, medium, and high).

Looking first at the men in Table 4, the underweight and normal weight men are noticeably younger than the heavier men, and many of these characteristics differ significantly by weight category. Morbidly obese men are more concentrated in the

[45] Department of Labor, "Crosswalk Search," *O*NET Online*, last accessed 06 Feb. 2012, http://www.onetonline.org/crosswalk/.
[46] U.S. Census Bureau Housing and Household Economic Statistics Division, "Industry and Occupation: Codes and Crosswalks," *U. S. Census Bureau Online*, last modified 07 Dec. 2011, http://www.census.gov/hhes/www/ioindex/crosswalks.html.
[47] Barry T. Hirsch, "Why Do Part-Time Workers Earn Less? The Role of Worker and Job Skills," *Industrial and Labor Relations Review* 58 (July 2005): 525-51.

South, while underweight men are more concentrated in the West. A quarter of the underweight men are Hispanic. Underweight men earn remarkably lower real hourly wages than the other weight groups, with normal weight and overweight men earning the highest real hourly wages. Throughout this paper, I define wages as the natural logarithm of real hourly wages in 2008 dollars. The CPS collects weekly earnings information from all respondents; it only collects hourly wage information from workers paid by the hour. The problem with weekly earnings data, of course, is that it contains both wage and labor supply information. As a result, I use the hourly wage data available for hourly workers, and I convert the weekly earnings data available for all other workers into hourly wage data by dividing weekly earnings by hours worked. I multiply the wages of workers whose wages were top coded by 1.5.[48] Finally, I use the Consumer Price Index to convert the hourly wages of respondents from 2006 and 2007 into 2008 dollars.

With regards to the main variables of interest, the communication and physical activity job characteristics, few trends are notable. Interestingly, morbidly obese men have the highest average ratings for every communications variable, meaning that they work in jobs that emphasize communications most. Underweight men and obese men have the highest average ratings for physical activity, meaning that they work in jobs that require the greatest amount of physical activity. Nonetheless, very few of the differences in ratings for men by BMI group are statistically significant, and the ones that are statistically significant do not follow a consistent pattern.

[48] This treatment of top coding is customary among authors who use the CPS. See, for example, Lawrence F. Katz and David H. Autor, "Changes in the Wage Structure and Earnings Inequality," in *Handbook of Labor Economics*, vol. 3A, ed. Orley Ashenfelter and David Card (Amsterdam: Elsevier Science Publishers, 1999), 1463-1558.

The trends for women in Table 5, however, are much clearer. For almost every variable, morbidly obese women are statistically different from normal weight women (see Bonferroni test "3"). The means for years of education and age are statistically different for almost every group, with obese and morbidly obese women having the highest average ages but the fewest years of education. Obese and morbidly obese women are highly concentrated in the South, and blacks are overrepresented in these two largest BMI groups. Nevertheless, underweight women have the lowest average real hourly wages. Perhaps the most striking trends, however, are visible in the primary variables of interest, the communication and physical activity ratings. For all six communication variables, the trend is consistent: the average rating is highest for normal weight women and steadily decreases as a woman moves up in BMI classification. The ratings differences are always statistically different for morbidly obese women compared to normal weight women, obese women compared to normal weight women, and overweight women compared to normal weight women (see Bonferroni tests "3," "6," and "8"). In contrast, the physical activity ratings follow exactly the opposite trend: the average rating is lowest for normal weight women but highest for morbidly obese women. With the exception of the speed of limb movement variable, the average ratings for morbidly obese women are always statistically different than the average ratings for normal weight women (see Bonferroni test "3").

The consistency of the trends for women in the occupational characteristic ratings is remarkable. Still, the summary statistics demonstrate that larger women differ from smaller women in more than just occupational characteristics. Therefore, before drawing any inferences about whether weight is causing this occupational sorting in the labor

market, I must first control for these other differences. The next section implements these controls through regression analysis.

Results

As outlined in the previous two sections, my analysis requires two steps. First, I regress each job characteristic on individual characteristics and BMI classification to look for evidence of occupational sorting. Second, if evidence of occupational sorting exists, I regress wages on individual characteristics, BMI classification, job characteristics, and interaction terms between BMI classification and job characteristics. The O*NET data allows me to consider six types of occupational characteristics related to communication and contact and seven types of occupational characteristics related to physical activity. My analysis also treats members of each BMI classification (underweight, normal weight, overweight, obese, and morbidly obese) separately.

The results of step one are presented in Tables 6 through 9. Tables 6 and 7 present the six communication ratings regression results for men and women, respectively, while Tables 8 and 9 present the seven physical activity ratings regression results. These tables report only the variables of interest, the BMI classifications. The top section of each table reports the ordinary least squares (OLS) results. In many of the regressions, the coefficients for the overweight and obese groups are similar in sign, magnitude, and significance level. Thus, I test whether the overweight coefficient is equal to the obese coefficient, and for most regressions, I cannot reject the hypothesis that

the coefficients are equal. Thus, in the middle of each table, I present the OLS results again with the overweight and obese groups pooled.

The bottom of each table repeats my preferred specification with overweight and obese individuals pooled using ordered probit analysis. Because my dependent variables are ordinal rating scales from one to five, OLS is not consistent and cannot constrain predicted values between one and five. Thus, the more appropriate regression technique is ordered probit, a type of maximum likelihood estimation.[49]

All three sets of regressions—OLS, pooled OLS, and pooled ordered probit—report the marginal effects. For example, according to Table 7, being morbidly obese decreases the importance that a woman's occupation places on communication with persons outside the organization rating between 0.094 points and 0.117 points. This decrease does not seem like much, but it is important to remember that these ratings are only scaled from one to five. The wage regressions in step two of the analysis will also be better able to explain how this rating decrease translates into wages.

Although the exact meaning of the results may be difficult to grasp, the pattern in the results for morbidly obese women is still striking. In Table 7, the coefficients on morbid obesity are all negative, statistically significant, and larger in magnitude than for any other weight group.[50] No matter how importance of communication and contact with others is measured, morbidly obese women are less likely to work in occupations that emphasize these factors. Indeed, the pattern begins to emerge as a woman gets heavier.

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[49] William H. Greene, *Econometric Analysis*, 6th ed. (Upper Saddle River, N.J.: Pearson Prentice Hall, 2008), 831-35.

[50] The lone exception is the coefficient on morbid obesity in the importance of performing for or working directly with the public ordered probit pooled regression. Although this coefficient is not statistically significant, it is close to 10 percent significance and has the same sign and magnitude as the morbid obesity coefficients in the other regressions.

After overweight and obese women are pooled, they too appear less likely to hold jobs that emphasize communication and contact with others. Still, the evidence of occupational sorting for morbidly obese women is the strongest: the magnitude of the morbid obesity coefficients is over twice as large as the magnitude of the significant overweight/obese coefficients. Together, the results indicate that the heavier the woman, the less likely she is to work in an occupation that emphasizes communication and contact with others.

Surprisingly, the opposite pattern emerges for women in Table 9. The results in this table indicate that the heavier the woman, the more likely she is to work in an occupation that emphasizes physical activity. This result runs contrary to any of the theories presented in the supply- or demand-side models. If any sorting occurred in occupations that emphasize physical activity, the model predicted that it would be negative. Regardless of whether sorting was the product of obese workers keeping themselves out of certain jobs or of employers refusing to hire obese workers for certain jobs, the model predicted that obese workers would be less likely to work in occupations emphasizing physical activity because of the links between obesity and other health problems. As in Table 7, these results are strongest and most consistent for morbidly obese women. Being a morbidly obese woman increases the importance that her occupation places on performing general physical activities by between 0.150 and 0.152 points. Once overweight and obese women are pooled, they too appear more likely to work in occupations emphasizing physical activity.

Despite the clear patterns of occupational sorting that emerge from the data for women, no real pattern emerges for men in either the communication or the physical

activity ratings. Very little is significant in Table 6 for men, and the coefficients do not follow a clear pattern of getting progressively smaller (or progressively larger) as they do for women. The only noticeable trend in the data is that the coefficient on underweight is negative and significant in several of the communication regressions. Revisiting the summary statistics in Table 4 cautions me from drawing too many conclusions about the underweight men, however. Recall that this dataset contains only forty underweight men. A quarter of these men are Hispanic, and the men are younger, less educated, and concentrated in the Western United States. Thus, the underweight results in these regressions may be a product of the uniqueness of this small sample.

Table 8 also fails to reveal much evidence of sorting on the basis of occupational characteristics for men. This table, which regresses the physical activity variables on weight, does provide some evidence that underweight, overweight, and obese men are more likely to work in occupations emphasizing physical activity than normal weight and morbidly obese men. But the results do not follow a clear pattern as they do for women: it is not clear that the heavier a man becomes, the more (or less) likely he is to work in an occupation emphasizing physical activity. Indeed, the underweight terms have the most positive coefficients that are greatest in magnitude (which could again be the result of the idiosyncratic nature of underweight men sample), followed by the obese and overweight terms. Overweight and obese men do seem more likely to work in jobs that emphasize physical activity. But if weight is truly driving this occupational sorting for men, it is unclear why the sorting drops off for morbidly obese men, especially considering that the physical activity sorting results are strongest for morbidly obese women.

All in all, the results in Tables 6 through 9 support the hypothesis that women sort into occupations on the basis of weight. The sorting theory is less convincing for obese men, but then again, obese women's labor market outcomes require the most explanation. Previous researchers have repeatedly documented that obese women experience wage discrepancy that is robust to a variety of controls, but they could not explain why.[51] Perhaps the fact that obese women sort into occupations that emphasize physical activities and away from occupations that emphasize communications may explain their heretofore unexplained wage discrepancy. Only actual wage regressions will reveal if and how much of the wage discrepancy for obese women that occupational sorting can explain.

For this reason, step two of my analysis regresses wages on BMI classifications, communication and physical occupation characteristics, and the interactions between BMI classifications and occupation characteristics. The results are presented in Table 10 (with overweight and obese BMI classifications considered separately) and Table 11 (with overweight and obese BMI classifications pooled). In both tables, columns one and five present regressions of wages on weight and individual characteristics for men and women, respectively. Columns two and six add controls for communication and physical occupation characteristics. Columns three and seven add interaction terms between BMI classifications and the occupational characteristics. Columns four and eight, the preferred specifications, only include the interaction terms that were significant in columns three and seven.[52]

[51] See the introduction for a description of previous papers documenting the unexplained wage disparity faced by obese women.

[52] Note that the F-tests for both men and women on the joint significance of the communication interaction terms and the physical activity interaction terms fail to reject the hypotheses that these terms are all equal to

Note that the results presented in Tables 10 and 11 use the "importance of communicating with persons outside the organization" rating as the communication characteristic and "importance of performing general physical activities" rating as the physical activity characteristic. I chose to present the results that used these two variables because these variables seemed to be the most general indicators of an occupational emphasis on communication and physical activities. Nevertheless, I did run the regressions with every other combination of the communication and physical activity variables as a robustness check, and the results were very similar.

In both tables, when wages are regressed on weight and individual controls only (columns one and five), both men and women appear to experience a wage penalty for being morbidly obese. But the penalty for women is almost twice as large as the penalty for men; in fact, the penalty for morbid obesity in men is of a similar magnitude to the penalty for regular obesity in women. The morbid obesity penalty increases slightly for men when occupational characteristics controls are added but decreases slightly for women (columns two and six). All of the coefficients on the BMI classifications lose significance for men once the interaction terms are added in column three, and all classifications for women except for the obese lose significance once the interaction terms are added in column seven. The problem with the regressions in columns three and seven is that the majority of the interaction terms are insignificant (and in fact, are jointly insignificant together), so these interaction terms simply flood the regression with

zero. Yet the main reason that the F-statistic is so low for these tests is because only one interaction term is statistically significant, and the rest of the terms simply flood the model. Thus, the final columns (four and eight) that include only the significant interaction terms are my preferred specifications, despite the results of the F-tests in columns three and seven.

extraneous terms. As a result, columns four and eight only include the significant interaction terms from columns three and seven.

Column four reveals that even after controlling for occupational characteristics and the relevant interactions of weight with these occupational characteristics, a statistically significant wage discrepancy for morbidly obese men remains in both Tables 10 and 11. According to Table 10, morbidly obese men still earn 9.97 percent lower wages than normal weight men, even after controlling for individual characteristics, occupational characteristics, and the relevant interaction terms.[53] This result runs somewhat contrary to Cawley (2004), who found that the wage discrepancy disappeared for obese men once he introduced controls for individual characteristics and sibling BMI.

Two differences in my estimation may explain why I find an unexplained wage discrepancy for morbidly obese men and Cawley does not. I treat morbidly obese and obese men separately, while Cawley groups them together. Perhaps Cawley too would have found a wage discrepancy for morbidly obese men if he had separated them from obese men. More than likely, however, the remaining wage discrepancy for morbidly obese men is due to the fact that the NLSY contains more potential controls than the CPS-ATUS-EHM. I am unable to control for sibling BMI, which Cawley uses as a proxy for genetic propensity towards obesity. Thus, genetic propensity towards obesity may be driving the wage discrepancy for men that appears in my estimates but not in Cawley's. I am also unable to control for intelligence except through educational attainment. The NLSY contains intelligence test score data, but the CPS-ATUS-EHM does not. If

[53] This percentage was calculated using the coefficient (-0.105) in Table 10 using the method outlined in R. Halvorsen and P. Palmquist, "The Interpretation of Dummy Variables in Semilogarithmic Equations," *American Economic Review* 70 (1980): 474-75; P. Kennedy, "Estimation with Correctly Interpreted Dummy Variables in Semilogarithmic Equations," *American Economic Review* 71 (1981): 801.

educational attainment is a better indicator of motivation than of intelligence, then the absence of intelligence test score data may result in omitted variable bias, thus explaining the discrepancy for morbidly obese men. Regardless of what is behind the wage discrepancy for morbidly obese men seen in column one, occupational sorting is not the culprit since the coefficient on morbidly obese actually gets larger once I introduce controls for occupational characteristics in the subsequent columns.

In contrast, the wage penalty for morbidly obese women disappears once I control for occupational characteristics and the relevant interactions of weight with these occupational characteristics in column eight. Over the course of columns four through eight, the wage discrepancy for women decreases and loses statistical significance as additional occupational characteristic controls and interaction terms are introduced. In fact, in column eight, the coefficient on the morbidly obese variable loses significance as soon as I control for the one significant interaction term from column seven, the interaction between being morbidly obese and the communications rating.

The loss in magnitude and statistical significance of the morbidly obese coefficient over the course of columns four through eight indicates that two forces are driving the wage discrepancies for women seen in my column four estimate as well as the in the estimates of previous authors like Cawley. First, the regressions in Tables 7 and 9 demonstrate that morbidly obese women are more likely to work in occupations that emphasize physical activity but less likely to work in occupations that emphasize communication. The wage regressions in columns four through eight of Tables 10 and 11 demonstrate that occupations that emphasize physical activity are associated with lower wages, while occupations that emphasize communication are associated with

higher wages. Thus, unlike for men, women's occupational sorting does explain at least part of the wage discrepancy between morbidly obese and normal weight women. Second, morbidly obese women who work in occupations that emphasize communication appear to earn less than women with lower BMIs who work in occupations with a similar emphasis. The one significant interaction term, which interacts occupational emphasis on communication with being morbidly obese, indicates that a normal weight woman who works at an occupation with a particular communication rating would earn more than a morbidly obese woman with exactly the same communication rating for her occupation.

In sum, previous authors have found that a higher BMI has a negative effect on wages, and once they controlled for a wide range of individual characteristics, the negative effects generally disappeared for men but not for women. Although these previous authors have controlled for many things—including occupation and industry name—they have not controlled for occupational characteristics. They have not considered that certain occupational skills and requirements may be more affected by weight than others. The results of this chapter have demonstrated that a combination of sorting and wage penalties for certain types of occupational characteristics lay behind at least some—if not all—of the previously unexplained discrepancy in wages experienced by the heaviest women in the labor market.

Robustness Checks

In this section, I perform four robustness checks of my results. I first question one of the assumptions of my paper and all other previous papers in this literature. I have assumed that absolute weight (as defined by the medical classifications of BMI) matters more than relative weight, and thus, that the BMI classifications are the correct way to group individuals when studying the effect of weight on wages. Consequently, the first robustness check tests the effect of relative weight on occupational sorting and wages. Next, I reconsider my use of ordinal scale ratings for communication and physical activity characteristics. Instead of using the raw O*NET scale, my second robustness converts this scale into low, medium, and high ratings. In my third robustness check, I consider whether correcting for the fact that my weight data is self-reported changes my results. Finally, my fourth robustness check explores the effects of introducing additional industry and occupation controls into my regressions.

The Effect of Relative Weight on Occupational Sorting and Wages

Until this point in the chapter, I have assumed that the most logical grouping of individuals by weight is the standard BMI grouping used in the medical literature: underweight, normal weight, overweight, obese, and morbidly obese. This assumption is not unique; all other previous authors examining the effect of obesity on wages have also made this assumption. But authors working in other areas of obesity research have called the usefulness of the BMI classification into question. Smalley et al. (1990) criticized the "false positive" problem: individuals who were very muscular, particularly men, could be

erroneously classified as obese under the traditional BMI classifications.[54] Kragelund and Omland (2005) pointed out that other measures of obesity, such as the amount of abdominal visceral fat, were a better predictor of poor health outcomes.[55] Moreover, after researching the history of BMI, Oliver (2006) pointed out that the BMI standards were not medical in origin. The five current groups were actually developed in the 1940s by an insurance actuary at the Metropolitan Life Insurance Company. This actuary developed tables classifying the average weight of twenty-five year old men as "normal weight" because men with this weight had the longest life expectancy (without controlling for any other, potentially confounding factors). Because BMI was simply a weight-to-height ratio, and thus, easy to collect, it was quickly and widely adopted by medical researchers, epidemiologists, and federal agencies.[56]

The fact that the BMI standards were promulgated seventy years ago suggests another potential problem with them: people were much smaller in the 1940s than they are today. The obesity rate has doubled since 1980, making one-third of the country either obese or morbidly obese. Because another third of the country is overweight, the "normal weight" BMI standard no longer represents anyone's average weight.[57] As a result, it may make more sense to look at weight relative to the rest of the population—instead of the absolute standards provided by the BMI classifications—when conducting an obesity study.

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[54] K. J. Smalley et al., "Reassessment of Body Mass Indices," *American Journal of Clinical Nutrition* 52 (1990): 405-08.
[55] Charlotte Kragelund and Tobjorn Omland, "A Farewell to Body Mass Index?" *The Lancet* 366 (2005): 1589-91.
[56] J. Eric Oliver, *Fat Politics: The Real Story Behind America's Obesity Epidemic* (New York: Oxford University Press, 2006), 18-20.
[57] Centers for Disease Control and Prevention, "Facts about Obesity in the United States," *Overweight and Obesity*, last accessed 11 Feb. 2012, http://www.cdc.gov/pdf/facts_about_obesity_in_the_united_states.pdf.

Tables 12 through 17 do just that: these tables replicate the earlier results using relative weight categories instead of the five BMI classifications. To examine the effect of relative weight, I divide both the men and the women's BMI data into deciles. Table 12 defines all ten BMI deciles by gender also provides information on the BMIs of the top and bottom 5 percent of the sample. Interestingly, women's BMIs span a larger range than men's BMIs: the bottom 5 percent of women have a smaller BMI than the bottom 5 percent of men, but the top 5 percent of women have a larger BMI than the top 5 percent of men.

Tables 13 through 16 reexamine the results in Tables 6 through 9 by testing the effect of BMI decile on communications and physical activities ratings. In all regressions, BMI decile five is the omitted category. Very little in these tables is significant. The results in Table 13 indicate that men in decile ten are more likely to work in occupations that emphasize communication. In contrast, women in the lowest three deciles are more likely to work in occupations that emphasize communication according to Table 14. No clear pattern emerges from the regressions of physical activities ratings on BMI deciles for men in Table 15, but the women in the top four deciles appear more likely to work in occupations emphasizing physical activities according to Table 16.

The signs of the decile coefficients, particularly for women, follow the same general pattern that they did in the principal results. Lighter women appear more likely to work in occupations emphasizing communication, while heavier women appear more likely to work in occupations emphasizing physical activities. But the overall loss of significance for both genders suggests that this grouping is not correct. The five standard

BMI classifications—no matter who developed them and how arbitrary they seem—matter.

The results in Table 17, which replicates the wage results in Table 10 using BMI deciles, continues the pattern of overall loss in significance from using BMI deciles instead of the five standard BMI classifications. Specifications one and five regress wages on BMI deciles and individual characteristics for men and women, while specifications two and six add in the communication and physical activities ratings. Specifications three and seven add interaction terms between BMI decile and the communication and physical activities ratings. Specification four repeats specification three for men removing all insignificant interaction terms; there is no analogous specification for women since all of their interaction terms were insignificant in specification seven. In specifications one, two, five, and six (the specifications without the interaction terms), evidence of a wage discrepancy is present for the men in decile ten and the women in the top three deciles.

As in the principal results, the wage disparity still remains for the heaviest men even after the interaction terms are introduced in specifications three and four. For women, the wage disparity disappears for the heaviest women after the interaction terms are introduced, also like the principal results. The only difference is that none of the interaction terms for women are significant. Thus, the additional penalty that appeared for the heaviest women in occupations emphasizing communication is no longer visible (recall the negative, statistically significant interaction term between communication and morbid obesity for women in Table 10). Table 10 demonstrated that the wage discrepancy faced by the heaviest women was largely driven by women in occupations

emphasizing communication. With this BMI decile grouping, however, this connection is no longer visible.

The overall loss of significance in the Table 17 wage regressions matches the overall loss of significance in the occupational characteristic ratings regressions in Tables 13 through 16. Just like these previous tables, Table 17 indicates that relative weight is not what matters. Instead, an absolute standard of weight matters, and this absolute standard of weight closely matches the five BMI classifications used in the principal results. Even if normal weight no longer reflects the average weight of the population, something about it still matters for the purposes of occupational sorting. Normal weight women choose occupations with different characteristics and, ultimately, earn more than overweight, obese, and morbidly obese women. This finding that absolute weight matters more than relative weight is not completely surprising. Anthropologists and psychologists such as Cassidy (1991), Sobal (1991), and Cogan et al. (1996) have documented that even though average weight has increased in the U.S. over the past century, standards of ideal weight have remained relatively constant.[58] This unchanging standard of ideal weight can help explain why absolute weight appears to matter so much more than relative weight for women in the labor market.

Reconsidering the Ordinal Scale Ratings

Moving beyond the broader concerns about how obesity should be measured—concerns that are certainly subject to debate—I now address the somewhat narrower concerns about the methodology specific to this chapter. One potential criticism of my

[58] C. M. Cassidy, "The Good Body: When Big is Better," *Medical Anthropology* 13 (1991): 181-213; J. Sobal, "Obesity and Socioeconomic Status: A Framework for Examining Relationships Between Physical and Social Variables," *Medical Anthropology* 13 (1991): 231-47; Jeanine C. Cogan et al., "A Comparison Study of United States and African Students on Perceptions of Obesity and Thinness," *Journal of Cross-Cultural Psychology* 27 (1996): 98-113.

methodology is that the measurement of occupational emphasis on communication and physical activities could be flawed. I chose to preserve the O*NET scale ratings from one (not important) to five (essential) in my regressions. This choice was not groundless; Hirsch (2005) also maintained the original scale ratings in his work with O*NET data.[59] Still, it is not clear that moving from one to two on the ratings scale is the same as moving from three to four or four to five, which calls the validity of the ordinal scale measurement into question.

Consequently, I test an alternative specification with low, medium, and high ratings. I divide the ordinal scale into thirds, with a rating of low signifying an original rating of 1.000 to less than 2.333, medium signifying and original rating of 2.333 to less than 3.666, and high signifying an original rating of 3.666 to 5.000. As in the previous robustness check, I replicate Tables 6 through 10. This time, however, I replace the ordinal scale ratings of occupational emphasis on communication and physical activities with low, medium, and high ratings.

The results of this robustness check are presented in Tables 18 through 22. The results in these tables are remarkably similar to the principal results. For the men in Tables 18 and 20, there is still no apparent relationship between weight and occupational emphasis on communication and physical activity. But for the women in Tables 19 and 21, the same pattern emerges as in Tables 7 and 9: heavier women (particularly the

[59] Barry T. Hirsch, "Why Do Part-Time Workers Earn Less? The Role of Worker and Job Skills," *Industrial and Labor Relations Review* 58 (July 2005): 525-51. Note that Hirsch actually went beyond my methodology and added several related, scaled variables together for use in his compensating differentials study. I do not do add similar variables together because it is not clear that the ratings should be additive. A one-point difference in one rating may be quite different than a one-point difference in another rating. More importantly, it is unclear how to interpret added ratings variables.

morbidly obese) are less likely to work in occupations that emphasize communication but more likely to work in occupations that emphasize physical activity.

The similarity continues in the regressions of wages on BMI classifications, presented in Table 22. In this table, specifications one and four present the results with controls for individual characteristics and the low, medium, and high occupational characteristic ratings. Specifications two and five add interaction terms between BMI classification and the occupational characteristic ratings. Finally, specifications three and six include only the significant interaction terms from specifications two and five. As in Table 10, morbid obesity consistently has a negative and statistically significant coefficient for men; differences in occupational emphasis on communication and physical activities cannot explain much of the wage discrepancy between morbidly obese men and normal weight men.

For women, on the other hand, the controls and interaction terms involving communication and physical activities explain the entire wage penalty faced by morbidly obese women in the labor market. Recall that in Table 10, controlling for the interaction between morbid obesity and occupational emphasis on communication destroyed the significance of the coefficient on morbid obesity for women. Although this interaction term is individually insignificant in specification five, all of the communication and physical activities terms are jointly significant, making specification five the preferred specification (instead of specification six). In sum, no matter how I use the O*NET ratings in my regressions—whether in their original, ordinal scale format or in revised low, medium, and high format—the results are the same. Occupational characteristics

explain much of the previously unexplained wage discrepancy experienced by the heaviest women in the labor market.

Predicting Actual Weight from Self-Reported Weight

The next potential concern with my principal results arises from the data. The EHM, like most surveys collecting weight and height information, asks respondents to self-report their weight. But as anyone who has filled out a drivers' license application knows, people are not always honest about their weight and height.

Random measurement error will, of course, bias the estimates of the coefficient of interest towards zero. But the potential measurement error associated with self-reported height and weight is particularly problematic since the measurement error may be systematic. With this concern in mind, Cawley and Burkhauser (2006) investigated whether survey respondents systematically misreported their weight using the only survey that collects both self-reported weight and actual weight, the National Health and Nutrition Examination Survey (NHANES). The authors did find evidence that underweight people tend to overestimate their weight, while overweight and obese people tend to underestimate their weight. As a result, Cawley and Burkhauser developed corrective equations using the NHANES to predict actual weight and height from self-reported weight and height. Recognizing that individuals may differ in how they misreport, the authors developed different corrections for each race and gender group.[60]

[60] John Cawley and Richard V. Burkhauser, "Beyond BMI: The Value of More Accurate Measures of Fatness and Obesity in Social Science Research," working paper, National Bureau of Economic Research, Cambridge, Mass., 2006.

The corrections have been widely adopted by obesity researchers, including Cawley et al. (2007), Lakdawalla and Philipson (2007), and Baum and Chou (2011).[61] Although these authors were all using datasets other than the NHANES, they extrapolated Cawley and Burkauser's NHANES corrections for use with their datasets. These authors have found that the corrections make very little different in their results. Nonetheless, I implement the Cawley and Burkhauser corrections as a robustness check of my principal results.

The results of this robustness check are present in Tables 23 through 27. Like the results of previous authors, my results with these corrections are virtually identical to my results without these corrections. The sign and significance of the coefficients generally remain unchanged, and interestingly, changes in magnitude go in both directions. For example, comparing Table 7 to Table 24, the coefficient on morbid obesity is more negative for women in the Table 24 regression of the importance of communicating with persons outside the organization rating on BMI classifications. In contrast, the coefficient on morbid obesity is less negative for women in the Table 24 regression of how much contact with others is required by the job rating on BMI classifications.

Turning to the wage regression results in Table 27, specifications one and five present the regression of wages on BMI classifications and individual characteristics only. Specifications two and six add controls for the importance of communication and physical activities ratings. Specifications three and seven add interaction terms between the BMI classifications and the communications and physical activities ratings.

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[61] John Cawley et al., "Occupation-Specific Absenteeism Associated with Obesity and Morbid Obesity," *Journal of Occupational and Environmental Medicine* 49 (2007): 1317-24; Darius Lakdawalla and Tomas Philipson, "Labor Supply and Weight," *Journal of Human Resources* 42 (2007): 85-116; Charles L. Baum and Shin-Yi Chou, "The Socio-Economic Causes of Obesity," working paper, National Bureau of Economic Research, Cambridge, Mass., 2011.

Specification four includes only the significant interaction terms from specification three for men. Specification eight includes only the communication rating-morbid obesity interaction term for women.

Comparing Table 27 to Table 10, the results for men are quite similar. It is still the case that an unexplained wage discrepancy remains for morbidly obese men in specification four after controlling for occupational emphasis on communication and physical activities as well as the relevant interaction terms. The wage results for women, however, are slightly different. The sign of the communication rating-morbid obesity term is still negative in specification seven, but it is no longer statistically significant. Nevertheless, including this interaction term in specification eight is still enough to destroy the significance of the morbid obesity term for women. The relationship between the morbid obesity term and the communication rating-morbid obesity interaction term is still present after introducing the predicted actual weight correction. But in all likelihood, the additional error introduced by extrapolating the corrections developed with one dataset for use on another dataset has destroyed the significance of the communication rating-morbid obesity term for women.

In sum, using predicted actual weight instead of self-reported weight makes very little difference for my results. Although the use of self-reported weight appears problematic, in reality, it has affected neither my results nor the results of other obesity researchers. No matter how the BMI classifications or the occupational ratings are measured, I still find that heavier women sort out of occupations with a communication emphasis and into occupations with a physical activities emphasis. Thus, my final robustness check examines the effect of introducing additional controls.

Reconsidering Controls for the Occupation and Industry Name

In my final robustness check, I control for major occupation and industry classifications in addition to occupational characteristics. I have been reluctant to introduce these controls until this point because Cawley (2004) and his predecessors have shown that introducing controls for major industry and occupation groups cannot completely eliminate the wage disparity experienced by obese women in the labor market. For this reason, this paper has advocated using more refined controls than just the names of workers' industries and occupations. Instead of these standard industry and occupation controls, this paper proposes looking at the characteristics and skill requirements associated with each occupation. Occupations that might sound different on the basis of their names might actually be quite similar when the requisite skills for them are compared.

The theory presented at the beginning of this chapter posits that obese workers might be less likely to work in jobs emphasizing certain types characteristics, namely communication and physical activity job characteristics, either because they avoid these jobs (the supply-side explanation) or because employers do not want them in these jobs (the demand-side explanation). As a result, the occupational characteristic controls have served as a sort of alternative for the standard occupation and industry controls. In other words, with the occupational characteristic controls, it is not clear that the additional occupation and industry controls are necessary. Moreover, even if these additional industry and occupation controls are added, they are likely to be correlated with the occupational characteristic ratings already included. It is unclear how any changes in the coefficients on occupational characteristic ratings results should be interpreted after

introducing these controls. At best, if the communication and physical activities characteristic ratings are still significant after including standard occupation and industry controls, it will show that these characteristic ratings pick up an effect beyond what the standard industry and occupation controls can.

Tables 28 through 32 replicate Tables 6 through 10 one final time with the addition of controls for major industry and occupation. The biggest change in results comes in the regressions of communications ratings on BMI classifications and individual characteristics for women in Table 29. Although the coefficients on morbid obesity are still negative, they are no longer statistically significant. Not surprisingly, the industry and occupation controls are correlated with the communications ratings, and since they are also correlated with being a morbidly obese woman, the morbid obesity term loses significance.

Interestingly, however, the morbid obesity term remains positive and statistically significant for women in the Table 31 regressions of physical activities ratings on BMI classifications and individual characteristics. Comparing the Table 31 results to the analogous results in Table 9, the coefficients on the morbid obesity term are smaller in magnitude, but they are still positive and statistically significant. The reduction in magnitude is again not surprising since the physical activities ratings are correlated with industry and occupation controls. Nevertheless, the results in Table 31 demonstrate that the occupational characteristic ratings are capturing an effect beyond what the standard industry and occupation controls are able to capture.

Perhaps the importance of the occupational characteristic ratings is most apparent, however, in the final table, Table 32. Table 32 replicates the wage regression results

once more adding in the controls for industry and occupation. Specifications one and five regress wages on BMI classifications, individual characteristics, and the industry and occupation controls. Specifications two and six add controls for the communication and physical activities characteristic ratings. Specifications three and seven add interaction terms between the characteristic ratings and BMI classification. Specifications four and eight repeat specifications three and seven but only include the interaction terms that were significant.

Even with the addition of the industry and occupation controls, the main results for women in Table 32 are very similar to the results in Table 10. Comparing specification four for men in the two tables, a large wage discrepancy still remains for morbidly obese men even after controlling for occupational skill ratings and the relevant interaction terms. Comparing specification eight for women in the two tables, controlling for the interaction between the communications rating and morbid obesity for women still destroys the significance of the morbid obesity term for women.

Indeed, the only real change in the wage regression results comes with the controls for the importance of communication and the importance of physical activities ratings. Without the industry and occupation controls, the coefficient on the communication rating is always positive and statistically significant, while the coefficient on the physical activity rating is negative and statistically significant. But with the industry and occupation controls, the magnitude of the coefficient on the communication rating is much smaller for men, and the coefficient on the physical activities variable also loses significance for men. For women, the coefficient on the physical activities rating becomes smaller in magnitude, while the coefficient on the communications rating

actually flips signs. It is unclear how to interpret why the coefficient on the importance of communication rating flips signs, especially since the coefficient remains positive and statistically significant for men. But this change in sign is certainly a product of the fact that the occupational characteristic ratings and the standard industry and occupation controls are highly correlated.

All in all, even after adding in controls that are highly correlated with the occupational characteristic ratings that are the focus of this paper, most of the results remain unchanged. It is still the case that the heaviest women are more likely to work in jobs that emphasize physical activities. It is also still the case that morbidly obese women face a wage discrepancy in occupations that emphasize communication that normal weight women do not face. This discrepancy appears to be the driving force behind the previously unexplained wage penalty for the heaviest women in the labor market.

This section has demonstrated that the principal results presented in Tables 6 through 10 are indeed robust to changes in specification and changes in variable measurement. This section has further supported the theory that occupational characteristics, which have not been considered in the literature, are driving a substantial portion of the previously unexplained wage discrepancy for the heaviest women in the labor market. The models presented at the beginning of the chapter hypothesized that obese workers of both sexes would be less likely to work in occupations emphasizing communication and physical activities. In reality, the empirical results have shown that occupational characteristics impact female workers only. The empirical results have demonstrated that morbidly obese female workers are less likely to work in occupations

emphasizing communication, but they are actually more likely to work in occupations emphasizing physical activities. With these results in mind, the final section considers how to explain these empirical findings using the models presented at the beginning of the chapter.

Conclusion

The empirical results have definitively rejected one of the hypotheses advanced in the model section of this chapter: obese workers are not less likely to work in occupations that emphasize physical activity. Obese men are no less likely than normal-weight men to work in occupations that require physical activity, and obese women are actually more likely than normal-weight women to work in these occupations. Obese workers are not keeping themselves out of occupations that require physical activity, nor are employers refusing to hire obese workers for occupations that require physical activity. Obese workers of both genders are at least as likely to work in occupations both requiring physical fitness (as measured by the general physical activities, speed of limb movement, and stamina ratings) and physical strength (as measured by the four strength ratings) as normal-weight workers. Consequently, concerns that the health conditions associated with obesity create physical limitations that prevent obese workers from performing their jobs are simply unfounded.

In contrast, the empirical results have supported the other hypothesis: at least some obese workers are less likely to work in occupations that emphasize communication and customer contact. Not all obese workers sort away from these occupations, just

morbidly obese women. Moreover, morbidly obese women encounter a wage discrepancy in occupations requiring communication that is not encountered by any other weight group. So what explains the fact that morbidly obese women experience a wage discrepancy and sort out of communication occupations?

To answer this question, I turn once more to the models presented at the beginning of the chapter. Sorting on the basis of occupational characteristic could be the result of morbidly obese women keeping themselves out (the supply-side effect) or employers keeping them out (the demand-side effect). Some psychology studies have presented evidence that obese individuals prefer to avoid social situations. If true, I have previously suggested that occupations requiring communication and customer contact would generate disutility for obese workers. As a result, obese workers would only be willing to work in these occupations if they were paid a wage premium, or a compensating differential.

In fact, the evidence shows that obese workers are not paid a wage premium for occupations that emphasize communication. In fact, morbidly obese women actually encounter a wage penalty. This evidence alone discredits the theory that the occupational sorting of morbidly obese women is coming from the supply side. Yet the supply-side theory has another problem: it fails to explain why obese women, but not men, would keep themselves out of occupations emphasizing communication. The psychology evidence discussed in the Supply-Side Effects Section does not indicate that obese women have a stronger desire to avoid social situations than do obese men.

Given the empirical results, the demand-side explanation seems much more plausible. The demand-side theory held that obese workers would be less likely to work

in occupations emphasizing communication if obese workers were less productive in these occupations or if obesity created some additional cost for employers in these occupations. It could be the case that obesity interferes with an individual's ability to communicate with others. But it is difficult to explain why obesity would interfere with the communication skills of women only, and not men. Future research from the fields of psychology and gender studies may reveal that obesity impacts the personalities of women differently than men, but for now, that hypothesis seems tenuous at best.

Since the previous explanations appear unlikely, I consider one final demand-side explanation: discrimination. Discrimination, as explained previously, is always the residual hypothesis and can never be proven directly in a study of wage gaps because the unexplained pay gap on the basis of obesity may be driven by omitted productivity characteristics correlated with obesity. My wage equations control for an extensive set of occupational characteristics, and as shown in Cawley (2004), an explained obesity gap for women remains even with additional controls for characteristics such as aptitude scores and family factors. Still, my results are consistent with discrimination. Taste-based discrimination could explain why obesity impacts women differently than men: obesity in women may be less palatable than obesity in men. This idea is not without basis in the literature. For example, Taylor (2011) interviewed adolescent boys and girls about their attitudes regarding obesity and found that they would "rather be a fat guy than a fat girl" and believed that "it's more normal for guys to be overweight."[62] Indeed, ever since the publication of Orbach's 1978 self-help book entitled *Fat is a Feminist Issue*,

[62] Nicole L. Taylor, "Guys She's Humongous!": Gender and Weight-Based Teasing in Adolescence," *Journal of Adolescent Research* 26 (2011): 178-99.

gender study scholars have argued that weight impacts the lives of women more negatively and more comprehensively than weight impacts the lives of men.[63]

Taste-based discrimination would explain why occupational sorting and wage penalties show up most clearly in occupations requiring communication and customer contact. These occupations require employees to deal with customers, co-workers, and supervisors more frequently. If customers do not like dealing with morbidly obese women, they may not buy from her. If co-workers and supervisors do not like associating with morbidly obese women, they may not cooperate with her. All of these effects would generate costs for the employer. As a result, the employer would either have to avoid this cost by refusing to hire morbidly obese women, or the employer would have to make up the cost of employing a morbidly obese woman by paying her less than other workers.

Using discrimination to explain the results of this chapter is appealing because it fits so well with the evidence. It also echoes the existing gender studies literature on obesity, which has argued for many years that women are more negatively impacted by their weight than are men. Nonetheless, I cannot completely rule out other demand-side explanations for my results, including the possibility that obesity impacts communication skills differentially by gender. Future studies from other disciplines, particularly psychology, can further clarify the role of gender in how obese individuals view themselves and how obese individuals are viewed by others.

[63] Susie Orbach, *Fat is a Feminist Issue* (New York: Paddington Press, 1978). For a review of the gender studies literature on the disproportionate impact of weight on women, see Janna L. Fikkan and Esther D. Rothblum, "Is Fat a Feminist Issue? Exploring the Gendered Nature of Weight Bias," *Sex Roles* (forthcoming).

Tables

Table 1. CPS-ATUS-EHM Summary Statistics By Gender				
	Men		Women	
	Number in Sample	Percent of Total	Number in Sample	Percent of Total
Total Observations	8,928	100.00	10,007	100.00
Weight Category				
Underweight	40	0.45	208	2.08
Normal Weight	2,372	26.57	4,511	45.08
Overweight	4,055	45.42	2,848	28.46
Obese	2,224	24.91	2,071	20.70
Morbidly Obese	237	2.65	369	3.69
Years of Education				
Less than 9	210	2.35	154	1.54
9 to 12	412	4.61	398	3.98
High School Graduate	1,905	21.34	2,273	22.71
Some College	2,514	28.16	3,196	31.94
College Graduate	2,378	26.64	2,594	25.92
Advanced Degree	1,509	16.90	1,392	13.91
Age				
20 or less	233	2.61	283	2.83
21 to 40	4,035	45.19	4,410	44.07
41 to 60	4,276	47.89	4,814	48.14
61 or over	384	4.30	500	5.00
Region				
Northeast	1,563	17.51	1,669	16.68
Midwest	2,201	24.65	2,576	25.74
South	3,060	34.27	3,620	36.17
West	2,104	23.57	2,142	21.41
Race/Ethnicity				
Black	806	9.03	1,401	14.00
Hispanic	1,129	12.65	1,051	10.50
Notes: Reported estimates use respondents aged 18 to 65 from combined 2006-2008 CPS, ATUS, and EHM data. Sample excludes pregnant women.				

Table 2. CPS-ATUS-EHM Industry and Occupation Distribution for Men By Weight Group (In Percents)							
	Underweight	Normal Weight	Overweight	Obese	Morbidly Obese	Full Sample	Bonferroni Test
Industry							
Agriculture, Forestry, Fishing, and Hunting	2.50	2.66	2.19	2.07	1.69	2.27	
Mining	0.00	0.80	0.81	0.72	0.84	0.78	
Construction	10.00	12.02	13.07	13.58	6.33	12.72	1, 2
Manufacturing	10.00	9.87	11.74	9.67	10.55	10.69	
Wholesale and Retail Trade	12.50	11.89	12.43	15.33	14.77	13.07	5, 6
Transportation and Utilities	0.00	3.92	4.56	5.67	8.02	4.74	3, 6
Information	5.00	3.67	3.63	3.55	3.38	3.62	
Financial Activities	5.00	8.56	8.24	8.14	7.59	8.27	
Professional and Business Services	10.00	15.01	13.83	11.11	9.70	13.34	5, 6
Educational and Health Services	15.00	14.38	12.95	12.81	17.72	13.43	
Leisure and Hospitality	20.00	7.80	5.72	5.08	5.91	6.18	4, 6, 7, 8, 9, 10
Other Services	5.00	4.30	3.67	4.54	3.80	4.07	
Public Administration	5.00	5.14	7.15	7.73	9.70	6.82	3, 6, 8
Total	100.00	100.00	100.00	100.00	100.00	100.00	
Occupation							
Management, Business, and Financial Occupations	7.50	22.05	23.30	21.22	24.05	22.40	
Professional and Related Occupations	25.00	28.29	23.77	21.76	28.27	24.60	6, 8
Service Occupations	30.00	12.82	13.69	13.62	13.92	13.52	4, 7, 9, 10
Sales and Related Occupations	17.50	10.67	11.86	13.13	8.02	11.78	6
Office and Administrative Support Occupations	2.50	7.93	6.78	8.72	7.17	7.56	4
Farming, Fishing, and Forestry Occupations	2.50	1.43	1.04	0.85	1.27	1.11	
Construction and Extraction Occupations	7.50	10.73	12.08	11.11	6.75	11.32	
Installation, Maintenance, and Repair Occupations	7.50	6.07	7.47	9.58	10.55	7.71	5, 6

Total	100.00	100.00	100.00	100.00	100.00	100.00	

Notes: Reported estimates use respondents aged 18 to 65 from combined 2006-2008 CPS, ATUS, and EHM data. Estimates based on 8,928 observations for men. The Bonferroni test column reports significant differences in means of weight group at the 10-percent level based on Bonferroni multiple comparison test, where "1" compares morbidly obese to obese, "2" compares morbidly obese to overweight, "3" compares morbidly obese to normal weight, "4" compares morbidly obese to underweight, "5" compares obese to overweight, "6" compares obese to normal weight, "7" compares obese to underweight, "8" compares overweight to normal weight, "9" compares overweight to underweight, and "10" compares normal weight to underweight.

Table 3. CPS-ATUS-EHM Industry and Occupation Distribution for Women By Weight Group (In Percents)							
	Underweight	Normal Weight	Overweight	Obese	Morbidly Obese	Full Sample	Bonferroni Test
Industry							
Agriculture, Forestry, Fishing, and Hunting	1.92	0.91	0.74	0.68	0.54	0.82	
Mining	0.00	0.09	0.07	0.14	0.00	0.09	
Construction	0.96	2.13	1.79	1.55	1.36	1.86	
Manufacturing	4.33	4.77	4.39	4.64	3.79	4.59	
Wholesale and Retail Trade	13.46	12.02	12.43	11.15	11.38	11.96	
Transportation and Utilities	2.40	2.04	2.04	2.80	1.36	2.18	
Information	3.37	2.64	2.18	2.61	2.71	2.52	
Financial Activities	12.02	9.24	10.36	9.22	7.86	9.56	
Professional and Business Services	9.62	11.42	9.48	8.74	8.67	10.17	6, 8
Educational and Health Services	34.13	36.98	39.40	40.03	45.80	38.56	3, 4
Leisure and Hospitality	8.65	7.60	6.92	6.52	6.50	7.16	
Other Services	6.73	5.19	4.49	4.97	2.71	4.89	
Public Administration	2.40	4.99	5.72	6.95	7.32	5.64	6, 7
Total	100.00	100.00	100.00	100.00	100.00	100.00	
Occupation							
Management, Business, and Financial Occupations	13.46	18.09	16.47	14.63	14.91	16.70	6
Professional and Related Occupations	37.02	33.34	27.81	26.65	23.85	30.11	3, 4, 6, 7, 8, 9
Service Occupations	15.87	16.49	20.54	21.78	23.58	18.99	3, 6, 8
Sales and Related Occupations	13.94	11.46	11.97	9.95	8.67	11.24	
Office and Administrative Support Occupations	17.79	19.44	22.26	25.74	27.10	21.79	3, 4, 5, 6, 7, 8
Farming, Fishing, and Forestry Occupations	1.44	0.29	0.35	0.43	1.08	0.39	10
Construction and Extraction Occupations	0.48	0.53	0.25	0.43	0.27	0.42	
Installation, Maintenance, and Repair Occupations	0.00	0.35	0.35	0.39	0.54	0.36	
Total	100.00	100.00	100.00	100.00	100.00	100.00	

Notes: Reported estimates use respondents aged 18 to 65 from combined 2006-2008 CPS, ATUS, and EHM data. Estimates based on 10,007 observations for women. Sample excludes pregnant women. The Bonferroni test column reports significant differences in means of weight group at the 10-percent level based on Bonferroni multiple comparison test, where "1" compares morbidly obese to obese, "2" compares morbidly obese to overweight, "3" compares morbidly obese to normal weight, "4" compares morbidly obese to underweight, "5" compares obese to overweight, "6" compares obese to normal weight, "7" compares obese to underweight, "8" compares overweight to normal weight, "9" compares overweight to underweight, and "10" compares normal weight to underweight.

