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The Pediatric Obesity Epidemic and the Role of the Corporation: Why Work Conditions and Faith in Meritocracy Matter

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Abstract

The global pediatric obesity epidemic is a “grand challenge” that will reduce quality of life and strain healthcare delivery systems for many years. The root causes and treatments of pediatric obesity are medical and social, requiring cross-disciplinary collaboration. Research on pediatric obesity spans medicine, molecular biology, public health, and sociology and involves hospitals, clinics, community partners, and schools. However, little attention has been given to how corporations play a role in this nexus of institutions. We make the case for understanding the role of the corporation, beyond that of producer and distributor of unhealthy foods. Specifically, we consider two factors. First, we examine the work conditions that corporations create for parents and how these affect family lifestyle, differentially by socioeconomic status (SES). Second, we expose how the American tendency to “individualize” social problems is reinforced in the corporation. Faith in meritocracy directs attention to individual effort rather than structural constraints. Treating pediatric obesity as remediable by meritorious individual behaviors might obscure root causes and promising approaches based on new medical research.

Keywords: pediatric obesity, obesity epidemic, disparities, energy balance, inequality, socioeconomic factors, meritocracy, transdisciplinary research

1. Introduction

This chapter explores the deepening global epidemic of pediatric obesity, which predisposes individuals to significant early-onset diabetes and cardiovascular disease. These complica-

tions limit quality of life and ability to work, and exacerbate healthcare costs. The Centers for Disease Control and Prevention (CDC) in the United States have identified an “obesity epidemic” and specifically, reported in 2010 that 14.6% of children from 2 to 4 years old in low income households are obese. Extending current trends, the scale of the problem by the year 2030 will overwhelm healthcare systems globally. Obesity experts readily acknowledge that the etiology of pediatric obesity is multifactorial and will not be solved with single-paradigm, single-cause approaches. This “grand challenge” has thus already garnered the attention of experts across many disciplines, including medicine, molecular biology, public health, social policy, urban planning, early childhood schooling, and nutrition.

We add the field of organization studies to this list of disciplines, because it has a long history of examining problems that at once involve “agency and structure”—that is, the actions of individuals and the constraints of societal systems. We posit that the management of pediatric obesity is confronted by exactly this tension between agency and structure. On the one hand, recommendations about lifestyle choices abound. On the other hand, two distinct kinds of constraints are at play. Societal conditions shape diet and exercise options, such as the availability of fresh produce or the safety of nearby playgrounds, with the result that childhood obesity in the United States is strongly linked to lower socioeconomic class. In addition, the underlying biological nature of obesity is being increasingly explored, yielding insights into when and to what extent lifestyle adaptations can make a difference. Many biological pathways are set in childhood, and moreover, obesity may manifest with varied metabolic patterns, suggesting that the focus on lifestyle, or behavioral variables alone, is incomplete. Certainly, medical researchers and clinicians also appreciate the duality of individual behaviors and biological determinants. “Boundary spanners” across disciplines and sectors can advance work on obesity [1]. Adding the insights about agency and structure from an organization studies approach to the role of the corporation will, we propose, expand the analytical options and rigor in approaching pediatric obesity.

2. The pediatric obesity epidemic, global inequality and current recommendations

The rise in obesity among adults is well documented. An alarming and relatively new problem is the rise of pediatric obesity. Childhood obesity in the United States more than doubled in children and quadrupled in adolescents from 1985 to 2015 [2, 3]. The CDC defines “overweight” as excess body fat such that body mass index (BMI) is 25.0–29.9 kg/m² and distinguishes it from “obesity,” which has BMI ≥ 30.0 kg/m² (CDC, 2015) [3]. In recent years, it has become necessary to create another category, “morbid obesity” (BMI ≥ 40), sometimes referred to as Class 3 obesity, super obesity, or severe obesity, a phenotype that had previously been exceedingly rare among adults. From 1980 to 2012, obesity in children aged 6–11 years increased from 7% to nearly 18%, whereas obesity in adolescents aged 12–19 years increased from 5% to nearly 21%. Tragically, pediatric morbid obesity and its dangerous complications have lately become increasingly common.

