Body Weight and Self-Control in the United States and Britain since the 1950s

By AVNER OFFER*

SUMMARY. Body weight has risen in defiance of health and appearance norms. This is framed in terms of the problem of time-inconsistency and self-control. The social epidemics of overeating and slimming were driven by market forces and the psychology of eating: restrained eating was easily disinhibited by the stresses of new rewards. For men, the rise in body weight was associated with the decline of family eating and exposure to greater food variety. For women, the 'cult of slimming' was associated with mating and workplace competition, driven initially by adverse sex ratios. Food abundance made it difficult for rational consumers to conform with social norms.

KEYWORDS: obesity, self-control, courtship, overweight, sex-ratios, social class, gender

Body weights have been rising above normative levels, first in the United States since the 1960s, and subsequently in Britain. These trends have generated a substantial academic response: in physiology, medicine, and psychology, in anthropology and economics, in history and in cultural studies, and also a vast lay and expert literature of exhortation and self-help. Disinterested observers might infer that the volume of publication is inversely related to its efficacy: if rising weight is a problem, there is no reliable knowledge on how to reverse it. Several recent historical studies are largely written in a socio-cultural, and sometimes explicitly feminist, vein. These accounts are either mostly descriptive, or they focus on cultural pressures on women to slim. They do not systematically explain the trends in body weight. Anthropometric historical research on body weight is only just beginning. If affluence is generally associated with increasing well-being, then the increase in body weight above normative levels presents an unwelcome paradox. The economic theory of consumer behaviour assumes that consumers are the best judges of their welfare, and that they act consistently and optimally over time. Rising weight can be seen as the outcome of rational consumer choice.

* All Souls College, Oxford, Great Britain OX1 4AL, UK. E-mail: avner.offer@all-souls.ox.ac.uk


2 Stearns, Fat History, is the most analytical of these studies.


Green's dilemma is a challenge to this point of view. In her *Diary of a Fat Housewife*, she wrote, 'I'm starting my diet, tomorrow, that's right/so let's have that last bite of pizza tonight!' But, for many years, tomorrow never came. Like millions of others, despite her best efforts, her weight would not go down. This study assumes that consumers may find it difficult to achieve their objectives. This may help to explain how cultural attitudes were formed. Moving from the individual to society as a whole, the rise of body weight demonstrates how affluence can rise, and yet fail to deliver well-being.

I

The social norms of body weight have reflected two concerns: health and personal attractiveness. Since the 1950s, both appearance and health norms for body weight have been going down. The standard height-adjusted measure is the Body Mass Index (BMI), calculated as weight (kg)/height squared (m²). The World Health Organization defines 'overweight' as starting at a BMI of 25 for women and men, and for all ages, with 'obesity' at BMI 30 and above. American agencies, which had previously used higher thresholds, have recently accepted this norm. Large longitudinal studies in the USA indicated that obesity (BMI > 30) doubled mortality risk. Obesity is associated with increased risks of gallbladder diseases, diabetes, heart disease and hypertension, of eightfold, sixfold, threefold, and one-half respectively. That mild overweight is harmful has been disputed, but recent work shows that it is not benign. In a British study of 7,735 men aged 40–59, '[the] risk of cardiovascular death, heart attack, and diabetes increased progressively from an index of <20 even after age, smoking, social class, alcohol consumption, and physical activity were adjusted for'. Similar findings were obtained for American women, aged 30–55, on a larger sample. The conventions of personal attractiveness have also lowered weight norms. In personal interaction, the overweight were held in low regard, and found it more difficult to make and keep friends and

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8. Bray, 'Overweight', e.g. fig. 3, p. 20.
spouses. Attractive persons had better prospects in education and at work, and were more likely to elicit co-operation.\textsuperscript{13}

Weight norms have followed a long cycle. A long-term record of these norms is provided by the measurement of photographs of models in women's magazines. The bust-to-waist ratios in \textit{Ladies Home Journal} and \textit{Vogue} declined from the turn of the century to a minimum in the 1920s, when weight-reduction first came into vogue. They rose to another peak in the late 1940s, a lower peak in the early 1960s, and a particularly sharp decline into the 1980s.\textsuperscript{14} \textit{Playboy} centrefolds and Miss America contestants in the 1960s and 1970s fell substantially below normative weights.\textsuperscript{15} Such norms were beyond the reach of most women. Feminist writers decried them as oppressive, in titles like \textit{Never too Thin, Unbearable Weight, Am I Thin Enough Yet?, The Beauty Myth} and \textit{The Tyranny of Slenderness}.\textsuperscript{16}

Real consumer spending per head more than doubled in the USA and Britain between 1950 and 1990.\textsuperscript{17} In contrast, spending on food, alcohol, and tobacco has risen only about one-fifth in the UK, and one-quarter in the United States.\textsuperscript{18} In spite of the lag in food consumption, body weights continued to rise while weight norms were going down (Figure 1). From around the turn of the century, average body weights rose about two BMI units, and may have already reached their 1980 levels in Britain in the 1930s, but were still within the 'optimal' range.\textsuperscript{19} Similar magnitudes of increase occurred in the United States, c. 1894–1961, with most of the increase apparently after 1944.\textsuperscript{20} National surveys since the 1960s show that,\

\begin{itemize}
\item \textsuperscript{16} Seid, \textit{Never too Thin}; S. Bordo, \textit{Unbearable Weight: Feminism, Western Culture and the Body} (Berkeley, 1993); Hesse-Biber, \textit{Am I Thin Enough?}; K. Chernin, \textit{Womanize: The Tyranny of Slenderness} (London, 1981); Wolf, \textit{Beauty Myth}.
\item \textsuperscript{17} U.K. Data are in constant 1990 prices, normalized to American 1987 dollars, which are used for American prices. In 1990 Purchasing Power Parity between the pound and the dollar was almost unity. USA: S. Lebergott, \textit{Pursuing Happiness: American Consumers in the Twentieth Century} (Princeton, 1993), appendix A; UK: Office of National Statistics, National Income Accounts, downloaded electronically.
\item \textsuperscript{18} It declined from 40 to 20 per cent of personal consumption expenditure in the UK, and from 30 per cent to 17 in the USA. Elasticities of food expenditure on consumption were 0.22 in the UK and 0.28 in the USA.
\item \textsuperscript{19} Floud, 'Height, Weight and Body Mass', figs. 9–10.
\item \textsuperscript{20} Costa and Steckel, 'Long-term Trends', fig. 2.4, p. 55. The data are patchy.
\end{itemize}
Fig. 1. Mean adult body mass index (BMI) in the United States and England and Wales, c. 1930–98