Table 4. CPS-ATUS-EHM-O*NET Summary Statistics for Men by Weight Group							
	Underweight	Normal Weight	Overweight	Obese	Morbidly Obese	Full Sample	Bonferroni Test
Years of Education	13.500	14.711	14.615	14.195	14.352	14.540	5, 6, 10
Age	32.450	39.320	42.093	42.315	41.962	41.365	3, 4, 6, 7, 8, 9, 10
Northeast	0.225	0.188	0.174	0.164	0.160	0.175	
Midwest	0.225	0.237	0.243	0.260	0.270	0.247	
South	0.175	0.315	0.343	0.371	0.392	0.343	4, 6, 7
West	0.375	0.261	0.240	0.205	0.177	0.236	3, 4, 5, 6
Black	0.075	0.087	0.082	0.107	0.114	0.090	5
Hispanic	0.250	0.112	0.132	0.131	0.110	0.126	10
Importance of Communicating with Persons Outside the Organization	1.976	2.448	2.420	2.334	2.497	2.406	6
Importance of Communicating with Supervisors, Peers, or Subordinates	2.489	2.897	2.934	2.852	3.047	2.905	1, 4, 5, 9
How Much Contact with Others Required by the Job	2.211	2.536	2.560	2.477	2.595	2.533	5
Importance of Establishing and Maintaining Interpersonal Relationships	1.910	2.282	2.328	2.256	2.400	2.298	4, 5
Importance of Performing for or Working Directly with the Public	1.640	1.733	1.698	1.680	1.782	1.705	
Importance of Selling or Influencing Others	1.363	1.646	1.681	1.631	1.731	1.659	
Importance of Performing General Physical Activities	2.988	2.738	2.764	2.823	2.786	2.774	6
Importance of Speed of Limb Movement	1.937	1.760	1.767	1.805	1.725	1.774	
Importance of Stamina	1.838	1.686	1.703	1.724	1.698	1.704	
Importance of Dynamic Strength	1.856	1.754	1.773	1.829	1.790	1.783	5, 6
Importance of Explosive Strength	2.008	1.728	1.753	1.807	1.753	1.761	5, 6
Importance of Static Strength	2.493	2.097	2.114	2.168	2.041	2.123	4, 6, 9
Importance of Trunk Strength	2.546	2.318	2.335	2.360	2.332	2.338	
Real Hourly Wage ($2008)	18.262	28.258	28.151	26.219	25.266	27.563	5, 6, 9, 10
Number of Observations	40	2,372	4,055	2,224	237	8,928	8,928

Notes: Reported estimates use respondents aged 18 to 65 from combined 2006-2008 CPS, ATUS, and EHM, and O*NET data. Note that the real hourly wage summary statistics only contain 7,484 observations. The Bonferroni test column reports significant differences in means of weight group at the 10-percent level based on Bonferroni multiple comparison test, where "1" compares morbidly obese to obese, "2" compares morbidly obese to overweight, "3" compares morbidly obese to normal weight, "4" compares morbidly obese to underweight, "5" compares obese to overweight, "6" compares obese to normal weight, "7" compares obese to underweight, "8" compares overweight to normal weight, "9" compares overweight to underweight, and "10" compares normal weight to underweight.

Table 5. CPS-ATUS-EHM-O*NET Summary Statistics for Women by Weight Group							
	Underweight	Normal Weight	Overweight	Obese	Morbidly Obese	Full Sample	Notes
Years of Education	14.522	14.822	14.134	13.842	13.785	14.379	3, 4, 5, 6, 7, 8
Age	36.563	40.186	42.899	43.161	42.978	41.601	3, 4, 6, 7, 8, 9, 10
Northeast	0.183	0.184	0.158	0.149	0.119	0.167	3, 6, 8
Midwest	0.212	0.250	0.259	0.265	0.320	0.257	3, 4
South	0.385	0.333	0.376	0.399	0.379	0.362	8
West	0.221	0.232	0.208	0.188	0.182	0.214	6
Black	0.067	0.074	0.169	0.227	0.279	0.140	1, 2, 3, 4, 5, 6, 7, 8, 9
Hispanic	0.125	0.094	0.108	0.125	0.089	0.105	6
Importance of Communicating with Persons Outside the Organization	2.110	2.133	1.995	1.958	1.889	2.048	3, 6, 8
Importance of Communicating with Supervisors, Peers, or Subordinates	2.632	2.686	2.577	2.533	2.473	2.615	3, 6, 8
How Much Contact with Others Required by the Job	2.389	2.399	2.279	2.257	2.166	2.326	3, 6, 8
Importance of Establishing and Maintaining Interpersonal Relationships	2.180	2.214	2.121	2.107	2.004	2.157	3, 6, 8
Importance of Performing for or Working Directly with the Public	1.644	1.637	1.558	1.555	1.473	1.591	3, 6, 8
Importance of Selling or Influencing Others	1.535	1.529	1.483	1.454	1.407	1.496	3, 6, 8
Importance of Performing General Physical Activities	2.941	2.964	3.041	3.063	3.163	3.013	3, 4, 6, 8
Importance of Speed of Limb Movement	1.889	1.908	1.928	1.944	2.009	1.924	3
Importance of Stamina	1.805	1.834	1.844	1.842	1.918	1.841	
Importance of Dynamic Strength	1.894	1.927	1.973	1.979	2.050	1.955	3
Importance of Explosive Strength	1.880	1.888	1.958	1.964	2.090	1.931	2, 3, 4, 6, 8
Importance of Static Strength	2.277	2.286	2.357	2.374	2.465	2.330	3, 6, 8
Importance of Trunk Strength	2.443	2.465	2.479	2.486	2.572	2.477	2, 3
Real Hourly Wage ($2008)	13.816	22.662	20.537	18.596	15.712	21.313	2, 3, 5, 6

Number of Observations	208	4,511	2,848	2,071	369	10.007	10,007
Notes: Reported estimates use respondents aged 18 to 65 from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. Note that the real hourly wage summary statistics only contain 8,915 observations. Sample excludes pregnant women. The Bonferroni test column reports significant differences in means of weight group at the 10-percent level based on Bonferroni multiple comparison test, where "1" compares morbidly obese to obese, "2" compares morbidly obese to overweight, "3" compares morbidly obese to normal weight, "4" compares morbidly obese to underweight, "5" compares obese to overweight, "6" compares obese to normal weight, "7" compares obese to underweight, "8" compares overweight to normal weight, "9" compares overweight to underweight, and "10" compares normal weight to underweight.							

Table 6. The Effect of Weight Group on Working in Jobs Requiring Communication and Customer Contact for Men						
	Dependent Variables					
Weight Group	Importance of Communicating with Persons Outside the Organization	Importance of Communicating with Supervisors, Peers, or Subordinates	How Much Contact with Others Required by the Job	Importance of Establishing and Maintaining Interpersonal Relationships	Importance of Performing for or Working Directly with the Public	Importance of Selling or Influencing Others
OLS						
Underweight	-0.248* (0.145)	-0.258* (0.135)	-0.136 (0.126)	-0.215** (0.106)	0.028 (0.118)	-0.172*** (0.059)
Overweight	-0.034 (0.031)	0.027 (0.025)	0.013 (0.026)	0.041 (0.026)	-0.032 (0.021)	0.027 (0.023)
Obese	-0.062* (0.036)	-0.016 (0.030)	-0.028 (0.030)	0.008 (0.029)	-0.019 (0.024)	0.001 (0.026)
Morbidly Obese	0.077 (0.080)	0.159** (0.068)	0.071 (0.070)	0.135* (0.069)	0.072 (0.057)	0.090 (0.064)
Test: Overweight= Obese (P-Value)	0.376	0.099	0.131	0.217	0.525	0.270
R^2	0.114	0.090	0.101	0.084	0.076	0.052
OLS Pooled: Overweight and Obese						
Underweight	-0.248* (0.146)	-0.258* (0.135)	-0.136 (0.126)	-0.215** (0.106)	0.028 (0.118)	-0.172*** (0.059)
Overweight/Obese	-0.044 (0.029)	0.012 (0.023)	-0.001 (0.025)	0.030 (0.024)	-0.027 (0.020)	0.019 (0.021)
Morbidly Obese	0.078 (0.080)	0.160** (0.068)	0.072 (0.070)	0.135** (0.069)	0.072 (0.057)	0.090 (0.064)
R^2	0.114	0.090	0.101	0.084	0.076	0.052
Ordered Probit Pooled: Overweight and Obese						
Underweight	-0.165 (0.135)	-0.256* (0.136)	-0.217 (0.154)	-0.189 (0.120)	0.089 (0.166)	-0.097 (0.135)
Overweight/Obese	-0.033 (0.025)	0.011 (0.024)	-0.011 (0.025)	0.022 (0.024)	-0.027 (0.026)	-0.003 (0.025)
Morbidly Obese	0.054 (0.067)	0.174** (0.070)	0.029 (0.067)	0.151** (0.069)	0.108 (0.071)	0.108 (0.072)
Pseudo R^2	0.017	0.012	0.010	0.015	0.017	0.017

*** p<0.01, ** p<0.05, * p<0.1
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 8,928 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region.

Table 7. The Effect of Weight Group on Working in Jobs Requiring Communication and Customer Contact for Women						
	Dependent Variables					
Weight Group	Importance of Communicating with Persons Outside the Organization	Importance of Communicating with Supervisors, Peers, or Subordinates	How Much Contact with Others Required by the Job	Importance of Establishing and Maintaining Interpersonal Relationships	Importance of Performing for or Working Directly with the Public	Importance of Selling or Influencing Others
OLS						
Underweight	0.032	-0.010	0.039	0.008	0.042	0.032
	(0.073)	(0.069)	(0.077)	(0.061)	(0.064)	(0.051)
Overweight	-0.053**	-0.032	-0.053**	-0.028	-0.031	-0.010
	(0.026)	(0.024)	(0.026)	(0.022)	(0.021)	(0.017)
Obese	-0.051*	-0.041	-0.043	-0.012	-0.011	-0.022
	(0.029)	(0.027)	(0.029)	(0.025)	(0.024)	(0.019)
Morbidly Obese	-0.117**	-0.102*	-0.132**	-0.111**	-0.086**	-0.068**
	(0.054)	(0.054)	(0.054)	(0.047)	(0.042)	(0.033)
Test: Overweight= Obese (P-Value)	0.962	0.754	0.745	0.524	0.425	0.551
R^2	0.098	0.079	0.064	0.071	0.051	0.039
OLS Pooled: Overweight and Obese						
Underweight	0.032	-0.010	0.039	0.008	0.038	0.032
	(0.073)	(0.069)	(0.077)	(0.061)	(0.064)	(0.051)
Overweight/Obese	-0.052**	-0.036*	-0.049**	-0.021	-0.022	-0.015
	(0.023)	(0.021)	(0.022)	(0.019)	(0.019)	(0.015)
Morbidly Obese	-0.117**	-0.102*	-0.132**	-0.111**	-0.082**	-0.067**
	(0.054)	(0.054)	(0.054)	(0.047)	(0.042)	(0.033)
R^2	0.098	0.078	0.064	0.071	0.050	0.039
Ordered Probit Pooled: Overweight and Obese						
Underweight	0.013	-0.004	0.004	0.021	0.021	0.081
	(0.070)	(0.069)	(0.074)	(0.068)	(0.074)	(0.071)
Overweight/Obese	-0.043*	-0.027	-0.046**	-0.027	-0.053**	-0.039*
	(0.022)	(0.021)	(0.022)	(0.022)	(0.023)	(0.022)
Morbidly Obese	-0.094*	-0.099*	-0.160***	-0.107*	-0.085	-0.099*
	(0.056)	(0.057)	(0.057)	(0.055)	(0.057)	(0.057)
Pseudo R^2	0.017	0.010	0.009	0.013	0.010	0.010

*** p<0.01, ** p<0.05, * p<0.1
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 10,007 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.

Table 8. The Effect of Weight Group on Working in Jobs Requiring Physical Activity for Men							
	Dependent Variables						
Weight Group	Importance of Performing General Physical Activities	Importance of Speed of Limb Movement	Importance of Stamina	Importance of Explosive Strength	Importance of Dynamic Strength	Importance of Static Strength	Importance of Trunk Strength
OLS							
Underweight	0.159 (0.144)	0.126 (0.090)	0.136 (0.104)	0.208* (0.112)	0.027 (0.094)	0.294** (0.128)	0.198** (0.083)
Overweight	0.039 (0.024)	0.012 (0.016)	0.022 (0.016)	0.036* (0.018)	0.026 (0.018)	0.026 (0.022)	0.022 (0.016)
Obese	0.077*** (0.027)	0.037** (0.019)	0.040** (0.019)	0.074*** (0.022)	0.066*** (0.021)	0.054** (0.025)	0.040** (0.018)
Morbidly Obese	0.055 (0.061)	-0.036 (0.042)	0.017 (0.044)	0.030 (0.050)	0.039 (0.049)	-0.056 (0.056)	0.019 (0.042)
Test: Overweight= Obese (P-Value)	0.116	0.134	0.291	0.047	0.041	0.209	0.274
R^2	0.037	0.030	0.004	0.034	0.036	0.057	0.011
OLS Pooled: Overweight and Obese							
Underweight	0.159 (0.144)	0.126 (0.090)	0.136 (0.104)	0.208* (0.112)	0.027 (0.094)	0.294** (0.128)	0.198** (0.083)
Overweight/Obese	0.052* (0.022)	0.021 (0.015)	0.028* (0.015)	0.049*** (0.017)	0.040** (0.017)	0.036 (0.020)	0.028* (0.015)
Morbidly Obese	0.054 (0.061)	-0.036 (0.042)	0.017 (0.044)	0.029 (0.050)	0.038 (0.049)	-0.056 (0.056)	0.019 (0.042)
R^2	0.036	0.029	0.004	0.033	0.036	0.057	0.011
Ordered Probit Pooled: Overweight and Obese							
Underweight	0.145 (0.153)	0.216 (0.135)	0.191 (0.153)	0.302** (0.141)	0.043 (0.135)	0.361*** (0.137)	0.336*** (0.130)
Overweight/Obese	0.059** (0.024)	0.030 (0.025)	0.040 (0.025)	0.067*** (0.025)	0.052** (0.025)	0.041* (0.025)	0.041* (0.024)
Morbidly Obese	0.068 (0.065)	-0.078 (0.071)	-0.025 (0.074)	0.049 (0.071)	0.077 (0.070)	-0.048 (0.067)	0.021 (0.068)
Pseudo R^2	0.006	0.007	0.004	0.008	0.009	0.009	0.002
*** p<0.01, ** p<0.05, * p<0.1							

Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 8,928 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region.

Table 9. The Effect of Weight Group on Working in Jobs Requiring Physical Activity for Women							
	Dependent Variables						
Weight Group	Importance of Performing General Physical Activities	Importance of Speed of Limb Movement	Importance of Stamina	Importance of Explosive Strength	Importance of Dynamic Strength	Importance of Static Strength	Importance of Trunk Strength
OLS							
Underweight	-0.060 (0.067)	-0.033 (0.044)	-0.029 (0.050)	-0.039 (0.054)	-0.052 (0.053)	-0.045 (0.062)	-0.027 (0.046)
Overweight	0.043* (0.023)	0.007 (0.015)	0.025 (0.018)	0.036* (0.019)	0.032* (0.019)	0.035 (0.022)	0.015 (0.016)
Obese	0.047* (0.026)	0.018 (0.016)	0.030 (0.019)	0.024 (0.021)	0.030 (0.021)	0.034 (0.024)	0.024 (0.018)
Morbidly Obese	0.152*** (0.052)	0.086*** (0.033)	0.113** (0.039)	0.148*** (0.042)	0.107*** (0.041)	0.128*** (0.047)	0.112*** (0.034)
Test: Overweight= Obese (P-Value)	0.873	0.538	0.803	0.573	0.921	0.951	0.654
R^2	0.029	0.014	0.007	0.039	0.015	0.035	0.003
OLS Pooled: Overweight and Obese							
Underweight	-0.060 (0.067)	-0.035 (0.044)	-0.029 (0.050)	-0.039 (0.054)	-0.052 (0.053)	-0.045 (0.062)	-0.027 (0.046)
Overweight/Obese	0.045** (0.021)	0.012 (0.013)	0.027* (0.015)	0.031* (0.016)	0.031* (0.016)	0.034* (0.019)	0.019 (0.014)
Morbidly Obese	0.152*** (0.052)	0.086*** (0.033)	0.113*** (0.039)	0.149*** (0.042)	0.107** (0.041)	0.128*** (0.047)	0.112*** (0.034)
R^2	0.029	0.014	0.007	0.039	0.015	0.035	0.003
Ordered Probit Pooled: Overweight and Obese							
Underweight	-0.066 (0.069)	-0.052 (0.073)	-0.034 (0.070)	-0.031 (0.073)	-0.064 (0.072)	-0.041 (0.069)	-0.044 (0.071)
Overweight/Obese	0.042* (0.022)	0.017 (0.022)	0.046** (0.022)	0.038* (0.022)	0.040* (0.022)	0.034 (0.022)	0.025 (0.022)
Morbidly Obese	0.150*** (0.057)	0.141*** (0.053)	0.168*** (0.053)	0.204*** (0.057)	0.138*** (0.054)	0.139*** (0.053)	0.164*** (0.052)
Pseudo R^2	0.004	0.003	0.002	0.010	0.004	0.005	0.001
*** p<0.01, ** p<0.05, * p<0.1							

Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 10,007 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.

Table 10. The Effect of Weight Group and Job Requirements on Real Hourly Wage								
	Dependent Variable: ln(Real Hourly Wage ($2008))							
	Men				Women			
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Underweight	-0.168*** (0.065)	-0.120* (0.068)	-0.155 (0.347)	-0.119* (0.068)	0.009 (0.040)	-0.001 (0.039)	-0.026 (0.215)	-0.001 (0.039)
Overweight	0.035** (0.014)	0.032** (0.016)	-0.050 (0.078)	-0.022 (0.038)	-0.040*** (0.013)	-0.030** (0.014)	-0.050 (0.064)	-0.030** (0.014)
Obese	0.005 (0.016)	0.032 (0.016)	-0.022 (0.085)	0.019 (0.017)	-0.079*** (0.014)	-0.073*** (0.015)	-0.147** (0.072)	-0.073*** (0.015)
Morbidly Obese	-0.086** (0.038)	-0.105*** (0.041)	-0.296 (0.187)	-0.105** (0.041)	-0.177*** (0.026)	-0.165*** (0.027)	0.002 (0.149)	-0.068 (0.051)
Importance of Communication	---	0.059*** (0.006)	0.070*** (0.012)	0.060*** (0.006)	---	0.039*** (0.006)	0.044*** (0.009)	0.040*** (0.006)
Importance of Physical Activities	---	-0.061*** (0.008)	-0.088*** (0.016)	-0.069*** (0.010)	---	-0.087*** (0.007)	-0.096*** (0.010)	-0.087*** (0.007)
Communication* Underweight	---	---	-0.058 (0.081)	---	---	---	-0.007 (0.039)	---
Communication* Overweight	---	---	-0.010 (0.014)	---	---	---	-0.010 (0.013)	---
Communication*Obese	---	---	-0.023 (0.016)	---	---	---	0.001 (0.016)	---
Communication* Morbidly Obese	---	---	0.017 (0.036)	---	---	---	-0.064** (0.029)	-0.051** (0.023)
Physical*Underweight	---	---	0.054 (0.080)	---	---	---	0.013 (0.047)	---
Physical*Overweight	---	---	0.039** (0.019)	0.020 (0.013)	---	---	0.013 (0.015)	---
Physical*Obese	---	---	0.034 (0.021)	---	---	---	0.023 (0.017)	---
Physical*Morbidly Obese	---	---	0.053 (0.045)	---	---	---	-0.014 (0.035)	---
Test: Overweight=Obese (P-Value)	0.019	0.322	0.703	0.291	0.010	0.004	0.209	0.004

Test: Communication* Overweight= Communication*Obese (P-Value)	---	---	0.338	---	---	---	0.512	---
Test: Physical*Overweight= Physical*Obese (P-Value)	---	---	0.795	---	---	---	0.569	---
Test Communication Interaction Terms=0 (P-Value)	---	---	0.516	---	---	---	0.241	---
Test Physical Interaction Terms=0 (P-Value)	---	---	0.327	---	---	---	0.653	---
R^2	0.321	0.344	0.345	0.344	0.307	0.336	0.337	0.337
*** p<0.01, ** p<0.05, * p<0.1								
Notes: Reported estimates use OLS to analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions for men contain 7,475 observations; all regressions for women contain 8,905 observations. Heteroskedasticity-robust standard errors are below in parentheses. Each individual's rating for "importance of communicating with persons outside the organization" is used to represent importance of communication, and each individual's rating for "importance of performing general physical activities" is used to represent the importance of physical activities. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.								

Table 11. The Effect of Weight Group and Job Requirements on Real Hourly Wage (Overweight and Obese Pooled)								
	Dependent Variable: ln(Real Hourly Wage ($2008))							
	Men				Women			
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Underweight	-0.168*** (0.065)	-0.120* (0.068)	-0.154 (0.347)	-0.116* (0.069)	0.009 (0.040)	-0.001 (0.039)	-0.026 (0.215)	-0.001 (0.039)
Overweight/Obese	0.024* (0.013)	0.027* (0.015)	-0.039 (0.072)	-0.090** (0.042)	-0.056*** (0.012)	-0.048*** (0.012)	-0.091* (0.056)	-0.048*** (0.012)
Morbidly Obese	-0.086** (0.038)	-0.105*** (0.041)	-0.295 (0.187)	-0.103** (0.041)	-0.177*** (0.026)	-0.164*** (0.027)	0.002 (0.149)	-0.067 (0.051)
Importance of Communication	---	0.060*** (0.006)	0.070*** (0.012)	0.060*** (0.006)	---	0.039*** (0.006)	0.043*** (0.009)	0.040*** (0.006)
Importance of Physical Activities	---	-0.061*** (0.008)	-0.088*** (0.016)	-0.090*** (0.013)	---	-0.087*** (0.007)	-0.096*** (0.010)	-0.087*** (0.007)
Communication*Underweight	---	---	-0.058 (0.081)	---	---	---	-0.007 (0.039)	---
Communication*Overweight/Obese	---	---	-0.015 (0.013)	---	---	---	-0.005 (0.012)	---
Communication*Morbidly Obese	---	---	0.017 (0.036)	---	---	---	-0.064** (0.029)	-0.051** (0.023)
Physical*Underweight	---	---	0.054 (0.080)	---	---	---	0.013 (0.047)	---
Physical*Overweight/Obese	---	---	0.037** (0.018)	0.042*** (0.015)	---	---	0.018 (0.013)	---
Communication*Morbidly Obese	---	---	0.053 (0.045)	---	---	---	-0.013 (0.035)	---
Test Communication Interaction Terms=0 (P-Value)	---	---	0.530	---	---	---	0.169	---
Test Physical Interaction Terms=0 (P-Value)	---	---	0.209	---	---	---	0.537	---
R^2	0.320	0.343	0.345	0.344	0.306	0.336	0.336	0.336
*** p<0.01, ** p<0.05, * p<0.1								

Notes: Reported estimates use OLS to analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions for men contain 7,475 observations; all regressions for women contain 8,905 observations. Heteroskedasticity-robust standard errors are below in parentheses. Each individual's rating for "importance of communicating with persons outside the organization" is used to represent importance of communication, and each individual's rating for "importance of performing general physical activities" is used to represent the importance of physical activities. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.

Table 12. Robustness Check 1: Body Mass Index Deciles Summary Statistics						
	Men			Women		
	Minimum	Mean	Maximum	Minimum	Mean	Maximum
Decile 1	12.900	20.911	22.400	11.600	19.191	20.400
Decile 2	22.500	23.312	24.000	20.500	21.165	21.800
Decile 3	24.100	24.716	25.100	21.900	22.459	23.000
Decile 4	25.200	25.756	26.200	23.100	23.674	24.200
Decile 5	26.300	26.768	27.300	24.300	25.027	25.700
Decile 6	27.400	27.927	28.500	25.800	26.654	27.400
Decile 7	28.600	29.211	29.800	27.500	28.354	29.300
Decile 8	29.900	30.727	31.600	29.300	30.419	31.600
Decile 9	31.700	33.029	34.700	31.700	33.419	35.700
Decile 10	34.800	38.879	62.300	35.800	41.419	64.400
Bottom 5%	12.900	19.971	21.300	11.600	18.396	19.400
Top 5%	37.700	41.616	62.300	40.000	45.378	64.400
Notes: Reported estimates use respondents aged 18 to 65 from combined 2006-2008 CPS, ATUS, and EHM data. Estimates based on 8,928 observations for men and 10,007 observations for women. Sample excludes pregnant women.						

Table 13. Robustness Check 1: The Effect of Relative Weight on Working in Jobs Requiring Communication and Customer Contact for Men						
	Dependent Variables					
Weight Group	Importance of Communicating with Persons Outside the Organization	Importance of Communicating with Supervisors, Peers, or Subordinates	How Much Contact with Others Required by the Job	Importance of Establishing and Maintaining Interpersonal Relationships	Importance of Performing for or Working Directly with the Public	Importance of Selling or Influencing Others
OLS						
Decile 1	0.092* (0.055)	-0.024 (0.044)	0.007 (0.047)	-0.024 (0.046)	0.047 (0.037)	-0.027 (0.039)
Decile 2	0.037 (0.053)	-0.043 (0.043)	-0.016 (0.045)	-0.042 (0.044)	0.025 (0.036)	-0.013 (0.039)
Decile 3	-0.003 (0.051)	-0.023 (0.042)	-0.008 (0.044)	-0.024 (0.043)	-0.005 (0.035)	-0.015 (0.039)
Decile 4	0.044 (0.057)	0.0322 (0.046)	0.009 (0.048)	0.021 (0.048)	-0.021 (0.037)	0.013 (0.042)
Decile 6	0.065 (0.056)	-0.006 (0.044)	-0.014 (0.046)	0.018 (0.046)	0.016 (0.036)	0.014 (0.041)
Decile 7	0.066 (0.056)	0.023 (0.034)	0.051 (0.047)	0.039 (0.047)	0.035 (0.037)	0.010 (0.041)
Decile 8	-0.027 (0.056)	-0.096** (0.046)	-0.074 (0.047)	-0.079* (0.045)	0.001 (0.036)	-0.069* (0.039)
Decile 9	-0.035 (0.056)	-0.048 (0.036)	-0.037 (0.047)	-0.044 (0.046)	-0.015 (0.036)	-0.018 (0.041)
Decile 10	0.116** (0.058)	0.079* (0.047)	0.051 (0.049)	0.108** (0.049)	0.090** (0.040)	0.062 (0.044)
R^2	0.115	0.091	0.102	0.085	0.077	0.053
Ordered Probit						
Decile 1	0.062 (0.046)	-0.029 (0.036)	0.015 (0.047)	-0.017 (0.036)	0.061 (0.048)	0.005 (0.047)
Decile 2	0.016 (0.045)	-0.047 (0.045)	0.002 (0.045)	-0.033 (0.045)	0.013 (0.047)	0.001 (0.046)
Decile 3	-0.015 (0.043)	-0.029 (0.045)	-0.015 (0.044)	-0.018 (0.044)	-0.017 (0.045)	-0.024 (0.045)
Decile 4	0.021 (0.049)	0.027 (0.048)	0.006 (0.047)	0.019 (0.048)	-0.029 (0.048)	0.022 (0.049)

Decile 6	0.034 (0.048)	-0.008 (0.046)	-0.019 (0.046)	0.027 (0.047)	0.016 (0.047)	-0.010 (0.048)
Decile 7	0.030 (0.048)	0.011 (0.047)	0.060 (0.046)	0.049 (0.047)	0.041 (0.048)	0.015 (0.048)
Decile 8	-0.040 (0.048)	-0.123*** (0.048)	-0.066 (0.046)	-0.077* (0.047)	0.0004 (0.048)	-0.053 (0.047)
Decile 9	-0.044 (0.048)	-0.060 (0.049)	-0.015 (0.046)	-0.052 (0.048)	-0.025 (0.049)	-0.029 (0.049)
Decile 10	-0.044 (0.048)	0.083* (0.049)	0.050 (0.048)	0.105** (0.049)	0.102** (0.050)	0.070 (0.050)
Pseudo R^2	0.017	0.012	0.010	0.015	0.017	0.017
*** p<0.01, ** p<0.05, * p<0.1						
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 8,928 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Weight deciles are determined by weight relative to the rest of the sample from the same gender. Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region.						

Table 14. Robustness Check 1: The Effect of Relative Weight on Working in Jobs Requiring Communication and Customer Contact for Women						
	Dependent Variables					
Weight Group	Importance of Communicating with Persons Outside the Organization	Importance of Communicating with Supervisors, Peers, or Subordinates	How Much Contact with Others Required by the Job	Importance of Establishing and Maintaining Interpersonal Relationships	Importance of Performing for or Working Directly with the Public	Importance of Selling or Influencing Others
OLS						
Decile 1	0.129***	0.049	0.093**	0.035	0.066*	0.045
	(0.046)	(0.042)	(0.045)	(0.038)	(0.038)	(0.031)
Decile 2	0.095**	0.060	0.077*	0.034	0.038	0.014
	(0.047)	(0.043)	(0.046)	(0.039)	(0.039)	(0.031)
Decile 3	0.097**	0.041	0.083*	0.041	0.045	0.034
	(0.045)	(0.043)	(0.045)	(0.038)	(0.038)	(0.030)
Decile 4	0.070	0.061	0.064	0.048	0.009	0.040
	(0.047)	(0.044)	(0.046)	(0.040)	(0.038)	(0.032)
Decile 6	0.085*	0.039	0.036	0.016	0.029	0.041
	(0.046)	(0.043)	(0.045)	(0.038)	(0.037)	(0.031)
Decile 7	-0.026	-0.041	-0.021	-0.030	-0.031	-0.004
	(0.047)	(0.044)	(0.046)	(0.040)	(0.038)	(0.031)
Decile 8	-0.018	-0.046	-0.035	-0.041	-0.020	-0.046
	(0.047)	(0.045)	(0.047)	(0.040)	(0.039)	(0.030)
Decile 9	0.055	0.026	0.080*	0.055	0.052	0.040
	(0.047)	(0.045)	(0.048)	(0.041)	(0.040)	(0.031)
Decile 10	0.026	0.026	0.002	0.006	-0.017	-0.003
	(0.048)	(0.046)	(0.047)	(0.040)	(0.038)	(0.030)
R^2	0.099	0.079	0.065	0.072	0.051	0.040
Ordered Probit						
Decile 1	0.109**	0.053	0.066	0.030	0.100**	0.108**
	(0.044)	(0.043)	(0.043)	(0.043)	(0.045)	(0.045)
Decile 2	0.091**	0.090**	0.068	0.057	0.071	0.040
	(0.045)	(0.044)	(0.043)	(0.043)	(0.037)	(0.046)
Decile 3	0.087**	0.062	0.094**	0.040	0.090**	0.109**
	(0.044)	(0.043)	(0.042)	(0.043)	(0.045)	(0.044)
Decile 4	0.072	0.071	0.070	0.042	0.018	0.068
	(0.045)	(0.045)	(0.044)	(0.045)	(0.047)	(0.047)

Decile 6	0.088** (0.045)	0.078* (0.043)	0.036 (0.043)	0.020 (0.043)	0.051 (0.046)	0.083* (0.045)
Decile 7	-0.025 (0.047)	-0.030 (0.045)	-0.018 (0.046)	-0.063 (0.046)	-0.040 (0.048)	-0.021 (0.048)
Decile 8	-0.009 (0.047)	-0.025 (0.036)	-0.011 (0.046)	-0.048 (0.045)	-0.031 (0.050)	-0.060 (0.048)
Decile 9	0.039 (0.047)	0.050 (0.046)	0.054 (0.047)	0.056 (0.045)	0.022 (0.050)	0.055 (0.048)
Decile 10	0.055 (0.047)	0.043 (0.047)	-0.013 (0.047)	0.018 (0.045)	0.013 (0.048)	0.047 (0.047)
Pseudo R^2	0.017	0.010	0.009	0.013	0.010	0.010
*** p<0.01, ** p<0.05, * p<0.1						
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 10,007 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Weight deciles are determined by weight relative to the rest of the sample from the same gender. Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.						

Table 15. Robustness Check 1: The Effect of Relative Weight on Working in Jobs Requiring Physical Activity for Men							
	Dependent Variables						
Weight Group	Importance of Performing General Physical Activities	Importance of Speed of Limb Movement	Importance of Stamina	Importance of Explosive Strength	Importance of Dynamic Strength	Importance of Static Strength	Importance of Trunk Strength
OLS							
Decile 1	-0.026 (0.042)	-0.018 (0.028)	-0.045 (0.028)	-0.052 (0.033)	-0.061* (0.033)	-0.033 (0.038)	-0.033 (0.028)
Decile 2	-0.044 (0.041)	-0.008 (0.028)	-0.020 (0.029)	-0.050 (0.032)	-0.036 (0.033)	-0.036 (0.038)	-0.030 (0.027)
Decile 3	0.019 (0.040)	0.011 (0.027)	-0.005 (0.028)	-0.012 (0.032)	-0.036 (0.032)	-0.013 (0.037)	-0.031 (0.027)
Decile 4	-0.001 (0.043)	-0.010 (0.030)	-0.026 (0.030)	-0.025 (0.035)	-0.060* (0.034)	-0.019 (0.041)	-0.042 (0.029)
Decile 6	-0.005 (0.042)	-0.023 (0.028)	-0.009 (0.029)	-0.034 (0.034)	-0.038 (0.033)	-0.026 (0.039)	-0.007 (0.028)
Decile 7	0.055 (0.043)	0.041 (0.029)	0.024 (0.029)	0.022 (0.034)	0.008 (0.034)	0.021 (0.030)	0.008 (0.029)
Decile 8	0.037 (0.043)	0.027 (0.029)	-0.002 (0.029)	0.015 (0.034)	0.001 (0.034)	0.027 (0.039)	-0.007 (0.029)
Decile 9	0.069 (0.043)	0.048 (0.029)	0.045 (0.030)	0.061* (0.035)	0.049 (0.035)	0.044 (0.040)	0.034 (0.029)
Decile 10	0.038 (0.043)	-0.018 (0.030)	-0.013 (0.030)	-0.006 (0.035)	-0.010 (0.035)	-0.045 (0.040)	-0.020 (0.030)
R^2	0.037	0.030	0.005	0.034	0.037	0.057	0.011
Ordered Probit							
Decile 1	-0.023 (0.046)	-0.012 (0.045)	-0.049 (0.045)	-0.070 (0.048)	-0.080* (0.048)	-0.023 (0.045)	-0.056 (0.046)
Decile 2	-0.055 (0.045)	-0.016 (0.046)	-0.047 (0.046)	-0.073 (0.047)	-0.044 (0.048)	-0.055 (0.047)	-0.045 (0.045)
Decile 3	0.023 (0.044)	0.023 (0.045)	-0.013 (0.045)	-0.022 (0.046)	-0.039 (0.046)	-0.024 (0.045)	-0.059 (0.044)
Decile 4	0.008 (0.047)	-0.012 (0.049)	-0.053 (0.049)	-0.037 (0.051)	-0.073 (0.050)	-0.027 (0.049)	-0.078 (0.048)

Decile 6	-0.001 (0.046)	-0.050 (0.047)	-0.035 (0.047)	-0.059 (0.049)	-0.047 (0.049)	-0.051 (0.048)	-0.020 (0.046)
Decile 7	0.057 (0.047)	0.058 (0.047)	0.026 (0.047)	0.021 (0.049)	0.012 (0.049)	0.032 (0.047)	0.006 (0.047)
Decile 8	0.033 (0.047)	0.047 (0.046)	0.005 (0.046)	0.033 (0.049)	0.005 (0.049)	0.026 (0.047)	-0.015 (0.047)
Decile 9	0.077 (0.048)	0.081* (0.048)	0.061 (0.047)	0.076 (0.050)	0.070 (0.050)	0.048 (0.048)	0.054 (0.047)
Decile 10	0.053 (0.047)	-0.046 (0.49	-0.056 (0.049)	-0.012 (0.051)	0.006 (0.050)	-0.054 (0.048)	-0.041 (0.048)
Pseudo R^2	0.006	0.007	0.005	0.008	0.009	0.009	0.002
*** p<0.01, ** p<0.05, * p<0.1							
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 8,928 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Weight deciles are determined by weight relative to the rest of the sample from the same gender. Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region.							

Table 16. Robustness Check 1: The Effect of Relative Weight on Working in Jobs Requiring Physical Activity for Women							
	Dependent Variables						
Weight Group	Importance of Performing General Physical Activities	Importance of Speed of Limb Movement	Importance of Stamina	Importance of Explosive Strength	Importance of Dynamic Strength	Importance of Static Strength	Importance of Trunk Strength
OLS							
Decile 1	-0.077* (0.042)	-0.011 (0.027)	-0.040 (0.032)	-0.030 (0.033)	-0.071** (0.033)	-0.074* (0.039)	-0.032 (0.028)
Decile 2	-0.085** (0.042)	-0.019 (0.027)	-0.053* (0.033)	-0.043 (0.033)	-0.060* (0.034)	-0.060 (0.039)	-0.043* (0.028)
Decile 3	-0.058 (0.042)	-0.001 (0.026)	-0.047 (0.032)	-0.019 (0.033)	-0.034 (0.033)	-0.042 (0.038)	-0.012 (0.028)
Decile 4	-0.095** (0.042)	-0.015 (0.026)	-0.046 (0.033)	-0.033 (0.033)	-0.033 (0.035)	-0.077* (0.040)	-0.022 (0.029)
Decile 6	-0.111*** (0.041)	-0.047* (0.026)	-0.073** (0.030)	-0.046 (0.032)	-0.066** (0.033)	-0.103*** (0.038)	-0.046* (0.028)
Decile 7	0.033 (0.042)	0.055** (0.027)	0.042 (0.033)	0.081** (0.035)	0.050 (0.034)	0.059 (0.040)	0.039 (0.029)
Decile 8	-0.008 (0.043)	0.055** (0.028)	0.013 (0.033)	0.032 (0.034)	0.018 (0.035)	0.010 (0.030)	0.033 (0.030)
Decile 9	-0.048 (0.042)	-0.025 (0.026)	-0.033 (0.031)	-0.042 (0.033)	-0.038 (0.033)	-0.061 (0.039)	-0.032 (0.029)
Decile 10	0.024 (0.044)	0.040 (0.027)	0.025 (0.033)	0.066* (0.035)	0.024 (0.035)	0.031 (0.030)	0.037 (0.029)
R^2	0.030	0.015	0.008	0.041	0.016	0.037	0.005
Ordered Probit							
Decile 1	-0.072* (0.044)	-0.019 (0.044)	-0.054 (0.045)	-0.023 (0.045)	-0.084* (0.045)	-0.084* (0.045)	-0.049 (0.043)
Decile 2	-0.090** (0.044)	-0.030 (0.044)	-0.063 (0.045)	-0.051 (0.045)	-0.076* (0.046)	-0.066 (0.044)	-0.080* (0.044)
Decile 3	-0.062 (0.044)	0.001 (0.043)	-0.054 (0.45)	-0.027 (0.044)	-0.043 (0.044)	-0.047 (0.044)	-0.012 (0.043)
Decile 4	-0.079* (0.045)	-0.028 (0.044)	-0.073 (0.046)	-0.044 (0.046)	-0.049 (0.047)	-0.088* (0.046)	-0.034 (0.045)

Decile 6	-0.109**	-0.079*	-0.077*	-0.063	-0.084*	-0.121***	0.069
	(0.043)	(0.043)	(0.043)	(0.043)	(0.044)	(0.044)	(0.043)
Decile 7	0.041	0.090**	0.061	0.116**	0.070	0.063	0.061
	(0.044)	(0.045)	(0.046)	(0.046)	(0.046)	(0.046)	(0.046)
Decile 8	-0.013	0.092**	0.042	0.031	0.015	0.009	0.047
	(0.046)	(0.045)	(0.046)	(0.036)	(0.047)	(0.046)	(0.046)
Decile 9	-0.052	-0.048	-0.037	-0.050	-0.048	-0.080*	-0.056
	(0.044)	(0.044)	(0.045)	(0.044)	(0.044)	(0.044)	(0.045)
Decile 10	0.023	0.071	0.052	0.094**	0.036	0.033	0.056
	(0.036)	(0.045)	(0.046)	(0.046)	(0.046)	(0.046)	(0.045)
Pseudo R^2	0.004	0.003	0.002	0.010	0.004	0.005	0.001
*** p<0.01, ** p<0.05, * p<0.1							
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 10,007 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Weight deciles are determined by weight relative to the rest of the sample from the same gender. Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.							

Table 17. Robustness Check 1: The Effect of Relative Weight and Job Requirements on Real Hourly Wage							
	Dependent Variable: ln(Real Hourly Wage ($2008))						
	Men				Women		
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Decile 1	-0.072***	-0.080***	0.049	-0.081***	0.017	0.005	0.119
	(0.027)	(0.027)	(0.135)	(0.027)	(0.026)	(0.026)	(0.127)
Decile 2	-0.022	-0.024	0.124	-0.024	0.016	0.005	0.019
	(0.027)	(0.026)	(0.146)	(0.026)	(0.025)	(0.025)	(0.121)
Decile 3	-0.004	-0.003	0.224*	0.056	-0.007	-0.015	0.067
	(0.025)	(0.024)	(0.125)	(0.046)	(0.025)	(0.025)	(0.117)
Decile 4	0.005	0.004	0.209	0.071	0.047*	0.036	0.189
	(0.028)	(0.027)	(0.146)	(0.049)	(0.026)	(0.025)	(0.118)
Decile 6	0.027	0.022	0.117	0.022	-0.020	-0.036	0.117
	(0.027)	(0.027)	(0.144)	(0.027)	(0.024)	(0.024)	(0.113)
Decile 7	-0.037	-0.038	0.063	0.083*	-0.034	-0.031	0.100
	(0.027)	(0.026)	(0.139)	(0.049)	(0.025)	(0.025)	(0.122)
Decile 8	-0.021	-0.015	0.094	-0.013	-0.071***	-0.073***	0.130
	(0.026)	(0.025)	(0.138)	(0.025)	(0.025)	(0.025)	(0.124)
Decile 9	-0.023	-0.019	0.107	0.086*	-0.058**	-0.067***	-0.097
	(0.026)	(0.025)	(0.132)	(0.045)	(0.025)	(0.024)	(0.121)
Decile 10	-0.062**	-0.063**	0.086	-0.062**	-0.115***	-0.116***	-0.090
	(0.027)	(0.027)	(0.137)	(0.027)	(0.025)	(0.025)	(0.127)
Importance of Communication	---	0.060***	0.086***	0.075***	---	0.039***	0.057***
		(0.006)	(0.018)	(0.007)		(0.006)	(0.018)
Importance of Physical Activities	---	-0.060***	-0.037	-0.061***	---	-0.087***	-0.071***
		(0.008)	(0.023)	(0.008)		(0.007)	(0.021)
Communication* Decile 1	---	---	-0.014	---	---	---	-0.026
			(0.026)				(0.025)
Communication* Decile 2	---	---	0.004	---	---	---	0.006
			(0.026)				(0.025)
Communication* Decile 3	---	---	-0.043*	-0.025	---	---	-0.025
			(0.023)	(0.015)			(0.026)
Communication* Decile 4	---	---	-0.044*	-0.028	---	---	-0.010
			(0.026)	(0.017)			(0.026)
Communication* Decile 6	---	---	-0.014	---	---	---	-0.037
			(0.026)				(0.023)

Communication* Decile 7	---	---	-0.049* (0.026)	-0.050*** (0.017)	---	---	-0.037 (0.025)
Communication* Decile 8	---	---	-0.024 (0.025)	-0.046*** (0.016)	---	---	-0.037 (0.027)
Communication* Decile 9	---	---	-0.049** (0.024)	---	---	---	0.002 (0.026)
Communication* Decile 10	---	---	-0.030 (0.026)	---	---	---	-0.019 (0.026)
Physical*Decile 1	---	---	-0.035 (0.033)	---	---	---	-0.020 (0.031)
Physical*Decile 2	---	---	-0.058 (0.036)	---	---	---	-0.010 (0.029)
Physical*Decile 3	---	---	-0.044 (0.031)	---	---	---	-0.010 (0.028)
Physical*Decile 4	---	---	-0.036 (0.035)	---	---	---	-0.045 (0.028)
Physical*Decile 6	---	---	-0.022 (0.035)	---	---	---	-0.026 (0.027)
Physical*Decile 7	---	---	0.005 (0.033)	---	---	---	-0.019 (0.028)
Physical*Decile 8	---	---	-0.018 (0.034)	---	---	---	-0.042 (0.029)
Physical*Decile 9	---	---	-0.004 (0.032)	---	---	---	0.009 (0.029)
Physical*Decile 10	---	---	-0.028 (0.033)	---	---	---	0.003 (0.030)
Test Communication Interaction Terms=0 (P-Value)	---	---	0.274	---	---	---	0.510
Test Physical Interaction Terms=0 (P-Value)	---	---	0.717	---	---	---	0.629
R^2	0.316	0.344	0.346	0.345	0.308	0.337	0.338
*** p<0.01, ** p<0.05, * p<0.1							

Notes: Reported estimates use OLS to analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions for men contain 7,475 observations; all regressions for women contain 8,905 observations. Weight deciles are determined by weight relative to the rest of the sample from the same gender. Heteroskedasticity-robust standard errors are below in parentheses. Heteroskedasticity-robust standard errors are below in parentheses. Each individual's rating for "importance of communicating with persons outside the organization" is used to represent importance of communication, and each individual's rating for "importance of performing general physical activities" is used to represent the importance of physical activities. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.

