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***EPIDEMICS OF ABUNDANCE: OVEREATING AND SLIMMING IN
THE USA AND BRITAIN SINCE THE 1950S***

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Abstract

Body weight has risen in defiance of health and appearance norms. The social epidemics of overeating and slimming were driven by market forces and the psychology of eating: restrained eating is easily disinhibited by stress. 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 competition, driven initially by adverse sex ratios. Food abundance made a mockery of the rational consumer. Paradoxically, the costs of abundance fell more heavily on the poor, who have had less access to the resources of self-control.

EPIDEMICS OF ABUNDANCE: OVEREATING AND SLIMMING IN THE USA AND BRITAIN SINCE THE 1950s¹

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In her *Diary of a Fat Housewife*, Rosemary Green writes,

I'm starting my diet, tomorrow, that's right

So let's have that last bite of pizza tonight!

Alas, for year after year, tomorrow never comes.² A basic postulate in economics is that consumers are the best judges of their welfare, that they are insatiable, and that their choices add to the well-being of society.³ The post-war surge of consumption is therefore an unalloyed good.⁴ The life-cycle theory of consumption goes further, and assumes that consumer choices are consistent and optimal over time.⁵ The experience of eating in the post-war period belies this optimism. Abundance of food is desirable, but the consequent rise in body weights is not always so welcome. Why have weights risen above desirable levels, and differently between women and men, the USA and Britain? The eating experience suggests that abundance is not sufficient: well-being also requires self-control and prudent restraint.⁶

I

Real consumer spending per head more than doubled in the USA and Britain between 1950 and 1990.⁷ In contrast, spending on food, alcohol and tobacco has risen only about one-fifth in the

¹ Many thanks to Eleni Bantinaki, for devoted research assistance, to Prof. J. Gershuny, to Dr. Gavin Cameron, and Dr. Katharine Flegal for access to unpublished data. Thanks to H-J. Voth for some acute comments.

² Green, *Diary*, 6 Oct. 1983, p. 14.

³ Hausman, *Inexact and Separate Science of Economics*, chs. 1-2.

⁴ Lebergott, *Pursuing Happiness*.

⁵ Deaton, *Understanding Consumption*, ch. 1.

⁶ Recent historical studies include Schwartz, *Never Satisfied*; Seid, *Never Too Thin*, and Stearns, *Fat History*.

⁷ UK 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: Lebergott, *Pursuing Happiness*, appendix A; UK, Office of National Statistics, National Income Accounts, downloaded electronically.

UK, and one-quarter in the United States.⁸ Such restraint, in the face of vastly enlarged opportunities for consumption, suggests that something kept ingestion in check. One set of inhibitors were the social norms of body weight.

These norms arose out of medical experience, and from the conventions of personal attractiveness. An inverse relation between weight and health prospects was noted by American insurance companies at the end of the nineteenth century.⁹ Since the 1940s, 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 in kgs divided by height in metres squared. 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. This has been adopted recently by the American agencies, which had previously used higher thresholds.¹⁰ The large 1950s-1960s Framingham longitudinal study in the USA indicated that obesity (BMI>30) doubled mortality risk.¹¹ Obesity is associated with increased risks of gallbladder diseases, diabetes, heart disease and hypertension, of eightfold, sixfold, threefold and one-half respectively.¹² That mild overweight is harmful has been disputed,¹³ but recent work confirms 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.'¹⁴ Similar findings were obtained for American women, aged 30 to 55, on a larger sample.¹⁵

The conventions of personal attractiveness have also lowered weight norms. The overweight are handicap in personal relations. They were held in low regard, and found it more difficult to make and keep friends and spouses. Attractive persons were more likely to receive help and to elicit co-operation. They had better chances of employment, a higher starting salary, and faster promotion. Simulated juries judged them more leniently. They were favoured in college admissions.¹⁶ Weight norms are disseminated through the media. Between 1959 and 1988, the average weight of women in *Playboy* magazine centrefolds declined from 91 percent of expected weight (adjusted for height), to 82 percent. At the same time, the average weight of Miss America contestants declined from 87 to 85 percent of body weight norms. Body weights

⁸ It declined from 40 to 20 percent of personal consumption expenditure in the UK, and from 30 percent to 17 in the USA. Elasticities of food expenditure on consumption were 0.22 in the UK and 0.28 in the USA.

⁹ Marks, 'Body Weight'.

¹⁰ Bray, 'Overweight is Risking Fate'; Kuczmarski et al., 'Varying Body Mass Index Cutoff Points'; Flegal, 'Overweight and Obesity in the United States', p. 39.

¹¹ Bray, 'Overweight is Risking Fate', e.g. fig. 3, p. 20.

¹² Wolf and Colditz, 'Social and Economic Effects', table 1, p. 467s.

¹³ Bennett and Gurin, *The Dieter's Dilemma*, ch. 5; Seid, *Never Too Thin*, pp. 280-281.