Obesity is an alarming epidemic because of its comorbidities, which include diabetes, cardiovascular disease [4], and based on new evidence, increased risk of some forms of cancer [5, 6]. Obesity-driven diabetes, or Type 2 diabetes, was previously only a problem for adults and was termed “adult-onset” diabetes, to distinguish it from “childhood” diabetes, or Type 1 diabetes, which is primarily immunological in origin. Unfortunately, Type 2 diabetes is now prevalent among children, which is a new development in human history and is driven by obesity. In fact, 90% of all Type 2 diabetes, with its life-threatening complications, is obesity-driven.

Pediatric obesity is increasing globally, as an externality of economic growth. There is an asymmetry in the link between obesity and socioeconomic class, such that in wealthy nations, obesity is prevalent among the poor, whereas in emerging economies, obesity is prevalent among the rising middle class. Anthropologists explain this asymmetry as a case of rising status being associated with what is scarce. In nations with abundant food and scarce time, being lean is scarce and may, ironically, require greater investments, such as prepared foods and gym memberships. In contrast, in emerging economies, food may be scarce and foods with popular global branding are regarded as luxuries or status symbols. Thus, in emerging economies, pediatric obesity is associated with an expanding middle class, as a history of scarcity gives way to more plentiful foods that are caloric but nutritionally inefficient, which are often globally sourced [7]. Consider some examples: Childhood obesity in Kuwait is increasing rapidly as wealthy children are frequently offered fast food as a fashionable treat, which has prompted the government to explore new diagnostic tools [8]. New wealth in Bangalore, combined with call center jobs that involve long periods of sedentary work, is raising the incidence of obesity-related health problems [9]. World cacao reserves are depleting as Chinese middle class consumers develop a taste for chocolate, urged by American marketers, for example, pushing Oreos in China as a food and a cultural “experience.”

In contrast, in developed countries, pediatric obesity is related to poverty. Juxtaposition of two maps of the United States from the CDC [10], one showing the prevalence of obesity at US county-level resolution and other showing the prevalence of poverty, represents this strong correlation. Time becomes the scarce resource in developed nations. There are strong pressures to work long hours, whether as a demonstration of commitment for professionals or to secure a livelihood for workers in low-wage jobs. Time is required to prepare healthy meals in nuclear families and to exercise. The child development supplement (CDS) of the panel study of income dynamics (PSID) has been used to show that both maternal and paternal long hours of work affect childhood obesity [11]. Parents who can allocate more time to their children can play a role in reducing pediatric obesity. “Shared parent-child activities found to have an impact on childhood obesity included yard work, laundry, shopping, building or repair work, food preparation, talking, and reading” [11]. Also using the CDS of the PSID, maternal supervision of children and provision of nutrition were found to be small but significant mechanisms that mediated the relationship between maternal employment and childhood obesity [12]. The prevalence of pediatric obesity, but not the mechanisms, varied by maternal education. It becomes too easy to designate “good” versus “bad” parenting strategies for managing childhood obesity and moreover, to infuse these conclusions with class-based biases. Article titles such as “Do working mothers raise couch potato

kids?" [13] show the impulse toward locating the problem in individual lifestyles and behaviors. However, the problem of obesity and poverty in developed countries is more complex and involves structural factors, including economic policies [14].