Table 18. Robustness Check 2: The Effect of Weight on Jobs Requiring Communication Using Low, Medium, and High Occupation Characteristic Scores for Men						
	Dependent Variables					
Weight Group	Importance of Communicating with Persons Outside the Organization	Importance of Communicating with Supervisors, Peers, or Subordinates	How Much Contact with Others Required by the Job	Importance of Establishing and Maintaining Interpersonal Relationships	Importance of Performing for or Working Directly with the Public	Importance of Selling or Influencing Others
OLS						
Underweight	-0.149 (0.094)	-0.186 (0.117)	-0.075 (0.094)	-0.127* (0.070)	-0.017 (0.060)	-0.108*** (0.014)
Overweight	-0.010 (0.019)	0.026 (0.019)	0.014 (0.019)	0.033* (0.018)	-0.021* (0.013)	0.020 (0.013)
Obese	-0.032 (0.022)	-0.005 (0.023)	-0.019 (0.022)	0.011 (0.021)	-0.006 (0.015)	0.014 (0.014)
Morbidly Obese	0.019 (0.050)	0.130** (0.052)	0.074 (0.053)	0.081* (0.048)	0.020 (0.035)	0.051 (0.036)
Test: Overweight= Obese (P-Value)	0.264	0.130	0.108	0.227	0.223	0.653
R^2	0.107	0.080	0.095	0.060	0.034	0.012
OLS Pooled: Overweight and Obese						
Underweight	-0.149 (0.094)	-0.186 (0.117)	-0.075 (0.094)	-0.127* (0.070)	-0.017 (0.060)	-0.108*** (0.014)
Overweight/Obese	-0.018 (0.018)	0.015 (0.018)	0.002 (0.018)	0.026 (0.017)	-0.016 (0.012)	0.018 (0.012)
Morbidly Obese	0.019 (0.050)	0.130** (0.052)	0.074 (0.053)	0.082* (0.048)	0.019 (0.035)	0.051 (0.036)
R^2	0.107	0.080	0.094	0.059	0.034	0.012
Ordered Probit Pooled: Overweight and Obese						
Underweight	-0.240 (0.184)	-0.336 (0.209)	-0.150 (0.189)	-0.313* (0.185)	-0.036 (0.220)	-0.383*** (0.070)
Overweight/Obese	-0.019 (0.029)	0.025 (0.027)	0.013 (0.029)	0.053* (0.030)	-0.039 (0.034)	0.073* (0.043)
Morbidly Obese	0.041 (0.077)	0.194** (0.078)	0.134* (0.081)	0.153* (0.080)	0.059 (0.095)	0.192* (0.111)

Pseudo R^2	0.058	0.039	0.054	0.037	0.031	0.018
*** p<0.01, ** p<0.05, * p<0.1						
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 8,928 observations. All dependent variables were originally ratings on a scale from 1 to 5. In these regressions, the dependent variables take three values: 1 (corresponding to low, or an original score of 1 to less than 2.333), 2 (corresponding to medium, or an original score of 2.333 to less than 3.666), and 3 (corresponding to high, or an original score of 3.666 to 5). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region.						

Table 19. Robustness Check 2: The Effect of Weight on Jobs Requiring Communication Using Low, Medium, and High Occupation Characteristic Scores for Women						
	Dependent Variables					
Weight Group	Importance of Communicating with Persons Outside the Organization	Importance of Communicating with Supervisors, Peers, or Subordinates	How Much Contact with Others Required by the Job	Importance of Establishing and Maintaining Interpersonal Relationships	Importance of Performing for or Working Directly with the Public	Importance of Selling or Influencing Others
OLS						
Underweight	0.018 (0.047)	0.004 (0.053)	0.025 (0.053)	-0.009 (0.045)	0.022 (0.035)	0.007 (0.027)
Overweight	-0.018 (0.017)	-0.023 (0.018)	-0.040** (0.018)	-0.016 (0.015)	-0.010 (0.012)	0.010 (0.009)
Obese	-0.020 (0.019)	-0.036* (0.020)	-0.030 (0.021)	-0.013 (0.017)	-0.009 (0.013)	0.005 (0.009)
Morbidly Obese	-0.085** (0.035)	-0.076* (0.039)	-0.080** (0.039)	-0.073** (0.033)	-0.046** (0.022)	-0.019 (0.016)
Test: Overweight= Obese (P-Value)	0.943	0.556	0.640	0.857	0.945	0.623
R^2	0.077	0.092	0.052	0.032	0.034	0.006
OLS Pooled: Overweight and Obese						
Underweight	0.018 (0.047)	0.004 (0.053)	0.025 (0.053)	-0.009 (0.045)	0.022 (0.035)	0.007 (0.027)
Overweight/Obese	-0.019 (0.015)	-0.029* (0.016)	-0.036** (0.016)	-0.014 (0.013)	-0.010 (0.010)	0.008 (0.008)
Morbidly Obese	-0.085** (0.035)	-0.076* (0.039)	-0.080** (0.039)	-0.073** (0.033)	-0.046** (0.022)	-0.019 (0.016)
R^2	0.077	0.092	0.052	0.032	0.034	0.006
Ordered Probit Pooled: Overweight and Obese						
Underweight	0.013 (0.083)	-0.007 (0.084)	0.036 (0.085)	-0.030 (0.089)	0.035 (0.102)	0.001 (0.136)
Overweight/Obese	-0.034 (0.027)	-0.043* (0.025)	-0.058** (0.027)	-0.025 (0.026)	-0.033 (0.032)	0.050 (0.038)
Morbidly Obese	-0.140** (0.071)	-0.118* (0.006)	-0.133* (0.072)	-0.159** (0.073)	-0.143 ((0.090)	-0.103 (0.106)

Pseudo R^2	0.047	0.049	0.034	0.022	0.039	0.008
*** p<0.01, ** p<0.05, * p<0.1						
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 10,007 observations. All dependent variables were originally ratings on a scale from 1 to 5. In these regressions, the dependent variables take three values: 1 (corresponding to low, or an original score of 1 to less than 2.333), 2 (corresponding to medium, or an original score of 2.333 to less than 3.666), and 3 (corresponding to high, or an original score of 3.666 to 5). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.						

Table 20. Robustness Check 2: The Effect of Weight on Jobs Requiring Communication Using Low, Medium, and High Occupation Characteristic Scores for Men							
	Dependent Variables						
Weight Group	Importance of Performing General Physical Activities	Importance of Speed of Limb Movement	Importance of Stamina	Importance of Explosive Strength	Importance of Dynamic Strength	Importance of Static Strength	Importance of Trunk Strength
OLS							
Underweight	0.182 (0.117)	0.041 (0.070)	0.045 (0.063)	0.123 (0.077)	0.007 (0.072)	0.173* (0.089)	0.193*** (0.072)
Overweight	0.031* (0.019)	0.004 (0.011)	0.011 (0.011)	0.027** (0.012)	0.011 (0.011)	0.015 (0.015)	0.019 (0.014)
Obese	0.046** (0.021)	0.013 (0.012)	0.012 (0.013)	0.048*** (0.014)	0.034** (0.014)	0.030* (0.017)	0.022 (0.016)
Morbidly Obese	0.011 (0.048)	-0.009 (0.028)	0.013 (0.029)	0.018 (0.031)	-0.008 (0.030)	-0.034 (0.038)	0.033 (0.036)
Test: Overweight= Obese (P-Value)	0.451	0.415	0.946	0.084	0.069	0.323	0.835
R^2	0.042	0.002	0.010	0.010	0.022	0.033	0.014
OLS Pooled: Overweight and Obese							
Underweight	0.182 (0.117)	0.041 (0.070)	0.045 (0.063)	0.124 (0.077)	0.007 (0.072)	0.173* (0.089)	0.193*** (0.072)
Overweight/Obese	0.036** (0.017)	0.007 (0.010)	0.011 (0.010)	0.034*** (0.011)	0.019* (0.011)	0.020 (0.014)	0.020 (0.013)
Morbidly Obese	0.011 (0.048)	-0.009 (0.028)	0.013 (0.029)	0.018 (0.031)	-0.008 (0.030)	-0.035 (0.038)	0.033 (0.036)
R^2	0.042	0.002	0.010	0.010	0.021	0.033	0.014
Ordered Probit Pooled: Overweight and Obese							
Underweight	0.283 (0.179)	0.138 (0.218)	0.167 (0.211)	0.333* (0.190)	0.018 (0.203)	0.340** (0.163)	0.422*** (0.155)
Overweight/Obese	0.058** (0.028)	0.025 (0.034)	0.040 (0.036)	0.106*** (0.032)	0.064** (0.033)	0.045 (0.029)	0.046 (0.030)
Morbidly Obese	0.019 (0.075)	-0.032 (0.097)	0.037 (0.100)	0.060 (0.090)	-0.015 (0.091)	-0.067 (0.083)	0.078 (0.083)

Pseudo R^2	0.021	0.002	0.010	0.008	0.018	0.020	0.009
*** p<0.01, ** p<0.05, * p<0.1							
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 8,928 observations. All dependent variables were originally ratings on a scale from 1 to 5. In these regressions, the dependent variables take three values: 1 (corresponding to low, or an original score of 1 to less than 2.333), 2 (corresponding to medium, or an original score of 2.333 to less than 3.666), and 3 (corresponding to high, or an original score of 3.666 to 5). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region.							

Table 21. Robustness Check 2: The Effect of Weight on Jobs Requiring Communication Using Low, Medium, and High Occupation Characteristic Scores for Women							
	Dependent Variables						
Weight Group	Importance of Performing General Physical Activities	Importance of Speed of Limb Movement	Importance of Stamina	Importance of Explosive Strength	Importance of Dynamic Strength	Importance of Static Strength	Importance of Trunk Strength
OLS							
Underweight	-0.026 (0.052)	-0.004 (0.032)	-0.047 (0.033)	-0.032 (0.033)	-0.036 (0.033)	-0.018 (0.042)	-0.024 (0.040)
Overweight	0.036** (0.018)	0.001 (0.011)	0.020 (0.013)	0.021* (0.012)	0.009 (0.012)	0.026* (0.015)	0.018 (0.014)
Obese	0.023 (0.020)	0.002 (0.012)	0.025* (0.014)	0.022* (0.013)	0.012 (0.013)	0.024 (0.016)	0.038** (0.016)
Morbidly Obese	0.113*** (0.039)	0.051** (0.025)	0.048* (0.028)	0.068** (0.027)	0.041 (0.028)	0.083*** (0.032)	0.116*** (0.030)
Test: Overweight= Obese (P-Value)	0.552	0.921	0.751	0.933	0.835	0.931	0.221
R^2	0.029	0.007	0.037	0.019	0.013	0.015	0.005
OLS Pooled: Overweight and Obese							
Underweight	-0.026 (0.052)	-0.004 (0.032)	-0.047 (0.034)	-0.032 (0.033)	-0.036 (0.033)	-0.018 (0.042)	-0.024 (0.040)
Overweight/Obese	0.030* (0.016)	0.002 (0.010)	0.022** (0.011)	0.021** (0.010)	0.010 (0.010)	0.025** (0.013)	0.026** (0.012)
Morbidly Obese	0.113*** (0.039)	0.051** (0.025)	0.048* (0.028)	0.068** (0.027)	0.041 (0.028)	0.083*** (0.032)	0.116*** (0.030)
R^2	0.029	0.007	0.037	0.019	0.013	0.015	0.005
Ordered Probit Pooled: Overweight and Obese							
Underweight	-0.039 (0.080)	-0.015 (0.095)	-0.159 (0.106)	-0.088 (0.092)	-0.101 (0.094)	-0.034 (0.082)	-0.050 (0.083)
Overweight/Obese	0.046* (0.024)	0.004 (0.028)	0.054* (0.029)	0.056** (0.027)	0.025 (0.027)	0.049** (0.025)	0.053** (0.025)
Morbidly Obese	0.173*** (0.059)	0.145** (0.071)	0.127* (0.074)	0.172** (0.067)	0.109 (0.070)	0.159*** (0.059)	0.233*** (0.060)

Pseudo R^2	0.014	0.006	0.027	0.014	0.009	0.009	0.003
*** p<0.01, ** p<0.05, * p<0.1							
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions contain 10,007 observations. All dependent variables were originally ratings on a scale from 1 to 5. In these regressions, the dependent variables take three values: 1 (corresponding to low, or an original score of 1 to less than 2.333), 2 (corresponding to medium, or an original score of 2.333 to less than 3.666), and 3 (corresponding to high, or an original score of 3.666 to 5). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.							

Table 22. Robustness Check 2: The Effect of Weight and Job Requirements on Real Hourly Wage Using Low, Medium, and High Occupation Characteristic Scores						
	Dependent Variable: ln(Real Hourly Wage ($2008))					
	Men			Women		
Variables	(1)	(2)	(3)	(4)	(5)	(6)
Underweight	-0.118*	-0.283	-0.113*	0.001	-0.154	0.001
	(0.067)	(0.207)	(0.067)	(0.039)	(0.140)	(0.039)
Overweight	0.032**	-0.078	-0.037	-0.030**	-0.123***	-0.120***
	(0.015)	(0.049)	(0.039)	(0.014)	(0.046)	(0.044)
Obese	0.017	-0.082	-0.080*	-0.076***	-0.207***	-0.186***
	(0.017)	(0.055)	(0.045)	(0.015)	(0.050)	(0.049)
Morbidly Obese	-0.104**	-0.244*	-0.103**	-0.164***	-0.086	-0.164***
	(0.041)	(0.148)	(0.041)	(0.026)	(0.104)	(0.026)
Importance of Communication (Low, Medium, High)	0.102***	0.114***	0.103***	0.066***	0.038***	0.050***
	(0.009)	(0.014)	(0.010)	(0.009)	(0.014)	(0.011)
Importance of Physical Activities (Low, Medium, High)	-0.079***	-0.112***	-0.109***	-0.109***	-0.135***	-0.128***
	(0.010)	(0.019)	(0.017)	(0.008)	(0.013)	(0.012)
Communication* Underweight	---	-0.035	---	---	0.115	---
		(0.168)			(0.090)	
Communication* Overweight	---	0.029	---	---	0.058*	0.055*
		(0.028)			(0.035)	(0.031)
Communication*Obese	---	-0.010	---	---	0.125***	0.079**
		(0.034)			(0.042)	(0.036)
Communication*Morbidly Obese	---	0.010	---	---	-0.134	---
		(0.104)			(0.087)	
Physical*Underweight	---	0.088	---	---	0.064	---
		(0.087)			(0.056)	
Physical*Overweight	---	0.058**	0.038*	---	0.040**	0.037*
		(0.024)	(0.020)		(0.020)	(0.019)
Physical*Obese	---	0.058**	0.052**	---	0.056**	0.045**
		(0.026)	(0.023)		(0.022)	(0.021)
Physical*Morbidly Obese	---	0.074	---	---	-0.023	---
		(0.062)			(0.044)	
Test: Overweight=Obese (P-Value)	0.321	0.933	0.293	0.003	0.137	0.227

Test: Communication*Overweight =Communication*Obese (P-Value)	---	0.310	---	---	0.178	0.559
Test: Physical*Overweight= Physical*Obese (P-Value)	---	0.991	0.483	---	0.506	0.735
Test Communication Interaction Terms=0 (P-Value)	---	0.839	---	---	0.006	---
Test Physical Interaction Terms=0 (P-Value)	---	0.105	---	---	0.048	---
R^2	0.346	0.348	0.346	0.335	0.333	0.348
*** p<0.01, ** p<0.05, * p<0.1						
Notes: Reported estimates use OLS to analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions for men contain 7,475 observations; all regressions for women contain 8,905 observations. The communication and physical activities variables were originally ratings on a scale from 1 to 5. In this regression, the communication and physical activities take three values: 1 (corresponding to low, or an original score of 1 to less than 2.333), 2 (corresponding to medium, or an original score of 2.333 to less than 3.666), and 3 (corresponding to high, or an original score of 3.666 to 5). Heteroskedasticity-robust standard errors are below in parentheses. Each individual's rating for "importance of communicating with persons outside the organization" is used to represent importance of communication, and each individual's rating for "importance of performing general physical activities" is used to represent the importance of physical activities. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.						

Table 23. Robustness Check 3: The Effect of Predicted Actual Weight on Jobs Requiring Communication for Men						
	Dependent Variables					
Weight Group	Importance of Communicating with Persons Outside the Organization	Importance of Communicating with Supervisors, Peers, or Subordinates	How Much Contact with Others Required by the Job	Importance of Establishing and Maintaining Interpersonal Relationships	Importance of Performing for or Working Directly with the Public	Importance of Selling or Influencing Others
OLS*						
Underweight	-0.174 (0.140)	-0.233* (0.124)	-0.054 (0.132)	-0.143 (0.109)	0.066 (0.112)	-0.130* (0.071)
Overweight	-0.028 (0.031)	0.027 (0.025)	0.015 (0.026)	0.044* (0.026)	-0.026 (0.021)	0.029 (0.023)
Obese	-0.067* (0.035)	-0.015 (0.028)	-0.018 (0.030)	0.007 (0.029)	-0.024 (0.024)	-0.0003 (0.025)
Morbidly Obese	0.042 (0.073)	0.132** (0.062)	0.048 (0.063)	0.121** (0.062)	0.063 (0.053)	0.054 (0.056)
Test: Overweight= Obese (P-Value)	0.232	0.108	0.220	0.165	0.932	0.052
R^2	0.114	0.090	0.101	0.084	0.075	0.204
OLS Pooled: Overweight and Obese						
Underweight	-0.174 (0.140)	-0.233* (0.125)	-0.054 (0.132)	-0.143 (0.109)	0.066 (0.112)	-0.130* (0.071)
Overweight/Obese	-0.042 (0.029)	0.011 (0.023)	0.003 (0.024)	0.030 (0.024)	-0.025 (0.020)	0.018 (0.021)
Morbidly Obese	0.042 (0.073)	0.132** (0.062)	0.049 (0.063)	0.122** (0.062)	0.063 (0.053)	0.055 (0.056)
R^2	0.114	0.090	0.101	0.084	0.076	0.052
Ordered Probit Pooled: Overweight and Obese						
Underweight	-0.113 (0.123)	-0.216* (0.124)	-0.188 (0.158)	-0.125 (0.115)	0.104 (0.157)	-0.091 (0.132)
Overweight/Obese	-0.034 (0.025)	0.011 (0.024)	-0.005 (0.024)	0.021 (0.024)	-0.027 (0.025)	-0.004 (0.025)
Morbidly Obese	0.023 (0.062)	0.143** (0.063)	0.019 (0.061)	0.143** (0.062)	0.089 (0.065)	0.079 (0.064)
Pseudo R^2	0.017	0.012	0.010	0.015	0.017	0.017

*** p<0.01, ** p<0.05, * p<0.1
Notes: Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. Actual weight is calculated from the predicted weight reported in the EHM using a correction developed by Cawley (2006) with NHANES data. All regressions contain 8,928 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region.

Table 24. Robustness Check 3: The Effect of Predicted Actual Weight on Jobs Requiring Communication for Women						
	Dependent Variables					
Weight Group	Importance of Communicating with Persons Outside the Organization	Importance of Communicating with Supervisors, Peers, or Subordinates	How Much Contact with Others Required by the Job	Importance of Establishing and Maintaining Interpersonal Relationships	Importance of Performing for or Working Directly with the Public	Importance of Selling or Influencing Others
OLS						
Underweight	0.024 (0.073)	0.021 (0.071)	0.064 (0.078)	0.035 (0.063)	0.039 (0.065)	-0.005 (0.046)
Overweight	-0.052* (0.027)	-0.032 (0.025)	-0.057** (0.026)	-0.036 (0.022)	-0.037* (0.021)	-0.014 (0.018)
Obese	-0.048* (0.028)	-0.037 (0.027)	-0.036 (0.028)	-0.006 (0.024)	-0.018 (0.023)	-0.018 (0.018)
Morbidly Obese	-0.130*** (0.049)	-0.078* (0.048)	-0.116** (0.049)	-0.080* (0.042)	-0.071* (0.039)	-0.060* (0.031)
Test: Overweight= Obese (P-Value)	0.902	0.874	0.470	0.238	0.420	0.823
R^2	0.098	0.078	0.064	0.071	0.051	0.039
OLS Pooled: Overweight and Obese						
Underweight	0.024 (0.073)	0.021 (0.071)	0.064 (0.078)	0.035 (0.063)	0.039 (0.065)	-0.005 (0.03 6)
Overweight/Obese	-0.050** (0.023)	-0.034 (0.021)	-0.048** (0.023)	-0.023 (0.019)	-0.029 (0.019)	-0.016 (0.015)
Morbidly Obese	-0.130*** (0.049)	-0.078* (0.048)	-0.116** (0.049)	-0.081* (0.043)	-0.072* (0.039)	-0.059* (0.031)
R^2	0.098	0.078	0.064	0.071	0.050	0.039
Ordered Probit Pooled: Overweight and Obese						
Underweight	0.028 (0.069)	0.025 (0.069)	0.031 (0.074)	0.050 (0.069)	0.039 (0.074)	0.056 (0.070)
Overweight/Obese	-0.040* (0.022)	-0.029 (0.022)	-0.047** (0.022)	-0.027 (0.022)	-0.055** (0.023)	-0.045** (0.023)
Morbidly Obese	-0.102** (0.050)	-0.087* (0.051)	-0.133*** (0.049)	-0.084* (0.049)	-0.082 (0.051)	-0.094* (0.051)
Pseudo R^2	0.017	0.010	0.009	0.013	0.010	0.010

*** p<0.01, ** p<0.05, * p<0.1
Notes: Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. Actual weight is calculated from the predicted weight reported in the EHM using a correction developed by Cawley (2006) with NHANES data. All regressions contain 10,007 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.

Table 25. Robustness Check 3: The Effect of Predicted Actual Weight on Jobs Requiring Physical Activity for Men							
	Dependent Variables						
Weight Group	Importance of Performing General Physical Activities	Importance of Speed of Limb Movement	Importance of Stamina	Importance of Explosive Strength	Importance of Dynamic Strength	Importance of Static Strength	Importance of Trunk Strength
OLS							
Underweight	0.195 (0.126)	0.117 (0.084)	0.102 (0.095)	0.204* (0.104)	0.017 (0.087)	0.290** (0.118)	0.154* (0.086)
Overweight	0.035 (0.024)	0.010 (0.016)	0.023 (0.016)	0.027 (0.018)	-0.032 (0.018)	0.027 (0.022)	0.022 (0.016)
Obese	0.067** (0.027)	0.039 (0.018)	0.041** (0.018)	0.070 (0.021)	0.065*** (0.021)	0.053** (0.025)	0.040** (0.018)
Morbidly Obese	0.109* (0.057)	-0.010 (0.038)	0.028 (0.040)	0.043 (0.045)	0.046 (0.44)	-0.010 (0.052)	0.020 (0.038)
Test: Overweight= Obese (P-Value)	0.195	0.087	0.278	0.028	0.022	0.252	0.288
R^2	0.037	0.030	0.004	0.033	0.036	0.057	0.011
OLS Pooled: Overweight and Obese							
Underweight	0.195 (0.126)	0.117 (0.084)	0.102 (0.096)	0.250** (0.104)	0.017 (0.087)	0.290** (0.118)	0.154* (0.086)
Overweight/Obese	0.047** (0.022)	0.021 (0.015)	0.030** (0.015)	0.043** (0.017)	0.037** (0.017)	0.036* (0.020)	0.029** (0.015)
Morbidly Obese	0.108* (0.057)	-0.010 (0.038)	0.028 (0.040)	0.042 (0.045)	0.045 (0.044)	-0.011 (0.052)	0.020 (0.038)
R^2	0.037	0.029	0.004	0.033	0.036	0.057	0.011
Ordered Probit Pooled: Overweight and Obese							
Underweight	0.183 (0.133)	0.193 (0.129)	0.142 (0.145)	0.295** (0.132)	0.015 (0.128)	0.339*** (0.131)	0.254* (0.143)
Overweight/Obese	0.052** (0.024)	0.027 (0.025)	0.041* (0.024)	0.058** (0.025)	0.048* (0.025)	0.041* (0.024)	0.044* (0.024)
Morbidly Obese	0.123** (0.061)	-0.035 (0.065)	-0.010 (0.067)	0.062 (0.064)	0.081 (0.063)	-0.005 (0.061)	0.026 (0.062)
Pseudo R^2	0.006	0.007	0.004	0.008	0.009	0.009	0.002

*** p<0.01, ** p<0.05, * p<0.1
Notes: Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. Actual weight is calculated from the predicted weight reported in the EHM using a correction developed by Cawley (2006) with NHANES data. All regressions contain 8,928 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region.

Table 26. Robustness Check 3: The Effect of Predicted Actual Weight on Jobs Requiring Physical Activity for Women							
	Dependent Variables						
Weight Group	Importance of Performing General Physical Activities	Importance of Speed of Limb Movement	Importance of Stamina	Importance of Explosive Strength	Importance of Dynamic Strength	Importance of Static Strength	Importance of Trunk Strength
OLS							
Underweight	-0.037 (0.068)	0.004 (0.44)	0.007 (0.051)	0.002 (0.043)	-0.017 (0.053)	-0.009 (0.063)	-0.004 (0.046)
Overweight	0.034 (0.024)	0.002 (0.015)	0.026 (0.018)	0.031* (0.019)	0.027 (0.019)	0.031 (0.022)	0.016 (0.016)
Obese	0.030 (0.025)	0.013 (0.016)	0.025 (0.019)	0.016 (0.020)	0.022 (0.020)	0.022 (0.023)	0.019 (0.017)
Morbidly Obese	0.158*** (0.046)	0.097*** (0.209)	0.102*** (0.034)	0.149*** (0.037)	0.115*** (0.036)	0.134*** (0.041)	0.100*** (0.030)
Test: Overweight= Obese (P-Value)	0.881	0.481	0.968	0.485	0.805	0.723	0.889
R^2	0.029	0.014	0.007	0.039	0.015	0.035	0.003
OLS Pooled: Overweight and Obese							
Underweight	-0.037 (0.068)	0.004 (0.044)	0.007 (0.051)	0.002 (0.054)	-0.017 (0.053)	-0.009 (0.063)	-0.004 (0.046)
Overweight/Obese	0.033 (0.021)	0.007 (0.013)	0.026* (0.016)	0.025 (0.016)	0.025 (0.017)	0.027 (0.019)	0.017 (0.014)
Morbidly Obese	0.158*** (0.046)	0.097*** (0.029)	0.102*** (0.034)	0.149*** (0.037)	0.115*** (0.036)	0.135*** (0.041)	0.100*** (0.030)
R^2	0.029	0.014	0.007	0.039	0.015	0.035	0.003
Ordered Probit Pooled: Overweight and Obese							
Underweight	-0.037 (0.072)	0.016 (0.072)	0.008 (0.072)	0.011 (0.074)	-0.014 (0.072)	0.001 (0.072)	-0.008 (0.071)
Overweight/Obese	0.029 (0.022)	0.011 (0.022)	0.042* (0.022)	0.028 (0.022)	0.028 (0.023)	0.028 (0.022)	0.023 (0.022)
Morbidly Obese	0.159*** (0.050)	0.162*** (0.047)	0.151*** (0.048)	0.198*** (0.049)	0.156 (0.047)	0.147*** (0.047)	0.147*** (0.046)
Pseudo R^2	0.004	0.003	0.001	0.010	0.004	0.005	0.001

*** p<0.01, ** p<0.05, * p<0.1
Notes: Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. Actual weight is calculated from the predicted weight reported in the EHM using a correction developed by Cawley (2006) with NHANES data. All regressions contain 10,007 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.

Table 27. Robustness Check 3: The Effect of Predicted Actual Weight and Job Requirements on Real Hourly Wage								
	Dependent Variable: ln(Real Hourly Wage ($2008))							
	Men				Women			
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Underweight	-0.164***	-0.129**	-0.416	-0.477**	-0.012	-0.021	-0.116	-0.021
	(0.058)	(0.062)	(0.284)	(0.226)	(0.039)	(0.039)	(0.199)	(0.039)
Overweight	0.032**	0.029*	-0.063	-0.090**	-0.034**	-0.024*	-0.024	-0.023*
	(0.014)	(0.015)	(0.078)	(0.045)	(0.014)	(0.014)	(0.066)	(0.014)
Obese	0.005	0.013	-0.052	-0.061	-0.075***	-0.071***	-0.125*	-0.071***
	(0.015)	(0.017)	(0.085)	(0.074)	(0.014)	(0.015)	(0.070)	(0.015)
Morbidly Obese	-0.081**	-0.088**	-0.223	-0.085**	-0.138***	-0.123***	-0.086	-0.073
	(0.033)	(0.035)	(0.161)	(0.036)	(0.024)	(0.025)	(0.135)	(0.048)
Importance of Communication	---	0.059***	0.070***	0.066***	---	0.039***	0.045***	0.040***
		(0.006)	(0.012)	(0.007)		(0.006)	(0.010)	(0.006)
Importance of Physical Activities	---	-0.060***	-0.091***	-0.091***	---	-0.087***	-0.096***	-0.088***
		(0.008)	(0.015)	(0.013)		(0.007)	(0.010)	(0.007)
Communication* Underweight	---	---	-0.019	---	---	---	0.024	---
			(0.059)				(0.037)	
Communication* Overweight	---	---	-0.008	---	---	---	-0.017	---
			(0.014)				(0.014)	
Communication*Obese	---	---	-0.026*	-0.021*	---	---	-0.002	---
			(0.016)	(0.013)			(0.015)	
Communication*Morbidly Obese	---	---	0.012	---	---	---	-0.032	-0.026
			(0.032)				(0.027)	(0.022)
Physical*Underweight	---	---	0.113*	0.120*	---	---	0.015	---
			(0.068)	(0.069)			(0.043)	
Physical*Overweight	---	---	0.040**	0.043***	---	---	0.011	---
			(0.019)	(0.016)			(0.016)	
Physical*Obese	---	---	0.045**	0.044**	---	---	0.019	---
			(0.021)	(0.020)			(0.017)	
Physical*Morbidly Obese	---	---	0.038	---	---	---	0.008	---
			(0.038)				(0.032)	
Test: Overweight=Obese (P-Value)	---	0.290	0.890	0.689	---	0.001	0.170	0.001

Test: Communication* Overweight= Communication*Obese (P-Value)	---	---	0.216	---	---	---	0.333	---
Test: Physical*Overweight= Physical*Obese (P-Value)	---	---	0.812	0.936	---	---	0.664	---
Test Communication Interaction Terms=0 (P-Value)	---	---	0.483	---	---	---	0.506	---
Test Physical Interaction Terms=0 (P-Value)	---	---	0.136	---	---	---	0.845	---
R^2	0.321	0.343	0.345	0.345	0.036	0.336	0.336	0.336
*** p<0.01, ** p<0.05, * p<0.1								
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. All regressions for men contain 7,475 observations; all regressions for women contain 8,905 observations. Actual weight is calculated from the predicted weight reported in the EHM using a correction developed by Cawley (2006) with NHANES data. Each individual's rating for "importance of communicating with persons outside the organization" is used to represent importance of communication, and each individual's rating for "importance of performing general physical activities" is used to represent the importance of physical activities. The communication and physical activities variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.								

Table 28. Robustness Check 4: The Effect of Actual Weight on Jobs Requiring Communication for Men (Including Industry and Occupation Controls)						
	Dependent Variables					
Weight Group	Importance of Communicating with Persons Outside the Organization	Importance of Communicating with Supervisors, Peers, or Subordinates	How Much Contact with Others Required by the Job	Importance of Establishing and Maintaining Interpersonal Relationships	Importance of Performing for or Working Directly with the Public	Importance of Selling or Influencing Others
OLS						
Underweight	-0.138 (0.099)	-0.040 (0.083)	-0.017 (0.085)	-0.056 (0.091)	0.027 (0.100)	-0.039 (0.054)
Overweight	0.011 (0.020)	0.049*** (0.017)	0.045** (0.018)	0.075*** (0.020)	0.002 (0.018)	0.046*** (0.017)
Obese	0.015 (0.023)	0.016 (0.020)	0.009 (0.021)	0.050** (0.022)	0.018 (0.021)	0.034* (0.019)
Morbidly Obese	0.023 (0.050)	0.095** (0.046)	0.011 (0.050)	0.093* (0.051)	0.045 (0.050)	0.066 (0.047)
Test: Overweight= Obese (P-Value)	0.872	0.063	0.045	0.224	0.355	0.477
R^2	0.646	0.572	0.586	0.482	0.339	0.477
OLS Pooled: Overweight and Obese						
Underweight	-0.138 (0.099)	-0.040 (0.083)	-0.017 (0.086)	-0.056 (0.091)	0.027 (0.100)	-0.039 (0.054)
Overweight/Obese	0.013 (0.019)	0.037** (0.016)	0.032* (0.017)	0.066*** (0.018)	0.007 (0.017)	0.042*** (0.016)
Morbidly Obese	0.023 (0.050)	0.095** (0.046)	0.012 (0.050)	0.094* (0.051)	0.045 (0.050)	0.066 (0.047)
R^2	0.646	0.572	0.586	0.482	0.339	0.477
Ordered Probit Pooled: Overweight and Obese						
Underweight	-0.154 (0.141)	-0.065 (0.137)	-0.120 (0.146)	-0.035 (0.144)	0.061 (0.168)	0.088 (0.136)
Overweight/Obese	0.015 (0.025)	0.051** (0.024)	0.029 (0.025)	0.080*** (0.025)	0.006 (0.026)	0.049* (0.026)
Morbidly Obese	0.010 (0.068)	0.145** (0.067)	0.003 (0.069)	0.117* (0.066)	0.078 (0.075)	0.063 (0.072)
Pseudo R^2	0.147	0.114	0.082	0.103	0.082	0.143

*** p<0.01, ** p<0.05, * p<0.1
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. Regressions include controls for major industry and occupation. All regressions contain 8,928 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region.

Table 29. Robustness Check 4: The Effect of Actual Weight on Jobs Requiring Communication for Women (Including Industry and Occupation Controls)						
	Dependent Variables					
Weight Group	Importance of Communicating with Persons Outside the Organization	Importance of Communicating with Supervisors, Peers, or Subordinates	How Much Contact with Others Required by the Job	Importance of Establishing and Maintaining Interpersonal Relationships	Importance of Performing for or Working Directly with the Public	Importance of Selling or Influencing Others
OLS						
Underweight	0.041 (0.053)	0.011 (0.054)	0.018 (0.062)	-0.001 (0.017)	0.005 (0.059)	0.035 (0.045)
Overweight	-0.021 (0.018)	-0.015 (0.019)	-0.029 (0.020)	-0.013 (0.017)	-0.016 (0.019)	0.003 (0.014)
Obese	-0.002 (0.020)	-0.015 (0.021)	-0.013 (0.022)	0.009 (0.020)	0.005 (0.021)	0.002 (0.015)
Morbidly Obese	-0.025 (0.036)	-0.049 (0.042)	-0.056 (0.044)	-0.062 (0.039)	-0.037 (0.039)	-0.024 (0.026)
Test: Overweight= Obese (P-Value)	0.377	0.977	0.492	0.277	0.339	0.942
R^2	0.575	0.440	0.414	0.405	0.240	0.386
OLS Pooled: Overweight and Obese						
Underweight	0.041 (0.053)	0.011 (0.054)	0.018 (0.062)	-0.001 (0.051)	0.005 (0.059)	0.035 (0.045)
Overweight/Obese	-0.013 (0.016)	-0.015 (0.016)	-0.023 (0.018)	-0.004 (0.015)	-0.008 (0.017)	0.002 (0.012)
Morbidly Obese	-0.025 (0.036)	-0.049 (0.042)	-0.057 (0.044)	-0.062 (0.039)	-0.038 (0.039)	-0.024 (0.026)
R^2	0.575	0.440	0.414	0.405	0.240	0.386
Ordered Probit Pooled: Overweight and Obese						
Underweight	0.027 (0.073)	0.019 (0.069)	-0.018 (0.072)	0.007 (0.069)	0.011 (0.076)	0.085 (0.074)
Overweight/Obese	-0.014 (0.022)	-0.010 (0.021)	-0.028 (0.022)	-0.014 (0.021)	-0.032 (0.023)	-0.017 (0.023)
Morbidly Obese	-0.021 (0.056)	-0.066 (0.057)	-0.100* (0.058)	-0.080 (0.056)	-0.017 (0.059)	-0.047 (0.058)

Pseudo R^2	0.129	0.081	0.058	0.083	0.057	0.107
*** p<0.01, ** p<0.05, * p<0.1						
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. Regressions include controls for major industry and occupation. All regressions contain 10,007 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.						

Table 30. Robustness Check 4: The Effect of Actual Weight on Jobs Requiring Physical Activity for Men (Including Industry and Occupation Controls)							
	Dependent Variables						
Weight Group	Importance of Performing General Physical Activities	Importance of Speed of Limb Movement	Importance of Stamina	Importance of Explosive Strength	Importance of Dynamic Strength	Importance of Static Strength	Importance of Trunk Strength
OLS							
Underweight	-0.014 (0.113)	0.017 (0.081)	0.004 (0.090)	0.017 (0.082)	-0.105 (0.071)	-0.093 (0.093)	0.086 (0.070)
Overweight	0.021 (0.018)	0.001 (0.013)	0.013 (0.014)	0.016 (0.014)	0.012 (0.014)	-0.004 (0.016)	0.009 (0.014)
Obese	0.034 (0.021)	0.009 (0.015)	0.009 (0.016)	0.038** (0.016)	0.031* (0.017)	0.011 (0.018)	0.019 (0.016)
Morbidly Obese	0.040 (0.046)	-0.033 (0.034)	-0.001 (0.037)	0.033 (0.036)	0.038 (0.039)	-0.043 (0.041)	0.028 (0.037)
Test: Overweight= Obese (P-Value)	0.458	0.525	0.766	0.121	0.183	0.654	0.481
R^2	0.438	0.392	0.291	0.469	0.433	0.520	0.263
OLS Pooled: Overweight and Obese							
Underweight	-0.014 (0.113)	0.017 (0.081)	0.004 (0.090)	0.017 (0.082)	-0.105 (0.071)	0.093 (0.093)	0.086 (0.070)
Overweight/Obese	0.025 (0.017)	0.004 (0.012)	0.012 (0.013)	0.024* (0.013)	0.018 (0.013)	0.006 (0.015)	0.012 (0.013)
Morbidly Obese	0.040 (0.046)	-0.034 (0.033)	-0.001 (0.037)	0.032 (0.036)	0.037 (0.038)	-0.043 (0.041)	0.027 (0.037)
R^2	0.438	0.391	0.291	0.469	0.433	0.520	0.262
Ordered Probit Pooled: Overweight and Obese							
Underweight	-0.045 (0.152)	0.070 (0.159)	-0.026 (0.155)	0.038 (0.145)	-0.192 (0.137)	0.182 (0.141)	0.173 (0.129)
Overweight/Obese	0.036 (0.025)	-0.001 (0.025)	0.015 (0.025)	0.040 (0.027)	0.027 (0.026)	0.009 (0.025)	0.019 (0.025)
Morbidly Obese	0.067 (0.064)	-0.089 (0.072)	-0.023 (0.073)	0.070 (0.071)	0.114 (0.073)	-0.052 (0.070)	0.041 (0.070)

Pseudo R^2	0.083	0.102	0.085	0.141	0.127	0.118	0.054
*** p<0.01, ** p<0.05, * p<0.1							
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. Regressions include controls for major industry and occupation. All regressions contain 8,928 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region.							

Table 31. Robustness Check 4: The Effect of Actual Weight on Jobs Requiring Physical Activity for Men (Including Industry and Occupation Controls)							
	Dependent Variables						
Weight Group	Importance of Performing General Physical Activities	Importance of Speed of Limb Movement	Importance of Stamina	Importance of Explosive Strength	Importance of Dynamic Strength	Importance of Static Strength	Importance of Trunk Strength
OLS							
Underweight	-0.071 (0.056)	-0.053 (0.039)	-0.054 (0.046)	-0.045 (0.046)	-0.078* (0.047)	-0.057 (0.051)	-0.033 (0.041)
Overweight	0.018 (0.019)	0.001 (0.013)	0.012 (0.016)	0.021 (0.016)	0.016 (0.016)	0.017 (0.018)	0.004 (0.014)
Obese	0.016 (0.022)	0.005 (0.014)	0.014 (0.018)	0.019 (0.017)	0.010 (0.018)	0.021 (0.020)	0.008 (0.016)
Morbidly Obese	0.087** (0.043)	0.065** (0.027)	0.088*** (0.034)	0.121*** (0.034)	0.067* (0.035)	0.096** (0.038)	0.083*** (0.030)
Test: Overweight= Obese (P-Value)	0.928	0.716	0.937	0.890	0.782	0.877	0.836
R^2	0.332	0.278	0.189	0.332	0.272	0.358	0.194
OLS Pooled: Overweight and Obese							
Underweight	-0.071 (0.056)	-0.053 (0.039)	-0.054 (0.046)	-0.045 (0.046)	-0.078* (0.047)	-0.057 (0.051)	-0.032 (0.041)
Overweight/Obese	0.017 (0.017)	0.001 (0.011)	0.013 (0.014)	0.020 (0.014)	0.013 (0.014)	0.018 (0.015)	0.006 (0.012)
Morbidly Obese	0.087** (0.043)	0.065 (0.027)	0.088*** (0.034)	0.122*** (0.034)	0.067* (0.035)	0.096** (0.038)	0.083*** (0.030)
R^2	0.332	0.277	0.189	0.332	0.271	0.358	0.194
Ordered Probit Pooled: Overweight and Obese							
Underweight	-0.088 (0.072)	-0.093 (0.076)	-0.073 (0.072)	-0.038 (0.075)	-0.114 (0.075)	-0.064 (0.071)	-0.054 (0.070)
Overweight/Obese	0.018 (0.022)	0.001 (0.022)	0.034 (0.022)	0.029 (0.023)	0.020 (0.022)	0.020 (0.022)	0.006 (0.022)
Morbidly Obese	0.102* (0.055)	0.125** (0.051)	0.154*** (0.052)	0.197*** (0.055)	0.103* (0.053)	0.128** (0.052)	0.135*** (0.053)

Pseudo R^2	0.051	0.063	0.063	0.092	0.074	0.072	0.039
*** p<0.01, ** p<0.05, * p<0.1							
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. Regressions include controls for major industry and occupation. All regressions contain 10,007 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.							

Table 32. Robustness Check 4: The Effect of Weight and Job Requirements on Real Hourly Wage (Including Industry and Occupation Controls)								
	Dependent Variable: ln(Real Hourly Wage ($2008))							
	Men				Women			
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Underweight	-0.100* (0.060)	-0.055 (0.062)	-0.230 (0.328)	-0.053 (0.063)	-0.00002 (0.038)	-0.001 (0.039)	-0.050 (0.212)	-0.001 (0.039)
Overweight	0.030** (0.013)	0.023 (0.015)	-0.030 (0.075)	0.023 (0.015)	-0.038*** (0.013)	-0.032** (0.013)	-0.067 (0.062)	-0.032** (0.013)
Obese	0.006 (0.015)	0.006 (0.017)	0.043 (0.083)	0.064** (0.029)	-0.077*** (0.014)	-0.077*** (0.014)	-0.149** (0.070)	-0.077*** (0.014)
Morbidly Obese	-0.099*** (0.035)	-0.114*** (0.040)	-0.246 (0.179)	-0.114 (0.040)	-0.169*** (0.024)	-0.165*** (0.025)	0.004 (0.142)	-0.049 (0.049)
Importance of Communication	---	0.029*** (0.008)	0.043*** (0.012)	0.036*** (0.008)	---	-0.029*** (0.008)	-0.025** (0.010)	-0.027*** (0.008)
Importance of Physical Activities	---	-0.002 (0.008)	-0.020 (0.016)	-0.002 (0.008)	---	-0.044*** (0.007)	0.053*** (0.010)	-0.043*** (0.007)
Communication* Underweight	---	---	-0.040 (0.072)	---	---	---	-0.008 (0.039)	---
Communication* Overweight	---	---	-0.011 (0.014)	---	---	---	-0.005 (0.013)	---
Communication*Obese	---	---	-0.034** (0.015)	-0.025** (0.011)	---	---	0.002 (0.015)	---
Communication*Morbidly Obese	---	---	0.007 (0.036)	---	---	---	-0.072*** (0.027)	-0.061*** (0.022)
Physical*Underweight	---	---	0.090 (0.077)	---	---	---	0.022 (0.046)	---
Physical*Overweight	---	---	0.028 (0.019)	---	---	---	0.015 (0.015)	---
Physical*Obese	---	---	0.015 (0.021)	---	---	---	0.023 (0.017)	---
Physical*Morbidly Obese	---	---	0.041 (0.096)	---	---	---	-0.010 (0.034)	---
Test: Overweight=Obese (P-Value)	0.053	0.232	0.313	0.134	0.005	0.002	0.268	0.002

Test: Communication* Overweight= Communication*Obese (P-Value)	---	---	0.086	---	---	---	0.653	---
Test: Physical*Overweight= Physical*Obese (P-Value)	---	---	0.458	---	---	---	0.678	---
Test Communication Interaction Terms=0 (P-Value)	---	---	0.220	---	---	---	0.119	---
Test Physical Interaction Terms=0 (P-Value)	---	---	0.473	---	---	---	0.630	---
R^2	0.400	0.400	0.401	0.400	0.386	0.390	0.391	0.390
*** p<0.01, ** p<0.05, * p<0.1								
Notes: Reported estimates analyze data from combined 2006-2008 CPS, ATUS, EHM, and O*NET data. Regressions include controls for major industry and occupation. All regressions for men contain 7,475 observations; all regressions for women contain 8,905 observations. All dependent variables range between a score of 1 (not important) to 5 (essential). Each individual's rating for "importance of communicating with persons outside the organization" is used to represent importance of communication, and each individual's rating for "importance of performing general physical activities" is used to represent the importance of physical activities. The communication and physical activities variables range between a score of 1 (not important) to 5 (essential). Heteroskedasticity-robust standard errors are below in parentheses. All regressions include controls for years of education, age, age squared, presence of a child, black, Hispanic, and geographic region. Sample excludes pregnant women.								