Note: For the USA since 1961 and for the UK since 1980, samples are large and representative, and typical standard errors of the mean are 0.13–0.14 in the USA (1988–91), 0.11–0.14 (E&W, 1991) and 0.04–0.06 (E&W, 1993–95) (USA adults aged 20 upwards). The earlier samples were large but were not designed to be encompassing. The broken line represents the ‘overweight’ boundary.


under affluence, mean BMI has been moving upwards: American men were already over the BMI health limit of 25 in the early 1960s, and rose to 26.5 thirty years later. American white women had lower BMIs, British men and women were lighter still, but average weights were converging upwards, women on men, and Britons on Americans. By the 1990s they were all well above the ‘overweight’ threshold of 25 BMI (Figure 1). Part of the rise can be attributed to ageing, but health–related weight norms are not adjusted for age, and similar rises are recorded within age groups.\textsuperscript{21} It was more significant that obesity (BMI > 30) was described as expanding sharply. Taking proportions rather than averages, from the 1970s to the 1990s the incidence of ‘overweight’ in the USA rose from 51 to 59 per cent for men, from 41 to 50 per cent for women, with Britain behind but catching up. ‘Obesity’ (BMI > 30) more than doubled in Britain to a level of 15—17 per cent, while of American men about one-fifth were defined as obese, and one-quarter of women.\textsuperscript{22} This is commonly referred to as an ‘epidemic’, which may be appropriate in view of the health consequences.\textsuperscript{23}

II

Body weight is regulated individually by the relationship between food intake and energy expenditure. The mismatch between weight aspirations and outcomes can be regarded as a problem of self-control. Self-control entails the sacrifice of some immediate reward for the prospect of a superior one. For Norbert Elias, the ‘civilizing process’ is the rise of self-control over historical time, exemplified in the evolution of table manners, in which the common bowl and greasy fingers gave way to a structured meal.\textsuperscript{24} Pierre Bourdieu found a contrast between the coarseness of working-class eating habits in 1960s France and the restrained and decorous format of middle-class eating.\textsuperscript{25} Both of these were progressive narratives, which linked a rise in affluence to increasing self-control. What they did not anticipate was that self-control might decline with abundance, nor did they anticipate the fragmenta-

\textsuperscript{21} In Britain, National Food Survey households increased in age from an average 34.1 to 36.6 between 1974–6 and 1992–4. An increase of this magnitude would raise BMI by 0.6–0.8 units, whereas the actual increase was more than twice as large. See A. Chesher, 'Diet Revealed? Semiparametric Estimation of Nutrient Intake-Age Relationships', unpublished paper, University of Bristol, (February 1996), table 1, p. 4; J. R. Gregory, K. Foster, H. Tyler, and M. Wiseman, The Dietary and Nutritional Survey of British Adults (London, 1990), tables 15.20–21, p. 247.


tion of meal patterns and table manners which has been strikingly observed in France itself.26

For weights to rise, it was necessary for people to prefer the immediate gratifications of eating, to the delayed ones of normative appearance. It is normal (though not always rational) to discount the future.27 But when people make choices that imply adverse consequences which they can foresee, and would not have made from a more detached or dispassionate perspective, their choice is described as 'time-inconsistent'.28 Such choices have long puzzled social scientists, as contradicting the assumptions of rational choice.29 They are sufficiently common to have motivated several explanatory approaches.30 In the rational choice approach there is no such thing as 'overweight'. People gain weight because the benefits outweigh the costs.31 But, if consumers (such as Mrs Green) are making a sustained effort to undo their prior decisions, that suggests that they regret the initial choice, and that compelling, but inferior, preferences pose a genuine difficulty. An alternative approach (widely observed in animal and human behaviour) suggests that discounting of future rewards is often not exponential but hyperbolic: rewards become more attractive as they approach in time, to a point where the ranking of preferences is reversed, so that an inferior reward now dominates a superior one in the future.32 The prior choice may be described as 'myopic'.33

The concept of myopia implies that one can do better by resisting a reward. Self-control, or prudence, the ability to defer gratification, thus becomes an attribute of rationality. The resources and strategies mobilized for self-control are individual and cognitive, involving knowledge, willpower, and personal rules and behavioural 'bright lines'. They also draw for support on social resources such as reputation, interpersonal pledges, contracts, norms, rules, and regulation.

The strategies of self-control, both cognitive and social, take time to develop and acquire.34 When they persist, they form durable clusters of 'culture'. If self-
control is costly, then the well-off have better access to it than the poor.\textsuperscript{35} Partly or wholly, this is because the poor have fewer realistic prospects of delayed rewards to look forward to. But self-control has not necessarily increased when society became more affluent as a whole. Our hypothesis is that myopic choice accounts for the reversal of the historical trend towards greater self-control. The post-war period of rapid economic growth was one in which the bulk of the population was finally released from the shadow of indigence. Food prices, which in earlier times had dominated manual incomes, fell sharply as a proportion of income, while supply increased greatly in variety.\textsuperscript{36} Affluence may be characterized as a flow of new and inexpensive rewards. If these rewards arrive faster than the disciplines of prudence can form, then self-control will \textit{decline} with affluence: the affluent (with everyone else) will become less prudent. Self-control strategies take time and effort to devise and to learn. Under the impact of affluence, they become obsolete.

\textit{III}

What caused body weights to rise was the impact of food availability on existing prudential strategies, interacting with the psychology of food consumption, and the decline in physical activity. Food availability was driven by supply competition. In the 1950s in Britain and America, most eating took place at home on the fixed occasions of three or four set meals. Housewives toiled long over 'the regular unimaginative English meal—meat, potatoes and, sometimes, "greens", followed by pudding and helped down by a final cup of coffee or tea'.\textsuperscript{37} In the 1950s, six out of every ten men took their main meal mid-day and at home. 'To be on the roads in any populated part of the country around mid-day is to see clouds of cyclists and motor cyclists who bear witness to this homeward trek.'\textsuperscript{38} American practice was similar. In the early 1950s, the core meal was made up of meat, starch (potatoes, corn, rice), and vegetables, but served more usually in the evening; of the ethnic minority cuisines, only the Italian made much headway, with spaghetti and tomato sauce.\textsuperscript{39}

Since the 1950s, the 'family-meal' system has been challenged by market competition, which has greatly expanded availability. British multiples increased their shares from one-fifth to three-quarters of the grocery market between 1950 and 1990.\textsuperscript{40} American supermarkets increased their share from 15 to 61 per cent in the same period.\textsuperscript{41} In the 1950s, they stocked 5,000–8,000 items, rising to more than


\textsuperscript{36} See notes 17 and 18, above.