¹⁴ Shaper et al., 'Body weight: implications', pp. 1291-2.

¹⁵ Manson et al., 'Body Weight and Mortality among Women', pp. 677-685.

¹⁶ Rodin et al., 'Women and Weight: A Normative Discontent', p. 272; Allon, 'The Stigma of Obesity in Everyday Life', pp. 136-140.

15 percent below the norm are characteristic of anorexia nervosa.¹⁷ In surveys, 70 percent of female characters on television were found to be thin, but only 17 percent of males.¹⁸ The girth of *Vogue* models since the 1920s shows a more complicated pattern, with women at their slimmest during the 1920s, then rising during the 1930s to peak in the late 1940s, with another lower peak in the early 1960s, and a particularly sharp decline since then.¹⁹ Feminist writers expressed their bitterness about these norms in titles like *Never too Thin*, *Unbearable Weight*, *Am I Thin Enough Yet?* and *The Tyranny of Slenderness*.²⁰

Before the war, average body-weight fell within the optimal range. Under affluence, BMI has been moving upwards (fig. 1). The mean weight of American men was already over the BMI health limit of 25 in the early 1960s. Thirty years later, it had reached 26.5. British men were at about 24 in 1960, and were still almost one unit lower than Americans in 1991.²¹ Women had lower BMIs than men up to the 1980s, but the 1990s were a period of rapid convergence, of women on men, and of Britons on Americans. The median person is now classified as overweight.²²

The number of *obese* people has been rising to ‘epidemic’ levels.²³ Taking proportions rather than averages, from the 1970s to the 1990s the incidence of overweight in the USA rose from 51 to 59 percent for men, from 41 to 50 percent for women, with Britain behind but catching up. Obesity (BMI of more than 30) more than doubled in Britain to a level of 15-17 percent, while of American men about one-fifth were obese, and one-quarter of women (table 1).

¹⁷ Garner et al., ‘Cultural Expectations of Thinness’; Wiseman et al., ‘Cultural Expectations of Thinness—An Update’.

¹⁸ Silverstein et al., ‘The Role of the Mass Media’.

¹⁹ Silverstein et al., ‘Some Correlates’; Silverstein et al., ‘Possible Causes’; Silverstein et al., ‘The Role of the Mass Media’.

²⁰ Seid, *Never too Thin*; Bordo, *Unbearable Weight*; Hesse-Biber, *Am I Thin Enough Yet?* passim; Chernin, *Womansize: The Tyranny of Slenderness*.; Wolf, *The Beauty Myth*. There is no male equivalent.

²¹ Kuczmariski et al., ‘Varying Body Mass Index Cutoff Points’, table 2, p. 545.

²² Fig. 1 and table 1.

²³ Björntorp, ‘Obesity’, p. 425; Seidell, ‘Obesity in Europe: Scaling an Epidemic’; Lurance, ‘Task Force’.

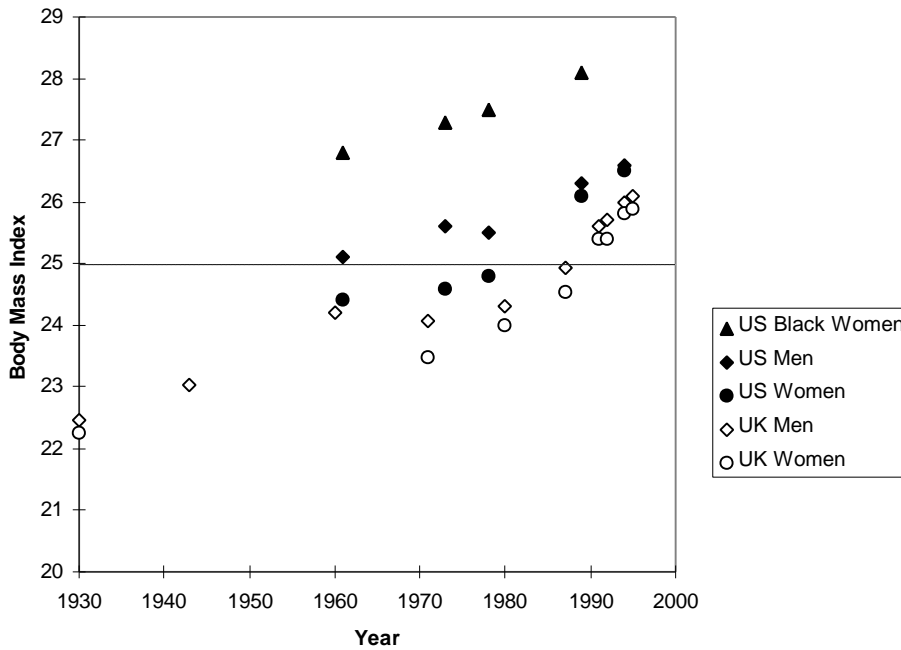


Figure 1. Mean adult body mass index (BMI) in the United States and England and Wales, c. 1930-1995.