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CHAPTER II

THE IMPACT OF EXISTING DISCRIMINATION LAWS ON EMPLOYMENT OUTCOMES OF THE OBESE

Introduction

Chapter I demonstrated that obese workers earn less than the non-obese. Previous authors have explained away this wage discrepancy for obese men, but an unexplained wage discrepancy has remained for obese women, even after controlling for potential correlates like genetic predisposition and intelligence. The previous chapter introduced evidence that this unexplained wage discrepancy results from a combination of sorting on the basis of occupational characteristics and of wage penalties for certain occupational characteristics. Chapter I concluded that the sorting and wage penalties could result from one of two demand-side effects. Obese women (but not obese men) might be less productive or generate some other added cost to employers in certain types of occupations. Alternatively, obese women may face discrimination that is particularly acute in certain types of occupations.

Ideally, legislators would know which explanation—cost or discrimination—was correct before passing a law to improve outcomes of the obese in the labor market. Whether society cares about passing a law to remedy the poor labor market outcomes of the obese may depend on the underlying cause. Moreover, the type of law passed (and the remedies provided) may also depend on the underlying cause.

Nevertheless, legislators have already passed laws to remedy the poor labor market outcomes of the obese without knowing the underlying cause. Two types of laws

currently protect the obese in the labor market. First, Federal law protects workers who have, previously had, or are regarded as having an actual disability that "substantially limits one or more major life activities"[64] under the ADA and the FRA.[65] The ADA and FRA attempt to balance the dual objectives of expanding the opportunities available for the disabled in the labor market while recognizing that some disabled workers are simply too costly to accommodate. A disabled individual must be able to "perform the essential functions of the employment position . . . with or without reasonable accommodation" to enjoy the protections of these laws.[66] Moreover, if the disabled individual requires an accommodation, this accommodation cannot impose an "undue hardship" on the employer.[67]

Although the ADA and FRA were not passed to address obesity specifically, obesity has been recognized as a disability for the purposes of these statutes since 1993 in one circuit. In that year, the severe health conditions associated with obesity convinced the First Circuit that it constituted a disability for the purposes of the ADA in *Cook v. Dept. of Mental Health, Retardation, & Hosps*.[68] Although other circuits have subsequently distinguished or disagreed with *Cook*, it remains good law in the First Circuit.[69] Moreover, the *Cook* decision may become good law in other circuits very soon. The 2008 Americans with Disabilities Act Amendments Act (ADAAA) broadened

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[64] *Americans with Disabilities Act*, *U.S. Code*, vol. 42, sec. 12102(1) (2012).
[65] *Federal Rehabilitation Act*, *U.S. Code*, vol. 29, sec. 794 (2012). Note that the evaluation standards are the same for the ADA and FRA. Moreover, other states and cities have disability laws that supplement these two Federal laws.
[66] *Americans with Disabilities Act*, *U.S. Code*, vol. 42, sec. 12111(8) (2012).
[67] *Americans with Disabilities Act*, *U.S. Code*, vol. 42, sec. 12111(10) (2012).
[68] *Cook v. Rhode Island Department of Mental Health*, 10 F3d 17 (1st Cir 1993).
[69] The cases that have distinguished *Cook* include *Greenberg v. Bellsouth Telecommunications, Inc.*, 498 F3d 1258 (11th Cir 2007); *E.E.O.C. v. Watkins Motor Lines*, 463 F3d 436 (6th Cir 2006); *Francis v. City of Meriden*, 129 F3d 281 (2nd Cir 1997); *Andrews v. State of Ohio*, 104 F3d 803 (6th Cir 1997); *Torcasio v. Murray*, 57 F3d 1340 (4th Cir 1995); *Smaw v. Com. Of Va. Dept. of State Police*, 862 FSupp. 1469 (E.D. Va. 1994).

the definition of disability, emphasizing that the term should "be construed in favor of broad coverage of individuals."[70] As a result, the U.S. Equal Employment Opportunity Commission (EEOC), which used to take the position that even morbid obesity had to be accompanied by another related condition in order to qualify as a disability under the original ADA, now views morbid obesity alone as enough to qualify for protection under the amended ADA.[71]

Second, legislators in one state and six cities across the United States have opted to protect obese individuals in the workplace more directly by passing laws that prohibit all discrimination on the basis of weight or personal appearance. In the state of Michigan as well as the cities of Binghamton, NY, Madison, WI, San Francisco, CA, Santa Cruz, CA, Urbana, IL, and Washington, DC, weight and personal appearance are protected classes for the purposes of employment—just as race, sex, color, religion, and national origin are protected classes nationwide under Title VII of the 1964 Civil Rights Act.[72]

As U.S. obesity rates climb, so do the relevance of these laws. Yet these laws have been virtually ignored in the literature. Carpenter (2006) studied the effect of the *Cook* decision on nationwide employment,[73] but no one has examined the effect of the seven Title VII-esque laws. In fact, no one has ever examined why these seven local laws were passed or how they work. This chapter aims to fill this gap in the literature by studying both the *Cook* decision and the seven local laws in more detail, and ultimately, by questioning whether these laws work. The results are somewhat discouraging; the

[70] *Americans with Disabilities Act*, *U.S. Code*, vol. 42, sec. 12102(4)(a)(4)(A) (2012).
[71] Katharine Kores, District Director of Memphis Office, Equal Employment Opportunity Commission, telephone conversation with author, 09 Jan. 2012.
[72] *Title VII of the Civil Rights Act of 1964*, *U.S. Code*, vol. 42, sec. 2000e (2012).
[73] Christopher S. Carpenter, "The Effects of Employment Protection for Obese People," *Industrial Relations* 45 (July 2006): 393-415.

Cook decision and five of the seven Title VII-esque laws have not improved employment outcomes for the obese. Only the Title VII-esque laws that have strong enforcement mechanisms show any signs of promise in eliminating the barriers faced by the obese in the labor market.

My study of U.S. obesity laws will begin by describing the *Cook* decision and the seven local laws. Next, I will explore the methodology and data necessary to evaluate the effectiveness of these laws. I will then analyze the effect of the *Cook* decision on employment of the obese, revisiting the estimates in Carpenter (2006). I will subsequently analyze the effects of the seven local laws on employment of the obese. I will conclude by comparing how the ADA and the seven Title VII-esque laws are enforced, exploring how differences in administration can explain why some of these laws have improved employment outcomes for the obese, while others have not.

Obesity as a Disability: Coverage under the Americans with Disabilities Act

In 1990, Congress revolutionized treatment of the disabled in the American workforce through the passage of the ADA. Although the 1973 FRA already protected the disabled working in Federal agencies and in other workplaces receiving Federal financial assistance, the ADA extended these protections to the private sector.[74] After ADA implementation in July 1992, any employer with fifteen or more employees had "to provide reasonable accommodation to an employee or job applicant with a disability,

[74] Amie A. Thompson, "Comment, Obesity as a Disability under the Americans with Disabilities Act Amendments Act and the Amendments' Effect on Obesity Claims under the Pennsylvania Human Relations Act: Should Employers Anticipate a Big Change?" *Duquesne Business Law Journal* 12 (Summer 2010): 259-72.

unless doing so would cause significant difficulty or expense for the employer ('undue hardship')."[75]

The requirements for a successful ADA or FRA claim are the same. The plaintiff must first prove that she is disabled. She must then show that the employer defendant actually discriminated against her on account of her disability even though she was otherwise qualified for the position in question. To prove disability, the plaintiff must show that she currently has, used to have, or is regarding as having a physical or mental impairment that "substantially limits one or more major life activities."[76] To prove actual discrimination, the plaintiff must demonstrate that a reasonable accommodation for her disability existed, the accommodation did not create undue hardship for the employer, and yet the employer still refused to provide it.[77] Finally, to prove that she was qualified, the plaintiff must prove that she can "perform the essential functions of the employment position . . . with or without reasonable accommodation."[78]

The broad disability coverage of both private- and public-sector employers provided by the ADA and FRA has brought a flood of employment discrimination litigation into Federal courts.[79] The focus of this litigation will likely change once the

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[75] U.S. Equal Employment Opportunity Commission, "Disability Discrimination," *Laws, Regulations, and Guidance*, last modified 2010, http://www.eeoc.gov/laws/types/disability.cfm.
[76] *Americans with Disabilities Act*, *U.S. Code*, vol. 42, sec. 12102(1) (2012).
[77] U.S. Equal Employment Opportunity Commission, "Disability Discrimination," *Laws, Regulations, and Guidance*, last modified 2010, http://www.eeoc.gov/laws/types/disability.cfm.
[78] *Americans with Disabilities Act*, *U.S. Code*, vol. 42, sec. 12111(8) (2012). For a broad overview of the structure of ADA claims, see Joel Wm. Friedman, *The Law of Employment Discrimination*, 7th ed. (New York: Foundation Press, 2009), 891-893; George Rutherglen, *Employment Discrimination Law: Visions of Equality in Theory and Doctrine*, 2d ed. (New York: Foundation Press, 2007), 224-236.
[79] For example, although the EEOC only filed three ADA enforcement suits in fiscal year 1993, it filed eight-two of these suits in fiscal year 1995. U.S, Equal Employment Opportunity Commission, *EEOC Litigation Statistics, FY 1992 through FY 1996*, last modified 31 Jan. 2007, http://archive.eeoc.gov/stats/litigation-a.html#fn1. For a discussion of more recent statistics on the number of employment discrimination claims filed, see Kevin M. Clermont and Stewart J. Schwab, "Employment Discrimination Plaintiffs in Federal Court: From Bad to Worse?" *Harvard Law & Policy Review* 3 (2009): 103-32.

new ADAAA cases reach the courts. But until the 2008 amendments, the principal focus of ADA and FRA litigation has been defining who is disabled. While a worker confined to a wheelchair might have had an easy time proving this threshold question, many workers suffering from common, but debilitating medical conditions have not. Workers whose diabetes, epilepsy, and HIV interfere with their ability to perform their job have often been denied coverage.[80]

Like diabetes, epilepsy, and HIV, obesity also fell within this grey area of ADA/FRA coverage before the 2008 amendments. Because obesity is such a prevalent condition in the US, the question of whether obesity was a disability emerged quickly after the passage of the original ADA. In 1993, the First Circuit answered this question in the affirmative. *Cook v. Dept. of Mental Health, Retardation, & Hosps.* upheld a jury award of $100,000 to a job applicant after the Rhode Island Department of Mental Health refused to rehire her as an institutional attendant because she was morbidly obese. The plaintiff, Bonnie Cook, had held this position twice previously, voluntarily leaving both times with a clean employee record, and she had always been morbidly obese.[81]

Although obesity could be "mutable" and could arise from "voluntary conduct," the First Circuit had no trouble finding that Cook qualified for ADA protection.[82] In fact, the court noted that Cook could not just "simply lose weight and rid herself of any concomitant disability"; the evidence demonstrated that Cook would have to deal with a dysfunctional metabolism for the rest of her life no matter how much weight she lost.[83]

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[80] For a discussion of the types of conditions that courts have denied ADA coverage, see Amie A. Thompson, "Comment, Obesity as a Disability under the Americans with Disabilities Act Amendments Act and the Amendments' Effect on Obesity Claims under the Pennsylvania Human Relations Act: Should Employers Anticipate a Big Change?" *Duquesne Business Law Journal* 12 (Summer 2010): 259-72.
[81] *Cook v. Rhode Island Department of Mental Health*, 10 F3d 17 (1st Cir 1993).
[82] Ibid., 23-24.
[83] Ibid., 24.

The court concluded, "In a society that all too often confuses 'slim' with 'beautiful' or 'good,' morbid obesity can present formidable barriers to employment. Where, as here, the barriers transgress Federal law, those who erect and seek to preserve them must suffer the consequences."[84] The court's strong language suggested that employers in the First Circuit would be well advised henceforth to provide reasonable accommodations for at least their morbidly obese workers and job applicants.

Even though the First Circuit had no trouble concluding that morbid obesity was a disability for the purposes of the original ADA, other circuits have. Since *Cook*, the Second, Sixth and Eleventh Circuits have all distinguished or disagreed with *Cook*. In *Andrews v. State of Ohio*, the Sixth Circuit refused to grant relief to Ohio State Highway Patrol officers who had been disciplined at work after failing to meet the weight limits set by the Highway Patrol Fitness Program. The court noted that the appendix to the relevant rule in the Code of Federal Regulations, 29 C.F.R. § 1630.2(h), held that the "definition of the term 'impairment' does not include physical characteristics such as eye color, hair color, left-handedness, or height, weight or muscle tone that are within 'normal' range and are not the result of a physiological disorder."[85] Thus, to hold that "a mere physical characteristic, without more, equal[s] a physiological disorder," the court concluded, "would debase [the] high purpose [of] the statutory protections available to those truly handicapped."[86] The Sixth Circuit distinguished their holding from the *Cook* case by noting that the plaintiff in *Cook* had presented expert testimony that her morbid obesity

[84] Ibid., 31.
[85] *Andrews v. State of Ohio*, 104 F3d 803 (6th Cir 1997).
[86] Ibid., 810.

arose from a physiological impairment of the metabolism. Almost a decade later, the Sixth Circuit reaffirmed this decision in *E.E.O.C. v. Watkins Motor Lines*.[87]

The Second and Eleventh Circuits have also been less generous than the First Circuit to the obese. In *Francis v. City of Meriden*, the Second Circuit declined to grant relief to a firefighter who had been suspended without pay after failing to meet the department weight standard and refusing to take a body fat or fitness test.[88] The Second Circuit agreed with the Sixth Circuit that physical characteristics not arising from a physiological condition were not impairments for the purposes of the ADA. In *Greenberg v. Bellsouth Telecommunications, Inc*., the Eleventh Circuit declined to grant ADA protection to an obese worker who actually did suffer from diabetes, hypertension, and hypothyroidism, and other physiological conditions because the worker failed to show that he was "unable to work in a broad class of jobs."[89]

Despite the subsequent negative treatment in other circuits, *Cook*'s record remains spotless in the First Circuit. The First Circuit has neither disagreed with nor distinguished its 1993 decision. Consequently, it is possible that *Cook* has had an effect on employment outcomes of the obese over the past two decades. If the poor labor market outcomes of the obese result from employers' beliefs that obesity substantially limits obese workers' performance at work (regardless of whether these beliefs are correct), then labor market outcomes for the obese should improve in any jurisdiction that recognizes obesity as a disability under the ADA.

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[87] *E.E.O.C. v. Watkins Motor Lines*, 463 F3d 436 (6th Cir 2006) held that "to constitute an ADA impairment, a person's obesity, even morbid obesity, must be the result of a physiological condition."
[88] *Francis v. City of Meriden*, 129 F3d 281 (2nd Cir 1997).
[89] *Greenberg v. Bellsouth Telecommunications, Inc*., 498 F3d 1258 (11th Cir 2007).

More specifically, if lower productivity or higher costs explain the poor labor market outcomes of the obese, then labor market outcomes should have improved for the obese in the First Circuit after 1993. This effect might be exacerbated in the long run by First Circuit firms relocating to another circuit in order to avoid the additional burdens placed on employers by the *Cook* decision. It takes more heroic assumptions to argue for a *Cook* effect outside the First Circuit. Nevertheless, if national companies with a presence in the First Circuit set their human resources policies based on the most restrictive circuit, then a nationwide increase in employment of the obese might be possible after *Cook*.

Although the coverage of Federal disability law has broadened since the *Cook* decision, testing the effect of the *Cook* decision is as pertinent as ever. As noted in the introduction, the EEOC now takes the position that morbid obesity should be recognized as a disability under the ADAAA in every circuit. In fact, the EEOC has filed suit on behalf of two morbidly obese plaintiffs in the Fifth Circuit who claim that they were wrongfully terminated on the basis of their weight. The New Orleans district office has filed suit on behalf of Lisa Harrison. Reminiscent of Bonnie Cook, Harrison had been fired from her job at a long-term care facility for weighing 527 pounds even though she had been 400 pounds at the time of hiring and had received "excellent" performance reviews.[90] Similarly, the Houston district office of the EEOC has filed suit on behalf of

[90] U.S. Equal Employment Opportunity Commission, "EEOC Sues Resources for Human Development, Inc. for Disability Discrimination," *EEOC Press Releases*, last modified 30 Sep. 2010, http://www.eeoc.gov/eeoc/newsroom/release/9-30-10u.cfm.

Ronald Kratz, whose former employer admits that they fired him because he weighed 680 pounds, despite his "very good" performance reviews.[91]

If these courts accept the EEOC's position on morbid obesity, then the Fifth Circuit may soon join the First in recognizing morbid obesity as a disability for the purposes of the ADA. And other circuits may soon follow suit. Thus, looking at the effect of the *Cook* decision on labor market outcomes of the obese becomes particularly crucial now. The best way to discern whether the expanded definition of disability will have far-reaching effects for the obese is to look at the effects in the one judicial circuit that has always had this expanded definition. The Results Section will test the effects of the *Cook* decision. Before turning to this estimation, however, the other weight discrimination laws in the U.S. merit further study.

Obesity as a Protected Class: Local Laws Prohibiting Weight Discrimination

Dissatisfied with the remedies available on the national level, one state and six cities across the U.S. have implemented protections on the local level over the past four decades. The laws in Binghamton, NY, Madison, WI, San Francisco, CA, Santa Cruz, CA, Urbana, IL, Washington, DC, and the state of Michigan prohibit all discrimination on the basis of weight or personal appearance. Unlike the ADA, these laws leave no room for exceptions like undue hardship, so that weight and personal appearance are protected in the same manner as race and gender. Although these seven laws have much

[91] U.S. Equal Employment Opportunity Commission, "EEOC Sues BAE Systems for Disability Discrimination," *EEOC Press Releases*, last modified 27 Sep. 2011, http://www.eeoc.gov/eeoc/newsroom/release/9-30-10u.cfm; L. M. Sixel, "At 680 Pounds His World Crumbled: Now Weighing Less than Half as Much, Man Still Unable to Find Work," *Houston Chronicle*, 29 Sep. 2011, 1.

in common, they were passed at very different times for very different reasons. For this reason, each law merits more individualized treatment.

Madison, Wisconsin

The first wave of these laws emerged in the 1970s. Even though other jurisdictions had considered adding these protections earlier,[92] the first place in the U.S. to pass a law prohibiting discrimination on the basis of weight or personal appearance was Madison, WI. Madison General Ordinances § 39.03(1) mandates the "practice of providing equal opportunities in housing, employment, public accommodations, and City facilities to persons without regard to…physical appearance."[93] The ordinance specifically defines physical appearance to include "weight."[94]

After the Madison Common Council passed the ordinance on March 13, 1975, a local newspaper article praised it as "one of the strongest ordinances in the country."[95] Concern over "[e]mployers' and landlords' biases concerning hair length and facial hair, married versus unmarried persons, styles of dress and sexual orientation" led to the addition of physical appearance to the anti-discrimination ordinance.[96]

To seek relief under the ordinance today, discrimination victims must file a complaint with the Madison Equal Opportunities Commission (MEOC), which administers and adjudicates the claim. A Madison Equal Opportunities hearing officer first decides the case, and the hearing officer's decision is appealable to the entire MEOC. Once the Commission either affirms or reverses the hearing officer's decision,

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[92] For example, a provision prohibiting discrimination on the basis of personal appearance was "discussed at length" but ultimately rejected in Urbana in 1973. Minutes of the Committee on Legislation, Urbana, Ill. City Council, 24 July 1974, Champaign County Historical Archives, The Urbana Free Library, Urbana, Ill.
[93] Madison, Wis., Gen. Ordinances, sec. 39.03(1) (2012).
[94] Madison, Wis., Gen. Ordinances, sec. 39.03(2)(bb) (2012).
[95] "Equal Opportunity Report," *Capital Times*, 24 Sep. 1975, 24.
[96] Ibid.

both the complainant and the respondent have the right of appeal to the Dane County Circuit Court, and afterward, the Wisconsin Court of Appeals.[97] Successful claimants are entitled to economic damages, noneconomic damages, front pay, and back pay.[98] The procedures and remedies available under the Madison ordinance, along with the procedures and remedies available under the other six local laws, are summarized in Table 1.

Michigan

Only a year later came the law in the state of Michigan. The Elliott-Larsen Civil Rights Act guarantees the "opportunity to obtain employment, housing and other real estate, and the full and equal utilization of public accommodations, public service, and educational facilities without discrimination because of . . . weight."[99] Weight was added to Michigan's civil rights legislation through the efforts of an innovative legislator, State Representative Thomas Mathieu. Mathieu, a former grassroots organizer, was somewhat ahead of his time in recognizing that weight could present a problem in the workplace, particularly for women. According to Mathieu, he pushed for the addition of weight

> because of my personal observations while working for the Community Action program in Grand Rapids. I saw with my own eyes how people lost out on job opportunities, just because of the way they looked. Too [sic] be blunt -- too fat or too short. In that work, before running and being elected to Michigan Legislature, I was deeply moved by the persons who had suffered such job rejections, simply because of the way they looked. Mostly it was overweight females, women with superb clerical and secretarial skills, clearly well qualified for the position but rejected out of hand because they didn't fit the employer's desire of a Playboy

[97] For examples of Madison Equal Opportunities Commission cases that have been appealed, see *Sam's Club, Inc. v. Madison Equal Opportunities Comm'n*, 668 NW2d 562 (Wis. Ct. App. 2003); *State ex rel. McDonald's v. Madison Equal Opportunities Comm'n,* 356 NW2d 495 (Wis. Ct. App. 1984); *Federated Rural Elec. Ins. Corp. V. Madison Equal Opportunities Comm'n,*, 308 NW2d 419 (Wis. Ct. App. 1981).
[98] Madison, Wis., Gen. Ordinances, sec. 39.03(1)(c)(2)(b) (2012).
[99] Mich. Comp. Laws. Sec. 37.2102(1) (2012).

Centerfold body to parade around the office.[100]

Since the law's passage in 1976, weight-discrimination victims must file a claim with either the Michigan Civil Rights Department or the Federal EEOC. At that point, the claimant can choose to adjudicate her claim through an administrative proceeding in the Michigan Civil Rights Department or through a private action. Claimants who bring a private action can, of course, appeal through the court system, and claimants who choose the Department process can appeal the commission decision to the Ingham County Circuit Court and then up through the Michigan state appellate system.[101] If successful, claimants under the Michigan law are entitled to injunctive and equitable relief, compensatory damages, back pay, and attorney fees. Furthermore, the respondent employer is subject to a civil fine of up to $50,000.[102]

Washington, District of Columbia

The next law came in 1977 from Washington, DC, although the story began almost four years previously. Since World War II, the city had unsuccessfully fought Congress for home rule. At last, in the 1967 Reorganization Act, Congress granted DC limited home rule, with a nine-member council and a commissioner all appointed by the U.S. President. Even though the council was not popularly elected, by August of 1973, it had passed a revolutionary law banning discrimination on the basis of personal appearance in employment, housing, and public accommodation.[103] The council was concerned that groups like "single people, students, and longhairs . . . ha[d] encountered

[100] Thomas C. Mathieu, Former Michigan State Representative from Grand Rapids, e-mail message to author, 17 Aug. 2011.
[101] Mich. Comp. Laws. Sec. 37.2606 (2012).
[102] Mich. Comp. Laws, secs. 37.2603-2605 (2012).
[103] Editorial, "The City's Moves to Protect Human Rights," *Washington Post*, 14 Aug. 1973, A20.

barriers that have no real bearing on their character, reliability, or public behavior."[104] The council was also concerned that in this "Northern town with Southern exposure," discriminating on the basis of personal appearance might serve as a clever excuse for Southerners in D.C. to discriminate on the basis of race.[105]

The law was short-lived, however. On December 24, 1973, Congress passed the District of Columbia Home Rule Act, granting DC full home rule. An elected mayor and thirteen-member, "very activist" council took office for the first time on January 1, 1975, ready to start from scratch and "to correct the wrongs of many years."[106] Under the leadership of Chairman Sterling Tucker, the council passed a new Human Rights Ordinance in 1977. The new ordinance was intended to be an "expansion of the 1973 act," protecting everything from "dashikis" to "bushes, long beards, and long hair."[107] Like the 1973 ordinance, the 1977 ordinance barred all discrimination on the basis of personal appearance.

While the DC statutory definition does not specifically include "weight," it broadly includes the "outward appearance of any person, irrespective of sex, with regard to bodily condition or characteristics, manner or style of dress, and manner or style of personal grooming, including, but not limited to, hair style and beards."[108] Like the Michigan statute, the DC law allows claimants to adjudicate their claims through either an administrative proceeding in the DC Office of Human Rights or through a private action. Successful claimants are entitled to injunctive and equitable relief, compensatory

[104] Editorial, "Improvement of Local Human Rights Protections," *Washington Post*, 28 May 1973, A26.
[105] Sterling Tucker, Former Chairman of the DC City Council, telephone conversation with author, 14 Sep. 2011.
[106] Ibid.
[107] Ibid.
[108] D.C. Code, sec. 2-1401.02(22) (2012).

damages, back pay, and attorney fees. Unsuccessful respondent employers may face a civil fine of up to $50,000.[109]

Urbana, Illinois

The final law of the 1970s came at the end of the decade from Urbana, IL. Urbana Code of Ordinances § 12-37 prohibits "discrimination by reason of . . . personal appearance . . . or any other discrimination based upon categorizing or classifying a person rather than evaluating a person's unique qualifications relevant to an opportunity in housing, employment, credit or access to public accommodations."[110] The ordinance specifically defines personal appearance to include "weight."[111] Urbana's Human Rights Law came after almost a decade of wrangling among the mayor and city council members.

The history of the provision prohibiting discrimination on the basis of personal appearance provision is intimately connected with the history of another provision in the 1979 Urbana ordinance that prohibited discrimination on the basis of sexual orientation. The Gay Liberation Front (GLF) was very active in the area throughout the 1970s, staging protests in both Urbana and its sister city, Champaign. Perhaps its best known local leader was University of Illinois student, Jeff Graubart. Graubart's appeals to local politicans led to the repeal of both Champaign and Urbana's anti-cross-dressing laws in 1971 and 1972, respectively.

Wanting additional civil rights protections, however, Graubart and the other members of the GLF continued their activism after the repeal of these laws. On April 15, 1972, while Graubart and other GLF members were staging a protest of an Urbana bar

[109] D.C. Code, sec. 2-1403.13 (2012).
[110] Urbana, Ill., Code of Ordinances, sec. 12-37 (2012).
[111] Urbana, Ill., Code of Ordinances, sec. 12-39 (2012).

that was openly hostile to homosexuals, they were assaulted by individuals unsympathetic to their cause. Even though the Urbana police failed to apprehend the assailants, a GLF member spotted one of them on campus on April 17, 1972. Graubart called the police, and the police arrested the individual. Nevertheless, when Graubart and another GLF member went into the police station to give a statement, the arresting officer accused them of lying to the police. The police officer held the two in custody for over an hour, threatening them for "defaming" an "All-American Boy" and subjecting them to a series of homophobic slurs.[112]

Graubart contacted the District Attorney's office about the incident, but the office refused to launch an investigation. Emotionally distraught, Graubart dropped out of school and moved to Chicago and later to California. But Graubart continued to be "haunted by…the horrors of April 15th, 1972" and the subsequent denial of justice.[113] Thus, in 1976, Graubart determined to return to Urbana and seek recompense for the 1972 events. On March 2, 1976, Graubart began a sit-in at Urbana City Hall. At the same time, he issued a press release demanding one million dollars in damages, full funding for him to finish his education, and reimbursement for the psychiatric and medical bills he had accrued as a result of the incident.[114]

The protest ended unsuccessfully—police arrested Graubart after seventeen days of camping out in City Hall. Even though Graubart did not receive the personal damages he sought, he did succeed in bringing public attention to his situation and the situation of the entire lesbian, gay, bisexual, and transgendered (LGBT) community in Urbana. He

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[112] Jeffrey Graubart, "Press Release: JUSTICE NOW!" 2 Mar. 1976, *Gay Liberation in Champaign-Urbana, IL. 1971-1976: A Personal History*, last modified 1 May 2010, http://outhistory.org/wiki/Press_Release_Initiating_the_Sit-in.
[113] Ibid.
[114] Ibid.

also caught the attention of an Urbana city councilman. In 1973, Dr. John Peterson, a well-known community organizer, became the first independent elected to the Urbana City Council. As the "outsider" on the Council, Peterson had successfully sponsored a human rights ordinance in 1975 that gave limited protections to the LGBT community.[115] However, the 1975 ordinance did not provide protection against housing discrimination, which was an important issue in a university town. The compromise required to avoid a mayoral veto in 1975 also resulted in limited investigatory powers if a complaint was filed and mild remedies if a complaint was successful.[116]

Peterson seized the opportunity to take advantage of the public discontent after Graubart's sit-in as well as the fact that, as of 1977, Democrats held a ten-to-four majority on the Urbana City Council, making the Council veto-proof. Over the next year-and-a-half, Peterson worked with members of the Urbana Human Rights Commission, Graubart, and other members of the LGBT community to draft a new ordinance. This ordinance would prohibit discrimination on the basis of sexual orientation in all facets of life with stronger enforcement powers and stiffer penalties. Still, some Democrats on the Council were weary of voting for a purely gay rights bill. According to Graubart,

> personal appearance was added as a way to make the bill more palatable to the homophobes. We were against inclusion, not because we supported such discrimination, but because their motive was to hide the fact that it was an LGBT ordinance…[We were] disturbed when they moved to add a laundry list of people who should not be discriminated against.[117]

[115] Dr. John Peterson, Former Urbana City Councilman, telephone conversation with author, 26 Jan. 2012.
[116] Marilyn Upah-Bant, "Urbana Commission Eyes Champaign's Rights Law," *Urbana Courier*, 16 Nov. 1977, 3; "Commission Seeks New Human Rights Ordinance," *Urbana Courier*, 19 Jan. 1978, 4.
[117] Jeffrey Graubart, e-mail message to author, 17 Feb. 2012.

Such a laundry list was necessary, however, to get the ordinance passed. Over two years after Graubart's sit-in, the Urbana Human Rights Law was signed into law on May 10, 1979.[118]

Today, current discrimination victims in Urbana must file a complaint with the local administrative authority, the Human Relations Commission. The Urbana Human Relations Officer (UHRO) and one other staff member investigate all claims. If they find that the claim has probable cause, the claim is slated for a public hearing in front of the Human Relations Commission within forty-two days (unless the claim settles first).[119] No private right of action is allowed under the Urbana Human Rights Ordinance. Successful claimants may obtain injunctive and equitable relief, compensatory damages, and back pay. The Human Relations Commission may also order an employer respondent to pay up to a $500 civil fine.[120] However, either party may appeal the Commission's decision to the Sixth Circuit.[121]

Santa Cruz, California

After the passage of the Urbana ordinance, the passage of weight- and personal-appearance discrimination ordinances ceased for over a decade. Indeed, the next ordinance did not emerge until 1992 in Santa Cruz, CA. Santa Cruz Municipal Code § 9.83.010 "safeguard[s] the right and opportunity of all persons to be free from all forms of arbitrary discrimination, including discrimination based on . . . weight or physical characteristic."[122] Sponsored by Councilmember Neal Coonerty,[123] the 1992 ordinance

[118] Todd Rent, Urbana Human Relations Officer, e-mail message to author, 14 Nov. 2011.
[119] Todd Rent, Urbana Human Relations Officer, telephone conversation with author, 03 Jan. 2012.
[120] Urbana, Ill., Code of Ordinances, sec. 12-39 (2012).
[121] Urbana, Ill., Code of Ordinances, secs. 12-84, 12-101 (2012).
[122] Santa Cruz, Cal., Municipal Code, sec. 9.83.010 (2012).
[123] Ryan Coonerty, Mayor of Santa Cruz, Cal., e-mail message to author, 30 Jul. 2011.

had origins similar to the 1979 Urbana ordinance. Weight and physical characteristic became add-ons to what began as a LGBT discrimination ordinance.

The initial push for the ordinance came after former California Governor Pete Wilson vetoed a law that would have prohibited discrimination on the basis of sexual orientation throughout the state.[124] Enraged by the veto, local LGBT activists knew that they would need a broader base of support to get an ordinance successfully passed in Santa Cruz. As a result, they formed a coalition with local women's rights and fat rights advocates to push for a new law "to protect more of the non-mainstream."[125] As in Urbana, public support for a strictly LGBT ordinance was not universal; many outraged citizens wrote letters to the Santa Cruz Council in opposition.[126] Weight and physical characteristics became successful distractions from the principal issue, LGBT rights. These distractions rallied support from council members who initially opposed the ordinance, and the revised ordinance passed the council on February 11, 1992.[127]

Today, discrimination victims must first file a claim with Santa Cruz Human Resources in order to pursue a claim under the Santa Cruz ordinance. The Chief Human Resources Officer conducts a preliminary investigation of the complaint, contacts the accused party for a response, and requests that the accused party attend mediation with the complainant. If the accused party accepts the mediation proposal, the Officer turns over the results of the preliminary investigation to the mediator, and the parties attempt to settle. If the parties do not settle, then the complainant can file a private action.

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[124] Laura Myers, "Santa Cruz Moves to Protect the Weird," *Prescott Courier*, 15 Jan. 1992, 3A.
[125] The most prominent organizations joining LGBT advocates included the Body Image Task Force, the National Organization of Women, and the Woman's International League for Peace and Freedom. Correspondence Folder, Ordinance 92-11, 1992, Santa Cruz City Clerk Office, Santa Cruz, Cal.
[126] Ibid.
[127] Laura Myers, "Santa Cruz Moves to Protect the Weird," *Prescott Courier*, 15 Jan. 1992, 3A.

Similarly, if accused party refuses to go to mediation, the complainant can file a private action.[128] Private actions under this ordinance can seek injunctive relief, equitable relief, compensatory damages, and attorney fees. Employers found in violation of the ordinance are also subject to a maximum fine of $500.[129]

San Francisco, California

The next ordinance came from the state of California as well. For San Francisco, a self-described "city of tolerance,"[130] it all started in 1999 with a billboard. A California-based chain of health clubs, 24 Hour Fitness, unveiled its new "sci-fi" advertising campaign in mid-February of 1999 with a prominent billboard South of Market depicting an alien and the message, "When they come, they'll eat the fat ones first."[131] Within days, local fat rights activists had organized a protest. About thirty protestors dressed as aliens stood outside one 24 Hour Fitness location on a Sunday morning doing aerobics as they held signs saying "Eat Me," "I'm Yummy," and "Bite My Fat Alien Butt."[132]

Even though the protest was small, it caught the attention of local newspapers, and more importantly, the San Francisco Board of Supervisors. Within a week, Supervisor Tom Ammiano had addressed the Board, the city attorney, and the San Francisco Human Rights Commission (SFHRC) about adding "weight and body size" to

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[128] Joe McMullen, Chief Human Resources Officer of Santa Cruz, telephone conversation with author, 09 Jan. 2011.
[129] Santa Cruz, Cal., Municipal Code, sec. 9.83.120 (2012).
[130] Edward Epstein, "Fat People Get a Positive Hearing in S.F.: Supervisors Set Vote on Protected Status," *San Francisco Chronicle*, 4 May 2000, A1.
[131] Ulysses Torassa, "Persons of Heft Protest Health Club's Ad Saying Space Aliens Would Gobble Up Fat Folks," *San Francisco Examiner*, 16 Feb. 1999, A1; Edward Epstein and Ken Hoover, "Ammiano Takes Aim at Fat Bias: Supervisor Wants Law to Cover Fat Individuals," *San Francisco Chronicle*, 18 Feb. 1999, A16.
[132] Ulysses Torassa, "Persons of Heft Protest Health Club's Ad Saying Space Aliens Would Gobble Up Fat Folks," *San Francisco Examiner*, 16 Feb. 1999, A1.

the city's Human Rights Ordinance.[133] By the end of February, the Human Rights Commission had sent a letter to 24 Hour Fitness asking the health club chain to remove the billboard because it "target[ed] people for their appearance," and "similar jokes about minorities or gays would not be tolerated" in the city of San Francisco.[134]

Although the Board's letter was unsuccessful—24 Hour Fitness refused to remove the billboard—the issue of body size discrimination remained in the spotlight. One staff member of the SFHRC noted that the publicity surrounding the Board's letter drew "a lot of support" because "[p]eople really responded on this issue as one of fairness to all people."[135] Consequently, the SFHRC approved a resolution on body size discrimination at their meeting on June 10, 1999 that encouraged "the Board of Supervisors and the Mayor to enact legislation adding 'body size' or a comparable phrase to San Francisco's anti-discrimination ordinances" and encouraged "all City contractors, and all business and agencies in San Francisco to eliminate body size discrimination from their programs and policies."[136]

After receiving the SFHRC's resolution, the Board of Supervisors spent almost a year considering the possibility of adding body size language to the city's Human Rights Ordinance. On March 20, 2000, Supervisor Tom Ammiano introduced an ordinance that banned "the practice of discrimination on the grounds of . . . weight" in employment, city

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[133] Edward Epstein and Ken Hoover, "Ammiano Takes Aim at Fat Bias: Supervisor Wants Law to Cover Fat Individuals," *San Francisco Chronicle*, 18 Feb. 1999, A16; Sondra Solovay, San Francisco Weight Discrimination Attorney, telephone conversation with author, 17 Aug. 2011.
[134] Jason B. Johnson, "S.F. Rights Commission Flexes Muscle: Panel, Fat Activists Write Letter Over Gym Billboard," *San Francisco Chronicle*, 26 Feb. 1999, A20. The San Francisco Human Rights Ordinance already began protecting against discrimination on the basis of race and sexual orientation in 1999.
[135] San Francisco Human Rights Commission, Minutes, 10 June 1999, *San Francisco Human Rights Commission Online*, last modified 2012, http://sf-hrc.org/ftp/archive/sfarchive.org/index73dd.html?dept=1028&sub=2153&dtype=2156&year=2194&file=12582.
[136] Ibid.; San Francisco Human Rights Commission, "Resolution on Body Size Discrimination," 10 June 1999, 2000 Human Rights Ordinance Folder, San Francisco Human Rights Commission Office, San Francisco, Cal.

contracts, public accommodations, and housing.[137] The Board requested a report on the ordinance from the Finance and Labor Committee as well as an opinion from the city attorney's office.

On May 3, 2000—almost a year after the 24 Hour Fitness protest—local fat rights advocates finally got their long-awaited public hearing at the Finance and Labor Committee meeting. Although the ordinance sponsor, Supervisor Ammiano, was a "rail-thin" man, the rest of the fat-rights advocates testifying at the hearing were almost exclusively large women.[138] The "true superstar" of the hearing, however, was Margarita Rossi, a sixteen-year-old student at the San Francisco School of the Arts.[139] Rossi recounted an emotional tale of being denied care for a gynecological problem by a local nurse practitioner. The nurse practitioner was so busy making "repeated remarks about [Rossi's] weight" that she "never got around to conducting an exam."[140]

Rossi's emotional testimony led to a unanimous approval of the ordinance by the three finance and labor committee members, and the ordinance was scheduled for a vote in front of the full Board on May 8, 2000. Without any debate, all eleven supervisors

[137] San Francisco, Cal., Administrative Code, sec. 12A.1 (2012); San Francisco Board of Supervisors, Minutes, 20 Mar. 2000, 2000 Human Rights Ordinance Folder, San Francisco Human Rights Commission Office, San Francisco, Cal.
[138] Edward Epstein, "Fat People Get a Positive Hearing in S.F.: Supervisors Set Vote on Protected Status," *San Francisco Chronicle*, 4 May 2000, A1; San Francisco Board of Supervisors Finance and Labor Committee, Minutes, 03 May 2000, 7, 2000 Human Rights Ordinance Folder, San Francisco Human Rights Commission Office, San Francisco, Cal. Other speakers included Debby Burgard, a local psychologist who ran a movement class for women over two-hundred pounds; Carole Cullum, a member of San Francisco's Board of Appeals, who testified about her personal experiences with the lack of plus-size seating accommodations in San Francisco; and Marilyn Wann, the organizer of the 24 Hour Fitness protest that had initially peaked the Board's interest in weight discrimination back in February 1999.
[139] Sondra Solovay, San Francisco Weight Discrimination Attorney, telephone conversation with author, 17 Aug. 2011.
[140] Edward Epstein, "Fat People Get a Positive Hearing in S.F.: Supervisors Set Vote on Protected Status," *San Francisco Chronicle*, 4 May 2000, A1.

voted to pass the ordinance on first reading on May 8, 2000.[141] This unanimous Board support continued with the vote for final passage on May 15, 2000.[142] Less than two weeks later, the ordinance became the official law of San Francisco with the signature of Mayor Willie L. Brown on May 26, 2000.[143]

Over a year later, the SFHRC issued compliance guidelines for the ordinance, which carry the force of law in San Francisco. Reinforcing the broad language of the ordinance, the guidelines state that weight discrimination is more than just discrimination on the basis of "a numerical measurement of total body weight." Weight discrimination also includes discrimination on the basis of "the ratio of a person's weight in relation to height," "an individual's unique physical composition of weight through body size, shape, and proportions," and "an impression of a person as fat or thin regardless of the numerical measurement."[144]

Under the ordinance, complainants today can pursue a remedy through the SFHRC and through a private action simultaneously. The remedies available are among the most generous of all the local laws: treble special and general damages, up to $400 in additional damages, attorney fees, and even punitive damages.[145]

Binghamton, New York

The final and most recent addition to the weight-discrimination laws came from the other side of the country in Binghamton, NY. The law was Binghamton

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[141] San Francisco Board of Supervisors, Minutes, 08 May 2000, 2000 Human Rights Ordinance Folder, San Francisco Human Rights Commission Office, San Francisco, Cal.
[142] San Francisco Board of Supervisors, Minutes, 15 May 2000, 2000 Human Rights Ordinance Folder, San Francisco Human Rights Commission Office, San Francisco, Cal.
[143] San Francisco Board of Supervisors, Signed Ordinance 101-00, 26 May 2000, 2000 Human Rights Ordinance Folder, San Francisco Human Rights Commission Office, San Francisco, Cal.
[144] San Francisco Human Rights Commission, Compliance Guidelines to Prohibit Weight and Height Discrimination, sec. II.A (26 July 2001), 2000 Human Rights Ordinance Folder, San Francisco Human Rights Commission Office, San Francisco, Cal.
[145] San Francisco, Cal., Police Code, secs. 3306-3307 (2012).

Councilmember Sean G. Massey's "first major legislative endeavor" after his election in 2008.[146] Much like the earlier Urbana and Santa Cruz ordinances, the Binghamton ordinance began as one principally concerned with LGBT rights.

In June of 2008, the Gender Equality Non-Discrimination Act, which would have prohibited discrimination on the basis of sexual orientation, passed the New York State Assembly. The New York State Senate, however, had a slight Republican majority that narrowly defeated the bill. The defeat enraged LGBT activists statewide. Soon afterwards, a group of transgendered activists approached Councilmember Massey, who then brought the idea to the rest of the Binghamton Council.

Fortunately for Massey, the composition of Binghamton politicians in 2008 was overwhelmingly liberal. Massey, his six fellow council members, and the mayor were all Democrats. During the 2008 election, Massey and the mayor had even been endorsed by the Working Families Party, a New-York based, progressive grassroots organization that advocates equal rights for all.[147] With the support of his fellow councilmembers, Massey began the research necessary to draft the ordinance.

Interestingly, what distinguishes Binghamton from the two previous LGBT laws in Urbana and Santa Cruz is the reason for including personal appearance and weight in the Binghamton ordinance. In Urbana and Santa Cruz, weight and personal appearance were added to distract council members who were wary to pass a law that exclusively concerned LGBT rights. In Binghamton, however, weight and personal appearance protections were actually suggested by LGBT groups. According to Massey,

[146] Sean G. Massey, Former Binghamton, N.Y. City Councilmember, e-mail message to author, 25 Jan. 2011.
[147] Ibid.

> Research on the legislation put me in contact with Lisa Mottet at the National Lesbian and Gay Task Force. She helped me find model legislation that included protections based on gender expression and identity. But we both agreed, however, that since we were creating a new law, we might as well create as comprehensive [a] law as possible.[148]

As a result, Massey contacted two San Francisco fat rights activists, Sondra Solovay and Marilyn Wann, who had helped draft that city's ordinance and compliance guidelines. With their help, Massey drafted an ordinance that "protect[s] and safeguard[s] the right and opportunity of all persons to be free from discrimination based on . . . weight."[149] Like the San Francisco ordinance, the definition of weight is extremely broad, including "an impression of a person as fat or thin regardless of the numerical measurement" and "[a]n individual's body size, shape, proportions, and composition . . . [that] make[s] them appear fat or thin regardless of numerical weight."[150]

The ordinance passed the Council successfully on December 15, 2008. Unlike the other six jurisdictions, Binghamton does not have a commission that oversees the administration of its Human Rights Law. Consequently, complainants under the Binghamton law must file a private action directly. Complainants can seek injunctive relief, equitable relief, compensatory damages, and attorney fees.[151]

Taken together, the seven Title VII-esque laws in Madison, Michigan, Washington, Urbana, Santa Cruz, San Francisco, and Binghamton differ substantially in their motivations for passage, remedies, and methods of administration. But they are remarkably similar in the broad level of coverage they provide against discrimination on

[148] Ibid.
[149] Binghamton, N.Y., Municipal Code, sec. 45-2 (2012).
[150] Binghamton, N.Y., Municipal Code, sec. 45-3 (2012).
[151] Binghamton, N.Y., Municipal Code, sec. 45-9 (2012).

the basis of weight and personal appearance. With a solid understanding of these seven laws, the FRA, and the ADA, it is now time to test their effectiveness.