\textsuperscript{37} W. E. Crawford and H. Broadley, \textit{The People's Food} (London, 1938), p. 54.


\textsuperscript{41} United States Department of Agriculture (henceforth USDA), 'U.S. Food Expenditures' [disk] (1/1996), Stock #91003, table 16. Sales for Food at Home by Type of Outlet.
25,000 different items by the 1980s. Shops stayed open longer: a median 82 hours a week in the USA in 1975, 108 in 1990, with universal Sunday opening, and almost a third of outlets open for 24 hours a day.\textsuperscript{42}

Cautiously, eaters also began to move beyond home cooking in search of variety and convenience.\textsuperscript{43} In the 1950s, a fifth of British breakfasts included American-type cereals.\textsuperscript{44} French \textit{haute cuisine} had long provided the model for upper-class cooking.\textsuperscript{45} Elizabeth David’s celebrated recipes introduced Mediterranean rustic flavours and ‘slow food’, with fresh ingredients, careful preparation, and a relaxed experience of eating. A similar \textit{nouvelle cuisine} appeared in the United States.\textsuperscript{46} For those in a hurry, the freezer and chilled sections of the shops carried ready-made food, building on the fish-fingers and frozen peas of the 1950s.\textsuperscript{47} At home, microwave ovens, introduced in 1973, reached 50 per cent of American households by 1985.\textsuperscript{48} Fridges and freezers made shopping easier.\textsuperscript{49} A 1984 British survey found ‘convenience’ food to account for more than a third of all food outlays.\textsuperscript{50}

In Britain, convenience and novelty beckoned in ethnic restaurants and takeaways, Chinese, Indian, Italian and Cypriot, and pizza parlours, burger bars and fried chicken outlets inspired or franchised from the USA. Still greater culinary variety diffused through the United States, reinforced by an abundance of themed cookbooks.\textsuperscript{51} Exotic cuisines entered the domestic cycle as sources of variety and spice, although not yet as staples.\textsuperscript{52} ‘Alien’ cuisines together accounted for about 12 per cent of restaurant turnover in 1975, rising to 27 per cent by 1990, or 36 per cent if ‘Continental’ ones are included.\textsuperscript{53}

Eating outside the home claimed less than 10 per cent of food outlays in Britain in 1955. By 1995 eating out had more than doubled its share of food spending, reaching about 25 per cent in the United Kingdom and more than 45 per cent in


\textsuperscript{43} J. Currie, ‘Trends in Food and Cooking Habits’, a study based upon research undertaken by the British Market Research Bureau on behalf of J. Walter Thompson Company Ltd. (196-), fols. 22–6.


\textsuperscript{45} C. Driver, \textit{The British at Table, 1940–1980} (London, 1983), ch. 1.


\textsuperscript{49} Ibid., table A1, p. 746.


the United States (Figure 2). The appeal was convivial as well as culinary. This is attested by the elasticity of 'eating out' on consumption expenditure, which was 0.93 in America and 0.76 in Britain, i.e. rising much closer in line with consumer expenditures than food outlays.

Fast food outlets expanded even faster. The palatable, fat-rich hamburger, pizza, fried chicken, and ethnic take-out cuisines rose from 3 to 16 per cent of US food


55 Data sources, see n. 17 above, and figure 2. Compare n. 18.
outlays between 1963 and 1993. Portions also grew, and the conception of a 'normal' helping has moved upwards. McDonald's biggest hamburger inflated from 3.7 ounces to almost nine. In a British market survey (1986), three-quarters of adults bought take-away food once a month, rising from about half in 1972. Most readily available were the sweet and salty, energy-heavy, snack or 'junk' foods: crisps, chocolate bars, nuts, cookies, soft drinks, etc. 'The most heavily advertised foods tend to be of dubious nutritional value', and are heavily promoted to children. Defining snacking as 'the consumption of food in-hand, without the use of domestic cutlery or crockery . . . and involving minimal or no immediate preparation', in 1987 in Britain, 'snack foods represent 34 per cent of all food purchases, and snack foods together with all other foods eaten as snacks account for 44 per cent of the total food market'. Adding non-alcoholic drinks would bring the outlay on snacking very close to 50 per cent.

There is a puzzle about food intake. Household food surveys showed intake in decline, even as body weights were rising. But the British National Food Survey omitted alcohol, confectionery and soft drinks, as well as eating out. A different, top-down, approach is to measure 'disappearance', that is, how much food enters the food chain. This incorporates some waste, but is a better guide to trends. Taking this measure, from 1961/4 to 1988/94 calorie intake per capita in the USA increased 22 per cent. Americans consumed about as many calories as Britons in the 1950s, but surged ahead in the 1970s, and again in the 1980s. Britons only followed after 1979 (Figure 3). American calorie intake was quite highly correlated with income per head over time \( r = 0.87 \), with British consumption much less so \( r = 0.39 \). Recent American household consumption surveys have also confirmed these trends, showing calorie intake rising about 9 per cent since 1977–78.
Decline in physical activity is a residual explanation for the rise in body weight, though there is little research. Bodily exertion at work has declined with manual employment. Britain motorized later than the United States, which may help to explain why Americans were heavier than Britons on the same amount of calories in the 1960s. The fragmentation of dwelling, shopping, and work has required more travel by car. It was a far cry from the world in which most men walked or cycled home for lunch. The physical activity that was once a part of daily life now had to be paid for with designated time, space, equipment, and advice. But, whatever the contribution of the decline in physical exercise, people have been eating more as well. They ate more because more variety was available. But how does food variety undermine self-control?

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54 Prentice and Jebb, 'Obesity in Britain', Philipson and Posner, 'Long-run Growth'.
55 In 1960 about 75 per cent of American householders had motor cars, vs. less than 50 per cent of British ones (Bowden and Oiffer, 'Household Appliances', Table 1, p. 729).
If food availability was the supply shock, on the demand side, the response was mediated by the psychology of satiation. Body weight responds to several different feedback loops, which are difficult to monitor and to control. It usually follows a slight rising trend over the life cycle without varying a great deal, but equilibrium is often well off target. The choice of what to eat and when to stop can be regarded as being either rational or myopic. Animal foraging in the wild, and hunter-gathering societies, are modelled in terms of 'optimal foraging', the rational quest for maximum energy at minimal effort. But the 'thrifty genotype', selected by evolution under scarcity, becomes maladaptive under affluence, and impels people to overeat. An 'efficient' converter of food into fat can put on twice as much weight as an 'inefficient' one, with the same intake. Metabolic efficiency is a genetic endowment, and overweight has a genetic component. There is a view that the body maintains a homeostatic balance that 'defends' a 'set-point' body weight. If weight falls below this level, the body will motivate weight gain. One approach to appetite concentrates on the 'normal' physiological cycle: an empty stomach signals hunger, the subject responds by eating, and a full stomach makes him stop. The feedback is self-contained and physiological, but the cycle is complex and poorly understood.