Sources: (E&W, 1930-1971): W.P.T. James, (ed.), *Research on Obesity* (London, 1976), table 2.2, p. 9. [ages 35-40]. (E&W, 1980): Sir Douglas Black, *Obesity: A Report of the Royal College of Physicians*, *Journal of the Royal College of Physicians of London*, vol. 17, 1 (1984), table 14, p. 26 [ages 35-40]; I. Knight and J. Eldridge, *The Heights and Weights of Adults in Great Britain* (1984), table 4.5 p.33 [adults, age 16-64] (Great Britain, 1987): J. R. Gregory, K. Foster, H. Tyler, and M Wiseman, *The Dietary and Nutritional Survey of British Adults* (London,1990), tables 15.18-19, p. 246. (England, 1991-1995), Great Britain, *Health Survey for England* (London, 1991-1995). (USA, 1961-1964—1976-1980): R. J. Kuczmarski, K. M. Flegal, S. M. Campbell, C. L. Johnson, 'Increasing Prevalence of Overweight Among US Adults', *Journal of the American Medical Association*, vol. 272, 3 (1994), table 4, p. 209. (USA 1988-1994) R. J. Kuczmarski, M. D. Carroll, K. M. Flegal, R.P. Troiano, 'Varying Body Mass Index Cutoff Points to Describe Overweight Prevalence among U.S. Adults: NHANES III (1988 to 1994)', *Obesity Research* vol. 5, 6, Nov. 1997, table 2, p. 545. Note: Samples are large, and typical standard errors of the mean are .13-.14 in the USA (1988-1991), 0.11-0.14 (E&W 1991) and .04-.06 (E&W 1993-1995). [USA adults aged 20 upwards]

Table 1. Percentage of adults obese and overweight in the Great Britain and US, 1960- 1995

| UK men | BMI | 1980 | | 1995 | |
|------------------|------------|---------------|---------------|------------------|------------------|
| Overweight | 25-30 | 33 | | 43 | |
| Obese | 30+ | 6 | | 15 | |
| Total | 25+ | 39 | | 58 | |
| UK Women | | | | | |
| Overweight | 25-30 | 24 | | 30 | |
| Obese | 30+ | 8 | | 17 | |
| Total | 25+ | 32 | | 47 | |
| USA men | BMI | 1960-2 | 1971-4 | 1976-1980 | 1988-1994 |
| Overweight | 25-30 | 38 | 41 | 39 | 39 |
| Obese | 30+ | 10 | 12 | 12 | 20 |
| Total | 25+ | 48 | 53 | 51 | 59 |
| USA Women | | | | | |
| Overweight | 25-30 | 24 | 24 | 24 | 25 |
| Obese | 30+ | 15 | 16 | 17 | 25 |
| Total | 25+ | 39 | 40 | 41 | 50 |

Sources: England, I. Knight and J. Eldridge, *The Heights and Weights of Adults in Great Britain* (London, 1984), table 4.5, p. 33; Great Britain, *Health Survey for England, 1995* (London, 1995), vol. 1, table 8.12, p. 334; USA, K. M. Flegal, M. D. Carroll, R. J. Kuczmarski, and C.L. Johnson, 'Overweight and Obesity in the United States: Prevalence and Trends, 1960-1994', *International Journal of Obesity*, vol. 22 (1998), tables 1-4, pp. 41-43.

Here then is what needs to be explained: eating choices have defied health and appearance norms. They have generated a 'cognitive dissonance', expressed in the contrast between the fashion and the cookery pages of weekend magazines. Body weight is on a rising trend.²⁴ Women lag behind men, the British behind Americans, even American women; black women lead. Can we bring these observations into a single frame of explanation?

II

The mismatch between weight aspirations and outcomes can be regarded as a failure 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 eating habits. The common bowl and greasy

²⁴ 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 Chesher, 'Diet Revealed', table 1, p.4; Gregory et al, *Dietary and Nutritional Survey*, Table 15.20-21, p. 247.

fingers of the middle ages gave way to a structured meal, with a clear beginning and end, a set sequence of courses and portions, and specialised crockery and cutlery.²⁵ For French society in the 1960s, Pierre Bourdieu stated that working class attitudes to eating express a congenital coarseness. All food for a meal would be placed on the table at the same time, servings were taken with common ladles, the same plates used throughout. In contrast, bourgeois meals were restrained and decorous, rigidly structured, with modest portions, all waiting until the last person served had started to eat.²⁶ 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 would *decline* with abundance, as evident in the rise in body weight, nor the fragmentation of meal patterns and table manners, which has been strikingly observed in France itself.²⁷

There is a view that if rational consumers prefer a compelling reward, and discount subsequent penalties, then that choice must be optimal for them.²⁸ Others assume that consumer choices at different times might be inconsistent. Giving up tobacco, or going to the gym, are attempts to undo prior smoking or eating decisions. In such cases, the prior choice may be described as *myopic*, and as sub-optimal. Time inconsistency is sufficiently common to have motivated several different explanatory approaches, of which extreme ‘rational’ discounting is merely one.²⁹ Ainslie, who has influenced the present approach, argues that rewards become more attractive at an hyperbolic rate as they approach in time, to a point where the ranking of preferences is reversed: An inferior reward *now*, will dominate a superior one which requires a delay. Although ‘rational’ consumers may discount the future heavily, they will not reverse preferences if it is time that they are discounting.³⁰ This irrational preference reduces welfare. It can be overcome by self-control. Thus, an important attribute of rationality is *self-control* or *prudence*, the ability to overcome myopia and defer gratification.