Data

To test the effectiveness of the ADA, FRA, and the seven local Title VII-esque laws, this paper uses data from the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a nationally representative health survey dataset conducted annually by telephone and administered by the Centers for Disease Control (CDC). Although only fifteen states participated during the first year of collection in 1984, most states participated by 1990. Indeed, by 1994, all fifty states, Washington, DC, Puerto Rico, Guam, and the Virgin Islands participated in the data collection.

As described in Chapter I, very few datasets collect both labor market information and information on weight and height from their participants. Yet the BRFSS has collected data annually on the health and risk characteristics, including weight and height, of its participants on a statewide basis.[152] In addition to providing health and risk behavior information, the BRFSS collects data on participants' employment status, education, state and county of residence, and other demographic information.

Besides the detailed information provided by each participant, another advantage of the BRFSS dataset is its large size. Each year of the BRFSS contains over 50,000

[152] Note that the BRFSS collects self-reported weight and height data, just as the EHM did in the last chapter. I do not correct for self-reported weight and height in this chapter because as the previous chapter and many other previous papers have shown, this correction does not change the results.

observations, so that when all of the BRFSS data from 1985[153] to 2010 are appended together, the result is over three million observations. The large size of the BRFSS is critical for this analysis because testing the effectiveness of each law requires enough observations from each jurisdiction. In smaller datasets like the NLSY, used for many previous obesity studies, or the CPS-ATUS-EHM, used in the previous chapter, there would never be enough observations from small cities like Binghamton, NY or Santa Cruz, CA to get statistically meaningful results. Moreover, like the CPS-ATUS-EHM, the BRFSS contains observations on people of all ages, from as young as eighteen to retirement-age. The BRFSS contains all of the information needed—in sufficiently large quantities—for the purposes of the study, so the next section explores the methodology necessary to test the effectiveness of the obesity laws using the BRFSS.

Empirical Methodology

Ideally, I could test the effectiveness of the ADA, FRA, and seven Title VII-esque laws for obese individuals over a broad range of labor market outcomes, including wages, industry and occupation distribution, and hours worked. But as the previous section described, the BRFSS collects data on only one labor market outcome: employment status. Using this outcome, a good way to test how these laws have affected employment of the obese is by comparing employment of the obese before and after each law's implementation. Comparing the raw employment levels is a good place to start, but since

[153] Although BRFSS data collection began in 1984, the observations from 1984 are not geographically identifiable on the county-level, which is necessary for this study. As a result, this paper uses the BRFSS data only from 1985 to 2010 (except for the Carpenter replication in Table 2, which only uses the BRFSS data from 1988 to 1999).

other things might have changed over time, a better analysis will control for these other factors.

To implement this controlled comparison of the before and after-effects, this paper uses a basic differences model. As in the previous chapter, I simplify the differences model here by assuming that only two BMI groups, obese and normal weight, exist. Nevertheless, in the actual empirical analysis, I consider all five medical classifications of BMI: underweight, normal weight, overweight, obese, and morbidly obese. In this first regression, I compare observations before the law's passage to observations after the law's passage within the affected jurisdiction:

$$E = X\beta + \gamma O + \delta L + \lambda(O \times L) + \varepsilon. \quad (1)$$

In this model, the dependent variable E is an indicator variable equal to one if the individual is employed. X is a vector of individual characteristics that commonly play a role in occupational choice, such as education, age, race, and geographical region. O is an indicator variable equal to one when the individual is obese; normal weight is the omitted category. L is an indicator variable equal to one for all observations that occurred in years after the relevant law came into effect. For example, when testing the effect of the 1993 *Cook* decision, L will be equal to one for all observations from years after 1993. In each regression, L will pick up all trends and changes that occurred after the passage of the relevant law, including changes due to general economic conditions. As a result, year fixed effects will also be included in an attempt to control for other changes in economic conditions besides the law being tested.

The variable of interest will be the interaction term, OxL, which will indicate the after-effect of each law specifically for the obese. If its coefficient λ is greater than zero,

then the results suggest that relevant law has improved employment outcomes for the obese. On the other hand, if λ is less than or equal to zero, then the law has not changed (or actually worsened) employment outcomes for the obese.

Comparing employment rates of the obese before and after a law's passage is certainly informative, but with the BRFSS, will not be possible for every law. The complete BRFSS data begins in 1985, but four of the local Title VII-esque laws were passed before 1980. Consequently, for laws without any before-observations, a different type of differences model must be implemented:

$$E = X\beta + \gamma O + \chi J + \eta(O \times J) + \varepsilon. \quad (2)$$

In this model, the dependent variable E is again an indicator variable equal to one if the individual is employed. X is the same vector of individual characteristics, and O is an indicator variable equal to one when the individual is obese. The new variable, J, is an indicator variable equal to one for observations that come from within the affected jurisdiction. Unlike the first differences model, which only considered observations within the affected jurisdiction, this differences model compares employment of the obese in jurisdictions with protective laws to employment of the obese in jurisdictions without such protections.

The variable of interest in this model will be the interaction term, OxJ, which will indicate the advantage (if any) of being an obese person in a jurisdiction with a protective law. As with the previous model, if its coefficient η is greater than zero, then the results suggest that the relevant law has improved employment outcomes for the obese. On the other hand, if η is less than or equal to zero, then the law has not improved employment outcomes.

In addition to these two tests of effectiveness, a third type of test is possible. For the jurisdictions eligible for the first effectiveness test—that is, the jurisdictions that have a sufficient number of BRFSS observations before passing an obesity law—an even more robust test is possible. This third test combines the differences tests in models one and two to perform a difference-in-differences analysis:

$$E = X\beta + \gamma O + \delta L + \chi J + \lambda(O \times L) + \eta(O \times J) + \phi(L \times J) + \mu(O \times L \times J) + \varepsilon. \quad (3)$$

In this third and final model, E is the same indicator variable equal to one if the individual is employed. X is the same vector of individual characteristics, and O is the same indicator variable equal to one when the individual is obese. As in the previous two models, L is an indicator variable equal to one for all observations that occurred in years after the relevant law came into effect, and J is an indicator variable equal to observations that come from within the affected jurisdiction. Thus, the difference-in-differences model, like the second differences model, requires using observations from both within and outside the affected jurisdiction.

The variable of interest in this model is the interaction term OxLxJ, which will indicate the effect of being an obese person in a jurisdiction with an obesity protection law after the law was passed. If its coefficient μ is greater than zero, then the results suggest that the relevant law has improved employment outcomes for the obese. On the other hand, if μ is less than or equal to zero, then the law has not improved employment outcomes. Using this methodology and the BRFSS data, the next section tests the effect of the *Cook* decision on employment outcomes for the obese.

Results

In this section, I will first present the results from testing the effect of the *Cook* decision on employment outcomes of the obese. I will then present the results from testing the effect of the seven local Title VII-esque laws on employment outcomes of the obese. Before turning to these results, however, a further exploration of the BRFSS data is merited. Table 2 presents the summary statistics for men by BMI classification (underweight, normal weight, overweight, obese, and morbidly obese), and Table 3 presents the summary statistics for women by BMI classification.

The first notable feature of both tables is the number of observations. The BRFSS data contains over 1.5 million observations for men and over two million observations for women. Primarily because of this large size, the differences in means by BMI classification are almost all statistically significant (see the Bonferroni test columns). For both genders, average age increases as BMI classification increases. Underweight and normal weight men are the least likely to be married, but underweight and morbidly obese women are the least likely to be married.

For men, only a slight correlation between race and weight appears, with the lightest and the heaviest men more likely to be black or Hispanic. For women, however, the correlation between race and weight is striking. Even though less than 10 percent of the full women's sample are black, 15.5 percent of the obese sample and 20.2 percent of the morbidly obese women's sample are black.

Overweight men have the highest education levels, while normal weight women have the highest education levels compared to the other BMI groups. Similarly,

overweight men are most likely to be employed for wages, but normal weight women are most likely to be employed for wages.

Note that here, and throughout the paper, employed for wages will serve as the dependent variable (E in the model above). The BRFSS gives respondents seven options when responding to the employment status question: employed for wages, self-employed, out of work, homemaker, student, retired, and unable to work. The employed for wages variable that I use throughout the paper defines employed for wages as employed, counts all respondents who are out of work, self-employed, a homemaker, a student, retired, or unable to work as not employed, and drops all respondents who refused to respond to the employment question. The rationale for defining employed in this manner is that counting the self-employed as employed may not account for individuals who are forced into self-employment because they cannot find another job in the labor market. The rationale for defining not employed in this manner is that it drops the fewest respondents possible from the analysis.

Nevertheless, two other definitions of employed/not employed have been tested on all regressions presented in this paper. I have tried defining all respondents who are employed for wages or self-employed as employed, counting all respondents who are out of work as not employed, and dropping all respondents who are a homemaker, a student, retired, unable to work, or refused to respond to the employment question. I have also tried defining all respondents who are employed for wages as employed, counting all respondents who are out of work as not employed, and dropping all respondents who are self-employed, a homemaker, a student, retired, unable to work, or refused to respond to the employment question. The results of these robustness checks are not generally

reported because the definition of employed/not employed does not affect the main results.

With these definitions and summary statistics in mind, I now turn to the main results of the paper. The first part will present the effects of the 1993 *Cook* decision on employment outcomes of the obese, both in the First Circuit (where *Cook* is the law) and nationwide. The second part will present the effects of the seven local laws on local employment outcomes of the obese.

The Effect of the Cook *Decision on Employment Outcomes for the Obese*

The First Circuit was the first and only circuit to hold that obesity is a disability for the purposes of the ADA and FRA in their 1993 case *Cook v. Dept. of Mental Health, Retardation, & Hosps*.[154] Even though *Cook* has received negative treatment in the Second, Sixth, and Eleventh Circuits, it remains the law in the First Circuit. As previously explained, *Cook* requires employers to overlook at least some of the costs associated with obese workers (whether real or perceived) by making reasonable accommodation. Thus, *Cook* could have increased employment of obese in the First Circuit over the past two decades if the poor labor market outcomes of the obese result from employers' beliefs that obesity substantially limits obese workers' performance at work. Furthermore, *Cook* could have increased employment of the obese nationwide if national companies with a presence in the First Circuit set their human resources policies based on the most restrictive circuit, which for the purposes of Federal obesity law, is the First Circuit. This section will test both of these hypotheses by looking at the effects of the *Cook* decision on employment of the obese both in the First Circuit and nationwide.

[154] *Cook v. Rhode Island Department of Mental Health*, 10 F3d 17 (1st Cir 1993). Note that the analysis in this section that follows is pertinent to both the ADA and the FRA since that the evaluation standards are the same for both statutes, but this paper will refer to the ADA only in this section for simplicity.

This paper is not the first to examine the effect of *Cook* on employment of the obese. Carpenter (2006) reported that the 1993 First Circuit decision in *Cook v. Dept. of Mental Health, Retardation, & Hosps.* had enormous effects on employment of obese workers—even outside the First Circuit. With the 1988-1999 BRFSS, Carpenter estimated using OLS that the decision increased nationwide employment of obese women by four percentage points and of obese men by two percentage points.[155] Carpenter did not report any estimates of *Cook*'s effect on employment of the obese in the First Circuit only, even though the effects in the First Circuit should have been stronger than any nationwide effects. Still, Carpenter argued that his nationwide estimates were plausible because the *Cook* case "effectively sent a nationwide signal to employers due to the widespread media attention" that obesity would be henceforth protected under the ADA.[156]

Because Carpenter's estimates are very large, this section revisits them and tests the robustness of his results. I begin with an exact replication. Carpenter uses the first differences model discussed in the Empirical Methodology Section to test the effect of the 1993 *Cook* decision on employment outcomes of the obese. Thus, the variables of interest in this replication will be the *obese*post-1993* and the *morbidly obese*post-1993* terms.

Instead of using the entire range of available BRFSS data, Carpenter restricts his data to the years between 1988 and 1999. Carpenter also limits his analysis to individuals between eighteen and forty-four. Carpenter dropped a large portion of his older

[155] Christopher S. Carpenter, "The Effects of Employment Protection for Obese People," *Industrial Relations* 45 (July 2006): 393.
[156] Ibid., 412. Although Carpenter argues that these employment effects were driven by the media, Carpenter does not cite other media events that have had effects on employment even remotely this large.

respondents because he wanted to drop all pregnant women from the sample, and the BRFSS does not ask women over forty-four whether they are pregnant.[157] Three attempts at exact replication are reported in Table 4. As the number of observations indicates, all three attempts at replication are unsuccessful. Because Carpenter does not specify how he defined his dependent variable, employed, the three plausible ways of defining this variable (discussed above) are all tested.

With all three definitions, the estimates of the coefficients on the variables of interest look quite similar for obese men. As Carpenter indicated in his paper, these regressions suggest that the 1993 *Cook* decision increased employment of obese men by about two percentage points for obese men nationwide. The results for women, however, are about half as large as Carpenter's estimates. In all three specifications, the coefficient on *obese*post-1993* indicates that the 1993 *Cook* decision increased employment of obese women between two and three percentage points.

Interestingly, the results for morbidly obese men and women are somewhat different from Carpenter's estimates. Carpenter found that the *Cook* decision had no statistically significant effect on the employment of morbidly obese men or women, even though Cook herself was a morbidly obese woman. My estimates in specification two agree with Carpenter's result for morbidly obese men (although the sign of the coefficient is negative, the coefficient is not statistically different from zero), but my estimates in specifications three and four find that the years after 1993 did have a positive, statistically significant impact on employment of morbidly obese men. Similarly, my estimates for

[157] Carpenter does not consider that "by 44 the fertility window is definitely closing" through either natural conception or medically-induced conception such as in-vitro fertilization. Salynn Boyles, "After Age 44, Fertility Successes are Few," 25 Aug. 2005, *WebMD Health News*, last modified 2012, http://www.webmd.com/infertility-and-reproduction/news/20050825/after-age-44-fertility-successes-are-few.

women in specifications, six, seven, and eight find that the years after 1993 had a positive, statistically significant effect on the employment outcomes of morbidly obese women.

I am unable to replicate Carpenter's results exactly in Table 4, yet I still find evidence that the years after 1993 had a positive and statistically significant impact on employment outcomes for the obese and morbidly obese nationwide. So the question becomes: Are these post-1993 effects the result of *Cook*? Or are they result of some other 1993 event? Carpenter's estimates—and my attempts to replicate him—assume that the *Cook* decision was capable of having a nationwide effect on employment of the obese. Yet even if *Cook* did have a nationwide effect, the effect should have been strongest in the First Circuit since *Cook* is only mandatory precedent in the First Circuit. Tables 5 and 6 test how the strength of the post-1993 effect in the First Circuit compares to the strength of the post-1993 effect in all other circuits.

In Table 5, I present the results of a difference-in-differences regression using the third regression model presented in the Empirical Methodology Section. This difference-in-differences regression compares pre-1993 and post-1993 observations within the First Circuit to those outside the First Circuit. Because I am no longer trying to replicate Carpenter, I use the full range of available BRFSS data from 1985 to 2010 as well as the full range of working-age respondents from eighteen to sixty-five. The variables of interest in this regression are the *obese*post-1993*first circuit* and the *morbidly obese*post-1993*first circuit* interaction terms. Neither of these interaction terms is statistically significant for men or for women. Consequently, Table 5 indicates that the

nationwide post-1993 effects picked up in Table 4 are the result of something besides *Cook*.

Table 6 first presents the nationwide differences estimates using the full range of 1985 to 2010 BRFSS data. Table 6 then divides this data between the First Circuit and all other circuits; it presents differences estimates for each division in order to determine what region of the country is driving the post-1993 nationwide employment effects seen in Table 4 and in Carpenter's paper. After comparing specifications five and six for women, it is clear that something outside the First Circuit is driving any post-1993 employment effects for the obese nationwide. The coefficient on *obese*post-1993* is statistically significant for women in the First Circuit, but it is smaller in magnitude than the coefficient on this variable in all other circuits.[158] Moreover, the coefficient on *morbidly obese*post-1993* is not even statistically significant for women in the First Circuit. If the *Cook* decision helped anyone, it should have been morbidly obese women in the First Circuit since Cook herself was a morbidly obese woman in the First Circuit. But it had no effect on these women, suggesting that the positive, significant coefficients on *obese*post-1993* and *morbidly obese*post-1993* seen nationwide in specification four is being driven by some other event in 1993, and not *Cook*.

The results for women in Table 6 as well as the previous results for both genders in Table 5 cast doubt on the premise that men saw benefits from the decision either. The fact that the *morbidly obese*post-1993* coefficient is not statistically significant for men in specifications one, two, or three of Table 6 further casts doubt on the premise that *Cook* is responsible for any positive employment effects after 1993. Nevertheless, specification two in Table 6 does show that the coefficient on *obese*post-1993* is

[158] These differences are statistically significant at the 10 percent level.

strongly positive and statistically significant for men in the First Circuit. These coefficients are larger than the same coefficients in specification three, which uses data for men outside the First Circuit. The magnitude of the *obese*post-1993* coefficient for men in the First Circuit is consistent with Carpenter's hypothesis that *Cook* improved employment outcomes for obese men.

Still, even if Carpenter's hypothesis is correct for men, it is not clear why his hypothesis would only be correct for obese men and not morbidly obese men—especially given that the plaintiff in *Cook* was morbidly obese. The anomaly of this one result, which is not robust to a change in specification (as seen in the difference-in-differences results for men in Table 5), must be driven by some other factor.

One potential candidate for this "other factor" is the economy. Despite three recessions during the 1980s and early 1990s, the economy grew for 120 consecutive months from April 1991 to March 2001.[159] The regression results may be picking up this economic growth, although the year fixed effects included in every regression should control for economic trends. I tested additional specifications, not reported here, in order to determine the origin of this one result, including controls for various macroeconomic indicators such as national unemployment rate, First Circuit unemployment rate, employment in blue collar industries, employment in utilities (since there were several energy crises during this period), poverty rate, and gross domestic product. This one result for obese men in this specification is robust to all of these additional controls. Still, given all of the other evidence, the fact that *Cook* is behind this one result is questionable.

[159] National Bureau of Economic Research, "U.S. Business Cycle Expansions and Contractions," *National Bureau of Economic Research Online*, last modified 20 Sep. 2010, http://www.nber.org/cycles.html.

For those convinced that this one result is driven by *Cook*, however, I present one final piece of evidence that *Cook* had nothing to do with any positive employment effects for the obese seen after 1993. This evidence is introduced in Table 7, which presents the results of a falsification test. If it is true that the 1993 *Cook* decision, which recognized obesity as an disability under the ADA, improved employment outcomes for the obese, then it should also be true that a contrary decision had either a negative effect or no effect at all on employment of the obese. In other words, if Carpenter is correct that *Cook* "sent a nationwide signal"[160] to employers that not hiring the obese could have legal consequences, then a contrary decision should have damaged this signal, particularly in the circuit where the decision was rendered.

Two such contrary decisions to *Cook* occurred in the Sixth Circuit over this time period. The first decision came in 1997. As discussed in the Obesity as a Disability Section, the Sixth Circuit refused to grant relief to Ohio State Highway Patrol officers who had failed to meet the force's weight requirements in *Andrews v. State of Ohio.*[161] The second decision, *E.E.O.C. v. Watkins Motor Lines,* came in 2006. Here, Watkins Motor Lines prevented a dock worker from returning to work after an injury because of his weight, so the worker brought suit against his employer. Because the worker's weight did not arise from an underlying physiological issue, the Sixth Circuit denied him relief, reaffirming the 1997 *Andrews* decision.[162]

Andrews and *Cook* are only mandatory precedent in the Sixth Circuit, so any negative effects on the employment of the obese resulting from these decisions should be

[160] Christopher S. Carpenter, "The Effects of Employment Protection for Obese People," *Industrial Relations* 45 (July 2006): 412.
[161] *Andrews v. State of Ohio*, 104 F3d 803 (6th Cir 1997).
[162] *E.E.O.C. v. Watkins Motor Lines*, 463 F3d 436 (6th Cir 2006).

strongest in the Sixth Circuit. As Table 7 demonstrates, neither the 1997 *Andrews* case nor the 2006 *Watkins* case had a negative impact on employment of the obese. In fact, these years actually had a positive effect on employment of the obese in the Sixth Circuit. The *obese*post* and *morbidly obese*post* coefficients are positive and statistically significant for women in both 1997 and 2006, and the *obese*post* coefficient is positive and statistically significant for men in 2006. These results are exactly the opposite of what Carpenter's hypothesis would predict.

Taken together, Tables 5 through 7 indicate that ADA protections have not improved employment outcomes for the obese, either in the First Circuit or nationwide. Therefore, even if the ADAAA does convince other circuits to recognize obesity as a disability in the future, these expanded protections are unlikely to improve employment outcomes for the obese. Although the *Cook* decision has not helped the obese, the seven local laws that specifically prohibit weight and personal appearance discrimination may have been more successful. The estimations in the next section test just how successful these other laws have been.

The Effect of Local Laws on Employment Outcomes for the Obese

Ideally, the BRFSS would contain observations before and after each local Title VII-esque law was passed, just as the BRFSS contained observations before and after the *Cook* decision. But as the Data and Empirical Methodology Sections described, the BRFSS did not begin until 1984, and not all states participated until the early 1990s. Therefore, the BRFSS does not contain any before-observations for Madison, WI, Michigan, Washington, DC, or Urbana, IL. Because California did not participate in the BRFSS from the beginning and Santa Cruz is a small city, there are no before-

observations for Santa Cruz either. As a result, for five of the seven cities, only a comparison between employment rates of the obese within the jurisdiction to employment rates outside the jurisdiction is possible.

Table 8 presents summary statistics that compare the raw employment rates by BMI classification for jurisdictions with Title VII-esque protections to surrounding jurisdictions without such protections. Because the number of observations are drastically reduced when a single jurisdiction is considered, the trends in the data are most visible when some of the BMI classifications are pooled. Therefore, for better readability and ease of comparison, the five weight classes are pooled into three groups: underweight and normal weight, overweight, and obese and morbidly obese. The weight group with the highest employment rate is highlighted in this table for each jurisdiction.

Nationwide, underweight/normal weight women and overweight men have the highest rates of employment. But in four of the jurisdictions with weight or personal appearance-discrimination laws, heavier residents have higher employment rates. Heavier men and women in Urbana, IL, women in Madison, WI, women in Binghamton, NY, and men in Santa Cruz, CA all appear to have more success in the labor market than heavier men and women in the rest of these states. None of these differences in means are statistically significant at the 10 percent level, but very few of the city differences in means are statistically significant given that cities have fewer observations.

Because this method of analysis is crude, the Santa Cruz, CA (N=207 men, 301 women) results may be at least partially driven by the fact that it is has the smallest number of observations of any jurisdiction in the sample. The obese/morbidly obese group of Santa Cruz men only has thirty-five observations. Binghamton, NY (N=359

men, 582 women) has a larger overall sample, but very few observations from after 2008 when its weight-discrimination law passed (N=51 men, 78 women). Nevertheless, for Urbana, IL (N=391 men, 562 women) and Madison, WI (N=1,608 men, 2,021 women), the sample sizes are large, and all of the observations come *after* their laws passed in the 1970s. Thus, even if the results for Santa Cruz and Binghamton are not totally convincing, there still appears to be something real occurring in Madison and Urbana.

Table 9 confirms that Madison and Urbana's laws are the only two that show strong signs of effectiveness. Table 9 shows the results of differences regressions for the five jurisdictions without before-observations. These regressions follow the second model presented in the Empirical Methodology Section; thus, the variable of interest in these regressions is *obese/morbidly obese*jurisdiction*. As in the previous table, weight groups are pooled here because of the small number of observations available in some of the affected jurisdictions. These regression results show that employment outcomes are better for obese men in Urbana and for obese women in Madison than in surrounding jurisdictions. In contrast, employment outcomes for the obese are worse in Michigan and Washington.

For the remaining two jurisdictions, San Francisco and Binghamton, the BRFSS contains observations for each city and its surrounding areas before and after each law's passage. The summary statistics for San Francisco and Binghamton before and after passage are presented in Table 10. These summary statistics indicate that employment rates for obese and morbidly obese men increased after the passage of San Francisco's law, while the employment rates for obese and morbidly obese women increased after the passage of Binghamton's law. Because this method of analysis is crude, however, I can

further exploit the broader availability of data for San Francisco and Binghamton. For these two cities, I run difference-in-differences regressions that follow the third model presented in the Empirical Methodology Section.

Table 11 presents the results of these difference-in-differences regressions. The variable of interest in these regressions is *obese/morbidly obese*post*jurisdiction*. The effect seen for obese and morbidly obese women in the Binghamton summary statistics disappears. This disappearance may indicate that Binghamton's law—like so many others—has not improved employment outcomes for the obese. On the other hand, this disappearance may simply be the result of having very few post-2008 observations for Binghamton men (N=51) and women (N=71). For Binghamton, it may be too soon to tell the effects of its law.

For San Francisco, however, the *obese/morbidly obese*post*jurisdiction* coefficient is positive and statistically significant for men, but neither of the coefficients of interest are statistically significant for women. These results could indicate that the San Francisco law has improved employment outcomes for obese men, but several factors cast doubt on this conclusion. First, the sample only contains thirty-five observations of obese and morbidly obese men in San Francisco after 2000. Second, the *obese/morbidly obese*post*jurisdiction* coefficient is enormous—if true, this estimate would suggest that the San Francisco law increased employment of obese men there by almost twenty percentage points. Not only is this estimate implausibly large to be attributed solely to the weight-discrimination law, but it is also difficult to reconcile with specification two, which suggests that the San Francisco law has not helped women at all.

In fact, if the San Francisco law were going to help one gender only, it should have been women. Although a male supervisor sponsored the ordinance, the participants in the protest that incited the law, the speakers at the Board of Supervisors hearing that considered the law, and the drafters of the San Francisco ordinance and compliance guidelines were almost exclusively women.[163] In addition, the two most famous and publicized complaints filed under this law were brought by women. Filed shortly after the law's passage, the two complaints came from Krissy Keefer, a dancer whose eight-year-old daughter was rejected by the San Francisco Ballet School for "not having the right body type,"[164] and Jennifer Portnick, an aerobics instructor who was rejected from teaching Jazzercise because of her weight.[165] Both cases resulted in settlement through the San Francisco Human Rights Commission mediation program.[166]

In sum, the seven local Title VII-esque laws that prohibit weight and personal appearance discrimination have performed better than the ADA in improving employment outcomes for the obese, but they still have not been entirely successful. With so many seeming failures, then the question naturally arises: Why have so few laws improved employment outcomes of the obese? The last section discusses this question at length.

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[163] Telephone interview with Sondra Solovay, San Francisco Weight Discrimination Attorney, in San Francisco, CA (Aug. 17, 2011).
[164] Jon Carroll, "Just Like a Ballerina," *San Francisco Chronicle*, 8 Dec. 2000, C24.
[165] Elizabeth Fernadez, "Teacher Says Fat, Fitness Can Mix: SF Mediates Complaint Jazzercise Showed Bias," *San Francisco Chronicle*, 24 Feb. 2002, A21.
[166] Sondra Solovay, San Francisco Weight Discrimination Attorney, telephone conversation with author, 17 Aug. 2011.

Administration: Why Some Laws Work and Some Laws Do Not

For advocates of obesity discrimination laws, the results of this chapter may be quite discouraging. Fat rights organizations like the National Association to Advance Fat Acceptance (NAAFA) tout the *Cook* decision and the seven local laws as archetypes for the rest of the nation, advocating legislation and policy as "the solution . . . to ensure size equality" and to improve labor market outcomes of the obese.[167] Yet only two laws appear to have made any progress toward achieving these goals.

On the bright side for fat rights advocates, it is not just the obesity laws that are falling short. No one seems to be doing very well under our current Federal system of employment discrimination protections. Acemoglu and Angrist (2001) found that overall employment of all disabled individuals actually declined after the ADA went into effect. Even after controlling for increased social security and disability insurance participation rates, the disabled were still worse off after the ADA. The ADA requires employers to make reasonable accommodation for disabled employees, but employers cannot dock disabled workers' wages to pay for this accommodation. Thus, Acemoglu and Angrist concluded that "the costs of reasonable accommodation are probably larger than the costs of litigation for wrongful termination" for most employers.[168]

Indeed, all potential victims of employment discrimination—even members of Title VII protected classes—face a difficult journey to enforce their rights under the current Federal system. Clermont and Schwab (2004) studied the Federal court outcomes

[167] National Association to Advance Fat Acceptance, "Facts on Size Discrimination," *NAAFA Online*, last viewed 03 Mar. 2012, http://www.naafaonline.com/dev2/assets/documents/naafa_FactSheet_v17_screen.pdf.
[168] Daron Acemoglu and Joshua D. Angrist, "Consequences of Employment Protection? The Case of the Americans with Disabilities Act," *Journal of Political Economy* 109 (2001): 915-57.

of a broad range of employment discrimination cases, including cases filed under Title VII, the ADA, 42 U.S.C. § 1981,[169] 42 U.S.C. § 1983,[170] the Age Discrimination in Employment Act (ADEA),[171] and the Family and Medical Leave Act (FMLA).[172] Compared to all other litigants in Federal court, employment discrimination plaintiffs fare worse at every step of the adjudication process. Plaintiffs under these statutes are more likely to lose pretrial, often succumbing to a defendant's motion for summary judgment. Even if they make it past the summary judgment phase, they are less likely to settle their claims, and thus, are more likely to go to trial. At trial, employment discrimination plaintiffs lose "disproportionately often."[173] And even though employment discrimination plaintiffs are more likely to appeal an adverse trial outcome, defendants do "far better on those appeals than the plaintiffs."[174]

Five years later, Clermont and Schwab (2009) updated their results and found that the situation for employment discrimination plaintiffs had gotten worse, not better. Employment discrimination plaintiffs still fared worse at every step of the adjudication process than other plaintiffs in Federal court. But now, another, more discouraging trend was present. Employment discrimination suits, which once constituted the largest fraction of the Federal docket, were now on the decline. Clermont and Schwab found that the absolute number of employment discrimination suits had been declining since

[169] This section prohibits intentional discrimination against members of protected classes engaged in protected activities. Thus, this section can be used to bring claims outside of employment as well.
[170] This section is primarily used to sue municipalities for discrimination a member of a protected class.
[171] The ADEA protects individuals who are at least forty years old from workplace discrimination. *Age Discrimination in Employment Act*, *U.S. Code*, vol. 29, sec. 621 (2012).
[172] The FMLA "entitles eligible employees of covered employers to take unpaid, job-protected leave for specified family and medical reasons with continuation of group health insurance coverage under the same terms and conditions as if the employee had not taken leave." U.S. Department of Labor, Wage and Hour Division, "Family and Medical Leave Act," *U.S. Department of Labor Online,* last modified 15 Feb. 2012, http://www.dol.gov/whd/fmla; *Family and Medical Leave Act*, *U.S. Code*, vol. 29, sec. 2601 (2012).
[173] Kevin M. Clermont and Stewart J. Schwab, "How Employment Discrimination Plaintiffs Fare in Federal Court," *Journal of Empirical Legal Studies* 1 (July 2004): 429-58.
[174] Ibid., 429.

1999, and the relative number of employment discrimination suits (compared to the rest of the Federal docket) had been declining since 2001.[175] The authors credited this decline to the frustration of employment discrimination plaintiffs and attorneys, leading to their "foreswearing use of the courts."[176]

Taken together, these papers all suggest the same conclusion: employers are not afraid of employment discrimination lawsuits brought under Federal law. Acemoglu and Angrist indicate that employers would rather take the chance of being sued than undertake the additional expenses associated with reasonable accommodation. Clermont and Schwab suggest that employers take this chance because even if they are sued, they generally win.

So why are potential victims of employment discrimination faring so poorly under Federal law? Congress intended that Federal employment discrimination laws would improve labor market outcomes for protected individuals. Yet the labor market outcomes of protected individuals show few signs of improvement—and have even declined in some cases. Consequently, the answer to this puzzle must lie in the administration of Federal employment discrimination statutes. Studying how these statutes are enforced may illuminate why many employment discrimination plaintiffs are not faring well under Federal law. More importantly, studying enforcement under the Federal system may illuminate why many employment discrimination plaintiffs are not faring well under local obesity discrimination laws either.

[175] Kevin M. Clermont and Stewart J. Schwab, "Employment Discrimination Plaintiffs in Federal Court: From Bad to Worse?" *Harvard Law & Policy Review* 3 (2009): 103-32.
[176] Ibid., 104.

Enforcement of Federal Employment Discrimination Law

Individuals with a complaint under a Federal employment discrimination law, whether the ADA or something else, have no more than 300 days to file a charge with the EEOC or an authorized state agency. In fact, in states without their own employment discrimination laws and agencies, individuals have only 180 days to file. Once an individual has filed a valid employment discrimination charge under a current Federal law, the EEOC sends a letter to the employer with two options. The first option invites the employer to participate in a free mediation program.[177] If the employer refuses to participate in mediation, then the employer must choose the second option, which is to provide a written position statement and written answers to a list of questions based on the charge.[178]

If the employer chooses to mediate, the EEOC brings in a mediator from either inside or outside the EEOC. The parties may bring an attorney to mediation, but they are not required to bring one. Mediation remedies vary from offers to hire and monetary settlements to employer recommendation letters and apologies. According to the latest EEOC statistic from 2008, the mediation program has a 72.1 percent settlement rate.[179] Of course, this statistic does not account for selection into the program; employers with bad cases may be the only ones who choose to mediate.

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[177] The employee must also agree to mediation. If the employee refuses to mediate, then the EEOC automatically requires the employer to provide a written position statement and written answers to questions based on the charge.

[178] The information in this section comes almost entirely from an interview with an EEOC District Director. Katharine Kores, District Director of Memphis Office, Equal Employment Opportunity Commission, telephone conversation with author, 09 Jan. 2012.

[179] U.S. Equal Opportunity Employment Commission, "Questions and Answers About Mediation," *Equal Opportunity Employment Commission Online*, last viewed 20 Feb. 2012, http://www.eeoc.gov/eeoc/mediation/qanda.cfm.

Regardless, if EEOC mediation fails (or if either party refuses to mediate), the EEOC begins its investigation process. During its investigation, the EEOC can rely on the information provided by both parties, but it can also gather its own information independently. The information gathering process may include onsite visits to the employer and interviews with other employees. The EEOC strives to complete this investigation within 180 days. Unfortunately, according to one EEOC District Director, the "workload increases every year," and most investigations "probably go more towards a year."[180]

At the end of the investigation, the EEOC determines whether the investigation has given the agency "reasonable cause" to believe that discrimination has occurred.[181] If it has not, then the EEOC will issue a right to sue letter to the charging party, which will, as the name implies, give the charging party the right to bring a lawsuit against her employer. If the investigation has given the agency reasonable cause to believe that discrimination has occurred, however, then the parties are invited to participate in conciliation. During conciliation, the EEOC uses "informal methods of conference, conciliation, and persuasion" to encourage the parties to reach a settlement agreement.[182] In practice, the EEOC seeks full relief for the charging party during the conciliation process. For charges that involve an entire class of individuals, the EEOC will ask the employer to change its discriminatory policy and to compensate all victims (not just the charging party). Still, conciliation is voluntary, and the employer can refuse the EEOC's proposals.

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[180] Katharine Kores, District Director of Memphis Office, Equal Employment Opportunity Commission, telephone conversation with author, 09 Jan. 2012.
[181] *Title VII of the Civil Rights Act of 1964*, *U.S. Code*, vol. 42, sec. 2000e-5 (2012).
[182] Ibid.

If the employer does refuse the EEOC proposals (or refuses to participate in conciliation at all), then the EEOC sends the case to the agency legal unit. The legal unit determines whether to file the lawsuit itself or to issue a right to sue letter to the charging party. If the EEOC files the lawsuit itself, then the agency brings the case on its own accord; the charging party is not the agency's client. Still, having the EEOC bring the case is always preferable because the charging party does not have to hire an attorney or pay any of the fees associated with litigation. Furthermore, the charging party and any class members are still entitled to relief obtained from the litigation.

On the other hand, if the agency issues a right to sue letter, the charging party is on her own to bring a lawsuit against her employer. Because employment discrimination cases are legally complicated and take years to litigate, most individuals cannot afford to pay an attorney out-of-pocket. Therefore, most lawyers working in the employment discrimination area work on a contingent-fee basis: they do not receive payment unless their client wins.[183] Even though many discrimination statutes—both Federal and local—contain fee-shifting provisions, which allow plaintiffs who are successful at trial to seek an award of reasonable attorneys' fees, the contingent fee amount often controls. In *Venegas v. Mitchell*, the U.S. Supreme Court held that employment discrimination attorneys were allowed to collect the contingent fee agreed to by their client, even if the amount of the contingent fee exceeded the court's determination of a reasonable attorney fee.[184] Since this case, Federal courts agree that a successful plaintiffs' attorney is at least

[183] Joel Wm. Friedman, *The Law of Employment Discrimination*, 7th ed. (New York: Foundation Press, 2009), 698.
[184] *Venegas v. Mitchell*, 495 US 82 (1990).

entitled to the higher of the two fees (either the contingency fee or the statutory award).[185] However, the Fifth Circuit has held in *Gobert v. Williams* that a plaintiffs' attorney can collect both the contingency fee and the statutory award.[186] The generous fee awards for plaintiffs' attorneys who are successful at trial may seem almost excessive, but courts realize that "the attorney is being compensated for the risk that the suit would be unsuccessful" (and in employment discrimination suits, plaintiffs' attorneys are often unsuccessful).[187]

Contingent-fee attorneys, as a result, are "reluctant to bring questionable claims," and they are also reluctant to bring valid claims that will not result in a high level of damages.[188] With questionable claims, plaintiffs' attorneys have a higher probability of losing and, consequently, a lower possibility of ever being compensated for their time. With low damage claims, the contingency fee may not fully compensate plaintiffs' attorneys for their time, even if they are successful. Of course, plaintiffs' attorneys bringing low-damage claims who are successful at trial can eventually seek a reasonable fee award from the defendant. But plaintiffs' attorneys who settle low-damage claims before or during trial are only entitled to the small contingency fee. Thus, even a plaintiff

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[185] Joel Wm. Friedman, *The Law of Employment Discrimination*, 7th ed. (New York: Foundation Press, 2009), 700. One case allowing attorneys to take the higher of the two fees is *Ross v. Douglas County*, 244 F3d 620 (8th Cir 2001).
[186] *Gobert v. Williams*, 323 F3d 1099 (5th Cir 2003).
[187] Joel Wm. Friedman, *The Law of Employment Discrimination*, 7th ed. (New York: Foundation Press, 2009), 699-700.
[188] Kevin M. Clermont and Stewart J. Schwab, "Employment Discrimination Plaintiffs in Federal Court: From Bad to Worse?" *Harvard Law & Policy Review* 3 (2009): 114. In addition, Michael Selmi makes this point. Selmi acknowledges that fee-shifting provisions allow plaintiffs attorneys to collect their fees from the defendant if they win at trial, but he worries that "by focusing on fees that are expected after trial one easily loses sight of the reality that so few cases are actually tried." He continues, "As long as litigation costs drive decisions, or expected monetary outcomes determine decisions to litigate, the reality is that many low damage claims simply will not be brought." Even more troubling, Selmi finds that "a significant portion of the EEOC caseload is concerned with low-damage cases." Michael Selmi, "The Value of the EEOC: Reexamining the Agency's Role in Employment Discrimination Law," *Ohio State Law Journal* 57 (1996): 32-34.

with a valid claim and a right to sue letter may have a difficult time finding an attorney—and may be forced to choose between bringing a case *pro se* or not bringing a case at all.

Supposing a plaintiff with a right to sue letter does decide to bring her lawsuit, Clermont and Schwab (2004, 2009) demonstrated that she will face another uphill battle surviving summary judgment, trial, and appeal.[189] Supporting Clermont and Schwab's findings, Nielsen et al. (2010) found that over 40 percent of all employment discrimination plaintiffs have their cases dismissed or lose on summary judgment. Plaintiffs who proceed *pro se* are three times as likely to have their cases dismissed or lose on summary judgment. And only 33 percent of plaintiffs who survive summary judgment win at trial.[190]

Furthermore, even successful plaintiffs endure years of litigation. The enormous time it takes to litigate employment discrimination cases is evident from the legal community's remaining uncertainty about the ADAAA. The ADAAA took effect in 2008, and yet no one knows for certain whether courts will consider obesity a disability for the purposes of the ADA. The two cases brought by the EEOC in the Fifth Circuit still have not gone to trial. Moreover, Lisa Harrison, the plaintiff from the first case filed in 2010, has now died, and the EEOC is proceeding on behalf of her estate.[191]

All things considered, the lengthy EEOC process, the even lengthier litigation process, and all of the roadblocks set up for plaintiffs along the way can explain why employers feel little pressure from Federal employment discrimination statutes. Thus, it

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[189] Ibid., 103-32; Kevin M. Clermont and Stewart J. Schwab, "How Employment Discrimination Plaintiffs Fare in Federal Court," *Journal of Empirical Legal Studies* 1 (July 2004): 429-58.
[190] Nielsen et al., "Individual Justice or Collective Mobilization? Employment Discrimination Litigation in the Post Civil Rights United States," *Journal of Empirical Legal Studies* 7 (June 2010): 175-201.
[191] U.S. Equal Employment Opportunity Commission, "EEOC Sues Resources for Human Development, Inc. for Disability Discrimination," *EEOC Press Releases*, last modified 30 Sep. 2010, http://www.eeoc.gov/eeoc/newsroom/release/9-30-10u.cfm.

is not surprising that plaintiffs in jurisdictions following the Federal model suffer the same fate.

Enforcement of Local Laws

Looking back at Table 1, the resemblance of the seven state and local employment discrimination enforcement processes to the Federal process is striking. Every jurisdiction except Binghamton, NY has its own enforcement agency. All six jurisdictions with enforcement agencies have mediation programs. Moreover, four of these jurisdictions, including Michigan, Madison, WI, Urbana, IL, and Santa Cruz, CA, require employees to file a charge with the local enforcement agency so that the agency can make a reasonable cause determination.

Beyond the similarities in enforcement agencies, the state and local processes also resemble the Federal process in method of adjudication. In five of the seven jurisdictions, complainants have a private right of action. Michigan, Washington, DC, and San Francisco, CA also allow complainants to pursue a remedy through the local enforcement agency instead, but submitting to the enforcement agency's process is optional. In fact, the only two jurisdictions that do not allow discrimination complainants to file a private right of action happen to be the same two jurisdictions that showed any promise of helping the obese in the labor market: Madison, WI and Urbana, IL. Complainants in these jurisdictions must go through the local enforcement agency processes in order to obtain relief.

One of the fundamental assumptions of economic theory is that more choice is better.[192] Thus, at first glance, it would appear that Michigan, Washington, DC, and San Francisco, CA were the most plaintiff-friendly environments since plaintiffs there have a

[192] Hal R. Varian, *Microeconomic Analysis*, 3d ed., New York: W. W. Norton & Company, 1992, 94-96.

choice between pursuing a remedy through the local enforcement agency or through the courts. Nevertheless, the higher employment rates of the obese in Madison and Urbana are not an accident. Even though complainants in these cities cannot file a private lawsuit, the commission adjudication processes are quick, rigorous, and sufficiently threatening for employers to take them seriously.

Madison, Wisconsin

Although the Madison commission process as a whole is quite different from the EEOC process, the Madison process begins in the same manner. After a complaint is filed with the MEOC, the complaint is assigned to an investigator. The investigator uses the information provided by the parties as well as information from her own independent research to make a determination of probable cause. During the investigatory process, the parties are given an opportunity to mediate. If one party declines, or mediation fails, the investigator proceeds to make a probable cause determination.[193]

If the investigator determines that no probable cause exists, then the complainant has fifteen days to appeal this decision to a hearing examiner and fifteen days to make a second appeal to the entire MEOC; otherwise, the case is closed. If the investigator determines that there is probable cause, the parties have the opportunity for conciliation, just as they do in the EEOC process.

The similarities between the MEOC and EEOC processes end after conciliation. In the EEOC process, complainants with probable cause begin the long process of Federal court litigation. In the MEOC process, once conciliation fails, a hearing officer is

[193] The information presented in this section is based on three sources: City of Madison Department of Civil Rights, *City of Madison Department of Civil Rights Online*, last modified 2012, http://www.cityofmadison.com/dcr/index.cfm; Lucia Nunez, Director of the Madison Department of Civil Rights, e-mail message to author, 4 Jan. 2012; Rachel Campbell, Administrative Clerk for the Madison Equal Opportunities Commission, e-mail message to author, 4 Jan. 2012.

immediately appointed, and the complaint is scheduled for a prehearing conference and final hearing. At the prehearing conference, the parties determine issues commonly decided at a pretrial conference, such as deadlines for each party's list of witnesses. By law, the final hearing must be scheduled within thirty days of the probable cause determination.[194]

At the hearing, the parties must present all of the evidence that they wish the hearing examiner to consider. The hearing examiner will not consider the investigator's report on her own, but the parties are free to introduce content from the investigator's report. The hearing begins with each party making an opening statement. The complainant presents witnesses, and the employer is allowed to cross-examine the complainant's witnesses. At any point during the witness testimony, the hearing officer is allowed to ask her own independent questions of the witnesses.