Once people attempt to restrain eating before satiation, they are easily disinhibited into excess eating. The trigger is external stress, which comes in three forms: appetizing food; negative feelings; and the company of other people. Again, similar results have come out of different research programmes. A robust finding is that eating restarts after satiation, when the subject is exposed to palatable food. Rats which maintained a steady weight on monotonous unrestricted 'chow' diets, rose rapidly into obesity when offered a 'supermarket' of appetising foods. Another research programme identified two psychological reactions to food. Eaters were given a 'preload', e.g. a satiating lunch. They were then presented with a rich milkshake or ice-cream. 'Normal' eaters soon lost interest. 'Restrained eaters' started a new cycle of eating. They could be identified in advance by their concern.
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about body weight, and their inclination to diet and binge. Once having overstepped their diets, 'restrained eaters' abandoned restraint altogether. This pattern appears to be pervasive. Although both 'normal' and 'restrained' eating are found at all weight levels, it seems that weight control is more easily attained by not trying too hard.

'Restrained' eaters typically turn to food in search of comfort and relief. Food acts as an 'emotional tranquillizer'. Distress is the single most reliable precipitant of a binge. Here again, there is a difference: in response to stress, 'normal' eaters hold intake steady or reduce it, while 'restrained' eaters increase it. In company, people eat more. In everyday settings, a curvilinear power–law relationship was observed between the number of eaters and the size of the meal. An increase from one eater to seven increased meal size from 400 to 700 calories. 'Restrained eaters' were more susceptible to companionship than unrestrained ones. Food prepared professionally, eaten on a special occasion, is likely to be more appetizing. Restaurant food tends to mimic formal bourgeois eating patterns, only more so. Noise, itself a form of stress, stimulates eating, hence perhaps the ubiquity of canned music in restaurants and pubs.

The disinhibiting effect of stress in the form of appetizing food, distress, and company, forms the link between the micro-motives of individuals, and macro-behavioural patterns. It suggests why Elias and Bourdieu have not been confirmed in their hypothesis that self-control would increase with affluence. The three-meal system was monotonous, regular, predictable, short on stimulation and on novelty. The breakdown of family mealtime routines, expanding food variety and choice,


83 J. M. de Castro and E. M. Brewer, 'The Amount Eaten in Meals by Humans is a Power Function of the Number of People Present', *Psychology & Behavior*, 51 (1991), 121–5; Herman and Polivy, 'What Does Abnormal Eating Tell Us', fig. 5.1, p. 212.

84 Wood, *Sociology of the Meal*, ch. 3.

the ubiquity of rich fast foods, and their attendant advertising, exposed increasing numbers to new foods, irregular eating and eating in public places and in company, thus precipitating a shift from 'normal' to disturbed, or aroused, eating patterns. Eating out, with its large portions, 'standard' three course meals, and clean plates, has also challenged restraint. In its turn, this has acted to shift body weight upwards, thus increasing the motivation for self-control, and hence for restrained eating. In their turn, restrained eaters find it more difficult to resist arousal and, as their share of the population increased, weight control became collectively more difficult.\(^{86}\) Dissatisfaction with weight is the most frequently reported hassle in daily life, and small hassles are good predictors of distress.\(^{87}\) and hence of eating binges.

From physiology on to society: economic and social status also affects desired body weight, both directly, and more importantly through gender. In poor societies, food is scarce, the poor are thin, and the wealthy are fat. Once these societies were exposed to food abundance, they experienced a sharp rise in weights, and rising levels of obesity.\(^{88}\) In affluent societies, these conditions persist, and the poor tend to fatness, while the well-off are slimmer.\(^{89}\) Table 1 compares the relation between obesity, class, and gender in the USA, Europe, and several developing countries. In poor countries, higher income is associated with obesity, for both women and men. In the developed world, there is a strong inverse relation for women. For men, there is an inverse relation in Britain and Europe, but an indeterminate one in the United States. Women's obesity is more strongly determined by socio-economic status than men's.\(^{90}\)

Table 2 indicates that, when average weights under affluence are considered (rather than obesity), the relation of class and weight is mediated by gender. American weight surveys are coy about social class. There is, however, one representative socio-economic breakdown available, of the national health survey of 1971–4, which is compared here with the British one of 1986–7. The gap in time brings the incomes closer together. Table 2 describes the two social extremes in the UK and the USA. American and British men at both social extremes differed very little from each other in BMI. In contrast, affluent, educated women were much thinner than poor women and those with little education. The difference in BMI between lower- and upper-class women was between two and three units.

These weight norms are consistent with the 'handicap principle' in signalling: it is the scarce and costly which is valued.\(^{91}\) 'Beauty, if it's to be deemed to have any

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TABLE 1. Relationship between socio-economic status and obesity: percentage of studies showing inverse or positive relationship

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TABLE 2. Mean weight, height, BMI and social class of adults, USA 1971-4, UK 1986-7

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<th>Men weight (kg)</th>
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<td>&gt;0.5</td>
<td>&gt;0.5</td>
<td>0.005</td>
<td>&gt;0.5</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Notes: (1) Ages: 18–74 in the USA, 16–64 for Britain. (2) USA Income: defined as family income. (3) American BMI is derived from height and weight data. (4) Probability: chance that the difference of the means is equal to 0, using two-tailed t-tests. Tests carried out on aggregate data. Reported data are age-adjusted.


worth, has to be rare.\footnote{N. Lawson, 'Let's Take a Wider Look at the Thin Issue', *Observer*, 16 April 2000.} Under indigence, girth signals wealth and power. Under affluence, it is slimness that is difficult, and demonstrates a capacity for self-control. If self-control is costly, it is more readily available to the well-off than to the poor.\footnote{Brown and Konner, 'An Anthropological Perspective', p. 42.}

American research indicates that *economic* rewards to slimness are not in terms of direct levels of pay. There was a small penalty for unattractiveness, and a small premium for attractiveness, but these were gender-blind, and the contribution of
body weight was not statistically significant. Other studies show a small wage penalty for obesity, affecting women alone. The rewards for body-shape accrued mostly through the competition for mates, a point reluctantly acknowledged by feminist writers. 'Physical attractiveness and weight are still the chief and most wholeheartedly sanctioned domains in which women are encouraged to contend with each other.' Female mating competition is more acute than male competition. Women seek men who are typically older, more educated and better off than themselves. The age, the income, and the education pyramids taper towards the top, so there are more female seekers than males sought. Women typically marry men who are two to three years older.