Myopic choice is congenital and pervasive. Rationality is attainable, but requires a special effort to achieve. This effort may be cognitive, involving knowledge, willpower, and personal rules. It can also draw on social resources such as pledges, contracts, norms, rules and regulation. The strategies of self-control, both cognitive and social, take time to develop and to acquire.

Myopic choice accounts for the reversal of the historical trend towards greater self-control. If self-control is costly, then the affluent have it more than the poor. But self-control will not necessarily increase as *society* becomes more affluent as a whole. Affluence is a flow

²⁵ Elias, *The Civilising Process*, vol. 1, pp. 99-113; Wood, *Sociology of the Meal*, p. 32.

²⁶ Bourdieu, *Distinction*, pp. 194-6; Wood, *Sociology of the Meal*, pp. 20-21.

²⁷ Seidell, ‘Obesity in Europe: Scaling an Epidemic’; Laurier, ‘Prevalence of Obesity’; Fischler, ‘Gastro-nomie et gastro-anomie’.

²⁸ Stigler and Becker, ‘*De Gustibus non est Disputandum*’; Becker and Murphy, ‘A Theory of Rational Addiction’; Viscusi, *Smoking: Making the Risky Decision*.

²⁹ Ainslie, *Picoeconomics*; Loewenstein and Elster, *Choice over Time*; Loewenstein, ‘Out of Control’; Price, *Time, Discounting and Value*; Baumeister and Heatherton, ‘Self-Regulation’; Viscusi, *Smoking*, ch. 2.

³⁰ Ainslie, *Picoeconomics*. Preference reversal might still occur if they discount different goods at different rates.

of new and inexpensive rewards. If these rewards arrive faster than disciplines of prudence can form, then self-control will *decline* with affluence: the affluent (with everyone else) will become less prudent. That is our hypothesis: synchronically (in cross-section), prudence increases with individual wealth; but diachronically, (over time), it declines with aggregate wealth. Self-control strategies take time and effort to devise, and become fixtures of society and culture. Under the impact of affluence, they become obsolete. The rise in body-weight is one measure of the extent to which rewards could run ahead of adaptations.

In the 1950s in Britain and America, most eating took place at home. 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.’³¹ In the 1950s, six out of every ten men took their main meal in 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.’³² A cooked breakfast was eaten by half the population in the 1950s. The evening meal was lighter and eaten early.³³ The middle classes (less than a third of the population) usually reversed the meal order, and most households also had a light late supper. 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 cuisines, only the Italian made much headway, with spaghetti and tomato sauce.³⁴

Since the 1950s, the ‘family-meal’ system has been disrupted by market forces. Supermarkets swept away the counter barrier, and the grocer behind it. British multiples increased their shares from one fifth to three-quarters of the grocery market between 1950 and 1990.³⁵ In the United States, supermarkets increased their share from 15 to 61 percent in the same period.³⁶ In the 1950s, they typically stocked 5,000-8,000 items, rising to more than 25,000 different items by the 1980s.³⁷ Shops stayed open longer: a median 82 hours a week in the US in 1975, 108 in 1990, with universal Sunday opening, and almost a third of outlets open for 24 hours a day.³⁸ Packaged food, a drink and a smoke could be had late into the night in convenience shops and ethnic groceries.

Cautiously, eaters began to move beyond home cooking.³⁹ In the 1950s, a fifth of British breakfasts included American-type cereals.⁴⁰ French *haute cuisine* had long provided

³¹ Crawford, *The People’s Food*, p. 54.

³² Warren, *The Foods we Eat*, 63.

³³ Warren, *The Foods We Eat* p. 115ff.

³⁴ Brown, *American Standards of Living*, pp. 194-5; Levenstein, *Paradox of Plenty*, ch. 8;

³⁵ Raven et al, *Off Your Trolleys*, p. 37.

³⁶ 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.

³⁷ Walsh, *Supermarkets Transformed*, pp. 9, 43.

³⁸ *Ibid.*, p. 49.

³⁹ Currie, ‘Trends in Food and Cooking Habits’, fos. 22-26.