3. Work conditions in the corporation

We hypothesize that corporations promote obesity in families through three aspects of the employment relationship: low wages, long hours, and unpredictable hours. Low wages strain a family's ability to buy healthy foods, live in neighborhoods where fresh produce is more likely to be available, and enroll family members in exercise programs. In 2009, 5.2 million families were living below the US poverty level, despite having at least one member in the labor force for half the year or more. The 2009 figure increased from 4.5 million in 2008 and continues to trend upward [15]; inequality across households is widening in the United States [16]. The plight of the working poor [17], whose employment does not yield sufficient income, widens the gap in well-being. Even the conditions of the unemployed poor may be determined in part by corporate labor policies, particularly where unemployment or part-time work status is involuntary. Corporate investors in the United States have long pressed for employment practices that maximize shareholder wealth but negatively impact work conditions and workers; layoffs increase stock prices [18] but strain households, wages are depressed in the lowest positions [19], and US jobs are outsourced [20].

Long hours of work tax the ability of family members to engage in physical activity and the ability of parents to prepare healthy foods from fresh ingredients each evening. Work hours in the United States increased steadily from the 1970s [21], especially for families where parents' low wages require their taking a second job. Increased working hours for men are found primarily among high socioeconomic score (SES) brackets [22], and thus, a key mechanism behind pediatric obesity likely depends on the intersection of low SES with *female* hours worked. Specifically, working mothers in the United States spend significantly less time with their children than nonworking mothers, in each of several dimensions (eating together, unstructured playing together, playing sports together, custodial care or supervision) [23].

Long hours worked by mothers are associated with childhood obesity in the United States [12, 24, 25], the United Kingdom [26], Australia [27], and Japan [28]. Working mothers frequently express preferences for sustainable jobs at 20–30 h of work per week [29] and limit on the pressure to do involuntary overtime [30], but corporations typically do not provide such employment options. At the same time, father's as well as mother's work conditions are increasingly having a negative impact on pediatric obesity. A study of 434 9-year olds in an Australian birth cohort, 22.8% of whom were overweight or obese, found that father's non-standard work hours, but not mother's, were significantly associated with the child's being overweight or obese [31].

Families composed of middle class and white collar professional parents might compensate for longer hours by hiring child care providers who facilitate children's after school physical activities or by purchasing time-saving and healthy already prepared foods. Women in lower SES strata do not have these options. Parents in low-wage jobs cannot afford many of the child

care options available. If they must rely upon food stamps, the US government's food subsidy to offset poverty, as many families do when corporations pay low wages [32], they cannot use these food stamps to buy prepared meals. Thus, the intersection of low wages and long hours for parents likely increases the hazard of obesity for children.

Unpredictable and nonstandard hours may make it difficult to create healthy conditions for children. For example, parents in retail jobs with varying schedules that include weekends may find it difficult to create exercise routines or help their children participate in organized sports. Service sector jobs are increasingly affected by this type of instability, which is sometimes attributed to the intrinsic nature of the work and the corporate necessity of coping with steep competition. Researchers are asking "Are bad jobs inevitable?" [33] in the competitive global economy and concluding that the answer is No. Alternative employment strategies can support stability and better wages, more evidenced in European than US employment [34]. Consider an example: In Massachusetts, in the United States, in 2009, the Hyatt Corporation dismissed its domestic staff who were earning living wages of \$17 per hour. They replaced them with an outsourced housekeeping staff earning \$8 per hour. The negative economic and health repercussions for these families linger, but of special note, the other hotels in this particularly competitive sector did not follow suit [35]. The downward spiraling "race to the bottom" in working conditions is not inevitable [36].

Whether hours are variable or standard, parents in low-wage jobs often find that they lack flexibility in when and where they are able to accomplish their work. They are less able to take time midday to bring their children for preventive and nonemergency health care [37, 38], which may diminish the possibility of early detection of increasing BMI and the provision of essential education. Flexibility for working parents is an intervention that could improve the health of children [39]. Early intervention can reshape the course of widespread diabetes onset in increasingly young people.

4. Children and the onset of obesity

Pediatric obesity is shaped by factors that are largely not within the control of children, which makes childhood obesity a good place to look beyond the tendency toward "blaming the victim" for social problems. The levels of exercise and content of diet for children, especially the alarmingly high number of obese children under the age of 11, are affected by parents, schools, built environments, and biological propensities.