After the presentation of witnesses, each party is allowed to introduce exhibits, including previous decisions of a Madison Equal Opportunities hearing officer, the Commission itself, or Wisconsin state appellate courts. Every decision on the Madison law is indexed by subject and party name on the MEOC website, so relevant cases are easy to find, even for a novice legal researcher. Finally, each party makes a closing statement, and the hearing officer makes a decision, and if applicable, awards damages. As mentioned previously, the hearing officer's decision is appealable first to the entire Commission for review, then the Dane County Circuit Court, and finally the Wisconsin Court of Appeals.

Although the MEOC process has some similarities to the Federal process, two key differences make it more effective. First, the Madison process is much faster.

[194] Madison, Wis., Gen. Ordinances, sec. 39.03(10)(c)(2)(a) (2012).

Complainants who file with the Federal EEOC are generally still waiting for a probable cause determination a year after filing their charge; complainants who file with the MEOC have generally already had their hearing in that time. As a result, even decisions that are appealed all the way up to the Wisconsin Court of Appeals are generally resolved within three years.[195] In contrast, litigants who take their cases up through the Federal court system can expect double that amount of time.[196]

Second, and more importantly, the MEOC tries to make the commission process as accessible for complainants as possible. The MEOC does not require complainants to have a lawyer; in fact, the MEOC does everything possible to help complainants represent themselves effectively. As mentioned before, the MEOC maintains an extensive and easily searchable decision digest so that complainants can look up previous cases similar to their own. The MEOC also provides complainants with extensive instructions on every step of the commission process, including how to gather evidence, prepare witnesses, and present their cases at the hearing.

If a complainant decides that she wants assistance in the pre-hearing negotiations and the actual hearing, the MEOC allows the complainant to bring anyone to help represent her, including a non-lawyer. Moreover, if the complainant prefers to have an actual lawyer, the MEOC provides a list of attorneys who have litigation experience with the Madison law.

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[195] Madison Equal Opportunities Commission, "Decision Digest," *City of Madison Department of Civil Rights Online*, last modified 2012, http://www.cityofmadison.com/dcr/DecisionDigest/index.cfm.

[196] Although I have been unable to find a study documenting the average length of adjudication time for a Federal employment discrimination suit, a quick glance through well-known Supreme Court cases in this area show that litigation is still ongoing five to ten years after the adverse employment action. For examples, see *McDonnell Douglas Corp. v. Green*, 411 U.S. 792 (1973) (nine years); *Price Waterhouse v. Hopkins*, 490 U.S. 228 (1989) (seven years); *St. Mary's Honor Center v. Hicks*, 509 U.S. 502 (1993) (nine years); *Reeves v. Sanderson Plumbing Products, Inc.*, 530 U.S. 133 (2000) (five years); *Gross v. FBL Financial Services*, 557 U.S. 167 (2009) (six years).

Because the MEOC makes the process so accessible for complainants, the MEOC receives between seventy and eighty employment complaints each year.[197] Although the majority of complaints are not related to physical appearance, some are. In the twenty-seven years since the ordinance's passage, six physical appearance cases have made it to the final hearing. Of these cases, two have resulted in decisions for the complainant.[198] In the past fourteen years, seven other complaints based on physical appearance have been filed but have not made it to final hearing. Three of these seven lawsuits have resulted in settlements.

The number of physical appearance complaints brought under the Madison ordinance is small, but the results of this chapter show that the Madison ordinance is working in another way. The filing and adjudication process is faster, easier, and cheaper for complainants than the EEOC process; therefore, the potential threat posed by an MEOC complaint is greater for employers. Together, the uniqueness of the Madison process and the empirical results indicate that employers respond to this threat by hiring workers whom they would not normally hire: the obese.

Urbana, Illinois

Urbana's filing and adjudication process differs even more from the EEOC process than does Madison's. The Urbana Human Relations Commission process is administered solely by one primary staff member, the UHRO, and one part-time employee. Individuals who wish to file a complaint under the Urbana ordinance make an

[197] Madison received seventy-six employment complaints in 2011 and seventy complaints in 2010. Rachel Campbell, Administrative Clerk for the Madison Equal Opportunities Commission, e-mail message to author, 4 Jan. 2012.

[198] Madison Equal Opportunities Commission, "Decision Digest," *City of Madison Department of Civil Rights Online*, last updated 2012, http://www.cityofmadison.com/dcr/DecisionDigest/index.cfm. Cases such as *Cronk v. Reynolds Transfer & Storage*, *Regan v. Lyons Mortgage Co.*, and *Maxwell v. Union Cab Cooperative* have all found that the complainant was discriminated against because of personal appearance.

appointment with the UHRO, who assists them in filing a formal complaint. Once the complaint has been filed, the UHRO begins an investigation into the complaint. With the assistance of the part-time employee, the UHRO conducts a completely independent investigation, collecting documents from employers, conducting interviews, and scheduling onsite factfinding meetings with the employers.[199]

By law, within forty-two days of the complainant's filing, the UHRO must make a probable cause determination. If the UHRO determines that no probable cause for discrimination exists, then the complainant can appeal the decision to the Commission. The Commission chair appoints one Commission member and two outside individuals to hear the appeal. After considering the evidence proffered by the UHRO as well as any additional evidence proffered by the complainant, the three-member panel determines whether to affirm the UHRO's decision or to reverse the decision and issue its own probable cause decision.

If the UHRO or the three-member panel find probable cause, the UHRO's role in the case transforms into that of a "law enforcement officer."[200] Technically, the UHRO always acts as an advocate for the people of Urbana, but after a probable cause determination, he begins to act as an inadvertent advocate for the complainant, much like the EEOC acts as an inadvertent advocate for complainants whose cases the agency decides to file itself. At this point, the UHRO begins a process of "conference, conciliation and persuasion," much like the EEOC conciliation process.[201] The UHRO

[199] The information presented in this section is based on three sources: Urbana, Ill., Code of Ordinances, secs. 12-82 – 12-84 (2012); Todd Rent, Urbana Human Relations Officer, e-mail message to author, 14 Nov. 2011; Todd Rent, Urbana Human Relations Officer, telephone conversation with author, 03 Jan. 2012.
[200] Todd Rent, Urbana Human Relations Officer, telephone conversation with author, 03 Jan. 2012.
[201] Urbana, Ill., Code of Ordinances, secs. 12-83(a) (2012);

acts as the complainant's advocate during conciliation, seeking full relief. The principle difference between the Urbana conciliation process and the EEOC process, however, is that there is a strict time limit on this process in Urbana: forty-two days. If conciliation is unsuccessful within this time limit, then a public hearing before the commission is scheduled for no more than 105 days later.

At the public hearing, the UHRO serves as the inadvertent advocate for the complainant, so there is no need for the complainant to have an attorney. Traditionally, the Commission has made all determinations of fact and law, resulting in very lengthy, and often complicated hearings. For this reason, the Commission is currently considering bringing an Administrative Law Judge (ALJ) for the next hearing. The ALJ would hear the case and make factfinding recommendations, which the Commission would later review and approve. Even if Urbana does incorporate an ALJ into its hearing process, Urbana will still maintain the swiftest, cheapest, and easiest adjudication process for employment discrimination complainants.

Despite the accessibility of the Urbana process for plaintiffs, Urbana, like Madison, does not see an overwhelming number of complaints under its ordinance. The UHRO receives approximately five to six new complaints every month. Almost all of these complaints are based on other types of discrimination; in fact, only one personal appearance complaint has been filed since 1990. Even more interestingly, the complaints in Urbana almost never make it to public hearing—the last public hearing was five years ago.

Nevertheless, Todd Rent, the current UHRO, believes that the lack of public hearings is an indicator of success, not failure. According to Rent, the office has "a very

active enforcement mechanism and a reputation of being thorough."[202] This reputation combines with a "level of awareness [that is] greater than in most communities" about the city's strong human rights law, resulting in employers who take the Urbana ordinance very seriously.[203]

As a result, employers try to avoid receiving complaints in the first place, but when they do, they are more likely to settle—especially if the UHRO finds probable cause. Still, Rent believes that the most important advantage of the Urbana system is that it allows individuals who would be shut out of the traditional EEOC process to receive compensation for real discriminatory acts. Rent notes that most employment discrimination attorneys will not even consider bringing a lawsuit unless substantial sums of money are involved due to the great expense required to litigate these cases. In practice, Rent sees a lot of individuals with strong complaints but low damages. Thus, Rent compares his office to a "small claims court," regularly making settlements of $1,000 to $5,000.[204] The large number of small settlements negotiated by Rent's office suggest that, as in Madison, employers see the Urbana Human Relations Commission as a valid threat, and as a result, hire workers who might otherwise be ignored—including the obese.

San Francisco, California, Michigan, and Washington, District of Columbia: Why the Other Three Commissions Do Not Work

The details of the Madison, WI and Urbana, IL enforcement commissions help to explain why their processes work. But they do not explain why the processes in other jurisdictions do not. Particularly in the three other jurisdictions with commission

[202] Todd Rent, Urbana Human Relations Officer, telephone conversation with author, 03 Jan. 2012.
[203] Ibid.
[204] Ibid.

enforcement processes—Michigan, San Francisco, CA, and Washington, DC—it seems that outcomes for classes of workers who experience greater difficulty in the labor market, including the obese, should be better, not worse. After all, in these jurisdictions, complainants have the option to seek enforcement through the local commission or through litigation.

But all enforcement commission processes are not created equal. Indeed, key differences in the commission processes in these three cities make it more difficult for complainants to seek redress for their claims. As a result, individuals with legitimate employment discrimination claims appear to succeed less frequently, and employers appear to feel less threatened by the local laws.

At the outset, San Francisco's law probably seemed the best candidate to improve employment outcomes of the obese. Recall that San Francisco was the only jurisdiction to pass a law with the principal intent of eliminating obesity discrimination. The sponsor of Michigan's bill was more broadly interested in protecting individuals who were "too fat or too short" and whose bodies did not conform with "Playboy Centerfold" ideals.[205] And in all other jurisdictions, weight and personal appearance were simply add-ons to make the legislation more comprehensive or more passable. San Francisco's law was the only one initiated by fat rights advocates.

Yet strong legislative intent is not enough to overcome severe weaknesses in the enforcement process. In spite of being a self-proclaimed city of tolerance, San Francisco's commission process has three weaknesses that undermine enforcement of its

[205] Thomas C. Mathieu, Former Michigan State Representative from Grand Rapids, e-mail message to author, 17 Aug. 2011.

human rights ordinance: lack of timeliness, lack of ability to proceed without a lawyer, and lack of awareness.[206]

Perhaps the greatest strength of the Madison and Urbana commission processes is their swiftness. Both Madison and Urbana's adjudicatory swiftness is driven by statutory time limits. San Francisco's ordinance only places strict time limits on housing complaints; employment and all other complaints under the ordinance are not subject to any time limits. Thus, as with litigation, commission adjudication can drag on for an indefinite period of time.

The San Francisco process is also unfriendly to complainants not represented by an attorney. The San Francisco commission does not require that complainants are represented by an attorney. But the San Francisco commission provides neither the extensive guidance nor the easily accessible decision digest that MEOC does. Moreover, commission investigators do not act as *de facto* advocates for complainants in commission hearings. The greater need for advocacy in the San Francisco commission process is apparent from the fact that complainants are actually retaining counsel. In the two most notable settlements to come out of the San Francisco weight discrimination ordinance, the complainants were represented by the same local civil rights attorney, Sondra Solovay.[207]

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[206] The information in this section this section comes from four sources: San Francisco, Cal., Administrative Code, sec. 12A.1 (2012); San Francisco, Cal., Police Code, secs. 3306-3307 (2012); San Francisco Human Rights Commission, *San Francisco Human Rights Commission Online*, last modified 2012, http://www.sf-hrc.org/index.aspx?page=1; Sondra Solovay, San Francisco Weight Discrimination Attorney, telephone conversation with author, 17 Aug. 2011.

[207] In fact, the San Francisco Contract Compliance Officer only knows of one other case that has settled under this ordinance. This case was not highly publicized like the other two cases, and the complainant did not retain counsel. Mullane Ahern, Contract Compliance Officer, San Francisco Human Rights Commission, e-mail message to author, 12 Jan. 2012.

The final barrier to effective commission enforcement in San Francisco is lack of awareness of the law by local employers. A 2006 study commissioned by the San Francisco Human Rights Commission agreed with this chapter that "San Francisco's public policy to prohibit weight discrimination is not effective in preventing weight based discrimination."[208] The study placed much of the blame for this ineffectiveness on the local enforcement agency, the Human Rights Commission. After conducting a survey of San Francisco residents, the study concluded that the failure of the Human Rights Commission to promote public awareness of the ordinance combined with the failure of the Human Rights Commission to actively enforce the ordinance was responsible for this ineffectiveness.[209]

Awareness is less of a problem in Michigan than in San Francisco. According to a 1994 article, 190 individuals had filed weight discrimination complaints since the law's passage in 1976.[210] The Michigan Department of Civil Rights has not been able to determine how many complaints have been filed since 1994, but 190 complaints still overwhelm the small number of weight- and personal appearance-based complaints seen in other jurisdictions.[211]

Some of these complainants, of course, pursued litigation instead of the Michigan Department of Civil Rights Commission process. Weight discrimination litigants in

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[208] Catherine M. Wippel, "San Francisco Administrative Code Chapters 12A, 12B and 12C and San Francisco Municipal/Police Code Article 33: An Evaluation of San Francisco's Public Policy to Prohibit Weight Discrimination," 21 Dec. 2006, 4, 2000 Human Rights Ordinance Folder, San Francisco Human Rights Commission Office, San Francisco, Cal.
[209] Ibid., 16-17.
[210] Aaron Epstein, "Fighting Bias Against the Obese," *Philadelphia Inquirer*, 10 Jan. 1994, A1.
[211] Sylvia J. Elliott, Director, Office of Legal Affairs, Michigan Department of Civil Rights, e-mail message to author, 10 Jan. 2012. According to Elliott, "The number of complaints based on weight or a combination of weight and another protected basis is very small. Of that very small number most settle or are NPC [no probable cause]. A very small amount may have a legitimate business reason (BFOQ) [bona fide occupational qualification] for the weight discrimination. A recent case involved Hooters Restaurant which settled."

Michigan have achieved mixed results. Part of the difficulty faced by these litigants is the fact that proving an employment discrimination claim under Michigan law is difficult for all Michigan plaintiffs—not just ones claiming weight discrimination.

In any employment discrimination case, under state or federal law, the plaintiff must prove her prima facie case, then employer can rebut the plaintiff by offering a legitimate non-discriminatory reason (LNDR) for the adverse employment action, and finally the plaintiff can rebut the employer's LNDR by claiming that it is pretext. For the third and final pretext step, three pretext rules have developed across U.S. states. In "pretext only" states, the employee will always prevail as long as she can demonstrate that the employer's LNDR is false. In "pretext may" states, the employee *may* prevail if she can demonstrate that the employer's LNDR is false. In "pretext plus" states, the employee must prove something beyond the fact that the employer's LNDR is false in order to prevail, making recovery most difficult for employees in these jurisdictions. Indeed, employees in pretext plus jurisdictions must not only prove that the employer's LNDR is false, but they must also prove that discrimination is the real reason for the adverse employment action.[212]

Since the 2000 U.S. Supreme Court case *Reeves v. Sanderson Plumbing Products, Inc.*, employment discrimination plaintiffs bringing claims under Federal anti-discrimination laws have been held to the pretext may standard. But plaintiffs bringing claims under state discrimination laws may still be held to the pretext only or the pretext plus standards, depending on the state's case law. Unfortunately for Michigan plaintiffs,

[212] For an overview of the pretext rules, see Joel Wm. Friedman, *The Law of Employment Discrimination*, 7th ed. (New York: Foundation Press, 2009), 891-93 and George Rutherglen, *Employment Discrimination Law: Visions of Equality in Theory and Doctrine*, 2d ed. (New York: Foundation Press, 2007), 61-106.

the state still follows the pretext plus standard.[213] Consequently, successful weight discrimination plaintiffs there have generally produced direct evidence (not just circumstantial evidence) that, if believed, "requires the conclusion that unlawful discrimination was at least a motivating factor" in the employer's actions."[214] In fact, of the five published decisions involving Michigan's weight-discrimination law, three of the five plaintiffs prevailed. All three of these plaintiffs presented "credible, direct evidence of wrongful discrimination" in the form of comments about their weight made by supervisors; the two unsuccessful plaintiffs did not have such evidence.[215]

Although litigation under the Michigan law is particularly difficult for discrimination plaintiffs, the alternative commission process has its own problems. One benefit of the Michigan commission process is that complainants need not retain counsel; in fact, according to the current Director of the Michigan Department of Civil Right's Office of Legal affairs, "the majority of people using the Department process do not retain counsel due to financial concerns."[216] Nevertheless, the office does not provide the same guidance for complainants proceeding without representation that the MEOC does.

Yet the biggest problem faced by discrimination complainants using the Michigan commission process is the time delay. Unlike Madison and Urbana, Michigan's statute

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[213] Lee Hornberger, "Employment Discrimination Law in Michigan," *Michigan Bar Journal*, Sep. 2003, 13-16, http://www.michbar.org/journal/pdf/pdf4article612.pdf.
[214] *Figgins v. Advance America Cash Advance Centers of Mich., Inc.*, 476 FSupp 675, 686 (E.D. Mich. 2007); *Lamoria v. Health Care & Retirement Corp*., 584 NW2d 589, 593 (Mich. App. 1998).
[215] *Hein v. All America Plywood Company, Inc*., 232 F3d 482, 488 (6th Cir 2000). To see this distinction, compare *Figgins v. Advance America Cash Advance Centers of Mich., Inc.*, 476 FSupp 675 (E.D. Mich. 2007) (denying employer's motion for summary judgment with respect to the plaintiff's weight discrimination claim); *Lamoria v. Health Care & Retirement Corp.*, 593 NW2d 699 (Mich. App. 1999) (reinstating plaintiff's weight-based discrimination claim); and *Ross v. Beaumont Hospital*, 687 FSupp 1115 (E.D. Mich. 1988) (ordering a new trial for plaintiff on her claim of weight discrimination); with *Hein* (affirming employer's motion for summary judgment) and *Byrnes v. Frito-Lay, Inc.*, 811 FSupp 286 (E.D. Mich. 1993) (granting employer's motion for summary judgment).
[216] Sylvia J. Elliott, Director, Office of Legal Affairs, Michigan Department of Civil Rights, e-mail message to author, 10 Jan. 2012.

does not place any time limits on administration of discrimination complaints.[217] As a result, complainants pursuing the Michigan commission process face waiting times that rival the Federal process. Interestingly, the delays in Michigan's commission adjudication are not the result of most complaints going through the entire process to full commission hearing. Since 2000, the Michigan Department of Civil Rights has maintained an online decision digest of all cases decided by the full Michigan Civil Rights Commission.[218] The commission has decided only sixteen cases in that time.[219]

Furthermore, looking through the commission cases, complainants who go through the Michigan commission process must wait a very long time just to be heard by the commission. The last four complaints heard by the commission had been filed two to four years earlier. And of course, if either the complainant or the respondent chooses to appeal the commission decision, then adjudication time gets even longer. Moreover, it is not the case that all strong cases settle before being heard by the commission. Two of the last four complaints heard by the commission resulted in judgments for the complainant.[220] One of these complaints involved a disabled individual who had been evicted from her apartment because she required a service dog. The complainant had been evicted four years prior.[221] The result of these long complaint resolution times and difficult proof standards in Michigan is likely to discourage employees from bringing claims. More importantly, it is likely to encourage employers to take the law less

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[217] Mich. Comp. Laws, sec. 37.2605 (2012).
[218] Sylvia J. Elliott, Director, Office of Legal Affairs, Michigan Department of Civil Rights, e-mail message to author, 10 Jan. 2012.
[219] Michigan Department of Civil Rights, "Commission Decisions," *Michigan Department of Civil Rights Online*, last modified 2011, http://www.michigan.gov/mdcr/0,1607,7-138-47782_47828_48067---,00.html.
[220] Ibid.
[221] *Emmick v. Royalwood Cooperative Apartments, Inc.* (Mich. Civil Rights Commission 2004), "Commission Decisions," *Michigan Department of Civil Rights Online*, last modified 2011, http://www.michigan.gov/documents/mdcr/268485-emmick_212978_7.pdf.

seriously. Hence, it is not surprising that Michigan's law has had no effect on employment outcomes of the obese.

The final jurisdiction with a commission process, Washington, DC, does not make complainants endure the same time delays as the Michigan commission. In fact, the DC Office of Human Rights (OHR), which administers the complaints of individuals who choose to pursue a remedy through the commission process instead of a private action, has instituted strict time limits for itself to investigate and adjudicate complaints. The timeline for housing discrimination complaints is stricter than the employment timeline because of eviction concerns, but the DC OHR still moves remarkably fast on employment complaints. The office schedules mediation (mandatory for both parties in the commission process) within one month of an individual completing a pre-complaint questionnaire. If mediation fails, then OHR investigators must complete their investigation within four months, and the OHR director must make a final decision on whether the complaint has probable cause within five weeks after completion of the investigation.[222]

If the OHR director finds probable cause, the case is then certified for a hearing in front of three members of the DC Human Rights Commission. Complainants can also appeal a finding of no probable cause to the full commission. All in all, the timeline for the DC process appears to mirror the Madison process, with most adjudications occurring within a year of filing a complaint.[223]

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[222] District of Columbia Office of Human Rights, "Timeline – What to Expect After Submitting an Intake Questionnaire," *Office of Human Rights Online*, last viewed 22 Feb. 2012, http://ohr.dc.gov/service/timeline-what-expect-after-submit-intake-questionnaire.

[223] District of Columbia Office of Human Rights, "DC Commission on Human Rights," *Office of Human Rights Online*, last viewed 22 Feb. 2012, http://ohr.dc.gov/page/dc-commission-human-rights.

Like Madison and Urbana, the DC OHR does not require—or even expect—that complainants be represented by an attorney. DC, like Madison, also provides extensive instructions for complainants on the hearing process, although it does not provide complainants with an easily searchable decision digest. Moreover, upon request, the OHR will provide complainants who reach a full commission hearing with representation.[224]

With swift adjudication and no expectation of outside representation, the question remains: why has the DC law not improved employment outcomes of the obese? DC appears to have a similar problem to San Francisco: lack of awareness. In San Francisco, the lack of awareness is just among the residents. But in DC, the lack of awareness about its law prohibiting discrimination on the basis of personal appearance seems to extend to the OHR itself. When contacted, the General Counsel of the OHR knew almost nothing about the law, including when or why the law was passed. The General Counsel also did not know of any complaints under the law.[225] Thus, while the DC commission process is likely very effective for some forms of discrimination, personal appearance discrimination appears to have been forgotten by the staff of the DC OHR.[226]

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[224] District of Columbia Commission on Human Rights, "A Guide to the Adjudication Process," September 2003, *Office of Human Rights Online*, last viewed 22 Feb. 2012, http://ohr.dc.gov/sites/default/files/dc/sites/ohr/publication/attachments/HRCommiss-HearingGuideBook-English.pdf.

[225] Alexis P. Taylor, General Counsel for the Office of Human Rights for the District of Columbia, telephone conversation with author, 4 Aug. 2011.

[226] After I contacted the General Counsel last year, the General Counsel assigned a staff member to research the law because she knew so little about it. The staff member was unable to find anything about the law in the OHR records. The legislative history presented here is solely the result of my own independent research from newspaper articles and from an interview with Sterling Tucker, the Chairman of the DC Council that passed the 1977 Human Rights Ordinance. Alexis P. Taylor, General Counsel for the Office of Human Rights for the District of Columbia, e-mail message to author, 14 Aug. 2011; Jewell Little, Staff Attorney, Office of Human Rights for the District of Columbia, e-mail message to author, 7 Sep. 2011; Jewell Little, Staff Attorney, Office of Human Rights for the District of Columbia, e-mail message to author, 3 Jan. 2012.

As this exploration of the commission processes in San Francisco, Michigan, and DC has shown, the Madison and Urbana discrimination laws are not necessarily more effective because they take away choice and force complainants to pursue relief through commissions. They are more effective because their commission processes are more accessible for complainants seeking relief for discrimination on the basis of weight or personal appearance. Before drawing too many conclusions about the most effective way to enforce these discrimination laws, however, a brief exploration of the procedures in the two jurisdictions without commission processes is warranted.

Santa Cruz, California and Binghamton, New York

Recall from the Results Section that obese and morbidly obese men in Santa Cruz and obese and morbidly obese women in Binghamton have the highest employment rates of all weight groups. These trends were only visible in the summary statistics and did not hold up in the regression analyses. Thus, the Results Section concluded that any trends in the summary statistics were likely the result of the small number of observations, although it could not completely rule out the possibility that these laws had improved employment outcomes for the obese.

An investigation into the actual enforcement of these laws reinforces the conclusion that any trends visible in the summary statistics probably result from a small number of observations. Santa Cruz does not have a formal commission process, but it does require that individuals file a complaint with Santa Cruz Human Resources before pursuing a private action. An interview with Joe McMullen, the Chief Human Resources Officer of Santa Cruz, revealed that only two such complaints have been filed since the Human Rights Ordinance was passed in 1992. Neither complaint involved either weight

or personal appearance discrimination. One of the complaints was immediately dropped; the other complaint involved a homosexual couple who were refused a room at a local motel. Once Santa Cruz Human Resources notified the motel owner of the complaint, the motel owner agreed to attend sensitivity training, and the couple dropped their complaint.

If any other complaints are filed in the future—whether based on weight discrimination or any other form of discrimination prohibited by the Santa Cruz ordinance—the Santa Cruz Chief Human Resources Officer will immediately contact the accused party for a response. At no point will Santa Cruz Human Resources conduct its own investigation or make a probable cause determination. Because there is "not a lot of guidance in the ordinance," McMullen has in the past tried to assist in settlement negotiations based on his assessment of the situation.[227] In the case of the motel owner, his efforts worked. If they do not work in the future, however, McMullen (or his successor) will set up the mediation required by statute. Only if mediation fails will the complainant will have the right to sue. All in all, McMullen seems ready to enforce any complaints brought to him, but the ordinance appears to have been completely forgotten by the residents of Santa Cruz.

In Binghamton, the ordinance also appears to be forgotten despite being passed only four years ago. In Binghamton, of course, there is neither an oversight commission nor any requirement to file a complaint before pursuing litigation. Still, neither the Binghamton Court Clerk nor local employment discrimination lawyers know of a single lawsuit filed in Binghamton under any part of the broad human rights ordinance (recall

[227] Joe McMullen, Chief Human Resources Officer, Santa Cruz, Cal, telephone conversation with author, 09 Jan. 2012.

that the ordinance also prohibits other types of discrimination, including sexual orientation discrimination).[228]

In sum, I cannot completely rule out that Santa Cruz and Binghamton's ordinances have had a prophylactic effect on employer's hiring decisions, especially since remedies under the ordinances appear fairly easy to pursue in both cities. But the evidence certainly suggests a general lack of awareness of these ordinances. Perhaps this lack of awareness results from the lack of enforcement guidance in both ordinances or from the cities' failure to publicize the laws. Whatever the reason, it appears that these ordinances have not improved employment outcomes for the obese.

Conclusion

This chapter has presented a broad overview of the laws that currently protect obese individuals in the U.S. labor market. Throughout the chapter, I have taken the position that in order to truly understand the effectiveness of these laws, a multi-dimensional analysis is required. Understanding the legislative history and the enforcement mechanisms of a law can be just as important as conducting a rigorous empirical analysis of it. After researching the legislative history, enforcement mechanisms, and empirical realities of the one Federal, one state, and six cities' laws that currently protect the obese in the United States, I have concluded that only two

[228] Sean G. Massey, Former Binghamton, N.Y. City Councilmember, e-mail message to author, 24 Feb. 2012. Massey, the sponsor of the ordinance, made several phone calls on my behalf to the Binghamton Court Clerk and to local employment discrimination attorneys. No one knew of any cases filed under the ordinance.

jurisdictions, Urbana, IL and Madison, WI, appear to have succeeded in improving employment outcomes for the obese.

Thus, perhaps the greatest lesson to be learned from this chapter is that when studying the effectiveness of laws, empirical analysis is not enough. It is not usually possible to control for every subtlety of a law, and so empirical researchers studying laws make a mistake by not supplementing their results with additional qualitative research. Carpenter (2006), for example, concluded that the nationwide improvement in employment outcomes for the obese that he saw in the data after 1993 must have been due to *Cook* because the case received some publicity, and there was no other obvious alternative explanation. But had he done more research into the negative treatment of *Cook* in the other ten Federal circuits, he would have realized that a *Cook* effect outside the First Circuit was highly unlikely.

With regards to the seven local laws prohibiting discrimination on the basis of weight or personal appearance, the empirical results would not have had much meaning without additional qualitative research. The fact that only the Madison and Urbana laws showed any real signs of effectiveness would have seemed almost random if this chapter had ended after presenting the empirical results. Until comparing the qualitative details of each jurisdiction's enforcement process, it seemed almost counter-intuitive that the two laws that restricted the enforcement choices of discrimination victims would also be the most effective. Future empirical research on the effectiveness of laws—whether discrimination laws or other types of laws—would be wise to remember this lesson.

Tables

Table 1. Comparison of Local Laws Prohibiting Weight and Personal Appearance Discrimination									
Jurisdiction	**Year Passed**	**Type of Discrimination Prohibited**	**Oversight Commission**	**Does Employee Have a Private Right of Action?**	**Must Employee File Complaint with Oversight Commission Before Private Action?**	**Mediation**	**Remedies Available to Complainant**	**Maximum Civil Fine for Violation**	**Attorney Fees**
Madison, WI	1975	Physical appearance	Equal Opportunities Commission	No, administered by Commission	Yes, with Equal Opportunities Commission	Required	Economic damages, noneconomic damages, front and back pay (limited to two years)	None	No
Michigan	1976	Weight	Civil Rights Department	Yes, but may choose to go through Department instead	Yes, with either the EEOC or the Civil Rights Department	Optional Through Department	Injunctive and equitable relief, compensatory damages, back pay	First Infraction: $10,000 Second in Five Years: $25,000 Third in Seven Years: $50,000	Yes

Washington, DC	1977	Personal appearance	Office of Human Rights	Yes, but may choose to go through Commission instead	No	Required in Commission Process	Injunctive and equitable relief, compensatory damages, back pay	First Infraction: $10,000 Second in Five Years: $25,000 Third in Seven Years: $50,000	Yes
Urbana, IL	1979	Personal appearance	Human Relations Commission	No, administered by Commission	Yes, with Human Relations Commission	Required	Injunctive and equitable relief, compensatory damages, back pay	$500	No
Santa Cruz, CA	1992	Weight	Santa Cruz Human Resources	Yes	Yes, with Santa Cruz Human Resources	Required (Both parties share costs)	Injunctive and equitable relief, compensatory damages	First Infraction in One Year: $100 Second: $200 Third: $500	Yes
San Francisco, CA	2000	Weight	Human Rights Commission	Yes, but may choose to go through Commission in addition	No	Required in Commission Process	Treble special and general damages, $200-$400 additional damages, punitive damages	None	Yes
Binghamton, NY	2008	Weight	None	Yes	No	No	Injunctive and equitable relief, compensatory damages	None	Yes

Table 2. Summary Statistics of BRFSS Data for Men by BMI Classification, 1985-2010							
Variables	Underweight	Normal Weight	Overweight	Obese	Morbidly Obese	Full Sample	Bonferroni Test
Age	37.270	40.111	44.398	45.898	46.311	43.370	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Married	0.352	0.510	0.647	0.657	0.564	0.602	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Black	0.094	0.067	0.066	0.083	0.100	0.071	1, 2, 3, 5, 6, 7, 9, 10
Hispanic	0.087	0.059	0.066	0.070	0.071	0.065	2, 3, 4, 5, 6, 7, 8, 9, 10
No High School Diploma	0.206	0.098	0.082	0.099	0.127	0.093	1, 2, 3, 4, 5, 7, 8, 9, 10
High School Diploma	0.358	0.297	0.298	0.328	0.352	0.305	1, 2, 3, 5, 6, 7, 9, 10
Some College	0.234	0.246	0.257	0.276	0.285	0.258	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
College Graduate	0.202	0.359	0.363	0.297	0.235	0.343	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Employed for Wages	0.506	0.645	0.663	0.634	0.543	0.647	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Total Observations	11,401	481,883	687,029	330,820	33,362	1,544,495	---

Notes: Sample includes men between the ages of eighteen and sixty-five from the 1985-2010 BRFSS data. The employed for wages variable counts all respondents who are employed for wages as employed, counts all respondents who are out of work, self-employed, homemaker, a student, retired, or unable to work as not employed, and drops all respondents who refused to respond to the employment question. The Bonferroni test column reports significant differences in means of weight group at the 10-percent level based on Bonferroni multiple comparison test, where "1" compares morbidly obese to obese, "2" compares morbidly obese to overweight, "3" compares morbidly obese to normal weight, "4" compares morbidly obese to underweight, "5" compares obese to overweight, "6" compares obese to normal weight, "7" compares obese to underweight, "8" compares overweight to normal weight, "9" compares overweight to underweight, and "10" compares normal weight to underweight.

Table 3. Summary Statistics of BRFSS Data for Women by BMI Classification, 1985-2010							
Variables	Underweight	Normal Weight	Overweight	Obese	Morbidly Obese	Full Sample	Bonferroni Test
Age	37.865	41.791	45.889	46.585	46.523	43.958	2, 3, 4, 5, 6, 7, 8, 9, 10
Married	0.474	0.586	0.589	0.536	0.432	0.568	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Black	0.057	0.060	0.110	0.155	0.202	0.098	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Hispanic	0.055	0.060	0.082	0.084	0.071	0.071	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
No High School Diploma	0.104	0.067	0.096	0.121	0.145	0.090	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
High School Diploma	0.307	0.277	0.319	0.336	0.339	0.303	2, 3, 4, 5, 6, 7, 8, 9, 10
Some College	0.277	0.279	0.319	0.299	0.310	0.287	1, 2, 3, 4, 5, 6, 7, 8, 9
College Graduate	0.312	0.377	0.296	0.244	0.206	0.320	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Employed for Wages	0.521	0.595	0.583	0.562	0.486	0.579	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Total Observations	56,040	961,594	589,910	409,004	82,682	2,099,230	---

Notes: Sample includes 2,099,230 observations of women between the ages of eighteen and sixty-five from the 1985-2010 BRFSS data. The employed for wages variable counts all respondents who are employed for wages as employed, counts all respondents who are out of work, self-employed, homemaker, a student, retired, or unable to work as not employed, and drops all respondents who refused to respond to the employment question. The Bonferroni test column reports significant differences in means of weight group at the 10-percent level based on Bonferroni multiple comparison test, where "1" compares morbidly obese to obese, "2" compares morbidly obese to overweight, "3" compares morbidly obese to normal weight, "4" compares morbidly obese to underweight, "5" compares obese to overweight, "6" compares obese to normal weight, "7" compares obese to underweight, "8" compares overweight to normal weight, "9" compares overweight to underweight, and "10" compares normal weight to underweight. Sample excludes pregnant women.

Table 4. Regression Estimates for Probability of Employment, 1988-1999								
	Men				Women			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variable	Carpenter (2006) Estimate	Replication: Employed = Employed for Wages; Dropped = Refused	Replication: Employed = Employed for Wages and Self Employed	Replication: Employed = Employed for Wages; Dropped = Self-Employed	Carpenter (2006) Estimate	Replication: Employed = Employed for Wages; Dropped = Refused	Replication: Employed = Employed for Wages and Self Employed	Replication: Employed = Employed for Wages; Dropped = Self-Employed
Post-1993	0.013***	0.001	-0.012***	-0.014***	-0.007	-0.061***	-0.044***	-0.039***
	(0.005)	(0.005)	(0.003)	(0.003)	(0.005)	(0.005)	(0.003)	(0.003)
Underweight	-0.037***	-0.056***	-0.057***	-0.061***	-0.022***	-0.038***	-0.015***	-0.017***
	(0.012)	(0.014)	(0.011)	(0.013)	(0.007)	(0.006)	(0.004)	(0.004)
Overweight	0.018***	0.017***	0.002	0.003	-0.003	-0.011***	-0.019***	-0.021***
	(0.005)	(0.003)	(0.001)	(0.002)	(0.006)	(0.003)	(0.002)	(0.002)
Obese	-0.008	-0.007	-0.022***	-0.025***	-0.024***	-0.034***	-0.044***	-0.047***
	(0.007)	(0.004)	(0.003)	(0.003)	(0.007)	(0.005)	(0.003)	(0.004)
Morbidly Obese	-0.09***	-0.049***	-0.061***	-0.071***	-0.069***	-0.114***	-0.101***	-0.106***
	(0.028)	(0.018)	(0.013)	(0.015)	(0.022)	(0.012)	(0.011)	(0.011)
Underweight*Post	-0.008	0.008	0.031**	0.035**	-0.006	-0.018**	-0.003	-0.004
	(0.017)	(0.019)	(0.014)	(0.016)	(0.010)	(0.008)	(0.005)	(0.006)
Overweight*Post	-0.001	0.004	0.002	0.003	0.021**	0.016***	0.011***	0.012***
	(0.006)	(0.003)	(0.002)	(0.002)	(0.007)	(0.004)	(0.003)	(0.003)
Obese*Post	0.021**	0.020***	0.018***	0.022***	0.048***	0.024***	0.024***	0.026***
	(0.009)	(0.005)	(0.003)	(0.004)	(0.009)	(0.006)	(0.004)	(0.004)
Morbidly Obese*Post	0.024	-0.017	0.032**	0.040**	0.013	0.032**	0.052***	0.054***
	(0.037)	(0.021)	(0.015)	(0.017)	(0.024)	(0.014)	(0.012)	(0.013)
N	292,469	283,471	261,578	228,542	314,914	337,735	261,065	238,911
R^2	0.062	0.045	0.037	0.040	0.054	0.044	0.044	0.045
*** p<0.01, ** p<0.05, * p<0.1								

Notes: Reported estimates are from a linear probability model. Heteroskedasticity-robust standard errors are below in parentheses. Specifications one and five are the estimates reported in Carpenter (2006). Specifications two and six count all respondents who are employed for wages as employed, count all respondents who are out of work, self-employed, homemaker, a student, retired, or unable to work as not employed, and drop all respondents who refused to respond to the employment question. Specifications three and seven count all respondents who are employed for wages or self-employed as employed, count all respondents who are out of work as not employed, and drop all respondents who are out of work, a homemaker, a student, retired, unable to work, or refused to respond to the employment question. Specifications four and eight count all respondents who are employed for wages as employed, count all respondents who are out of work as not employed, and drop all respondents who are self-employed, a homemaker, a student, retired, unable to work, or refused to respond to the employment question. All regressions include controls for age, age-squared, marital status, race, education level, state of residence, and year fixed effects. All regressions are restricted to BRFSS respondents between the ages of 18 and 44, as in Carpenter (2006). DC and Wyoming were dropped from the sample as in Carpenter (2006). Sample excludes pregnant women.

Table 5. Difference-in-Differences Regression Estimates for the Probability of Employment in the First Circuit, 1985-2010		
	Men	Women
Variable		
Post-1993	-0.041*** (0.006)	-0.067*** (0.005)
First Circuit	-0.152*** (0.011)	-0.059*** (0.008)
Underweight	-0.084*** (0.013)	-0.036*** (0.005)
Overweight	0.019*** (0.002)	-0.010*** (0.003)
Obese	-0.008** (0.004)	-0.037*** (0.003)
Morbidly Obese	-0.075*** (0.015)	-0.126*** (0.009)
Underweight*Post	-0.008 (0.013)	-0.041*** (0.006)
Overweight*Post	0.010*** (0.003)	0.037*** (0.003)
Obese*Post	0.028*** (0.004)	0.050*** (0.004)
Morbidly Obese*Post	0.015 (0.014)	0.049*** (0.009)
Underweight*First	0.002 (0.043)	-0.006 (0.019)
Overweight*First	-0.010 (0.009)	0.012 (0.010)
Obese*First	-0.023 (0.014)	-0.001 (0.014)
Morbidly Obese*First	-0.030 (0.057)	-0.019 (0.038)
Post*First	-0.019*** (0.007)	0.014*** (0.005)
Underweight*Post*First	-0.017 (0.048)	-0.007 (0.021)

Overweight*Post*First	0.020** (0.009)	-0.014 (0.010)
Obese*Post*First	0.023 (0.014)	-0.021 (0.014)
Morbidly Obese*Post*First	0.024 (0.055)	-0.018 (0.039)
N	1,544,495	2,099,230
Pseudo R^2	0.096	0.067
*** p<0.01, ** p<0.05, * p<0.1		
Notes: Reported estimates are the marginal effects from a probit model. Heteroskedasticity-robust standard errors are below in parentheses. The specifications are restricted to BRFSS respondents between 18 and 65, counting all respondents who are employed for wages as employed, counting all respondents who are out of work, self-employed, homemaker, a student, retired, or unable to work as not employed, and dropping all respondents who refused to respond to the employment question. All estimates use BRFSS data from 1985-2010. All regressions include controls for age, age-squared, marital status, race, education level, state of residence, and year fixed effects. Sample excludes pregnant women.		

Table 6. Differences Regression Estimates for the Probability of Employment by Circuit, 1985-2010						
	Men			Women		
	(1)	(2)	(3)	(4)	(5)	(6)
Variable	Nationwide BRFSS Data, 1985-2010	First Circuit Only, 1985-2010	All Circuits But the First, 1985-2010	Nationwide BRFSS Data, 1985-2010	First Circuit Only, 1985-2010	All Circuits But the First, 1985-2010
Post-1993	-0.043***	-0.098***	-0.036***	-0.066***	-0.097***	-0.062***
	(0.006)	(0.025)	(0.005)	(0.005)	(0.018)	(0.005)
Underweight	-0.084***	-0.080**	-0.084***	-0.036***	-0.037**	-0.036***
	(0.012)	(0.045)	(0.013)	(0.005)	(0.019)	(0.005)
Overweight	0.018***	0.009	0.019***	-0.009***	0.003	-0.010***
	(0.002)	(0.009)	(0.002)	(0.003)	(0.010)	(0.003)
Obese	-0.009***	-0.029**	-0.008**	-0.037***	-0.033**	-0.037***
	(0.004)	(0.014)	(0.004)	(0.003)	(0.014)	(0.003)
Morbidly Obese	-0.077***	-0.100*	-0.076***	-0.127***	-0.136***	-0.127***
	(0.015)	(0.058)	(0.015)	(0.009)	(0.038)	(0.009)
Underweight*Post	0.010	-0.023	-0.009	-0.042***	-0.047**	-0.041***
	(0.012)	(0.047)	(0.013)	(0.006)	(0.021)	(0.006)
Overweight*Post	0.012**	0.028***	0.010***	0.036***	0.023**	0.037***
	(0.003)	(0.009)	(0.003)	(0.003)	(0.010)	(0.003)
Obese*Post	0.030***	0.048***	0.028***	0.048***	0.028**	0.050***
	(0.004)	(0.014)	(0.004)	(0.003)	(0.014)	(0.004)
Morbidly Obese*Post	0.017	0.005	0.016	0.048***	0.030	0.050***
	(0.014)	(0.055)	(0.014)	(0.009)	(0.037)	(0.009)
N	1,544,495	124,285	1,420,210	2,099,230	171,676	1,927,554
Pseudo R^2	0.096	0.097	0.096	0.067	0.085	0.066
*** p<0.01, ** p<0.05, * p<0.1						

Notes: Reported estimates are the marginal effects from a probit model. Heteroskedasticity-robust standard errors are below in parentheses. The specifications are restricted to BRFSS respondents between 18 and 65, counting all respondents who are employed for wages as employed, counting all respondents who are out of work, self-employed, homemaker, a student, retired, or unable to work as not employed, and dropping all respondents who refused to respond to the employment question. All estimates use BRFSS data from 1985-2010. All regressions include controls for age, age-squared, marital status, race, education level, state of residence, and year fixed effects. Sample excludes pregnant women.

Table 7. Falsification Test: The Effect of the Negative Treatment of *Cook* on Employment in the Sixth Circuit				
	1997 Decision: *Andrews*		2006 Decision: *Watkins*	
	(1)	(2)	(3)	(4)
	Men	Women	Men	Women
Variable				
Post (1997 or 2006)	-0.037**	-0.041***	-0.098***	-0.134
	(0.016)	(0.015)	(0.019)	(0.014)
Underweight	-0.188***	-0.044***	-0.122***	-0.059***
	(0.031)	(0.013)	(0.021)	(0.009)
Overweight	0.021***	0.004	0.023***	0.014***
	(0.006)	(0.006)	(0.004)	(0.004)
Obese	-0.003	-0.034***	-0.002	-0.017***
	(0.009)	(0.008)	(0.005)	(0.004)
Morbidly Obese	-0.092***	-0.159***	-0.090***	-0.126***
	(0.031)	(0.017)	(0.013)	(0.008)
Underweight*Post	0.070**	-0.036**	-0.071*	-0.036*
	(0.033)	(0.016)	(0.043)	(0.021)
Overweight*Post	0.011	0.016**	0.026***	0.007
	(0.008)	(0.007)	(0.009)	(0.007)
Obese*Post	0.010	0.029***	0.022**	0.019**
	(0.010)	(0.009)	(0.010)	(0.008)
Morbidly Obese*Post	0.008	0.053***	0.019	0.034***
	(0.031)	(0.019)	(0.020)	(0.013)
N	109,801	161,283	109,801	161,283
Pseudo R^2	0.126	0.080	0.126	0.080
*** p<0.01, ** p<0.05, * p<0.1				
Notes: Reported estimates are the marginal effects from a probit model. Heteroskedasticity-robust standard errors are below in parentheses. The specifications are restricted to BRFSS respondents between 18 and 65, counting all respondents who are employed for wages as employed, counting all respondents who are out of work, self-employed, homemaker, a student, retired, or unable to work as not employed, and dropping all respondents who refused to respond to the employment question. All estimates use BRFSS data from 1985-2010 from the Sixth Circuit only. All regressions include controls for age, age-squared, marital status, race, education level, state of residence, and year fixed effects. Sample excludes pregnant women.				