But why was it during the period from the 1960s to the 1980s that the 'cult of thinness' re-emerged? There are several reasons why mating competition, especially among middle-class and educated women, might have intensified during this period. These are associated with a reduction in the supply of eligible males. The 1960s to the 1980s were the decades of massive female entry into higher education and well-paid employment, which reduced the relative number of males with comparable or superior attributes. Women with high education and occupational achievement are less likely to be married. To make things more difficult, between the 1960s and the 1980s, the sex ratio turned strongly against women in the courting age, and they outnumbered considerably the numbers of men two to three years older. This arose as a result of the 'baby boom' cycle. In a sustained period of rising numbers of marriageable people, the older cohorts will be smaller than the younger ones, thus disadvantaging women seeking older mates. Figure 4 shows six different measures of the male/female sex ratio, in a separate cluster for each census year, for the United States and Britain. It

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100 Seid, *Never too Thin*, chs. 7–10.
Fig. 4. Ratios of eligible men per 100 women, selected age groups, total and unmarried, USA and England and Wales, 1950–91.

Note: Number for male 20–29 age group is taken as average for 20–24 and 25–29 age groups.


shows that, from a level of parity at the 1960–61 censuses, the number of eligible men per 100 women in the 20–29 age groups dropped to around 80, and this ratio persisted in the USA through the 1980 census. It is only by 1990 that parity was restored. Association is not proof of causation, but the relation is strongly suggestive.

In a tightening mating market, body weight was one way for women to compete. The weight target was set at the low end of the normal range.13,14 American

13,14 Rodin et al., 'Women and Weight', pp. 281–4.
women sought a lower weight for themselves than the level that men found attractive.\textsuperscript{105} This is consistent with the view that low weight is not desirable in itself, but is rather a credible signal of self-control and virtue.\textsuperscript{106} It also suggests why the media-driven 'cult of thinness' found such ready acceptance among the readers of women's magazines. Overweight was often regarded as an advertisement of moral failure: 'my body remains a visible-to-all-the-world sign that I am not in control of my life', wrote Rosemary Green. 'Fat parents are forever a sign of self-indulgence, a perfect example of lack of self-control'.\textsuperscript{107} Silverstein and Perlick make a suggestive association of eating disorders, extreme slimming, and the rise in mental health problems with women's labour force competition with men, whom they are driven to emulate in bodily appearance.\textsuperscript{108} There is a reasonably good fit between a norm of thin body shapes and the expansion of working opportunities for women in the 1920s and after the 1960s. And the signal of self-control may be as valuable in the labour market as in the mating market. But the stick-thin models in women's magazines are not generally shown as power-dressing, but rather wearing garments of a distinctly feminine character. And while weight norms have decreased, women's weights have increased. Anorexia only affects 1–2 per cent of college-age women, while about one-quarter of all women are obese.

Food has symbolic power, signifying masculinity and femininity, weakness and strength, high and low prestige.\textsuperscript{109} Some foods acquire an association with virtue or with moral failing: the self-help slimming movement (like its model Alcoholics Anonymous) has evangelical undertones.\textsuperscript{110} Many more women dieted than men, and on the average (comparing BMI outcomes), women succeeded better than men, suggesting that more was at stake for women.\textsuperscript{111}

Body weight affected the outcomes of courtship. In one American study, women of average weight reported one or two dates per week, overweight women about one per month.\textsuperscript{112} Being slim (or tall) has been conducive to social mobility. In Britain, the tallest women were the most likely to raise their social class through marriage, while the shortest were least likely to raise their social class


\textsuperscript{107} Green, Diary, pp. 27, 56; see Allon, 'Stigma of Obesity'; Hesse-Biber, Thin Enough?, p. 4 and ch. 2.


\textsuperscript{111} J. Horm and K. Anderson, 'Who in America is Trying to Lose Weight?', Annals of Internal Medicine, 119 (1993), 672–6.

that way.\textsuperscript{113} Obese women were more likely to be downwardly mobile.\textsuperscript{114} In New York in the 1950s, 12 per cent of upwardly mobile women were obese, as compared with 22 per cent of the downwardly mobile, with no comparable trend for men.\textsuperscript{115} In a large American study in the 1980s, differences in marriage probabilities and in spouse's earnings accounted for 50–95 per cent of the lower economic status of obese women, and visually unattractive women married less educated men: 'the great majority (as much as 96 per cent) of the economic deficit associated with obesity among women . . . results from differences in the marriage market (especially the probabilities of marriage), not the labor market'.\textsuperscript{116} Overweight women were less likely to marry, were poorer, and finished their education earlier than other women, and earlier than men of the same social position.\textsuperscript{117} If marital and occupational mobility was denied to the fat,\textsuperscript{118} then the poor had even greater obstacles to overcome than the well-off, and with a lower endowment of resources. In a period of accelerated marriage dissolution, mating competition did not end with marriage.\textsuperscript{119} Attractive women reported better sex lives and more faithful husbands and lovers.\textsuperscript{120}

Figure 5 shows that the younger women tended to be thinner than younger men, and how the gap has been closing both with age and over time: women became less competitive as they grew older, and the sex ratio moved in their favour from the 1960s to the 1990s.

During courtship, a woman might have struggled to eat as little as possible. In a permanent relationship, she typically aspired to keep her partner and children well fed.\textsuperscript{121} 'With cooking you get some appreciation', said a housewife in the 1960s, 'you'll never hear my husband saying the floor looks clean but he'll say he enjoys his food'.\textsuperscript{122} Women claimed more satisfaction from cooking than from any other housework.\textsuperscript{123} A well-structured 'proper meal' of meat and two veg. for the whole

\textsuperscript{113} Knight and Eldridge, \textit{Heights and Weights}, pp. 15, 18.


\textsuperscript{117} S. L. Gortmaker, A. Must, J. M. Perrin, A. M. Sobol, and W. H. Dietz, 'Social and Economic Consequences of Overweight in Adolescence and Young Adulthood', \textit{New England Journal of Medicine}, 329 (1993), 1008–12. As pointed out elsewhere, poverty is more likely to be a cause than a consequence of weight, and poverty is inversely correlated with education.