Built environments include "safe streets" where children can walk to playgrounds and available options for purchasing healthy and affordable foods. They also include recent economic and technological developments like superstores that source and sell food in bulk. These stores make it easier to obtain processed food and less necessary to exert while doing so. A recent study finds that "an additional Supercenter per 100,000 residents increases average BMI by 0.24 units and the obesity rate by 2.3% points" [40].

The act of eating itself includes an environment, with factors such as portion size, plate size, food variety, lighting, and socializing; variation in these factors prompt individuals to eat

different amounts [41]. This body of research offers an expanded notion of marketing and context for understanding overeating, but the burden falls back to the consumer. The overarching conclusion is that individuals must monitor their “mindless eating” [42].

We suggest that, instead of treating diet and exercise as lifestyle choices that parents make, energy balance should be understood as shaped within structural constraints created by organizations and environments. In addition, the ability of parents to seek appropriate clinical screening for their children, which can yield early detection of inflammation profiles and medical complications, is often shaped by work hours and wages. Lower SES and working in jobs where compliance is valued over speaking up can affect whether and how much parents lobby in the doctor's office for early medical interventions [43].

Considerations for how overall environments shape individual options around food and exercise behaviors are just gaining salience. Ideas from organization studies about meritocracy show how hard it is for structural factors to appear above the din of individualistic attributions and recommendations. Despite extensive research on numerous structural factors, the focus remains on individualistic health goals, even for very young children. The Institute of Medicine [44] issued a comprehensive set of recommendations, which focus on having early child care providers create ample time for exercise and movement, even for infants, and serve healthy foods, with state regulators urged to oversee these practices. Such practices are necessary and useful, but are designed around a fragmentary, incomplete portrait of how parental work conditions relate to childhood obesity. More fundamental questions, such as why long parental work hours necessitate so much child care or how quality and affordability of child care varies across SES, were not probed. Parents who work nonstandard hours may have to resort to more sedentary child care options, such as children staying with older, retired relatives, or alone.

5. Path dependencies and future “life chances”

Childhood obesity typically determines important biological pathways early in life, such that adults who experienced obesity as children commonly show early onset of the comorbidities of obesity, such as diabetes and cardiovascular disease. Our problem of interest becomes relevant here, because while “willpower” has some impact on the margin for adults seeking to control obesity onset later in life, obese children find themselves coping with deeply set biological patterns that will make future control of their obesity difficult. Individualistic prescriptions for diet and exercise will be of limited value; even more extreme surgical remedies, such as bariatric surgery, show mixed evidence of long-term success [45]. There is mounting evidence that extended exposure to chronic obesity may promote irreversible, “epigenetic reprogramming” events that permanently alter molecular pathways in humans, including nutrient-sensing pathways in the brain, for which there is currently no practical hope to correct [46]. Sociologists have long examined early path dependencies shaped by children's race and class [43], demonstrating how early determinants of life chances have significant impacts over a long duration. In juxtaposing these cross-disciplinary literatures, we see that recent medical research is finding remarkable, specific molecular evidence to support this well-

established sociological literature on paths set in childhood. With this broad picture of pediatric obesity, it is easier to see the importance of engaging less individualistic analyses and more structural solutions.

6. Faith in meritocracy

Meritocracy is an ideal that states that a person's merits determine their outcomes [47]; for example, working hard yields higher income. Meritocracy poses a “logical syllogism” [48] in that it also implies the reverse: People with low incomes must simply not be working hard. The corporation is a setting where faith in meritocracy is emphasized; employees receive performance evaluations and are rewarded with promotions and income accordingly. Employees are less likely to contest inequality if they accept that it is meritocratic, so corporations continue to reinforce the idea of meritocracy [47]. There are of course biases and breakdowns in meritocratic processes, such that poor outcomes may not be traceable to individual merit and effort. Nonetheless, the persistent faith in opportunity and meritocracy among Americans creates a belief that hard work can lift families out of poverty. Surveys find that two-thirds of Americans believe “most people can get ahead if they work hard” [49], consistent with General Social Survey findings over decades [50]. Data show that 9.2 million families constitute the “working poor,” who are employed, but whose incomes fall below the poverty level [51]. Nonetheless, Americans continue to view poverty as a “moral failing” and lack of a work ethic. These tenacious beliefs extend now to the realm of obesity, where a person's weight is regarded as a merit-based achievement—the result of meritorious individual behaviors, such as managing a good diet and exercising vigorously. The cultural overlay around these behaviors—and moral judgments of people who appear not to engage in them—is significant but often underestimated.