⁴⁰ Collins, ‘The “Consumer Revolution”’, pp. 31-43; Crawford, *The People’s Food* p. 39; Warren, *The Foods We Eat*, p. 24.

the model for upper class cooking.⁴¹ 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 *nouvelle cuisine* appeared in the United States.⁴² 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.⁴³ At home, the microwave waited: the ovens, introduced in 1973, reached 50 percent of American households by 1985.⁴⁴ Britain lagged a little in appliances: by 1955, 95 percent of American households had a refrigerator, while only 75 percent of British ones had one in 1980.⁴⁵ A 1984 British survey found convenience food to account for more than a third of all food outlays.⁴⁶

In Britain, convenience and novelty beckoned in ethnic restaurants and take-aways, Chinese, Indian, Italian and Cypriot, in 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.⁴⁷ Exotic cuisines, entered the domestic cycle as sources of variety and spice, though not yet as staples.⁴⁸ Eating out continued to be dominated (in England), by 'English' restaurants in hotels, holiday camps and the High Street, pubs for beer, fish and chips for fast food, together with burger bars, whereas the 'alien' cuisines together accounted for only about 12 percent of turnover in 1975, rising to 27 percent by 1990, or 36 percent if 'Continental' restaurants are included.⁴⁹

Eating outside the home claimed less than ten percent of food outlays in Britain in 1955. By 1995 eating out more than doubled its share of food spending, reaching about 25 percent in the United Kingdom and more than 45 percent in the United States (fig. 2). The appeal was as much convivial as culinary—eating in company is an agreeable experience of mutual regard, and (especially when graced by wine or beer, and rounded off by sweets and coffee) makes for one of life's highest pleasures.⁵⁰ 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

⁴¹ Driver, *The British at Table*, ch. 1.

⁴² Ibid. p. 53; Seid, *Never too Thin*, pp. 200-201; Levenstein, *Paradox of Plenty*, pp. 220-221.

⁴³ Åstrom, 'Main Trends in the Development of Frozen Food', fig. 1, p. 6.

⁴⁴ Ibid., table 1, pp. 729-730.

⁴⁵ Bowden and Offer, 'Household Appliances', table A1, p. 746.

⁴⁶ Excluding fast foods and takeaways. Mintel, *Convenience Meals*, table 3, p. 7.

⁴⁷ Levenstein, *Paradox of Plenty*, ch. 14; Hess and Hess, *The Taste of America*, take a jaundiced view.

⁴⁸ Charles and Kerr, *Women, Food and Families*, p.65; DeVault, *Feeding the Family*, pp.212-214; Marshall, 'Eating at Home', pp. 276-277.

⁴⁹ Wardle, *Changing Food Habits*, table 9, p. 38; Keynote, *Restaurants*, table 33, p. 40.

⁵⁰ Visser, *Rituals of Dinner*; Finkelstein, *Dining Out*.