\textsuperscript{118} Occupational mobility, see Pagán and Dávila, 'Obesity'.


\textsuperscript{122} J. Currie, 'Trends in Food', fols 1, 10–14.

FIG. 5. Ratio of proportion of overweight women to proportion of overweight men, USA 1960–94


family (or some ethnic variant thereof) has remained the woman's ideal. Several British surveys found 60–70 per cent of families eating together on most days in the 1980s. In 1987, 'Family mealtimes are more prevalent among younger people, and in the higher social groups. The presence of children in the family is particularly important.' A serious commitment to cooking survived the pressures towards 'convenience' in about a third of households.

But convenience was telling. With the decay of the 'three-meal system', by 1982 less than a quarter of British households conformed to the three-meal pattern, while almost half ate only one main meal a day by 1982. In the 1960s, British women spent about two hours a day cooking; by the 1980s, this had fallen by almost 45 minutes (Table 3). American women were cooking less than British women in the 1960s, and about the same in the 1980s. Some slack was taken up by men, so that the overall decline in cooking time was less; only about ten minutes in America, and twenty in Britain. By the 1980s about the same time was spent cooking in both countries, with women doing about four-fifths of the work.

126 Mintel, Snacking, p. 33.
128 Mintel, Snacking, p. 9.
129 In a recent survey, 80 per cent of women prepared every meal, while only 22 per cent of men did the same. G. Nicolaas, Cooking: Attitudes and Behaviour. A Report on OPCS Omnibus Survey Data Produced on behalf of the Department of Health. OPCS Omnibus Survey Publications: Report,
TABLE 3. Minutes per day spent in food preparation, UK and USA, c. 1961–90

<table>
<thead>
<tr>
<th>Period</th>
<th>UK</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>1961–70</td>
<td>120</td>
<td>9</td>
</tr>
<tr>
<td>1971–82</td>
<td>103</td>
<td>11</td>
</tr>
<tr>
<td>1983–90</td>
<td>86</td>
<td>26</td>
</tr>
<tr>
<td>1995</td>
<td>60</td>
<td>35</td>
</tr>
</tbody>
</table>

Source: Research in progress by Professor J. Gershuny (1995). Figures are controlled for employment and non-motherhood, both of which reduced time spent cooking, and both of which increased.

With food, women’s mating interests diverged from their nurturing ones. For men, the domestic meal restricted their exposure to food; for women, its preparation prolonged this exposure. Children were inimical to slimness. Pregnancy usually had a lasting effect on body weight. Child-care is stressful, and stress disinhibits eating. Children like sweet and salty flavours, and energy-dense foods. They also react keenly to television advertising of such foods. Giving way to children, women are exposed more strongly to sweet and savoury snacks. ‘Junk food’ is an easy way to silence children, and another is to place them in front of the television. When the two practices are combined, the likelihood of obesity in childhood rises. Metabolic rates decline while children are watching television. When the pressures of home and work mount, one solution is to eat out more, and eating out, as we have seen, is also conducive to more ample eating. The stresses of marriage also disinhibit eating, and eating can become part of implicit bargaining about sexual exchange, signalling availability or withdrawal.

As body weight began to rise, it stimulated an effort to recapture self-control. As in other dimensions of self-control, those with more at stake, and with more access to resources, have been more successful. Women, with more at stake than men, maintained lower weights; the well-off were more successful than the poor. The repertoire of reactions included food choice, exercise, eating disorders, normative defiance, and acceptance.

If women were driven to slimness by the competition for attractiveness, then, for men, the compelling pressures have been the correlations of animal foods with heart disease. Previously these very foods, red meat in particular, were associated with manliness, while dairy products, fresh, full-fat milk and butter in particular, were regarded as healthy for children. In the 1950s and the 1960s the correlation between cholesterol and heart disease was discovered, and etched in the public mind. Heart disease at that time was the prime cause of death among males. What followed in the 1970s, in both America and Britain, was a shift in eating habits from richer protein and fatty foods, to foods that were perceived as either 'lighter', or as containing vegetable instead of animal fats. A US Senate committee highlighted correlations between food choice and disease in 1977; the Surgeon General urged a lighter diet, and similar British reports followed soon after. Despite some industry resistance, lighter eating became an official health objective. For the United States, some sense of the changes can be gleaned from a list of 'winners' and 'losers', which reflects both the shift to 'lighter' foods (e.g. broccoli, yoghurt), and to more sophisticated ones (e.g. wine, cheese, pasta). Similar changes have occurred in Britain.

Supply-side sources also indicate some shifts within food groups, such as the large shift from butter to margarine in both countries. But for body weight it is calories that count, and the rising input of meat, fats, cereals, sugar, and cheese in the United States adds up to a higher calorie intake (Figure 3). Three differences stand out: Americans ate more meat, while the British consumed more vegetables and cereals; and, while Americans were consuming more sugar, the British restrained

140 Levenstein, Paradox of Plenty, ch. 13.
143 J. J. Putnam, 'Food Consumption', National Food Review, July–Sept. (1990), 1–9, p. 2; C. Ritson and R. Hutchins, 'The Consumption Revolution', in J. Slater (ed.), Fifty Years of the National Food Survey, 1940–1990 (London, 1991), 35–46; For Britain, Buss, 'British Diet' and Nelson, 'Social-class Trends' also report these changes. As noted below (n. 147), American trends indicate that this improvement will have been partly counteracted by inferior nutritional quality of the growing proportion of food excluded from the National Food Survey, on which these studies are based.
their sweet tooth. These changes involved some self-deception. There was a shift from 'heavy' meat (beef, pork, mutton) to 'light' meat, but consumption overall increased substantially. Artificial sweeteners only accounted for about 7 per cent in terms of sugar equivalents. Low-fat 'lite' foods are often almost as high in calories as regular foods. American sales of diet drinks rose from 2 to 12 gallons per year per head, but sugared soft drinks increased from 21 to 40 gallons at the same time (1968–1994).