Among obesity researchers, people who engage frequent, high-intensity exercise but find it difficult to lose weight, and people who eat excessively yet gain weight relatively slowly, provoke a similar questioning of a simple link between effort and outcome. Deeper questions of the mechanisms that govern energy balance have been addressed in recent path-breaking work demonstrating that both humans and animal models that are obese but “metabolically healthy” and lean but “metabolically unhealthy” should be studied [52–54]. The underlying differentiator of metabolic health or abnormal metabolism is, in part, the person's inflammation profile, which is linked to absolute levels as well as ratios of specific cytokines identified in straightforward laboratory analyses.

7. Medical research and moving beyond individual behaviors

Structural constraints on individuals can be medical as well as societal. Not only socioeconomic class but personal medical profiles may reveal the limits to individualistic prescriptions. Biological propensities include a mix of factors that make some children more vulnerable to

obesity and its correlates. Specifically, a child's "inflammatory profile" may indicate varying levels of severity of obesity and likelihood of developing Type 2 diabetes [8].

Whereas certain individuals become obese on limited food intake, their experiences are rarely creditable, because ideas of individual accountability suggest that they must be consuming more energy than they report. Research articles with revealing titles such as "Do unsuccessful dieters intentionally underreport food intake?" [55] conclude that shame in a culture that blames obesity on the obese prompts underreporting.

Well-studied human populations provide illustrative examples of genetic and molecular mechanisms that couple energy intake and expenditure to obesity in ways that are not strongly associated with individual-level behaviors. The Pima aboriginal population of the states of southern Arizona in the United States and northern Sonora in Mexico are highly genetically similar and share evolutionary origins. The Sonora cohort subsists on a more traditional Mexican diet, whereas the Arizona cohort consumes a calorie-dense US diet. The Arizona cohort experiences some of the highest rates of obesity and diabetes in the world, whereas the Sonora cohort is less obese and much healthier. Consensus medical opinion holds that these differences are related to genetics and metabolic pathways, not primarily to differences in individual willpower on either side of the border.

New studies are being proposed, to learn more from these populations about the mechanisms linking obesity and health outcomes. With chronic inflammation as a central explanatory mechanism, new types of data become relevant. For example, the nationally representative US National Social Life, Health, and Aging Project, 2005–2006, was used to investigate why older black men have worse metabolic outcomes than older white men, ages 57–85 years. Research at the intersection of social science and medicine finds that health behaviors do not explain the difference [56]:

"Instead, these outcomes seem to derive more consistently from a factor almost unexamined in the literature—chronic inflammation, arguably a biological "weathering" mechanism induced by these men's cumulative and multi-dimensional stress. These findings highlight the necessity of focusing attention not simply on proximal behavioral interventions, but on broader stress-inducing social inequalities, to reduce men's race disparities in health."

The insight that obese individuals who are relatively metabolically healthy (*e.g.*, no Type 2 diabetes despite obesity) lack many local (in adipose tissue) and systemic (in blood) biomarkers of chronic inflammation was important [57]. The impact of such insight into medical screening and treatment protocols is surprisingly low inasmuch as many clinicians, whose training is a journey through avowedly meritocratic institutions, do not readily see beyond individual accountability for health outcomes. There is still strong medical opinion that avers that obese individuals must be both in charge of their own obesity and at risk of their somewhat deserved if unfortunate outcomes. Indeed, obesity was only recognized as a disease by the American Medical Association in 2013, over considerable opposition among professionals.