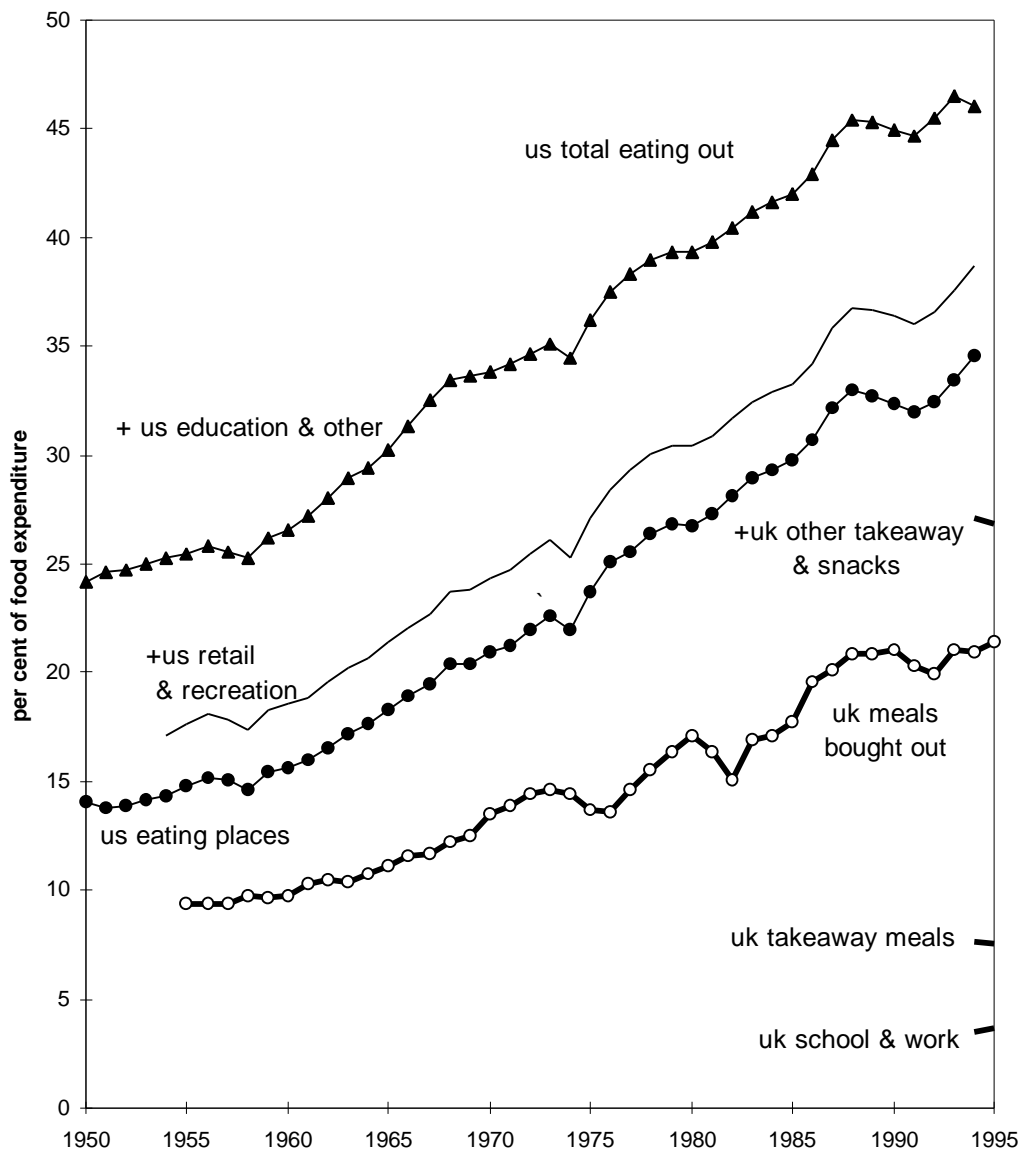


Figure 2. Eating out as percentage of food expenditure, US and UK, 1950-1995 (cumulative).
 Sources: USDA, 'U.S. Food Expenditures' (Jan. 1996) Stock #91003, tables 3, 17; UK, *Family Expenditure Survey* (annual).

much more in line with consumer expenditures than food outlays.⁵¹

Fast food outlets expanded even faster. The palatable, fat-rich hamburger, pizza, fried chicken, and ethnic take-out cuisines rose from 3 to 16 percent of US food outlays between 1963 and 1993.⁵² Portions also grew. McDonald's biggest hamburger inflated from 3.7 ounces to almost nine.⁵³ In a British market survey (1986), three-quarters of adults bought take-away food once a month, rising from about half in 1972.⁵⁴ Most readily available were the sweet and

⁵¹ Data sources, see n. 7 above, and figure 2.

⁵² USDA, 'U.S. Food Expenditures' (Jan. 1996) Stock #91003, table 17.

⁵³ Fumento, *Fat of the Land*, pp. 44-48.

⁵⁴ Mintel, *Snacking*, p. 133.

salty, energy-heavy, snack or ‘junk’ foods: crisps, chocolate bars, nuts, cookies, soft drinks etc. 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 percent of all food purchases, and snack foods together with all other foods eaten as snacks account for 44 percent of the total food market.’⁵⁵ This excludes non-alcoholic drinks, which in 1987 would account for another 5 percent, bringing the outlay on snacking very close to fifty percent.⁵⁶ In 1987, food eaten out accounted for 34 percent of calories for men, and 24 percent for women.⁵⁷