In both the United States and Britain, improvements in the nutritional quality of food have taken place inside the home. In the stable context of the home, learning took place and prudential eating strategies emerged. But increasingly, as we have seen, food is eaten outside the home. The expanding, compelling, novel, and less regular eating environment outside was able to frustrate these strategies. And this food, in the United States, improved much less. It typically contained more of the nutrients overconsumed (fat) and less of those underconsumed (calcium, fibre, and iron). From Britain there is evidence that the prudential task was more difficult for the poor. Specially packaged, palatable 'light foods' tend to be more expensive than the dietary staples, while cheap, low-fat, unsweetened staples such as oatmeal and cabbage take a considerable effort to convert into palatable meals. Poor families found it more difficult to produce balanced diets within their budget constraints. The lower social grades consume 'junk food' more heavily, e.g. 14 per cent of class AB are 'heavy users' of potato crisps, as against 27 and 30 per cent respectively for classes C2 and D. There are large differences in household consumption, and the well-off spend more than the poor on food, especially on high-cost foods. Body weight is implicated in cancers and heart disease. All of them bear more heavily on the lower social classes, and these classes also tend to consume more tobacco, alcohol, and inferior food.

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144 See Figure 5 in the discussion paper version of this article. Based on OECD, Food Statistics (annual).  
147 Fumento, Fat of the Land, pp. 80-1.  
148 USDA, Economic Research Service, 'Food Consumption, Prices, and Expenditures' (February 1996), Stock #89015B.  
149 The British National Food Survey, which reports these changes, covers only home consumption.  
150 Lin et al., 'Away-from-Home Foods'.  
152 Z. Ratcliff (ed.), Snack Foods, 12th edn (London, 1997), table 20, p. 46. Similar gradients are found for other 'junk' foods.  
An appropriate response was to take up exercise: ‘Joggers have become an almost familiar sight throughout America in the last year [1968].’ Exercise swept the United States in the 1970s and 1980s. Stationary bikes became a spare-bedroom fixture, and younger people spent long hours ‘working out’. Fitness clubs were a £1bn industry in the UK by 1998. But exercise requires self-control and resources no less than restrained eating. Table 4 is an indicator that exercise (like other forms of self-control) increases with education and income. It also supports the notion that weight control is motivated by courtship. Exercise was as frequent among the never married, as amongst the highest earners and the best educated. In Britain, too, exercise was more of a male activity, and there was a class gradient, with professionals taking exercise more frequently than manual workers (Table 5). Both class and gender were converging over time.

Slimming is a repudiation of the prior ‘eating decision’. In the 1980s, about 23 per cent of American men, and 40 per cent of women, were trying to lose weight. In the UK, only 4 per cent of men, and 12 per cent of women were on a slimming diet. Both success and failure are expensive. In 1990, some $8.4bn was being spent in the USA on products for serious dieters, with about $33bn being spent on slimming as a whole. The direct treatment costs of obesity were placed somewhat higher, at $45.8bn. Together, what may be termed the money ‘regret costs’ of eating and drinking came to about 15 per cent of the outlays, comparable to all the increment in annual food and alcohol outlays since 1965.

Thousands of diet books attest that losing weight is a major emotional and cognitive undertaking, which often ends in failure. Success is a notable achievement, justifying celebration in a book, and providing credibility for a career as a slimming authority. This was Rosemary Green’s motivation to begin her diary, but even the financial incentive was of no avail. After years of yo-yo dieting, she came to see that having come within range of a snack, it was already too late to exercise self-control. She finally succeeded by turning over control of household food to her husband, who kept it under lock and key.

155 Chicago Tribune, 9 July 1968; the first recorded instance in the Oxford English Dictionary.
158 Horm and Anderson, ‘Who in America is Trying to Lose Weight?’ table 2, p. 674; Market research places the level much higher (Rodin, Body Traps, p. 166).
159 Gregory et al., Dietary and Nutritional Survey, p. 48.
162 Sources, n. 17, above.
164 Fumento, Fat of the Land, ch. 6.
165 Green, Diary, pp. 336–8.
TABLE 4. Exercise, drinking and smoking, USA 1990 (percentages, age 18 plus)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Exercise or sport regularly</th>
<th>Two plus drinks a day</th>
<th>Current smoker</th>
<th>BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>All persons</td>
<td>40.7</td>
<td>5.5</td>
<td>25.5</td>
<td>27.8</td>
</tr>
<tr>
<td>Male</td>
<td>44.0</td>
<td>9.7</td>
<td>28.4</td>
<td>27.3</td>
</tr>
<tr>
<td>Female</td>
<td>37.7</td>
<td>1.7</td>
<td>22.8</td>
<td>25.6</td>
</tr>
<tr>
<td>Marital status:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently married</td>
<td>39.4</td>
<td>5.3</td>
<td>24.6</td>
<td>29.2</td>
</tr>
<tr>
<td>Formerly married</td>
<td>34.3</td>
<td>5.3</td>
<td>30.3</td>
<td>29.1</td>
</tr>
<tr>
<td>Never married</td>
<td>51.3</td>
<td>6.6</td>
<td>24.3</td>
<td>19.8</td>
</tr>
<tr>
<td>Education:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 12 years</td>
<td>25.9</td>
<td>5.1</td>
<td>31.8</td>
<td>32.7</td>
</tr>
<tr>
<td>12 years</td>
<td>37.0</td>
<td>5.9</td>
<td>29.6</td>
<td>28.6</td>
</tr>
<tr>
<td>More than 12 years</td>
<td>52.1</td>
<td>5.4</td>
<td>18.3</td>
<td>23.8</td>
</tr>
<tr>
<td>Income:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $10,000</td>
<td>32.9</td>
<td>4.8</td>
<td>31.6</td>
<td>29.3</td>
</tr>
<tr>
<td>$10,000 to $19,999</td>
<td>32.3</td>
<td>4.9</td>
<td>29.8</td>
<td>28.5</td>
</tr>
<tr>
<td>$20,000 to $34,999</td>
<td>40.5</td>
<td>5.8</td>
<td>26.9</td>
<td>28.2</td>
</tr>
<tr>
<td>$35,000 to $49,999</td>
<td>46.1</td>
<td>5.6</td>
<td>23.4</td>
<td>27.8</td>
</tr>
<tr>
<td>$50,000 or more</td>
<td>51.7</td>
<td>6.7</td>
<td>19.3</td>
<td>24.9</td>
</tr>
</tbody>
</table>


TABLE 5. Exercise or physical activity of adults within last month in the UK, ages 19–40, by social class and gender (percentage engaged during last month)

<table>
<thead>
<tr>
<th>Class</th>
<th>Professional</th>
<th>Intermediate</th>
<th>Manual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>All years</td>
<td>55</td>
<td>39</td>
<td>44</td>
</tr>
<tr>
<td>1977</td>
<td>50</td>
<td>27</td>
<td>39</td>
</tr>
<tr>
<td>1987</td>
<td>59</td>
<td>46</td>
<td>50</td>
</tr>
<tr>
<td>1997</td>
<td>57</td>
<td>45</td>
<td>48</td>
</tr>
</tbody>
</table>

Sources: Great Britain, General Household Survey, data extracted by Professor J. Gershuny.