What is interesting from a translational medicine approach is that these findings meet resistance in promulgation into care management and public policy. One reason appears to be

that there is a robust faith that obese people must be, to some significant degree, “responsible” for their own obesity and unhealthy as a consequence (or even, more subtly, as a punishment or cautionary tale). The possibility that some obese people might not experience high risk of comorbidities like diabetes and cardiovascular disease, whereas some lean people may in fact experience elevated risk is a provocation and a challenge to long-held understandings. This provocation might be greeted as a bold new way to direct healthcare dollars into more carefully evidence-based treatments of obese and lean people [53]. However, these insights run against the grain of cultural beliefs. Dominant ideas like meritocracy traverse societal domains. It is as likely that deeply held views of merit-based outcomes prevail in the workplace as in the clinical setting.

Overall, the role of unresolved, chronic inflammation [57] in understanding childhood health risks [8] and racial disparities [56, 58] is gaining attention. The quest to characterize structural factors in addition to individual behaviors requires a shift in mindset. Individualism is defended by the corporate actors who benefit most from the current economy. Fresh perspective is needed precisely at a time when the idea of individual accountability is gaining global traction. Individual accountability is a fundamental tenet of neoliberal capitalism and its financial institutions, which are only getting stronger [59].

8. An expanded role for corporations

Many players across sectors have been called to action to address the pediatric obesity epidemic. The CDC [3] lists these:

“The dietary and physical activity behaviors of children and adolescents are influenced by many sectors of society, including families, communities, schools, child care settings, medical care providers, faith-based institutions, government agencies, the media, and the food and beverage industries and entertainment industries.”

Notably absent from this list is the for-profit sector and corporations beyond the industries proximally related to food and exercise.

Corporations have been drawn into obesity debates in their roles as producers and distributors of sugary, fatty, and salty foods. Some corporations have voluntarily withdrawn their foods from vending machines located in schools. Companies that rely on foods regarded as too sugary are seeking new strategies, as described for the Kellogg corporation in the business press [60]. Business schools have been teaching for a decade about the food industry and its response to public pressures to address the obesity problem [61].

Corporations play another role in health care in the United States, as the provider of health benefits to employees. In addition, they increasingly offer wellness programs, which sometimes focus on obesity; one review found some fun work-based contests like “the biggest loser,” which is modeled in a popular television program [62]. These wellness programs are more

likely to support adults and do not typically extend to the children of working parents. Such programs are also rare in low-wage workplaces.

We propose that the most important role of corporations for stemming pediatric obesity is their structural role as employers. As employers, corporations create working conditions for the parents of young children, which in turn affect parental time and financial resources for supporting their children's diet and exercise [63, 64]. Work practices can be a good place to look for sources of inequalities [65]. Long and nonstandard hours of work affect parenting, such that pediatric obesity might be regarded as an externality of current work arrangements. An externality is a factor that causes harm, that a corporation exports, that no corporation is rationally motivated to curb on its own, but that later impinges negatively on all corporations and societies collectively; pollution is an example. Considering pediatric obesity as a negative externality of corporations might reframe policy debates, particularly toward supporting more remunerative and stable work conditions.

We emphasize the importance of looking at the corporate role in creating obesogenic employment conditions. Indeed, employment and consumption patterns may be linked, when taking a broader view of food systems [66]:

“[I]nstead of paying workers well enough to allow them to buy things like cars, as Henry Ford proposed to do, companies like Wal-Mart and McDonald's pay their workers so poorly that they can afford only the cheap, low-quality food these companies sell, creating a kind of nonvirtuous circle driving down both wages and the quality of food. The advent of fast food (and cheap food in general) has in effect, subsidized the decline of family incomes in America.”