Table 8. Employment Rates by Sex and Weight in Jurisdictions with Obesity Discrimination Laws								
	Men				Women			
Location	Underweight/ Normal	Overweight	Obese/ Morbidly Obese	Bonferroni Test	Underweight/ Normal	Overweight	Obese/ Morbidly Obese	Bonferroni Test
Nationwide	0.519	0.540	0.532	1, 2, 3	0.465	0.436	0.441	1, 2, 3
Michigan	0.523	0.541	0.503	1, 2, 3	0.464	0.420	0.423	1, 2, 3
Indiana	0.574	0.596	0.580	1, 2, 3	0.492	0.463	0.469	1, 2
Ohio	0.530	0.550	0.535	1, 2, 3	0.471	0.426	0.430	1, 2, 3
Wisconsin	0.567	0.579	0.561	1, 3	0.537	0.493	0.501	1, 2
Binghamton, NY	0.517	0.532	0.457	1	0.451	0.403	0.471	
New York	0.535	0.557	0.542	1, 3	0.496	0.460	0.452	1, 2
Madison, WI	0.591	0.622	0.602	3	0.605	0.577	0.617	
Wisconsin	0.567	0.579	0.561	1, 3	0.537	0.493	0.501	1, 2
Santa Cruz, CA	0.452	0.474	0.629		0.417	0.333	0.370	
California	0.525	0.555	0.543	1, 3	0.443	0.410	0.413	1, 2, 3
San Francisco, CA	0.517	0.516	0.485		0.463	0.407	0.399	
California	0.525	0.555	0.543	1, 3	0.443	0.410	0.413	1, 2, 3
Urbana, IL	0.574	0.591	0.671		0.455	0.496	0.486	
Illinois	0.593	0.602	0.598	1, 3	0.511	0.473	0.481	1, 2
Washington, DC	0.590	0.595	0.541	1, 2	0.553	0.511	0.481	1, 2, 3
Maryland	0.594	0.607	0.593	1, 2	0.532	0.501	0.505	1, 2
Virginia	0.588	0.613	0.599	1, 2, 3	0.512	0.483	0.497	1, 2

Notes: All estimates use BRFSS data from 1985-2010. The Bonferroni test column reports significant differences in means of weight group at the 10-percent level based on Bonferroni multiple comparison test, where "1" compares obese/morbidly obese to overweight, "2" compares obese/morbidly obese to underweight/normal weight, and "3" compares overweight to underweight/normal weight. Sample excludes pregnant women.

Table 9. Differences Regressions: Employment Rates by Weight Group in Protected Jurisdictions Compared to Surrounding Jurisdictions

	Men		Women	
	(1)	(2)	(3)	(4)
Jurisdiction	Jurisdiction* Overweight	Jurisdiction* Obese/Morbidly Obese	Jurisdiction* Overweight	Jurisdiction* Obese/Morbidly Obese
Madison, WI	0.046 (0.031)	0.047 (0.042)	0.023 (0.032)	0.065* (0.035)
Michigan	-0.001 (0.008)	-0.068*** (0.020)	0.011* (0.006)	-0.065*** (0.011)
Washington, DC	0.012 (0.010)	-0.004 (0.013)	-0.015* (0.009)	-0.043*** (0.010)
Urbana, IL	0.033 (0.067)	0.136* (0.069)	0.045 (0.058)	0.057 (0.064)
Santa Cruz, CA (Post-1992)	-0.032 (0.084)	0.176 (0.157)	-0.046 (0.074)	-0.069 (0.071)

*** p<0.01, ** p<0.05, * p<0.10

Notes: Reported estimates are the marginal effects from a probit model. Heteroskedasticity-robust standard errors are below in parentheses. The specifications are restricted to BRFSS respondents between 18 and 65, counting all respondents who are employed for wages as employed, counting all respondents who are out of work, self-employed, homemaker, a student, retired, or unable to work as not employed, and dropping all respondents who refused to respond to the employment question. All estimates use BRFSS data from 1985-2010. The Madison regressions use data from the state of Wisconsin; the Michigan regressions use data from bordering states (Indiana, Ohio, and Wisconsin); the DC regressions use data from DC, Maryland, and Virginia; the Urbana regressions use data from Illinois; and the Santa Cruz regressions use data from California (excluding San Francisco). All regressions include controls for age, age-squared, marital status, race, education level, and s year fixed effects. Sample excludes pregnant women.

Table 10. Employment Rates in San Francisco and Binghamton Before and After Passage of Obesity Discrimination Laws								
	San Francisco				Binghamton			
	Men		Women		Men		Women	
	Pre-2000 Law	Post-2000 Law	Pre-2008 Law	Post-2008 Law	Pre-2000 Law	Post-2000 Law	Pre-2008 Law	Post-2008 Law
Underweight/Normal	0.591 (0.493)	0.464 (0.500)	0.521 (0.501)	0.437 (0.496)	0.571 (0.497)	0.188 (0.403)	0.468 (0.500)	0.286 (0.463)
Overweight	0.571 (0.497)	0.492 (0.501)	0.452 (0.500)	0.380 (0.487)	0.542 (0.500)	0.474 (0.513)	0.422 (0.496)	0.296 (0.465)
Obese/Morbidly Obese	0.457 (0.505)	0.495 (0.503)	0.489 (0.505)	0.360 (0.482)	0.472 (0.502)	0.375 (0.500)	0.462 (0.501)	0.522 (0.511)
Overall	0.570 (0.496)	0.484 (0.500)	0.500 (0.501)	0.415 (0.493)	0.531 (0.500)	0.353 (0.483)	0.451 (0.498)	0.366 (0.485)
N	328	665	378	792	307	51	474	71
Notes: Sample means use data from the 1985-2010 BRFSS. Standard deviation of the mean in parentheses. Sample excludes pregnant women.								

Table 11. Difference-in-Differences Regression: Before-and-After Employment Rates by Weight Group in Protected Jurisdictions Compared to Surrounding Jurisdictions				
	San Francisco		Binghamton	
	(1)	(2)	(3)	(4)
	Men	Women	Men	Women
Variable				
Post (2000 or 2008)	-0.013 (0.009)	-0.036*** (0.006)	-0.078*** (0.023)	-0.032** (0.014)
Overweight	0.029*** (0.008)	-0.008 (0.007)	0.026*** (0.007)	0.019*** (0.006)
Obese/Morbidly Obese	0.006 (0.011)	-0.022** (0.009)	-0.002 (0.009)	-0.016** (0.007)
Overweight*Post	0.006 (0.012)	0.031*** (0.010)	0.016 (0.029)	0.009 (0.022)
Obese/Morbidly Obese*Post	0.007 (0.015)	0.026** (0.012)	0.065 (0.206)	0.021 (0.024)
Jurisdiction (San Francisco or Binghamton)	-0.0007 (0.041)	-0.029 (0.032)	0.065 (0.054)	0.045 (0.044)
Post*Jurisdiction	-0.042 (0.051)	0.030 (0.041)	-0.179 (0.151)	-0.075 (0.115)
Overweight*Jurisdiction	-0.009 (0.066)	0.025 (0.062)	0.001 (0.072)	-0.062 (0.059)
Obese/Morbidly Obese*Jurisdiction	-0.148 (0.091)	0.013 (0.089)	-0.089 (0.078)	-0.025 (0.064)
Overweight*Post* Jurisdiction	0.039 (0.082)	-0.058 (0.076)	0.065 (0.206)	-0.011 (0.170)
Obese/Morbidly Obese*Post*Jurisdiction	0.199* (0.102)	-0.041 (0.101)	0.140 (0.207)	0.152 (0.181)
N	46,854	62,537	34,442	49,106
Pseudo R^2	0.209	0.173	0.210	0.197
*** p<0.01, ** p<0.05, * p<0.1				

Notes: Reported estimates are the marginal effects from a probit model. Heteroskedasticity-robust standard errors are below in parentheses. The specifications are restricted to BRFSS respondents between 18 and 65, counting all respondents who are employed for wages as employed, counting all respondents who are out of work, self-employed, homemaker, a student, retired, or unable to work as not employed, and dropping all respondents who refused to respond to the employment question. All estimates use BRFSS data from 1985-2010. The San Francisco regressions use data from the state of California (excluding Santa Cruz), and the Binghamton regressions use data from the state of New York. All regressions include controls for age, age-squared, marital status, race, education level, and year fixed effects. Sample excludes pregnant women.

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CHAPTER III

THE LAST LEGALLY ALLOWED FORM OF DISCRIMINATION: WHY WEIGHT SHOULD BE THE NEXT PROTECTED CLASS UNDER TITLE VII

Introduction

It has been called "one of the last legally allowed forms of discrimination,"[229] "the most socially acceptable prejudice left,"[230] "the last area of safe bigotry,"[231] and even "a socially acceptable injustice."[232] Fat rights advocates, newspaper reporters, and even some researchers have expressed their beliefs that obesity discrimination is real. Yet proving empirically that obesity discrimination is real is impossible since discrimination is always the residual hypothesis.

Nonetheless, Chapter I presented empirical evidence that was consistent with the discrimination hypothesis. The evidence in Chapter I was particularly supportive of discrimination since the sorting and wage discrepancies associated with certain occupational characteristics were only present for morbidly obese women, and not men. Chapter II explored the legal remedies enacted by the Federal government and seven other jurisdictions across the United States to prevent any such discrimination and examined whether these legal remedies had worked.

This chapter builds on the findings of Chapters I and II. The findings of Chapter I add to a growing body of evidence that is consistent with the existence of discrimination

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[229] International Size Acceptance Association, "Nationwide Contact Campaign Petition," *International Size Acceptance Association Online*, last modified 7 Dec. 2011, http://www.size-acceptance.org/nationwide.
[230] Aaron Epstein, "Fighting Bias Against the Obese," *Philadelphia Inquirer*, 10 Jan. 1994, A1.
[231] Janet Cawley, "Last Target of Legal Bigotry: Obesity," *Chicago Tribune*, 12 May 1993, 1.
[232] Rebecca M. Puhl, "Obesity Discrimination: A Socially Acceptable Injustice," *Obesity Action Coalition News* 3 (July 2008): 6-7.

against the obese—particularly obese women—in the labor market. Therefore, this chapter proposes passing a new Federal law to prohibit discrimination on the basis of weight using the lessons learned from the existing laws discussed in Chapter II. I propose making weight the sixth protected class for the purposes of employment under Title VII.

Some may be concerned with adding a characteristic that is at least somewhat under a person's control—in formal terms, mutable—to the list of Title VII protected classes. To address these concerns, I propose protecting weight in the same manner as religion. Anyone familiar with Title VII practice knows that religion is not quite as strongly protected as race or even sex. In litigation, once an employee has proven her prima facie case of Title VII religious discrimination, the employer can assert an undue hardship defense, similar to the undue burden defense under ADA law described in Chapter II. Allowing employers to assert an undue burden defense would also address any concerns that weight may interfere with certain types of jobs.

Others may fear that adding another protected class under Title VII may be somewhat of a slippery slope. If Congress adds weight to the list of protected classes, then what is to stop them from also protecting individuals who are unattractive, who have substance abuse problems, and who have bad personalities? Two characteristics distinguish weight from these other potential protected classes. First, as Chapter I and II have shown, there is currently no evidence that weight lowers an individual's productivity at work. In contrast, having a substance abuse problem or a bad personality could arguably make an individual less productive on the job. Second, and more importantly, weight is objectively measureable using BMI. Using BMI, courts could

easily draw a line between individuals whose BMI was high enough to merit legal protection and individuals whose BMI was not high enough. Yet it would be very difficult to decide who was unattractive enough, addicted enough, and unfriendly enough to merit legal protection.

Still others may be concerned about the costs of this proposal—more particularly, that the costs of enacting a new Federal law to prohibit weight-based discrimination might outweigh the benefits. Although it is impossible to predict the precise costs and benefits of my proposal, I deliberately advocate for policies that should minimize its costs and maximize its benefits. For example, I advocate that weight should be protected under Title VII and not the ADA because Title VII can address the full range of issues faced by the obese in the labor market, while the ADA cannot. Therefore, Title VII protections will provide the most benefits for the obese in the labor market. At the same time, making weight a protected class under Title VII is less likely to result in unintended consequences than protecting weight under the ADA. Later on in this chapter, I will present evidence that employment outcomes for the disabled have actually declined since the passage of the ADA, further suggesting that protecting weight under the ADA would be less beneficial.

Looking more closely at costs, recall from Chapter II that only a handful of weight-based complaints have been filed under the Madison and Urbana ordinances. These two ordinances work because employers know that the Madison and Urbana commissions take violations of the local anti-discrimination laws seriously; consequently, employers fear the costs of non-compliance. Indeed, Chapter II revealed that none of the seven jurisdictions with these laws have seen many complaints, suggesting that adding

weight to the list of protected classes will add only a small additional burden to the EEOC caseload. Moreover, advocating for protecting weight under Title VII instead of the ADA does not generate any additional costs: both laws require claimants to go through the same EEOC charge filing and litigation process. In fact, the only considerable costs associated with my proposal arise from the changes that I recommend for Federal administration of employment discrimination claims. Yet I propose these changes for all discrimination claims, not just ones based on weight, and regardless of whether the discrimination claims arise under Title VII, the ADA, or another Federal statute.

With all of these concerns in mind, my proposal for a new law (and the rationale behind it) will proceed as follows. First, I will discuss recent evidence from the field of psychology that weight stigma, a term adopted by researchers in that field to describe a bias against heavier people, exists. This growing evidence of weight stigma indicates that my results in Chapter I are being driven by discrimination and not some other demand-side effect. Second, I will explore more thoroughly why Title VII, and not the ADA, is the most appropriate model under which to prohibit weight discrimination in the workplace. Third, I will address three of the strongest arguments against making weight a protected class. Fourth, I will present the details of my proposal for making weight a protected class. Fifth, and finally, I will suggest some changes to the current Federal administration process of employment discrimination claims based on the evidence presented in Chapter II. Not only would these changes in administration make Title VII a more effective remedy for future protected classes, but they would also make Title VII a more effective remedy for the five currently protected classes.

Chapter I concludes with a call for further research on how obese individuals view themselves and how obese individuals are viewed by others. While this research is still very much ongoing, many psychology studies already support the notion that people associate obesity with a wide range of negative characteristics. These negative associations are particularly strong for obese women. Psychology researchers have classified these negative associations as weight stigma.

Although research on weight stigma and its implications for the workplace has grown in popularity as obesity rates have increased, the earliest papers on weight stigma actually emerged over two decades ago. In one of the first experiments, Larkin and Pines (1979) showed participants videos of normal-weight and overweight individuals applying for a job. Participants were less likely to describe the overweight applicants as neat, productive, ambitious, disciplined, or determined, and they were less likely to recommend overweight applicants for the job.[233] Decker (1987) provided subjects in his experiments with written descriptions of hypothetical managers. Subjects rated normal-weight managers as more likely to be good supervisors than overweight managers.[234] Similarly, Rothblum et al. (1988) provided participants in their experiment with written descriptions of obese and non-obese female job applicants. Participants believed the

[233] J. C. Larkin and H. A. Pines, "No Fat Persons Need Apply: Experimental Studies of the Overweight Stereotypw and Hiring Preference," *Social Work Occupations* 6 (1979): 312-27.
[234] W. H. Decker, "Attributions Based on Managers' Self-Presentation, Sex, and Weight," *Psychological Reports* 71 (1987): 175-81.

obese job applicants were more likely to lack self-discipline, supervisory potential, professional appearance, and even personal hygiene.[235]

Jasper and Klassen (1990) also used written descriptions of hypothetical job applicants; their experiment showed different subjects the same resume for a sales position. Some scenarios described the applicant as obese; other scenarios described the applicant as not obese. Participants reviewing the resumes of obese applicants rated them as less desirable.[236] Pingitoire et al. (1994) went back to live performance in their experiment. Using a male and a female professional actor, they created videos of fake job interviews for computer and sales positions. In some videos, the normal-weight actors wore a padded costume to make themselves look fat, but in other videos, they dressed as themselves. Subjects viewing the overweight videos were less likely to recommend the applicant to be hired for either position, although the effect was more pronounced for the sales position.[237] Moreover, the negative effect of the padded costume was more severe for the female applicant.

As a result, literature reviews of these early papers concluded that the outlook for obese applicants and employees in the labor market were grim. A comprehensive review by Roehling (1999) found psychology studies documenting stereotypes of obese individuals as lacking self-discipline, lazy, less conscientious, less competent, sloppy, and more likely to have a personal problem.[238] A later review by Puhl and Brownell

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[235] Esther D. Rothblum et al., "Stereotypes of Obese Female Job Applicants," *International Journal of Eating Disorders* 7 (1988): 277-83.
[236] C. R. Jasper and M. L. Klassen, "Perceptions of Salespersons' Appearance and Evaluation of Job Performance," *Perceptual & Motor Skills* 71 (1990): 563-66.
[237] R. Pingitoire et al., "Bias Against Overweight Job Applicants in a Simulated Employment Interview," *Journal of Applied Psychology* 79 (1994): 909-17.
[238] Mark V. Roehling, "Weight-Based Discrimination in Employment: Psychological and Legal Aspects," *Personnel Psychology* 52 (Dec. 1999): 969-1016.

(2001) concluded that "discrimination against obese individuals is real. It occurs in key areas affecting health and well-being."[239]

More recent psychology research has concurred with these earlier findings. Berry and Spence (2009) conducted a weight stigma experiment in which they showed subjects pictures of normal-weight individuals and overweight individuals. Subjects associated words such as "unmotivated, lethargic, unfit, lazy, inactive, sluggish, idle, weak, sickly, [and] loaf" with the pictures of the overweight individuals more frequently than with the normal-weight individuals.[240] Berry and Spence credited media portrayals of overweight and obese individuals with this "automatic stereotype activation."[241]

Besides Berry and Spence's paper, much of the other recent research in this area has come out of one particular research institute, the Yale Rudd Center for Food Policy and Obesity. Interestingly, the Rudd Center is primarily associated with research to combat obesity: researchers there have produced much of the seminal research on U.S. food sources, food addiction, food marketing, school nutrition policies, and soda taxes. Nevertheless, the Rudd Center also supports research on weight stigma.

Two of the researchers from the Rudd Center, Puhl and Brownell (2006), surveyed over 3,000 adult members of a weight loss support group on their experience with weight stigmatization and their psychological health. Puhl and Brownell found that as BMI increased, so did reported instances of weight stigma and weight discrimination. Approximately 70 percent of this mostly obese sample reported having others make negative assumptions about them based on their weight. Over half of the sample also

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[239] Rebecca M. Puhl and Kelly D. Brownell, "Bias, Discrimination, and Obesity," *Obesity Research* 9 (Dec. 2001): 801.
[240] Tanya Berry and John C. Spence, "Automatic Activation of Exercise and Sedentary Stereotypes," *Research Quarterly for Exercise and Sport* 80 (Sep. 2009): 633-40.
[241] Ibid.

reported experiencing nasty comments from children, inappropriate comments from doctors, and hurtful comments from family members. Finally, about one-quarter of the sample reported experiencing job discrimination. Despite all of this negative treatment, however, the authors did not find any evidence that higher BMI had any psychological effects; there was no statistical relationship between BMI and level of self-esteem or likelihood of being depressed.[242]

Interestingly, the weight stigma documented by Puhl and Brownell appears to be increasing over time—even though an increasing percentage of the U.S. population is overweight or obese. A later paper produced by Rudd Center researchers Andreyeva et al. (2008) found that weight and height discrimination increased nationwide from 7 percent to 12 percent over an eleven-year period. These researchers used data from the National Survey of Midlife Development in the United States (MIDUS), which asks participants questions related to their behavioral, psychological, and social well-being. The MIDUS data asked participants several questions about whether they had experienced discrimination, and if so, what type. In the 1995 to 1996 MIDUS sample. 4.1 percent of men and 10.0 percent of women reported experiencing weight and height discrimination. In the 2004 to 2006 MIDUS sample, however, 8.1 percent of men and 15.5 percent of women reported experiencing weight and height discrimination. Even more surprisingly, the authors found that in the 2004 to 2006 sample, reports of discrimination based on weight and height were just as common as discrimination based on race or age.[243]

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[242] Rebecca M. Puhl and Kelly D. Brownell, "Confronting and Coping with Weight Stigma: An Investigation of Overweight and Obese Adults," *Obesity* 14 (Oct. 2006): 1802-15.
[243] Tatiana Andreyeva et al., "Changes in Perceived Weight Discrimination Among Americans, 1995-1996 Through 2004-2006," *Obesity* 16 (2008): 1129-34.

Because the psychology research over the past three decades has almost universally supported the existence of weight stigma, the latest papers to come out of the Rudd Center have explored the negative consequences of weight stigma and have advocated finding ways to combat it. Puhl and Heuer (2010) expressed concern over studies documenting that obese patients receive less thorough care from their health care providers and concluded that "weight stigma is not a beneficial public health tool for reducing obesity."[244] Instead, the Puhl and Heuer suggested that weight stigma would only lead to further health disparities between the obese and non-obese. Another literature review by Puhl (2011) found that weight stigma started early: overweight and obese children were more likely to experience bullying and victimization from other children, teachers, and even parents. Puhl expressed concern that this victimization could create somewhat of a self-fulfilling prophecy: overweight and obese children would grow up to be less emotionally healthy than their normal-weight counterparts because they had been bullied their entire life.[245]

In sum, while economic evidence can only suggest the existence of weight discrimination, the psychology evidence is clear: weight stigma is real, and weight discrimination is its natural consequence. Over thirty years of psychology research have documented that being obese is associated with a wide range of negative characteristics about an individual's ability, personality, and work ethic. Although economists are reluctant to attribute the labor market disparities experienced by the obese to discrimination, psychologists see these disparities as the natural outgrowth of the

[244] Rebecca M. Puhl and Chelsea A. Heuer, "Obesity Stigma: Important Considerations for Public Health," *American Journal of Public Health* 100 (June 2010): 1019-28.
[245] Rebecca M. Puhl, "Weight Stigmatization Toward Youth: A Significant Problem in Need of Societal Solutions," *Childhood Obesity* 7 (Oct. 2011): 359-63.

"pervasive bias against overweight [and obese] people."[246] Because of this pervasive bias, the United States needs a strong Federal law to counteract its negative effects in the workplace. This new Federal protection should take the form of making weight the next protected class under Title VII.

Why Title VII—and Not the ADA

A new Federal law to counteract the poor labor market outcomes of the obese could conceivably take one of two forms: protection under the ADA or protection under Title VII. This section will argue that Title VII is the more appropriate model for protecting the obese in the labor market for three reasons. First, protection under the ADA will fail to address the full range of issues encountered by obese individuals in the labor market. Second, with the right administration, Title VII-esque laws are capable of improving employment outcomes. Third, and most practically, previous research demonstrates that making weight a protected class will garner more public support than recognizing obesity as a disability.

As Chapter II detailed, the ADA protects workers who have, previously had, or are regarded as having an actual disability that "substantially limits one or more major life activities."[247] Because the 2008 ADAAA instructed courts to begin construing the term disability "in favor of broad coverage," the EEOC now takes the position that at least morbid obesity is a disability under the statute. Future court decisions will

[246] Rebecca M. Puhl and Kelly D. Brownell, "Bias, Discrimination, and Obesity," *Obesity Research* 9 (Dec. 2001): 800.
[247] *Americans with Disabilities Act*, *U.S. Code*, vol. 42, sec. 12102(1) (2012).

determine whether obesity of any severity is actually a disability for the purposes of the amended ADA.

Yet even if courts uniformly decide that obesity is a disability under the amended ADA, the ADA may not address all problems encountered by obese individuals in the labor market. Recall that the ADA protects workers who have, previously had, or are regarded as having a disability. Thus, if the disadvantages encountered by the obese in the labor market are driven by employers viewing them as disabled workers who are less capable of doing their jobs without reasonable accommodation, then ADA protections should absolutely improve employment outcomes of the obese.

But what if the disadvantages encountered by the obese in the labor market are driven by something else? What if employers recognize that obese workers are just as capable and productive as non-obese workers? Employers' preferences for the non-obese may not be based on a belief that obese workers are somehow disabled. Instead, employers' preferences may be strictly based on taste for the appearance of non-obese individuals. In such a case, the ADA would not offer any protections. An obese worker who was turned down for a job or paid lower wages strictly because of an employer's tastes would not have an ADA claim: she would be unable to prove that she had a disability or was perceived as having a disability.

Discrimination based on pure employer taste might not be such a concern if the poor labor market outcomes of the obese were concentrated in occupations where employers might reasonably believe that weight interfered with an individual's ability to do the job—such as occupations requiring physical activity. But recall the results of Chapter I: morbidly obese women are more likely to work in occupations requiring

physical activity and less likely to work in occupations requiring communication with others.

The results in Chapter I suggest that if society wants to improve employment outcomes for the obese, then the ADA is not the right model. The disadvantages encountered by the obese in the labor market are not being driven by a perceived inability to do the job. They are being driven by employers' tastes for who does the job. The fact that sorting on the basis of occupational characteristic only occurs with women, and not with men, further strengthens the argument that the poor labor market outcomes of the obese are driven by employer taste, and not by perceived disability.

On a more practical level, Title VII-esque protections may always be a more effective method to improve a disadvantaged group's labor market outcomes than ADA-esque protections. The results of Chapter II indicated that with the right administration, Title VII-esque laws could improve employment outcomes of the obese. The ADA, on the other hand, has done nothing for the obese, even in the one circuit that recognized obesity as a disability before the ADAAA.

More generally, Chapter II pointed out that the ADA may not have improved employment outcomes for anyone with a disability. Acemoglu and Angrist (2001) found that overall employment of all disabled individuals declined after the ADA went into effect. The authors attributed the decline to the fact that employers who hired a disabled individual would be forced to incur the costs associated with reasonable accommodation without being able to pass these costs onto the employee. As a result, the authors hypothesized that it was cheaper for employers not to hire disabled employees and take

the chance that they might file a lawsuit under the ADA.[248] Acemoglu and Angrist's work suggests that the ADA model may never succeed in improving employment outcomes.

Of course, Chapter II also discussed papers such as Clermont and Schwab (2004, 2009) and Nielsen et al. (2010) that indicated Title VII might not be performing much better right now than the ADA.[249] But any current failure of Title VII to improve employment outcomes for its protected classes is due to a flaw in Federal administration, not a flaw in the overall model of Title VII. Leonard (1984) demonstrated that Title VII did improve employment outcomes for protected classes in the past: between 1966 and 1978, Leonard found that Title VII increased black employment across a wide range of occupations.[250]

Despite these early successes with Title VII, Federal enforcement of employment discrimination laws under the EEOC has been fraught with administrative problems from almost the very beginning. As early as 1976, the EEOC faced calls to "speed up its individual charge resolution process," to fund an "investigative staff upgraded by effective training," and to "function as a collegial decision-making body."[251] These calls for EEOC reform have continued in papers such as Monroe (1995), Selmi (1996), Green

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[248] Daron Acemoglu and Joshua D. Angrist, "Consequences of Employment Protection? The Case of the Americans with Disabilities Act," *Journal of Political Economy* 109 (2001): 915-57.

[249] Kevin M. Clermont and Stewart J. Schwab, "How Employment Discrimination Plaintiffs Fare in Federal Court," *Journal of Empirical Legal Studies* 1 (July 2004): 429-58; Kevin M. Clermont and Stewart J. Schwab, "Employment Discrimination Plaintiffs in Federal Court: From Bad to Worse?" *Harvard Law & Policy Review* 3 (2009): 114; Nielsen et al., "Individual Justice or Collective Mobilization? Employment Discrimination Litigation in the Post Civil Rights United States," *Journal of Empirical Legal Studies* 7 (June 2010): 175-201.

[250] Jonathan S. Leonard, "Antidiscrimination or Reverse Discrimination: The Impact of Changing Demographics, Title VII, and Affirmative Action on Productivity," *Journal of Human Resources* 19 (Spring 1984): 145-74.

[251] These calls for reform, made by the U.S. General Accounting Office to the House Oversight Subcommittee, were addressed by the Vice Chairman of the EEOC in Daniel E. Leach, "Title VII of the Civil Rights Act and the EEOC: An Agency in the Midst of Change," *Mercer Law Review* 29 (1978): 661-76.

(2000), and Moss et al. (2005).[252] The evidence that Title VII initially worked but has subsequently been the victim of administrative backlog strengthens Chapter II's conclusion that Title VII (and Title VII-esque laws) can improve employment outcomes if administered effectively.

Besides the argument that Title VII is a better model for improving the employment outcomes of disadvantaged groups in the labor market, a third and final argument for protecting obesity under Title VII is that this type of protection will garner more public support than protecting obesity under the ADA. Puhl and Heuer (2010) conducted a survey with a nationwide sample of 1,001 adults. They proposed six different laws to prohibit discrimination on the basis of weight. Proposal one asked respondents if obesity should be a disability for the purposes of the ADA; only 27 percent of men and 32 percent of women believed it should. Proposal four asked respondents if their state should have a Title VII-esque law like the state of Michigan. Almost twice as many respondents agreed: 47 percent of men and 61 percent of women. Finally, proposal six, which garnered the most support (65 percent of men and 81 percent of women), asked individuals if they agreed that

> It should be illegal (unlawful) for an employer to do all of the following:
> (i) Refuse to hire a qualified person because of his/her body weight.
> (ii) Fire a qualified employee because of his/her body weight.
> (iii) Deny a promotion or appropriate compensation to a qualified employee because of his/her body weight.[253]

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[252] Maurice E. R. Munroe, "The EEOC: Pattern and Practice Imperfect," *Yale Law & Policy Review* 13 (1995): 219-79; Michael Selmi, "The Value of the EEOC: Reexamining the Agency's Role in Employment Discrimination Law," *Ohio State Law Journal* (1996): 1-64; Michael Z. Green, "Proposing a New Paradigm for EEOC Enforcement after 35 Years: Outsourcing Charge Processing by Mandatory Mediation," *Dickinson Law Review* 105 (2000): 305-64; Kathryn Moss et al., "Prevalence and Outcomes of ADA Employment Discrimination Claims in the Federal Courts," *Mental & Physical Disability Law Reporter* 29 (2005): 303-11.

[253] Rebecca M. Puhl and Chelsea A. Heuer, "Public Opinion About Laws to Prohibit Weight Discrimination in the United States," *Obesity* 19 (2010): 76.

Although these are precisely the same protections offered by the Michigan law and all Title VII-esque laws, the authors noted that all proposals stated with greater "specificity" (thus eliminating the problem of unfamiliarity) consistently garnered more support from respondents.[254]

Puhl and Heuer's research indicates that Title VII-esque protections for the obese are not only the most effective: they are also the most passable. The legislative histories of the ordinances in Urbana, IL and Santa Cruz, CA, related in Chapter II, match Puhl and Heuer's findings. Recall that in these two cities, the prohibitions against weight and personal appearance discrimination were added to make these ordinances more passable.

All in all, this section has demonstrated that making weight a protected class under Title VII is preferable to recognizing it as a disability for the purposes of the ADA. Title VII is the more appropriate measure to remedy all issues faced by the obese in the labor market, the more effective measure in actually improving employment outcomes, and the more passable measure by a legislature. With Title VII established as the more preferable remedy to the ADA, I turn now to addressing additional arguments against making weight a protected class.

Arguments Against Including Weight as a Protected Class

Even though Title VII protection is preferable to ADA protection, many people may still be uncomfortable with elevating weight to the same level as the five currently protected classes under Title VII, race, sex, color, religion, and national origin. This section will address three of the strongest arguments against making weight a protected

[254] Ibid., 77.

class: the fact that weight is at least somewhat mutable, the fact that discrimination against the obese may be a good thing for society, and the fact that new protections for the obese may be redundant with existing laws. In turn, I will consider each of these arguments and demonstrate why the evidence behind them actually strengthens the case for including weight in the list of protected classes.

Obesity is Not as Mutable as Popular Opinion Would Suggest

Perhaps the most obvious concern with including weight in the list of Title VII protected classes is the fact that people believe their weight to be at least somewhat under their control. A 2005 survey, for example, found that 65 percent of Americans believed that obese people lacked personal willpower, and 63 percent of Americans thought that obesity was solely the result of consuming unhealthy food.[255] In contrast, courts have traditionally viewed the five Title VII protected classes as immutable traits that are beyond people's control.[256] Yet it is increasingly easy to dispute how immutable these five classes are. With the development of sex-change operations and skin bleaching, sex and color are now alterable. Even without going to these extreme measures, religion has always been alterable. Although people cannot change the religion into which they were born, they are certainly free to change it later.

Moreover, a careful study of the scientific evidence reveals that weight may be no more mutable than religion, sex, or color. Ever since the publication of an influential article by Nisbett (1972), psychologists and many medical researchers have prescribed to

[255] J. Eric Oliver and Taeku Lee, "Public Opinion and the Politics of Obesity in America," *Journal of Health Politics, Policy and Law* 30 (2005): 923-54.
[256] For a discussion of the court's traditional concept of immutable traits, see Minna J. Kotkin, "Diversity and Discrimination: A Look at Complex Bias," *William and Mary Law Review* 50 (2009): 1439-1500.

his "set point" theory of weight determination.[257] According to this theory, every individual has a natural weight, or set point, toward which they gravitate. Over the past four decades, the set point theory has been supported in laboratory experiments such as Sims et al. (1973),[258] Leibel et al. (1995),[259] and Levine et al. (2006).[260]

Opponents of the theory question why the weight of Americans has increased so much over the past three decades since this amount of time seems too small for any kind of evolutionary change in people's set points. Biologists have responded with a modification to the set-point theory. Instead of natural weight being completely pre-determined, many biologists now believe that natural weight is determined by the interaction between genes and environment. Genes determine people's predisposition towards being heavy; environment determines just how heavy they become.[261] As one literature review noted, "Genes do not necessarily make people fat but they do make certain people more predisposed to being heavy if environmental conditions are correct."[262] This widely accepted modification in the set-point theory indicates that weight may not be quite as mutable as popularly believed.

Furthermore, like sex and color, the most effective way for obese people to change their weight is through extreme measures: bariatric surgery. Surgical treatment is now widely accepted in the medical community as the best way for obese, and

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[257] Richard E. Nisbett, "Hunger, Obesity, and the Ventromedial Hypothalamus," *Psychological Review* 79 (Nov. 1972): 433-53.
[258] Ethan A. H. Sims et al., "Endocrine and Metabolic Effects of Experimental Obesity in Man," *Recent Progress in Hormone Research* 29 (1973): 457-96.
[259] Rudolph Leibel et al., "Changes in Energy Expenditure Resulting from Altered Body Weight," *New England Journal of Medicine* 332 (1995): 621-28.
[260] James A. Levine et al., "Non-Exercise Activity Thermogenesis: The Crouching Tiger Hidden Dragon of Societal Weight Gain," *Arteriosclerosis, Thrombosis, and Vasucal Biology* 26 (Apr. 2006): 729-36.
[261] Reviews of this literature include Robert Pool, *Fat Fighting the Obesity Epidemic* (New York: Oxford University Press, 2001) and Ellen Ruppel Shell, *The Hungry Gene: The Inside Story of the Obesity Industry* (New York: Atlantic Monthly Press, 2002).
[262] J. Eric Oliver, *Fat Politics: The Real Story Behind America's Obesity Epidemic* (New York: Oxford University Press, 2006), 104.

particularly morbidly obese, patients to achieve sustained weight loss. Some of the most prominent papers comparing the effectiveness of surgical and non-surgical weight loss techniques have emerged from the Swedish Obese Subjects Study Scientific Group (SOS). Sjöström (2000), for example, found that ten years after bariatric surgery, patients had sustained a 16 percent average loss of their initial weight. These findings left Sjöström to conclude, "No non-surgical treatment available today can achieve such results, not even over 2 years. Surgical treatment for obesity needs to become much more common."[263] Using the same SOS subject pool, Sjöström et al. (2004) found that bariatric surgery was also the most effective treatment for ameliorating the health conditions associated with obesity, such as diabetes and hypertension.[264] More recent research by Farias et al. (2011) has suggested that bariatric surgery works because it is the only way that individuals can change their natural set point.[265]

Reviewing the scientific literature on obesity indicates that weight is no more mutable than religion, and perhaps no more mutable than sex or color. The widespread public belief that obesity is solely determined by personal choice is wrong; everyone is born with a tendency toward being heavy, medium-sized, or thin—just as everyone is born with a tendency toward being tall, medium-height, or short. The fact that genes play a significant role in determining body size make weight just as much of an immutable trait as the five immutable traits currently recognized by Title VII.

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[263] Lars Sjöström, "Surgical Intervention as a Strategy for Treatment of Obesity," *Endocrine* 13 (Oct. 2000): 213-30.
[264] Lars Sjöström et al., "Lifestyle, Diabetes, and Cardiovascular Risk Factors 10 Years after Bariatric Surgery," *New England Journal of Medicine* 351 (23 Dec. 2004): 2683-93.
[265] Maria Magdalena Farias et al., "Set-Point Theory and Obesity," *Metabolic Syndrome and Related Disorders* 9 (Apr. 2011): 85-89.

Obesity Discrimination is Not Reducing Obesity Rates

A second argument against protecting weight under Title VII is that discriminating against the obese may actually be beneficial for society. Obesity is associated with higher risks of hypertension, high cholesterol, type two diabetes, respiratory problems, and osteoarthritis.[266] As obesity rates increase, society's health declines. Consequently, proponents of this second argument argue that discrimination is society's way of using the market to correct this social ill. As Patrick Basham of the Cato Institute has argued, "employer-driven discrimination [is] the correct approach…First, this policy would place the costs for being overweight squarely on individuals, giving them stronger incentives to slim down. Second, since most employers want a healthy workforce, it would give them an incentive to help employees control their weight."[267]

Proponents of this argument might also point to the fact that in the past, society has successfully used the market to correct another public health problem: smoking. Smokers face disadvantages in the labor market very similar to the obese.[268] Viscusi and Hersch (2001), for instance, demonstrated empirically that smokers worked in riskier jobs but earned less wage compensation for their risk. The authors concluded that smokers faced a different market offer curve than non-smokers: smokers not only had greater risk-

[266] National Institutes of Health, *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report*, NIH Publication No. 98-4083, last modified Sep. 1998, http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf.
[267] Patrick Basham, "Let the Boss Decide What to Do with Obese Workers," *Room for Debate*, *New York Times Online*, last modified 29 Nov. 2011, http://www.nytimes.com/roomfordebate/2011/11/28/should-legislation-protect-obese-people/let-the-boss-decide-what-to-do-with-obese-workers.
[268] For a comparison of smoking discrimination to obesity discrimination, see Lars Noah, "The Problem With the 'Disease' Label," *Room for Debate*, *New York Times Online*, last modified 29 Nov. 2011, http://www.nytimes.com/roomfordebate/2011/11/28/should-legislation-protect-obese-people/the-problem-with-the-disease-label.

seeking preferences but also had lesser market opportunities than non-smokers.[269] Auld (2005) found that smokers faced between an 8 percent and a 24 percent wage penalty in the labor market.[270]

Using the evidence above, proponents of the market correction of social ills argument would quickly point out that as smokers have been subjected to increasing scrutiny—both in the labor market and in society—smoking rates have declined dramatically. While almost half of the country smoked in 1965, only a fifth of the country smoked in 2007.[271] Thus, proponents of the market correction argument would argue that legally protecting the obese under Title VII is the last thing we should do from a public health standpoint. Discrimination, so the argument goes, helped to reduce smoking and improve public health; in turn, discrimination will help to reduce obesity and improve public health.[272]

The market correction of social ills argument and the related analogy of smoking to obesity have three flaws. First, although smoking may be the closest analogy to being obese from a labor market standpoint, there is a fundamental difference between smoking and obesity. Smoking is a pure personal choice. At least initially (before the onset of addiction), people make a choice to start smoking. But as the review of the scientific literature on obesity demonstrated, being obese is not necessarily a pure personal choice. Genes play a role in determining a person's size.

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[269] W. Kip Viscusi and Joni Hersch, "Cigarette Smokers as Job Risk Takers," *Review of Economics and Statistics* 83 (May 2001): 269-80.
[270] M. Christopher Auld, "Smoking, Drinking, and Income," *Journal of Human Resources* 40 (Spring 2005): 505-18.
[271] Marc Kaufman, "Decades-Long U.S. Decrease in Smoking Rates Levels Off," *Washington Post*, 9 Nov. 2007, A7.
[272] For an overview of the debate on smoking discrimination, see "Banning Smoking at Work—Is It Discrimination?" 11 Feb. 2009, *CBS News Online*, last modified 28 Feb. 2012, http://www.cbsnews.com/stories/2002/01/31/health/main327245.shtml and A. G. Sulzberger, "Hospitals Shift Smoking Bans to Smoker Ban," *New York Times*, 10 Feb. 2011, A1.

Even if being obese were a pure personal choice, a second flaw exists in the argument that discrimination is the market's way of decreasing obesity rates: it is not clear that the labor market is even capable of curing social ills such as rising obesity rates. Indeed, the Evidence of Weight Stigma and Weight Discrimination Section discussed research by Puhl and Heuer (2010), which found that weight discrimination actually worsens obesity outcomes. According to these authors, instead of encouraging the obese to lose weight, weight discrimination "threatens the psychological and physical health of obese individuals, impedes the implementation of effective efforts to prevent obesity, and exacerbates health disparities."[273]

Yet even for those who do not believe Puhl and Heuer's research, there is a third, more fundamental problem with the argument that discrimination is the market's way of reducing obesity rates. The economic studies discussed in Chapter I illustrate that even if the labor market is capable of reducing obesity rates, only one-half of the market is working. If it is true that discrimination is the market's way of reducing obesity rates, then obese individuals should experience the same level of discrimination, regardless of their gender. But in fact, both Chapter I and earlier economics research have demonstrated that women see a much greater discrepancy in their wages for being obese than do men. At best, under this argument, the labor market is still failing along gender lines. One way to remedy market failure is, of course, to pass a law—such as making weight a protected class under Title VII.

[273] Rebecca M. Puhl and Chelsea A. Heuer, "Obesity Stigma: Important Considerations for Public Health," *American Journal of Public Health* 100 (June 2010): 1024.

Title VII Protections for Weight Would Not Be Redundant

The third argument against making weight a protected class under Title VII is that these protections are unnecessary given the other Federal employment discrimination laws currently on the books. I have already discussed in detail above why the ADA does not offer sufficient protection for the obese in the labor market, even assuming that obesity is recognized as a disability in every circuit for the purposes of the amended ADA. The ADA would never protect obese employees who experienced an adverse employment action because of pure taste-based preferences (and not a perception of inferior ability). Moreover, empirical evidence suggests that the ADA has not improved employment outcomes for any disabled individuals because it is too costly for employers to follow strictly.

An argument that requires greater consideration, however, is that making weight a protected class under Title VII would be redundant with the sex-based protections that already exist under Title VII. Chapter I demonstrated that labor market disparities for the obese are really only a problem for obese women. The previous economics literature discussed in Chapter I found that the obesity wage discrepancy is only robust for women; the discrepancy can be eliminated for men once enough controls are introduced. This evidence suggests that obesity discrimination may actually be gender discrimination in disguise.

In more formal legal terms, opponents of making weight a protected class may argue that obese women could already file a claim under the theory of Title VII "sex-plus" discrimination. A sex-plus claim alleges that an employer is discriminating not just on the basis of sex, "but on the basis of sex plus some other, facially neutral

qualification."[274] Since the advent of the sex-plus theory in *Phillips v. Martin Marietta Corp.*, female plaintiffs have successfully challenged employer's discriminatory hiring policies against women with preschool-aged children,[275] women who were married,[276] and women who were unwed mothers.[277] Successful sex-plus claimants must demonstrate that the employer does not care about the facially neutral qualification on its own; the employer only cares because of the claimant's sex. Consequently, in the previously mentioned cases, claimants had to show that the employers in question were still willing to hire men with preschool-aged children, men who were married, and men who were unwed fathers. Because the economic evidence strongly indicates that employers care about women's weight but not men's weight, it seems logical that women who are obese might also be able to make a successful sex-plus claim.

Unfortunately for obese women, a sex-plus-obesity discrimination claim is almost certain to fail under Federal courts' current interpretation of the sex-plus doctrine. Federal courts will only recognize sex-plus claims when the facially neutral characteristic is either a fundamental right, such as the right to marry and have children, or an immutable trait.[278] Kotkin (2009) attributes courts' reluctance to recognize sex-plus claims to a concern that at the extreme, "protected subgroups would exist for every possible combination of race, color, sex," and the "benefits of Title VII…[will] be splintered beyond use and recognition."[279]

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[274] Joel Wm. Friedman, *The Law of Employment Discrimination*, 7th ed. (New York: Foundation Press, 2009), 385.
[275] *Phillips v. Martin Marietta Corp*,, 400 US 542 (1971).
[276] *Sprogis v. United Air Lines, Inc*., 444 F2d 1194 (7th Cir 1971)
[277] *Dolter v. Wahlert High School*, 483 FSupp 266 (N.D. Iowa 1980).
[278] *Willingham v. Macon Telegraph Publishing Co.*, 507 F2d 1084, 1091 (5th Cir 1975).
[279] Minna J. Kotkin, "Diversity and Discrimination: A Look at Complex Bias," *William and Mary Law Review* 50 (2009): 1473, quoting *Judge v. Marsh*, 649 FSupp 770, 780 (D.D.C. 1986).

As a result, courts have been very reluctant to recognize aspects of a claimant's personal appearance as an immutable trait. The cases testing whether personal appearance constitutes an immutable trait have largely focused on one element: hairstyle. Most famously, in 1975, the Fifth Circuit rejected Alan Willingham's sex-plus discrimination claim that the Macon Telegraph Publishing Co. had refused to hire him because he had long hair. Even though Willingham demonstrated that Macon allowed its female employees to have long hair, the court rejected Willingham's claim because hairstyle was not a fundamental right or an "immutable trait[], such as race and national origin."[280] Interestingly, the Fifth Circuit's definition of immutable trait was apparently limited to characteristics already protected by Title VII like race and national origin.