1 Annual, 1977 to 1997.

Chancellor of the Exchequer, also wrote a slimming book. Like Mrs Green, he also handed over control to his spouse. These successful dieters both conformed with Ainslie’s model of self-control: since available rewards were impossible to resist, their strategy was to surrender food control to an external ally, and to follow strict routines.

But self-control can go too far. A rising wave of eating disorders has emerged since the 1970s. Anorexia and bulimia are little known outside the affluent world in the last three decades, although they are not unknown in the Western past.

167 Ainslie, Picoeconomics, pp. 162–70, 296–7, and passim.
They affected young women mainly, especially in college.\textsuperscript{168} Clinical diagnosis is infrequent, but in milder forms these disorders affect substantial numbers.\textsuperscript{169} The mating hypothesis of female slimming is supported by a 1980s longitudinal study: female student eating disorders were peaking in the early 20s. Seven or eight years later the women were more likely to be married, heavier, and with fewer eating disorders, although still concerned about body weight. Men had fewer disorders initially, gained more weight subsequently and remained unconcerned about it.\textsuperscript{170} Likewise, the convergence of female and male BMIs in the 1990s (Figure 1) is consistent with the rise in male sex ratios during those years. The ultimate act of body-shaping is cosmetic surgery: in 1996, almost 300,000 fat-sucking operations were carried out in the United States, on 4.4 women for every man.\textsuperscript{171} It remains an anomaly that the pursuit of thinness does not seem to have abated, despite the return of sex ratios to parity—but the recent popularity of ‘working-out’ suggests that emphasis has shifted onto ‘muscle tone’, in which men are more heavily involved than women (Tables 4 and 5).

Black women were the heaviest of all social groups (Figure 1). Among the reasons canvassed are fewer educational and financial resources, low physical activity levels, ineffective dieting, and a rejection of non-black weight norms.\textsuperscript{172} This research is inconclusive. Many of these factors would apply to black men as well, but black men have similar BMIs to whites, while black women are two BMI units heavier than white women.\textsuperscript{173} Culture is as likely to be a consequence as an independent cause. The sex-ratio explanation of male–female difference may have some purchase here. For black women, sex ratios were much the worst. Black males have been disproportionately absent on military service or in prison, and fell victim excessively to accidents and violence. They achieved less in education than black women. Almost half of multi-person black households are now headed by women.\textsuperscript{174} In these circumstances, competition for males has become much less compelling, since the likelihood of marital commitment is reduced. The ratio of the percentage of white to black married men was 7:6:67 in 1970, 70:55 in 1980,

\textsuperscript{170} T. F. Heatherton \textit{et al.}, 'A 10-Year Longitudinal Study of Body Weight, Dieting, and Eating Disorder Symptoms', \textit{Journal of Abnormal Psychology}, 106 (1997), 117-25. This is not inconsistent with a labour-force entry interpretation for slimming pressures.
and 66 : 49 in 1990.175 With mating prospects so limited, there was less to be gained in trying to push body weight below its natural equilibrium.

Two other responses are acceptance and defiance. As we have seen, the extreme rational choice school regards overweight as an expression of legitimate consumer choice. At the other ideological extreme, feminist writers of the 1970s and 1980s recommended accepting one’s body.176 The National Association to Advance Fat Acceptance advocates ‘Fat Pride’.177 Several influences have been acting to relax weight norms. Sex ratios have improved in favour of women (Figure 4). Overweight is becoming a majority condition (Figure 1).178 Contrary to much comment, overweight people as a whole are not particularly low in self-esteem, and do not suffer exceptionally from mental disorders.179

VI

Under affluence, the challenge posed by cheap rewards like food is not to maximize consumption, but to pace it down to the rate of optimal reward.180 Pacing requires self-control, and self-control requires prudential strategies. Knowledge takes time to build up, and the better-off, who have the resources, are therefore more capable of success. This applies across the board: in women’s body weight, in junk food consumption, in taking exercise, in family meals, in smoking. Indeed, if one assumes that affluent men are more exposed to food temptations than the less well-off, then the weak relation between men’s income and their weight (Table 2) might suggest that well-off men are also exercising self-control, as the theory predicts.

The example of smoking is suggestive. Society lacks protection from new and cheap rewards, and smoking swept through the United States and Britain until, by 1950, about three-quarters of all American families were buying tobacco.181 Evidence that smoking was inimical to health emerged before the Second World War. By the early 1960s society was learning to respond. Governments endorsed the medical warnings, and began to regulate advertising. Learning goes on, and tobacco is increasingly restricted and shunned. Consumption peaked in the 1960s, and has been declining ever since. The higher social classes have proven more adept at avoiding tobacco, and the aversion is spreading. It is the poorest and those least educated who are the most exposed to the reward (Table 5).182 But, as old

175 Statistical Abstract 1992, table 49, p. 44.
176 Orbach, Fat is a Feminist Issue, e.g. p. 14, pp. 31–2.
178 Polivy and Herman, ‘Diagnosis and Treatment’.
180 Ainslie, Picoeconomics, pp. 256–73, 293–300.
problems were mastered, new ones appeared. Alcohol is rich in calories, while smoking inhibits appetite. Drinking rose in step with affluence until the 1970s, when it levelled off. Smoking has declined.\textsuperscript{183} This pattern is consistent with the rise of body weight. Over a ten-year period in the 1980s, men who quit smoking gained an average 4.4 kg, and women 5.0 kg. They were more than twice as likely to become overweight as non-smokers.\textsuperscript{184}

New rewards were thrown up by affluence faster than it took to learn to cope with the previous ones, so that overall, despite growing wealth, self-control declined. Obesity shows how abundance, through cheapness, variety, novelty, and choice, could make a mockery of the rational consumer, how it enticed only in order to humiliate. The 'cult of thinness' can be seen as a response to competitive demands on women in mating and the workplace. But its impact on behavioural outcomes was restricted to keeping women's average BMIs below those of men for about two decades; it has not been able to halt the upwards trend of body weight.

\textit{Acknowledgements}

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\textsuperscript{183} Sources as n. 17, above.

\textsuperscript{184} Flegal \textit{et al.}, 'Smoking Cessation'; in Britain, men non-smokers were heavier than smokers, but women were not. Gregory \textit{et al.}, \textit{Dietary and Nutritional Survey}, p. 229.