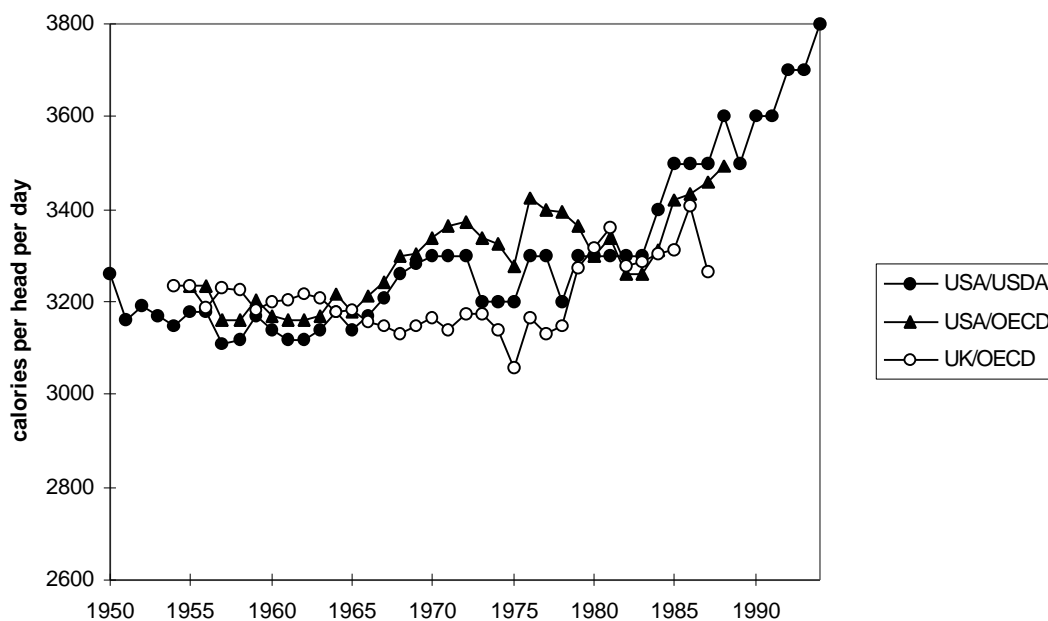


Figure 3. Calories per head per day consumed in the United States and Britain, c. 1950-1994. Sources: OECD, *Food Consumption Statistics*; USDA, ‘Food Consumption, Prices, and Expenditures’ (Aug. 1997), Stock #89015B, table42.wk1; USDA, *Agricultural Statistics 1995-6* (1998), table 649.

There is a puzzle about food intake. Household food surveys show intake in decline, even as body weights were rising.⁵⁸ But British survey coverage omitted alcohol, confectionery and soft drinks, as well as eating out.⁵⁹ Also, the overweight often dissemble about food intake.⁶⁰ A different, top-down approach, is to measure ‘disappearance’, i.e. 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 in the USA increased 22 percent while BMIs

⁵⁵ Ibid., *Snacking*, pp. 11, 19.

⁵⁶ USDA, ‘Expenditures of Food, Beverages and Tobacco, 1970-1988’ (n.d.), Stock #93050, table uk.wk1.

⁵⁷ Gregory et al, *Dietary and Nutritional Survey*, table 14/1, p. 221.

⁵⁸ Prentice and Jebb, ‘Obesity in Britain’; Seid, *Never too Thin*, p. 297, n. 49.

⁵⁹ Great Britain, *National Food Survey 1994*, fig 4.28, p. 67.

⁶⁰ Weidner et al., ‘Family Consumption of Low-fat Foods’; Green, *Diary*, pp. 12, 166.

rose 6 percent (men) to 9 percent (women).⁶¹ Americans consumed as many calories as Britons in the 1950s, but surged ahead in the 1970s, and again in the 1980s. Britons only followed after 1979 (fig. 3). American calorie intake was quite highly correlated with income per head over time ($r=0.87$), while British consumption much less so ($r=0.39$).⁶² This, and the lower absolute level of consumption, may be taken as tentative indicators of greater British self-control, which started breaking down in the 1980s. Thus is the puzzle solved: people weighed more because they ate more. They ate more because more variety was available. But how does food variety undermine self-control?

III

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.⁶³ 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.⁶⁴ People differ in the efficiency with which they convert food into fat. An 'efficient' converter can put on twice as much weight as an 'inefficient' one, with the same intake.⁶⁵ Metabolic efficiency is a genetic endowment, and overweight has a genetic component.⁶⁶ 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.⁶⁷ 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 her stop. The feedback is self-contained and physiological, but the cycle is complex and poorly understood.⁶⁸

The crucial distinction is between 'normal' eaters, who eat to satiation, and 'restrained' eaters, who attempt to restrict their intake. Restrained eaters 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. The 'externality thesis' stated that

⁶¹ Gortner, 'Nutrition in the United States', table 1, p. 3248; USDA, 'Food Consumption, Prices, and Expenditures' (Aug. 1997), Stock #89015B, table40.wk1. There is a large margin of waste. Compare Gregory et al, *Dietary and Nutritional Survey*, table 7.1, p. 53; Kantor, 'America's Food Losses'.

⁶² 1950-1990. The time-series relation is too complicated to explore here.

⁶³ Logue, *Psychology of Eating and Drinking* (2nd edn. 1991), ch. 7.

⁶⁴ Blundell, 'Food Intake and Body Weight Regulation', p. 113.

⁶⁵ Rodin et al, 'Psychological Features of Obesity', p. 47, referring to Rose and Williams, 'Metabolic Studies'.

⁶⁶ Jebb, 'Aetiology of Obesity', pp. 265-267.

⁶⁷ Keesey, 'A Set-Point Analysis'.

⁶⁸ Blundell, 'Food Intake'; Bouchard, *Regulation of Body Weight*, passim

overweight people were excessively aroused by exposure to food.⁶⁹ In other experiments, eating was re-started after satiation, by new exposure to palatable food.⁷⁰ Rats which maintained a steady weight on monotonous unrestricted 'chow' diets, rose rapidly into obesity when offered a 'supermarket' of appetising foods.⁷¹ Other experiments 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 about body weight, and their inclination to diet and binge. Once having overstepped their diets, 'restrained eaters' abandoned restraint altogether. This pattern is pervasive.⁷² 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.⁷³

'Restrained' eaters typically turn to food in search of comfort and relief. 'The obese, dieters, and bingers... all tend to eat more when they are upset.'⁷⁴ Food acts as an 'emotional tranquilliser',⁷⁵ providing 'a sense of warmth and well-being' when things are bleak.⁷⁶ 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.⁷⁷

Most meals are eaten in company, and in company, people eat more.⁷⁸ In everyday settings, a power-law relation 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 restrained ones.⁷⁹ Food prepared professionally, eaten on a special occasion, is likely to be more appetizing. Restaurant

⁶⁹ Rodin, 'The Externality Theory Today'. It was subsequently found that a strong response to external stimulation was not restricted to the obese (and also that not all the obese had that response).