The pediatric obesity epidemic will, in turn, affect corporations. The future workforce will be less healthy and robust, and the children of workers in low-wage jobs, who are statistically most likely to end up themselves in low-wage jobs, may not be fit to undertake the heavy lifting or long hours expected. In addition, public opinion is shifting, such that there is greater awareness of food issues and their sources. Corporations should be welcomed into the varied alliances of stakeholders working on the pediatric obesity crisis.

Why might corporations be reluctant partners in this project? The answer requires looking at power. Status quo employment arrangements favor top executives and shareholders. Meritocratic ideals and the ethos of individualism can be invoked to legitimate inequalities from which corporate leaders benefit. Shifting toward structural explanations for outcomes, whether income or obesity, is a radical move. It will require some radical redistribution of employment opportunities, incomes, and resources, and thereby, it is likely to be met with resistance.

9. Conclusion

Our aim in this paper has been to take a fresh look at the pediatric obesity crisis across disciplines, with special attention to what insights from organization studies might bring to

bear. There is debate about whether the food industry can be a socially responsible partner in addressing the obesity epidemic [67, 68]. More broadly, we urge attention to whether organization studies scholars can broker a move away from persistently individualistic explanations and urge corporations to play a positive role in re-imagining lives, livelihoods, and health. Advances in molecular biology and medicine are pointing toward factors beyond individual behaviors. We argue that new prevention and treatment measures will only be seriously implemented in obesogenic and diabetogenic institutional contexts where individual choice models are not supreme.

We close by considering how the overarching analytical approach to “agency and structure” that we have urged in this chapter can assist in tackling three persistent myths in the realm of obesity.

1. *Weight loss programs work.* Many bariatric surgical patients regain weight, often reverting to their original BMI by three years after surgery. These individuals have been forced by their disease to elect the most dramatic medical intervention available and thus are strongly motivated to keep weight down; thus, mechanisms other than weak willpower likely account for their failure. New research suggests that metabolism is reprogrammed in obesity in ways that make high BMI the new “set-point.” Until we address this mechanism with new drugs and more creative clinical interventions, many weight loss programs must cope with a frequent failure rate.
2. *All obesity is the same with respect to disease risks.* Clinical studies have identified subpopulations of “metabolically obese but normal weight” and “metabolically healthy but obese” individuals. The former have a lean body phenotype, but a blood profile with elevation of insulin, of fasting glucose, of cholesterol, and of lipids, with corresponding increased risk of death from diabetes and cardiovascular disease. The latter have an obese, sometimes severely obese, body phenotype, but relatively normal blood measures and relatively attenuated disease risk. Thus, obesity is not disease destiny; the genes and molecular pathways that couple BMI to disease pathogenesis in these two subpopulations must be different from the general population. Chronic inflammation is thought to provide one such pathway. In recent analysis of Framingham Study adults, Denis has shown that “metabolically healthy obese” adults, who have attenuated inflammatory profiles, also appear to be protected from certain obesity-associated cancers [5, 10].
3. *Obesity is caused by eating too much.* This myth is perhaps the most pernicious of all. New research shows that obesity is multifactorial in origin, with surprising contributions from obesogenic chemicals that pollute the environment, such as tributyltin (a common additive in marine paints), and very small changes in energy balance or even ambient temperature. Thus, warmer winters in North America may provide a significant but understudied contributor to obesity. Furthermore, many US media voices emphasize the importance of portion control, the evils of high-fructose corn syrup, and the dangers of sugary sodas, without explaining why some Americans who consume large quantities of high sugar foods remain relatively healthy and lean, while others who restrict themselves to diet sodas and salads cannot seem to lose weight, beyond obvious explanations about differences in physical activity.

These insights, anchored in scientific research, should trigger new thinking about obesity. But individualistic and behavior modification approaches still offer a dominant narrative, and working conditions in corporations still hamper many people even from attempting alternative individualistic or family behaviors. The tools of scholars working at the intersection of disciplines—including the study of corporations—can help explain why these myths are so deeply culturally embedded and so obdurate.

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