Sex-plus-hairstyle discrimination claims have all failed. Moreover, two lower courts have suggested in dicta that closely related race-plus-hairstyle discrimination claims may succeed if the plaintiff alleged that an employer did not allow her to wear her race's natural hairstyle. Still, the claimants in both of these race-plus-hairstyle cases ultimately lost: in *Carswell v. Peachford Hospital* and *Rogers v. American Airlines Inc.*, black plaintiffs challenged their employers' prohibitions against wearing their hair in braids or cornrows. Although both courts suggested that the employers could not prohibit them from wearing their hair in a natural "afro," the courts found that employers could prohibit employees from wearing any other hairstyle.[281]

Notably, in 2006, the Ninth Circuit developed a different approach to sex-plus discrimination claims in an *en banc* decision. In *Jesperson v. Harrah's Operating Company, Inc.*, the court considered Harrah's formal policy requiring female employees

[280] *Willingham v. Macon Telegraph Publishing Co.*, 507 F2d 1084, 1091 (5th Cir 1975).
[281] *Rogers v. American Airlines, Inc.*, 527 F. Supp. 229 (S.D.N.Y. 1981); *Carswell v. Peachford Hospital*, 1981 WL 224 (N.D. Ga. 1981).

to wear makeup and forbidding male employees from wearing makeup. Instead of trying to determine whether this aspect of personal appearance constituted an immutable trait or a fundamental right, the Ninth Circuit asked whether this policy imposed equal burdens on both sexes. Even though this equal burdens test sounds broader than the immutable trait/fundamental right test in all other circuits, the Ninth Circuit has not applied it broadly. The *en banc* panel in *Jesperson* held that the makeup policy did impose equal burdens on men, pointing to Harrah's other grooming policies, such as hair length requirements for men, as support.[282]

Despite its different test, the Ninth Circuit has not proven to be any more accepting of sex-plus-personal appearance discrimination claims than the other ten circuits. Federal courts' rejection of previous sex-plus-personal appearance discrimination claims has led scholars such as Kotkin (2009) to be pessimistic that courts would treat previously untested elements of personal appearance, such as weight or beauty, any differently.[283]

As a result, even though the scientific evidence suggests that weight ought to be considered an immutable trait, it is highly unlikely that courts would consider it an immutable trait under current law. The *Willingham* court seemed unwilling to include anything but characteristics already protected by Title VII in its list of immutable traits. Other courts have been unwilling to recognize sex-plus claims based on facially neutral characteristics that involve even the slightest element of personal choice.

In sum, making weight a protected class under Title VII would not be redundant with currently existing laws. Even if obesity is a disability under the amended ADA, the

[282] *Jesperson v. Harrah's Operating Company, Inc.*, 444 F3d 1104 (9th Cir 2006) (en banc).
[283] Minna J. Kotkin, "Diversity and Discrimination: A Look at Complex Bias," *William and Mary Law Review* 50 (2009): 1486.

ADA will only provide protection when an employer believes that an individual's obesity substantially limits one or more of her life activities. The ADA will never protect obese individuals who experience adverse employment action because the employer has a taste for thinner people. Moreover, sex-plus-weight discrimination claims under Title VII cannot fill this gap in ADA coverage. Under courts' current interpretation of sex-plus doctrine, courts are unlikely to recognize weight as an immutable trait. In order for weight discrimination claims to succeed and to have a meaningful impact on employment outcomes for the obese, weight must be a separate protected class.

Proposal for Making Weight a Title VII Protected Class

Keeping all of these arguments against making weight a Title VII protected class in mind, I turn now to the details of my proposal. The goal of my proposed law is to provide the narrowest protection possible that will still help the obese overcome the real disadvantages that they face in the labor market. I keep my proposal narrow because as seen in the previous section, there are strong concerns against equating weight discrimination with race, color, sex, religion, and national origin discrimination. Moreover, viewing weight as immutable, while supported by scientific research, goes against the grain of public opinion.

Under my proposal, weight discrimination plaintiffs, like other Title VII plaintiffs, could bring cases using one of two theories. The first theory, disparate treatment, alleges that the employer intentionally discriminated against the employee because the employee was a member of a protected class. Proving these cases usually

requires presenting direct and circumstantial evidence that the employer treated the plaintiff differently because she was a member of a protected class. The second theory, disparate impact, alleges that the employer had a facially neutral policy that disproportionately impacted members of a protected class. In contrast to disparate treatment cases, proving disparate impact cases generally requires statistical evidence that the employer's policy negatively affected a large group of protected class members (not just the plaintiff) either working for or seeking a job with the employer.[284]

Thus, my basic proposal is that Congress should add weight to the list of protected classes under Title VII, which would entitle weight-based discrimination plaintiffs to seek relief in the same manner as any other Title VII plaintiff. Beyond this basic proposal, however, I must work out additional details. I will begin outlining these details with a brief discussion of why I propose a Federal law instead of additional state and local laws. Next, I will explain why I propose adding weight, instead of a broader protection like personal appearance, to the list of Title VII protected classes. I will then discuss two important defenses to my proposed Title VII protection of weight that I believe will address any cost concerns about making weight a protected class. Finally, I will address why I propose making weight a protected class just for the purposes of Title VII and not for the purposes of all Federal anti-discrimination laws.

The Advantage of a Federal Law

As Chapter II demonstrated, six cities and one state have successfully passed a law making weight a protected class for the purposes of employment. Consequently, passing weight-based discrimination laws at the state and local levels may seem more

[284] Joel Wm. Friedman, *The Law of Employment Discrimination*, 7th ed. (New York: Foundation Press, 2009), 60-321.

feasible than passing a Federal law. Moreover, Chapter II presents evidence that the Federal system is not doing a good job administering its anti-discrimination laws already in place, while at least two of the local jurisdictions, Madison, WI and Urbana, IL, are doing a good job. For this reason, many people may argue that making weight a protected class under state and local laws may be a better solution than making weight a protected class under Federal law.

Nonetheless, a Federal law has one enormous advantage: the ability to confer national uniformity. The fundamental problem with these state and local laws is that they are all different. The legislative histories and administrative procedures described in Chapter II demonstrate just how varying these laws are. Some of these laws protect weight; some of them protect all personal appearance. Some jurisdictions have enforcement commissions; some do not have one. Some have statutory time limits; some do not. The differences are endless, and the differences would multiply if additional state and local laws passed.

Moreover, as difficult as it may be for plaintiffs to keep track of all these differences, it may be even more difficult for employers. Particularly for employers located in multiple jurisdictions, setting a uniform human resources policy could become very tricky given all the differences in local anti-discrimination laws. The existence of weight discrimination laws in some jurisdictions and not others also raises fairness concerns, particularly in large metropolitan areas. It hardly seems fair that an employee who happens to work in one part of a metropolitan area can seek legal recourse for weight-based discrimination, but an employee who works in another part of a metropolitan area cannot. Employees in the greater San Francisco metropolitan area, for

example, enjoy weight-based discrimination protections if they happen to work in the city of San Francisco or in nearby Santa Cruz. But employees working in other areas of this large metropolitan area do not enjoy such protections. Federalism, which recognizes the right of different jurisdictions to have different laws, may trump these fairness concerns. But the fact remains that non-uniformity of workplace laws presents a particular challenge for employers and employees in metropolitan areas that span multiple cities and even multiple states.[285]

For all of these reasons, making weight a protected class under Federal law is preferable to continuing the current trend of making weight a protected class in select cities and states. State and local protections against weight-based discrimination in employment are certainly preferable to no protections at all. But if Congress were able to pass a law adding weight to the list of Title VII protected classes, it would create a national, uniform standard by which both employers and employees could abide. The superiority of a Federal anti-discrimination law, of course, depends on the Federal anti-discrimination law being administered effectively. Since Chapter II questioned the effectiveness of current Federal administration, the final section of this chapter will propose Federal administrative reforms. Instituting these reforms will make a Federal weight-based discrimination law unequivocally preferable to a state or local one.

[285] Indeed, both Congress and the courts have already recognized the need for uniform laws in the employment context, particularly for multi-jurisdictional employers. For example, the Employee Retirement Income Security Act of 1974 was designed to preempt local laws in the employee benefit context in order to allow employers "to establish a uniform administrative scheme, which provides a set of standard procedures to guide processing of claims and disbursement of benefits." *Fort Halifax Packing Co. v. Coyne*, 482 U.S. 1, 9 (1987).

Weight Versus Personal Appearance

Now that I have established that a Federal law would be preferable to a state or local law, I turn now to the details of my proposal. As mentioned in the previous section, many of the existing state and local laws discussed in Chapter II protect weight under the broader category of protecting personal appearance. In fact, the two cities whose laws appeared effective, Madison and Urbana, prohibited all personal appearance discrimination, not just discrimination on the basis of weight. Yet I do not propose that personal appearance be added to the list of protected classes under Title VII; I only propose that weight be added.

In fact, others have made the more expansive proposal that discrimination on the basis of all personal appearance characteristics should be prohibited under Title VII. Prohibiting discrimination on the basis of all personal appearance characteristics, not just weight, certainly seems reasonable. As Chapter I highlighted, the economic literature on beauty certainly suggests that the poorer labor market outcomes of the unattractive are the result of discrimination. Using this literature as justification for her proposal, Adamitis (2000) was one of the first authors to recommend that personal appearance be added to the list of protected categories.[286] More recently, Rhode (2010) has also argued that laws should prohibit discrimination on the basis of personal appearance. Rhode pointed to the small number of claims filed in the seven jurisdictions with these laws to convince her readers that these laws would add little additional burden to the already overburdened EEOC.[287] Finally, Hamermesh (2011), the pioneer of the beauty

[286] Elizabeth M. Adamitis, "Appearance Matters: A Proposal to Prohibit Appearance Discrimination in Employment," *Washington Law Review* 75 (2000): 195-223.
[287] Deborah L. Rhode, *The Beauty Bias: The Injustice of Appearance in Life and Law* (New York: Oxford University Press, 2010).

economics literature, has also argued that the U.S. should offer "legal protections to the ugly."[288]

While these proposals are certainly reasonable given the strong evidence that discrimination on the basis of personal appearance exists, the fundamental problem with personal appearance laws is that they lack any kind of objective standard. Hamermesh (2011) anticipates this argument and spends a sizeable portion of his book arguing that objective beauty standards do exist. While we may not always agree on the exact level of attractiveness or judgments of relative attractiveness, Hamermesh argues that we can all agree on who is "truly ugly."[289]

Hamermesh may be right—there may be a general consensus on who is truly ugly—but he is unable to draw a clear line between the people who are ugly enough to merit legal protection and the people who are not quite ugly enough. Even just protecting the bottom 1 to 2 percent of ugly people as Hamermesh suggests seems unwieldy from an administrative standpoint.[290] After all, who would decide who fell into this bottom 1 to 2 percent category? An appointed individual? A new beauty-rating agency? The EEOC? Considering that the EEOC has already a difficult time administering statutes like Title VII with fairly clear standards about who is a member of each protected class, Hamermesh's proposal would be a nightmare for the agency.

In contrast to personal appearance and beauty, where no true, measurable, and objective standards exist, weight does have an objective, measureable standard: BMI. While BMI may not be a perfect measure of obesity, it is the measure upon which the

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[288] Daniel S. Hamermesh, *Beauty Pays: Why Attractive People are More Successful* (Princeton, N.J.: Princeton University Press, 2011), 148.
[289] Daniel S. Hamermesh, "Ugly? You May Have a Case," *New York Times Sunday Review*, 27 Aug. 2011, SR12.
[290] Ibid.

healthcare industry relies. The BMI objective standard could allow the EEOC and courts to set a BMI cutoff point, such as thirty-five or forty, below which no claims of weight-based discrimination would be received. From a fairness perspective, a cutoff point would ensure that the heaviest claimants were given priority and treated uniformly. From a practical perspective, a cutoff point would limit the amount of additional cases that the EEOC would have to process under a new Federal law.

Arguably, a hard cutoff point might lead to arbitrary distinctions between individuals right below and individuals right above the cutoff. For that reason, a soft cutoff point might be more advisable. A soft cutoff point would not automatically bar individuals below the point from filing a claim, but it might require these lighter individuals to produce additional evidence that their adverse employment action was due to weight discrimination. Regardless of whether the EEOC and courts institute a hard or soft cutoff point—or any cutoff point at all—the fact that obesity can be measured by an objective scale means that the EEOC and courts have a tool through which they can compare plaintiffs and evaluate the relative strength of their claims.

All in all, grounds for making personal appearance a protected class certainly exist, and many scholars have previously advocated for such protection. But personal appearance is inherently a subjective term that is difficult to define. Federal courts and the EEOC are already having a difficult time enforcing discrimination against protected classes that are objectively well defined. Thus, including a subjective term like personal appearance (or even personality, as suggested in the introduction) in the list of protected classes could wreak enforcement havoc. Including weight, instead of broader personal

appearance, protections in Title VII would lessen these enforcement concerns since objective weight standards like BMI do exist.

Bona Fide Occupational Qualification

Because obesity is associated with so many negative health outcomes, many people may be concerned about adding weight to the list of Title VII protected classes because obesity could interfere with a person's physical ability to perform her job. The results in Chapter I should have allayed these fears since its results demonstrated that morbidly obese women were actually more likely to work in occupations requiring physical activity than normal-weight women (and morbidly obese men were no less likely to work in these occupations). Thus, obesity does not appear to be interfering with workers' abilities to perform physical activities systematically enough to show up in the data. Nonetheless, it is still possible to imagine an occasional situation where a job was so strenuous and a worker was so obese that it rendered her incapable of performing the job.

For an easy remedy to this occasional situation, I propose allowing employers to assert a Bona Fide Occupational Qualification (BFOQ) defense under 42 U.S.C. § 2000e-2(e) if weight becomes a protected class under Title VII. Currently, 42 U.S.C. § 2000e-2(e) allows employers to assert the BFOQ affirmative defense "in those certain instances where religion, sex, or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of that particular business or enterprise."[291] Consequently, BFOQ is never a valid defense to employment discrimination claims based on race or color.

[291] *Title VII of the Civil Rights Act of 1964*, *U.S. Code*, vol. 42, sec. 2000e-2(e)(1) (2012).

The first U.S. Supreme Court case applying the BFOQ defense, coincidentally, came in a sexual discrimination case involving weight and height restrictions. In *Dothard v. Rawlinson*, Dianne Rawlinson brought an employment discrimination claim after her application to be an Alabama state prison guard was turned down because of two Alabama regulations. The first regulation required that all prison guards meet minimum height and weight requirements; Rawlinson argued that these height and weight requirements had a disparate impact on women because very few women could meet these standards. The second regulation required that only males be employed in "contact positions" in all-male maximum-security prisons. Rawlinson brought a disparate treatment claim against the second regulation, arguing that treating men and women differently was unnecessary for these positions. Alabama asserted a BFOQ defense against both claims. The court rejected Alabama's BFOQ defense based on the weight and height requirements but accepted Alabama's BFOQ defense based on the bar on women in contact positions. The court reasoned that because of the "rampant violence" and "jungle atmosphere" in maximum security prisons, "[t]he likelihood that inmates would assault a woman because she was a woman would pose a real threat not only to the victim of the assault but also to the basic control of the penitentiary and protection of its inmates and the other security personnel."[292] Since *Dothard*, the Supreme Court has repeatedly asserted that the "BFOQ defense is written narrowly, and this Court has read it narrowly."[293] Nonetheless, BFOQ remains a viable defense for

[292] *Dothard v. Rawlinson*, 433 US 321, 335-36 (1976).
[293] *International Union, United Automobile, and Agricultural Implement Workers of America, UAW v. Johnson Controls, Inc.*, 499 U.S. 187, 201 (1991); *Trans World Airlines, Inc. v. Thurston*, 469 U.S. 111, 122-25 (1985).

employers who can demonstrate that changing their policy would interfere with the "essence" or the "central mission of the employer's business."[294]

As a result, if weight is added to the list of protected classes under Title VII, it should also be added to the list of protected classes in 42 U.S.C. § 2000e-2(e) against which employers can assert a BFOQ defense. A BFOQ defense against weight discrimination claims would provide an exception for occupations in which being obese could endanger the safety of the claimant, other workers, or both. Moreover, allowing for a BFOQ exception would not erode the strong protections otherwise provided by making weight a protected class. Because courts have admittedly read the BFOQ exception for sex, national origin, and religion narrowly, courts should read a BFOQ exception for weight just as narrowly (unless, of course, Congress indicated that it wanted courts to read the BFOQ exception more broadly for weight). Thus, including a BFOQ defense does not weaken my proposal to make weight a protected class; an employer could only assert the defense successfully in rare cases. But including a BFOQ defense in my proposal does address legitimate concerns that obesity may occasionally create a safety issue in certain occupations.[295]

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[294] *International Union, United Automobile, and Agricultural Implement Workers of America, UAW v. Johnson Controls, Inc.*, 499 U.S. 187, 203 (1991).

[295] The BFOQ defense could also plausibly be asserted against individuals who sued businesses that marketed women with a particular body type, such as strip clubs. The test would be the same—whether weight went "to the essence of the occupation and business involved" and was not "tangential." Compare the results in *Wilson v. Southwest Airlines Co.*, 517 FSupp 292 (N.D. Tex. 1981) (rejecting Southwest Airlines's BFOQ defense that hiring only attractive female flight attendants went to the essence of their business) with the results of the EEOC's investigation of Hooters Restaurant between 1991 and 1996. The EEOC ultimately dropped its investigation after Hooters launched a public relations campaign proclaiming that "food was 'secondary' to the business' main commodity, 'the sexiness of the Hooters' Girls.'" Patricia A. Casey, "Does Refusing to Hire Men as Food Servers Violate the Civil Rights Act: No: A Business Has a Right to Choose its Own Character," *American Bar Association Journal* 82 (1996): 41.

Undue Hardship

In order to allay additional concerns about the costliness of accommodating obese employees in the workplace, I propose allowing employers to assert a second defense against future Title VII claims based on weight: undue hardship. Unlike the BFOQ defense, an undue hardship defense does not appear anywhere in the text of Title VII. Yet in a Title VII claim based on religious discrimination, Federal courts all allow employers to assert a defense of undue hardship. After the claimant proves her prima facie case (which requires her to prove that an employment requirement conflicted with her religious beliefs, that she notified her employer of the conflict, and that she suffered an adverse employment action because she refused to comply with the requirement), the burden of proof shifts to the employer to demonstrate that he made a good faith effort to accommodate the claimant's religious belief. In the alternative, the employer can prove that a reasonable accommodation to the employee's religious beliefs would have created an undue hardship.[296] The court-created undue hardship defense in religious discrimination claims is reminiscent of the undue burden exception in ADA claims.

Importing the undue hardship defense from religious discrimination claims into my proposal for making weight a Title VII protected class may seem strange. Weight seems to be most closely associated with sex: certainly there is more apparent overlap between weight and sex than between weight and religion. But recall the discussion in the Obesity is Not as Mutable as Popular Opinion Would Suggest Section; religious discrimination is the most mutable of the five currently protected classes under Title VII.

[296] Joel Wm. Friedman, *The Law of Employment Discrimination*, 7th ed. (New York: Foundation Press, 2009), 362-63.

Therefore, it makes sense that courts do not protect against religious discrimination quite as strongly: religion is something that people can (and do) change.

The scientific literature reviewed earlier demonstrates that obesity is not as mutable as popular belief would suggest; genes play a large role in determining an individual's propensity toward obesity. Still, environment affects obesity too, making weight at least somewhat mutable. Weight is at least more mutable than the already protected categories of race and national origin. Consequently, it makes sense that courts would not protect against weight discrimination quite as strongly: weight is something that people can (and do) change.

More practically, allowing employers to assert an undue hardship defense can address any real cost considerations that arise from making weight a protected class. The results in Chapter I suggested that the disadvantages experienced by the obese in the labor market were not by and large the result of cost considerations. Still, it is easy to imagine the occasional situation where hiring an obese worker may create real costs for employers.

Suppose an obese worker is perfectly capable of performing a job, and her weight does not create a safety issue (if it did, it would already be covered by the BFOQ defense). But suppose the job requires an obese worker to use a piece of equipment that has a weight limit less than her current weight. Buying a new piece of equipment with a higher weight limit may be very costly for the employer, especially if the employer is a small business. The employer in this case could turn to the undue hardship exception.

The only area in which the undue burden defense would probably not help employers avoid the costs associated with hiring an obese worker is insurance. The

undue burden defense would not help small employers whose health insurance premiums would drastically increase by employing an obese worker because allowing such a defense would conflict with other laws. For other Federal anti-discrimination laws such as the ADA, increased health insurance costs arising from the employee's protected status do not constitute a legitimate undue burden for the employer.[297] Consequently, allowing such a defense under Title VII would conflict with the ADA, especially if morbid obesity becomes more broadly recognized as a disability under the ADAAA. Still, for most other situations, the undue hardship exception would help an employer avoid a cost from complying with Title VII that might otherwise put him out of business.

Even though the results in Chapter I suggest that these cost considerations are not driving the disadvantages experienced by the obese in the labor market, including an undue hardship exception would help remedy the few situations in which costs do matter. For that reason, allowing employers to assert an undue hardship defense will not erode the benefits of making weight a protected class. Instead, the inclusion of an undue hardship defense in my proposal addresses legitimate concerns that employing an obese worker may occasionally be cost-prohibitive, particularly for small employers.

Weight as a Protected Class Under Title VII Only

A final notable feature of my proposal is that I only propose making weight a protected class for the purposes of employment. I am not proposing making weight a protected class under any Federal anti-discrimination laws other than Title VII. This employment-only proposal runs somewhat contrary to other scholars such as Puhl and Heuer (2009), who advocate broader legal protections for the obese besides just

[297] U.S. Equal Employment Opportunity Commission, "Questions and Answers about the Association Provision of the Americans with Disabilities Act," *Equal Opportunity Employment Commission Online*, last modified 02 Feb. 2011, http://www.eeoc.gov/facts/association_ada.html.

employment,[298] and Rhode (2010), who advocates "expand[ing] prohibitions on discrimination based on appearance…[by] enact[ing] or amend[ing] federal, state, or local antidiscrimination rights statutes covering employment, housing, public accommodations, and related contexts."[299]

Unlike these scholars, I do not propose making weight a protected class in other contexts such as housing and public accommodations. My proposal is limited to employment simply because the role of weight in employment is the more thoroughly researched than the role of weight in other contexts. Moreover, virtually all of the previous research on weight and employment is consistent with the existence of discrimination.

The psychology research discussed in the Evidence of Weight Stigma and Weight Discrimination Section suggests that weight discrimination may occur in other areas like housing and public accommodations. But there is very little research on whether weight discrimination actually does occur in these areas, and what little research exists is quite outdated. For example, the one often cited psychology study of obesity discrimination in housing by Karris (1977) is almost four decades old. Moreover, Karris's study, while unique and supportive of the existence of obesity discrimination in the housing market, involved only six renters and eleven landlords.[300] Even Puhl and Heuer (2009), who have advocated legal protections beyond employment, admit that the research on "public

[298] Rebecca M. Puhl and Chelsea A. Heuer, "The Stigma of Obesity: A Review and Update," *Obesity* 17 (May 2009): 941-64.
[299] Deborah L. Rhode, *The Beauty Bias: The Injustice of Appearance in Life and Law* (New York: Oxford University Press, 2010), 154.
[300] Lambros Karris, "Prejudice Against Obese Renters," *Journal of Social Psychology* 101 (1977): 159-60.

accommodations, jury selection, housing and adoption" remain "understudied domains in which obese persons may be vulnerable to weight discrimination."[301]

A final concern with proposing broader weight protections is the cost. The results in Chapter I indicated that obese workers are not more costly to employ than non-obese workers; thus, adding protections for the obese in the workplace should not generate too many additional costs for employers. But the costs of protecting the obese may be much greater outside of employment. For example, protecting the obese in public accommodations may require governments to purchase larger, more costly seats that reduce the number of other people who are able to use the public accommodation. The benefits of protecting weight in other areas like public accommodations may still outweigh the costs, but further research is needed to address this issue.

In sum, there is not as much research on obesity discrimination outside of employment as there is within employment. Additional research on whether obesity discrimination exists outside of employment as well as on the costs of protecting weight outside of employment is necessary. Until this research exists, it would be unwise to propose laws that make weight a protected class outside of employment.

Reforming Title VII Administration: Critical for All Protected Classes

As Chapter II demonstrated, passing new laws does not help anyone if the laws are not well administered. Chapter II pointed out that many of the local laws prohibiting weight or personal appearance discrimination have been ineffective because they have

[301] Rebecca M. Puhl and Chelsea A. Heuer, "The Stigma of Obesity: A Review and Update," *Obesity* 17 (May 2009): 952.

been poorly administered, and in some cases, almost forgotten. Even worse, as the last chapter pointed out, the administration and adjudication of Federal employment discrimination claims for current Title VII protected classes leave much to be desired. For this reason, proposing a new Title VII protected class does not make much sense without also proposing changes in the EEOC's administration of Title VII claims. This section proposes two reforms, adding a commission process and imposing mandatory time limits on the EEOC, that will help the classes currently protected by Title VII, and as a result, will help any future protected classes as well.

Giving Plaintiffs a Choice: Adding a Commission Process

As Chapter II described, the EEOC already provides two opportunities for parties to settle before going to court: mediation and conciliation. The mediation program, while free, is completely voluntary, so an employer can refuse to participate. The conciliation process puts somewhat more pressure on the employer to negotiate with the complainant since the EEOC has reasonable cause to believe that discrimination has occurred. But the employer can still refuse to participate in conciliation.

Consequently, even if an employer knows that he has a weak case, he may still choose not to cooperate with the EEOC process by refusing to participate in both mediation and conciliation. This choice would be perfectly rational in certain cases, especially in ones involving low damage amounts. A rational employer knows that employment discrimination cases are very costly and time consuming to litigate. For that reason, a rational employer also knows that employment discrimination attorneys are only willing to represent complainants with strong cases that involve high damage

amounts. Thus, if a complainant has either a weak case or a case with low damages, the complainant will have difficulty finding a lawyer to represent her.

Complainants who cannot find a lawyer are forced to choose between proceeding *pro se* or not proceeding at all. The research by Nielsen et al. (2010) discussed in Chapter II demonstrates that *pro se* complainants almost never prevail in employment discrimination cases.[302] Thus, under the current EEOC system of voluntary mediation and conciliation, a rational employer should refuse to participate in mediation and conciliation if he believes that the complainant's case is weak or involves low damages. In such cases, the complainant is unlikely to prevail in court, so it makes little sense for the employer to give the complainant anything to avoid going to court.

The fate of complainants with weak cases may not be so concerning. But the fate of complainants with strong cases and low damages is concerning. Low damages in an employment discrimination suit could still amount to a few thousand dollars. Yet the prospect of winning even a few thousand dollars will not entice an employment discrimination lawyer. The problem is not that lawyers in this field are greedy, but the problem is that they generally work on a contingency basis. Thus, a percentage of a few thousand dollars would not fully compensate a lawyer for the amount of time it took her to win this money for her client.

A good way to remedy this problem is for Congress to amend the EEOC statutory enforcement provisions in 42 U.S.C. § 2000e-5 and establish an alternative adjudicatory process that does not require complainants to be represented by an attorney.[303] As Chapter II described, the state of Michigan as well as the cities of Madison, WI, Urbana,

[302] Nielsen et al., "Individual Justice or Collective Mobilization? Employment Discrimination Litigation in the Post Civil Rights United States," *Journal of Empirical Legal Studies* 7 (June 2010): 175-201.
[303] *Title VII of the Civil Rights Act of 1964*, *U.S. Code*, vol. 42, sec. 2000e-5 (2012).

IL, Washington, DC, and San Francisco, CA have commission processes that provide an alternative to litigation. Complainants in Madison and Urbana must have their claims adjudicated through the local commission; complainants in Michigan, Washington, and San Francisco can choose to have their claims adjudicated through the commission as an alternative to pursuing the traditional litigation process.

In well-run commission processes, such as the ones in Madison and Urbana, there is not the same incentive for employers to refuse to cooperate. Employers in these cities cannot take their chances that complainants with strong cases but low damages will not be able to find a lawyer, and thus, will not be able to prevail. Complainants in these jurisdictions do not need a lawyer to pursue their claims successfully. As a result, complainants with strong cases have a reliable remedy in these jurisdictions, even if their damages are low. The commission processes in Madison and Urbana are successful because they supply the "small claims court" that the Federal adjudication process is so noticeably lacking.[304]

Even though the Madison and Urbana processes are the only ones that seem to work, I am not advocating that the Federal government take away employment discrimination plaintiffs' private right of action in Federal court and force them to have their claims adjudicated through an EEOC agency hearing. Instead, I propose giving plaintiffs another option through which they can have their claims adjudicated. Once the EEOC determines that a complaint presents reasonable cause, the complainant should be given two (and occasionally three) options. First, the EEOC can issue a right to sue letter to the complainant (thus cutting out the conciliation process), and the complainant can bring her case in Federal court as she has always been allowed to do. Second, the

[304] Todd Rent, Urbana Human Relations Officer, telephone conversation with author, 03 Jan. 2012.

complainant can alternatively pursue her complaint through an EEOC agency hearing. Third, in the rare case that the EEOC is willing, the EEOC can bring a case on the plaintiff's behalf.

Complainants who choose the new EEOC agency hearing process would first participate in a conciliation process with the employer. But unlike the current EEOC conciliation process, where the employer can refuse to participate, the employer would now be forced to participate once the complainant chose the agency hearing process. Complaints not successfully resolved in conciliation would then proceed to an agency hearing in front of a committee. The committee should be comprised of at least three members (with an odd number for tiebreaking) who have no involvement in the investigatory process.

At the hearing, the EEOC should facilitate the complainant's ability to represent herself. Either the EEOC could allow the investigator who found reasonable cause to serve as the complainant's advocate, or the EEOC could provide explicit, detailed instructions to the complainant on how to present her case at the hearing. The committee would then make a decision, and this decision would be appealable to the Federal district court. In order to make the appeals process more efficient and less costly, the Federal district court would review committee decisions under the same standards that Federal appellate courts review district court decisions: "clearly erroneous" review of findings of fact and *de novo* review of conclusions of law.[305] Nevertheless, the key to this new agency hearing process working is that complainants must be able to represent

[305] Federal Rules of Civil Procedure 52(a) (2012). This rule states that "[f]indings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous." Conclusions of law, however, are reviewed as though the appellate court was reviewing the issue for the first time.

themselves. As the results from San Francisco in Chapter II showed, having a committee hearing process does not benefit the complainant if she still has to hire an attorney.

Giving complainants the option to pursue a commission enforcement process instead of litigation would make the EEOC more closely resemble many of the state and local employment discrimination agencies described in Chapter II. It may appear strange that state and local agencies have developed these commission enforcement processes, while the EEOC has seemingly lagged behind. Yet history has largely stood in the way of the EEOC's ability to develop a commission enforcement process. One of the compromises necessary to pass the 1964 Civil Rights Act, which established the EEOC, was to minimize the agency's enforcement powers. Opponents feared the prospect of an overzealous, plaintiff-favoring agency that could impede nationwide business operations and commercial growth. Thus, the final Civil Rights Act only gave the EEOC the power to do three things: receive complaints, investigate for reasonable cause, and conciliate claims with reasonable cause. These limitations earned the agency the nickname of the "toothless tiger" in its early years.[306] Although the EEOC's enforcement powers have expanded somewhat over the last half century, they are still basically limited to the three items mentioned above. Consequently, without Congressional action, the EEOC remains constrained by the history of its establishment, which is wrought with concerns about making it too easy for plaintiffs to win and about the risk of federal bureaucratic overreaching. These historical concerns have caused the pendulum to swing in the opposite direction: now, the enforcement process makes it extremely difficult for plaintiffs to win.

[306] U.S. Equal Employment Opportunity Commission, "Pre 1965: Events Leading to the Creation of the EEOC," *Equal Employment Opportunity Commission 35th Anniversary Online History*, last viewed 27 Mar. 2012, http://www.eeoc.gov/eeoc/history/35th/pre1965/index.html.

As mentioned before, the plaintiffs who appear to have the most difficult time winning are the ones with low-damage claims. The new commission process proposed here would particularly help these plaintiffs by providing the small claims court that the Federal process is currently lacking. Congressional institution of this commission would undeniably generate additional costs for the EEOC. However, eliminating the conciliation process for plaintiffs who wish to pursue litigation would also generate some cost savings for the agency. Even if the costs of the new process exceed the savings, instituting a commission adjudication option for complainants with reasonable cause is vital. Without it, many complainants with a strong case but low damages will continue to be left without any good options to seek redress for their claims.

Imposing Mandatory Time Limits on the EEOC

Of course, as Chapter II demonstrated, instituting a commission adjudication process is not enough. In places like Michigan and San Francisco, the commissions have been ineffective because the commission process can drag on for an indefinite period of time. The commissions in these jurisdictions are not bound by statutory time limits on how long the initial investigation can take and how soon a hearing must be held after probable cause is found. As a result, the commission process in places like Michigan can take just as long as litigation.

For this reason, Congress should pass a law imposing mandatory time limits on the EEOC, particularly for the initial investigation period. Congress needs to impose mandatory time limits regardless of whether it also decides to institute a commission adjudication process. Currently, the Federal authorizing statute requires that the

reasonable cause determination be made "as promptly as possible and, so far as practicable, not later than one hundred and twenty days from the filing of the charge."[307]

Because the current statutory time limits are merely suggestive, not mandatory, the reasonable cause determination takes much longer than 120 days. Indeed, Chapter II revealed that the EEOC's initial investigation process can take as long as a year. According to Katharine Kores, an EEOC District Director, the initial investigation need not take so long; in fact, the agency's current goal is to complete the initial investigation within 180 days (still sixty days longer than the suggested time in the statute). In reality, the investigations take this long because EEOC is very understaffed. Kores believes that "the more staff, the more we can reduce the time."[308]

Thus, if Congress imposes time limits on the EEOC, Congress must also face tough questions about the resources currently dedicated to the agency. Gaining additional funding from Congress is never easy for an agency, particularly in the current political climate, with candidates advocating cutting agencies' funding and even eliminating agencies altogether. But the results in Chapter II combined with the results of previous works such as Monroe (1995), Selmi (1996), Green (2000), Acemoglu and Angrist (2001), and Moss et al. (2005) indicate that the EEOC's situation is particularly dire.[309] The EEOC is so underfunded that it is increasingly unable to achieve its central

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[307] *Title VII of the Civil Rights Act of 1964*, *U.S. Code*, vol. 42, sec. 2000e-5(b) (2012).
[308] Katharine Kores, District Director of Memphis Office, Equal Employment Opportunity Commission, telephone conversation with author, 09 Jan. 2012.
[309] Maurice E. R. Munroe, "The EEOC: Pattern and Practice Imperfect," *Yale Law & Policy Review* 13 (1995): 219-79; Michael Selmi, "The Value of the EEOC: Reexamining the Agency's Role in Employment Discrimination Law," *Ohio State Law Journal* (1996): 1-64; Michael Z. Green, "Proposing a New Paradigm for EEOC Enforcement after 35 Years: Outsourcing Charge Processing by Mandatory Mediation," *Dickinson Law Review* 105 (2000): 305-64; Daron Acemoglu and Joshua D. Angrist, "Consequences of Employment Protection? The Case of the Americans with Disabilities Act," *Journal of Political Economy* 109 (2001): 915-57; Kathryn Moss et al., "Prevalence and Outcomes of ADA

mission: to "promote equality of opportunity in the workplace and enforce federal laws prohibiting employment discrimination."[310] Through laws like Title VII, the Federal government has made a commitment to support anti-discrimination values, regardless of whether allowing such discrimination is efficient. Thus, while my proposal for administrative reform may be costly, it is necessary to uphold the anti-discrimination values espoused by the Federal government.

Conclusion

The principal message of this chapter and of this dissertation is the necessity of legal reform. Because the overarching theme of this dissertation has been obesity, the most obvious call for reform has been to change the way that Federal law views weight in the workplace. Taken together, the economic research on obesity in the workplace reviewed in Chapter I, my results in Chapter I, and the psychology research reviewed in this chapter all suggest one conclusion: the United States needs a law that prohibits discrimination on the basis of weight in the workplace.

Yet this dissertation makes a less obvious, but perhaps more important call for reform. Studying the way in which other jurisdictions have handled obesity discrimination claims has exposed larger problems in how the Federal government currently handles all discrimination claims. The agency in charge of administering Federal discrimination claims is understaffed and underfunded, leading to long delays.

Employment Discrimination Claims in the Federal Courts," *Mental & Physical Disability Law Reporter* 29 (2005): 303-11.

[310] U.S. Equal Opportunity Employment Commission, "Overview," *Equal Opportunity Employment Commission Online*, last viewed 02 Mar. 2012, http://www.eeoc.gov/eeoc.

Individuals with legitimate discrimination claims who endure these long delays may still come out of the agency process with only a right to sue letter to show for their endurance. With a right to sue letter, these individuals may not find an attorney. And as a result, these individuals may be prohibited from gaining relief.

Thus, as much as Congress needs to pass a law prohibiting weight discrimination in employment, it may need to reform the adjudication and administration of discrimination claims even more. The reforms suggested in this chapter will ensure that protected classes—both present and future—will be able to gain relief for legitimate claims of discrimination in the workplace.

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APPENDIX A

VARIABLE DEFINITIONS FOR CHAPTER I

Table 1. Original Variables and Coding Information for the CPS-ATUS-EHM-O*NET Data

Variable Name in Chapter I Regressions	Data Source	Variable Name in Original Data Source	Variable > 0 If Respondent	Variable = 0 If Respondent	Dropped from Sample If Respondent
Hourly Wages (Transformed into the Natural Logarithm of Real 2008 Wages)[311]	CPS	Weekly workers: Computed using trernwa, ttwk, trwernal Hourly workers: Computed using wkearn, teernh1o, teernhry, trdpftpt, tehruslt, tehrusl1, tehrusl2	Is employed and earns positive wages	---	Refused to answer, or respondent is not employed
Major Industry (For Controls in Robustness Check Four)	CPS	trimjind1	Is employed	---	Refused to answer, or respondent is not employed
Major Occupation (For Controls in Robustness Check Four)	CPS	trmjocc1	Is employed	---	Refused to answer, or respondent is not employed
Detailed Occupation (For Matching O*NET Data)	CPS	teio1ocd	Is employed	---	Refused to answer, or respondent is not employed
Importance of Communicating with Persons Outside the Organization	O*NET	Work Activity File, element_id=4.A.4.a.3	Is employed	---	Refused to answer, or respondent is not employed
Importance of Communicating with Supervisors, Peers, or Subordinates	O*NET	Work Activity File, element_id=4.A.4.a.2	Is employed	---	Refused to answer, or respondent is not employed

[311] Reported wages from 2006 and 2007 were converted into 2008 dollars using the BLS Consumer Price Index Calculator.

How Much Contact with Others Required by the Job	O*NET	Work Context File, element_id=4.C.1.a.4	Is employed	---	Refused to answer, or respondent is not employed
Importance of Establishing and Maintaining Interpersonal Relationships	O*NET	Work Activity File, element_id=4.A.4.a.4	Is employed	---	Refused to answer, or respondent is not employed
Importance of Performing for or Working Directly with the Public	O*NET	Work Activity File, element_id=4.A.4.a.8	Is employed	---	Refused to answer, or respondent is not employed
Importance of Selling or Influencing Others	O*NET	Work Activity File, element_id=4.A.4.a.6	Is employed	---	Refused to answer, or respondent is not employed
Importance of Performing General Physical Activities	O*NET	Work Activity File, element_id=4.A.3.a.1	Is employed	---	Refused to answer, or respondent is not employed
Importance of Speed of Limb Movement	O*NET	Ability File, element_id=1.A.2.c.3	Is employed	---	Refused to answer, or respondent is not employed
Importance of Stamina	O*NET	Ability File, element_id=1.A.3.b.1	Is employed	---	Refused to answer, or respondent is not employed
Importance of Explosive Strength	O*NET	Ability File, element_id=1.A.3.a.2	Is employed	---	Refused to answer, or respondent is not employed
Importance of Dynamic Strength	O*NET	Ability File, element_id=1.A.3.a.3	Is employed	---	Refused to answer, or respondent is not employed
Importance of Static Strength	O*NET	Ability File, element_id=1.A.3.a.1	Is employed	---	Refused to answer, or respondent is not employed
Importance of Trunk Strength	O*NET	Ability File, element_id=1.A.3.a.4	Is employed	---	Refused to answer, or respondent is not employed
Underweight	EHM	Erbmi	Has BMI < 18.5	Has BMI ≥ 18.5	Refused to answer
Normal Weight	EHM	Erbmi	Has $18.5 \leq$ BMI < 25	Has BMI < 18.5 Has BMI ≥ 25	Refused to answer
Overweight	EHM	Erbmi	Has $25 \leq$ BMI < 30	Has BMI < 25 Has BMI ≥ 30	Refused to answer
Obese	EHM	Erbmi	Has $30 \leq$ BMI < 40	Has BMI < 30 Has BMI ≥ 40	Refused to answer
Morbidly Obese	EHM	Erbmi	Has BMI ≥ 40	Has BMI < 40	Refused to answer
Years of education	CPS	peeduca, pecyc, pems123	Completed at least first grade (see coding values in Table II)	Completed less than first grade	Refused to answer
Age	CPS	Prtage	Provides her age	---	Refused to answer

Female	CPS	Pesex	Is female	Is male	Refused to answer
White	CPS	ptdtrace, pehspnon	Is white, non-Hispanic	Is black, another race, or Hispanic	Refused to answer
Black	CPS	ptdtrace, pehspnon	Is black, non-Hispanic	Is white, another race, or Hispanic	Refused to answer
Hispanic	CPS	ptdtrace, pehspnon	Is any race and Hispanic	Is not Hispanic	Refused to answer
Children Present	CPS	erc19num	Has at least one child less than 19 living in the household	Does not have any children less than 19 living in the household	Refused to answer

Table 2. Years of Education Variable Coded Values	
Highest Level of Education Completed	Years of Education Coded Value
Less Than First Grade	0.0
First, Second, Third, or Fourth Grade	2.5
Fifth or Sixth Grade	5.5
Seventh or Eighth Grade	7.5
Ninth Grade	9.0
Tenth Grade	10.0
Eleventh Grade	11.0
Twelfth Grade (No Diploma)	11.5
High School Diploma	12.0
Less than One Year of College	12.5
One Year of College	13.0
Two Years of College	14.0
Three Years of College	15.0
Four Years of College (No Degree)	15.5
College Degree	16.0
One-Year Master's Degree	17.0
Two-Year Master's Degree	18.0
Three-Year Master's Degree	19.0
Professional School Degree	20.0
Doctoral Degree	21.0

APPENDIX B

VARIABLE DEFINITIONS FOR CHAPTER II

Table 1. Original Variables and Coding Information for the BRFSS Data

Variable Name in Chapter II Regressions	Variable Name in Original Data Source	Variable > 0 If Respondent	Variable = 0 If Respondent	Dropped from Sample If Respondent
Employed for Wages	employ	Is employed for wages	Is out of work, self-employed, homemaker, a student, retired, or unable to work	Refused to answer
Underweight	1984-86: weight, hti, htf 1987-98: _bmi 1999-2002: _bmi2 2003: _bmi3 2004-2009: _bmi4 2010: a_bmi4	Has BMI < 18.5	Has BMI ≥ 18.5	Refused to answer
Normal Weight	1984-86: weight, hti, htf 1987-98: _bmi 1999-2002: _bmi2 2003: _bmi3 2004-2009: _bmi4 2010: a_bmi4	Has 18.5 ≤ BMI < 25	Has BMI < 18.5 Has BMI ≥ 25	Refused to answer
Overweight	1984-86: weight, hti, htf 1987-98: _bmi 1999-2002: _bmi2 2003: _bmi3 2004-2009: _bmi4 2010: a_bmi4	Has 25 ≤ BMI < 30	Has BMI < 25 Has BMI ≥ 30	Refused to answer

Obese	1984-86: weight, hti, htf 1987-98: _bmi 1999-2002: _bmi2 2003: _bmi3 2004-2009: _bmi4 2010: a_bmi4	Has 30 ≤ BMI < 40	Has BMI < 30 Has BMI ≥ 40	Refused to answer
Morbidly Obese	1984-86: weight, hti, htf 1987-98: _bmi 1999-2002: _bmi2 2003: _bmi3 2004-2009: _bmi4 2010: a_bmi4	Has BMI ≥ 40	Has BMI < 40	Refused to answer
White	1984-2000: orace, hispanic 2001-2010: race2, hispanc2	Is white, non-Hispanic	Is black, another race, or Hispanic	Refused to answer
Black	1984-2000: orace, hispanic 2001-2010: race2, hispanc2	Is black, non-Hispanic	Is white, another race, or Hispanic	Refused to answer
Other Race	1984-2000: orace, hispanic 2001-2010: race2, hispanc2	Is any other race, non-Hispanic	Is white, black, or Hispanic	Refused to answer
Hispanic	1984-2000: orace, hispanic 2001-2010: race2, hispanc2	Is any race and Hispanic	Is not Hispanic	Refused to answer
Female	sex	Is female	Is male	Refused to answer
Age	age	Provides her age	---	Refused to answer
Married	marital	Is married	Is divorced, widowed, separated, never married, or a member of an unmarried couple	Refused to answer
Less than High School	educa	1984-92: Does not have a high school diploma or a technical school diploma 1993-2010: Does not have a high school diploma	1984-2010: Has a Has a high school diploma or a technical school diploma	Refused to answer
High School Graduate	educa	1984-92: Has a high school diploma or a technical school diploma 1993-2010: Has a high school diploma	1984-2010: Does not have a high school diploma or technical school diploma, or has a diploma plus additional college education	Refused to answer
Some College	educa	1984-2010: Has a high school diploma but not a college degree	1984-2010: Does not have a high school diploma or technical school diploma, or has a diploma plus a college degree	Refused to answer

College Graduate	educa	1984-2010: Has a college degree	1984-2010: Has less than a college degree	Refused to answer