⁷⁰ Rolls, Rolls and Howe, 'The Influence of Variety'.

⁷¹ Sclafani, 'Dietary Obesity', pp. 175-178.

⁷² Herman and Polivy, 'Restrained Eating'; Ibid., 'What does Abnormal Eating tell Us?', pp. 226-235; Orbach, *Fat*, describes the same syndrome, p. 16.

⁷³ That is what several dieting manuals recommend, although the majority stress fairly strict self-control. Among the former are Orbach, *Fat*; Polivy, *Breaking the Diet Habit*; Foreyt and Goodrick, *Living without Dieting*; Tribble and Resch, *Intuitive Eating*; among the latter, Stuart, *Act Thin, Stay Thin*.

⁷⁴ Herman and Polivy, 'What Does Abnormal Eating Tell Us', p. 233.

⁷⁵ Slochower, *Excessive Eating*, p. 98.

⁷⁶ Chernin, *Womansize*, p. 11; also Rodin, *Body Traps*, pp. 135-6; Brown, 'The Continuum', p. 63; Blair, 'Does Emotional Eating Interfere?'

⁷⁷ Herman and Polivy, 'What Does Abnormal Eating Tell Us', pp. 233-4.

⁷⁸ De Castro et al., 'Social Facilitation'; Clendenen et al., 'Social Facilitation'; Logue, *Psychology of Eating*, p. 207

⁷⁹ De Castro and Brewer, 'The Amount Eaten in Meals'; Herman and Polivy, 'What does Abnormal Eating tell Us', fig. 5.1, p. 212.

food tends to mimic formal bourgeois eating patterns, only more so.⁸⁰ Noise, itself a form of stress, stimulates eating, hence perhaps the ubiquity of canned music in restaurants and pubs.⁸¹

The disinhibiting effect of stress is the link between the micro-motives of individuals, and the macro-patterns in society as a whole. It also explains why the Elias-Bourdieu trend for self-control to increase with affluence has been reversed. 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, 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. It is a cascade: restrained eaters find it more difficult to resist arousal, and as their share of the population increases, weight control becomes collectively more difficult.⁸² 'Abnormal eating in the sense we have described it may ... have achieved statistical normality: Dietary constraints of one sort or another appear to have become the norm in our society.'⁸³ Dissatisfaction with weight is the most frequently reported hassle in daily life, and small hassles are good predictors of psychological ill-health.⁸⁴ They are also precipitators of eating binges.

Social pressures affect not only the desire to eat, but also the desired body-weight. In poor societies, food is scarce, the poor are thin, and the wealthy are fat. Once these societies are exposed to food abundance, they experience a very sharp rise in weights, and high levels of obesity.⁸⁵ In affluent societies, these conditions persist, and the poor tend to fatness, while the well-off are slimmer.⁸⁶ Table 2 compares the relation between weight, class, and gender in the USA, Europe and several developing countries. In poor countries, higher income is associated with higher weight, 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.

Table 2. Relation between Socio-Economic Status and Obesity. Percentage of Studies Showing Inverse or Positive Relationship.

⁸⁰ Wood, *Sociology of the Meal*, ch. 3.

⁸¹ McCarron and Tierney; 'The Effect of Auditory Stimulation'.

⁸² Presciently observed by Pullar, *Consuming Passions*, pp. 222-224, 233-4.

⁸³ Herman and Polivy, 'What does Abnormal Eating tell Us', p. 235, citing Polivy and Herman, 'Diagnosis and Treatment'.

⁸⁴ Argyle, *Social Psychology*, pp. 262-4.

⁸⁵ Brown and Konner, 'An Anthropological Perspective'.

⁸⁶ Hodge and Zimmet, 'The Epidemiology of Obesity'.

| <i>Relation</i> | <i>Women</i> | | | | <i>Men</i> | | | |
|-----------------|--------------|---------|----------------|----------------|------------|---------|----------------|----------------|
| | USA | Britain | Western Europe | Dev. countries | USA | Britain | Western Europe | Dev. countries |
| Inverse | 93 | 67 | 86 | 0 | 44 | 55 | 55 | 0 |
| None | 7 | 33 | 0 | 9 | 11 | 27 | 9 | 14 |
| Positive | 0 | 0 | 14 | 91 | 44 | 18 | 36 | 86 |
| N | 30 | 12 | 7 | 11 | 27 | 22 | 11 | 14 |

Source: J. Sobal and A.J. Stunkard, 'Socioeconomic Status and Obesity: A Review of the Literature', *Psychological Bulletin*, vol. 105, 2 (1989), tables 1,2,4.

Weight norms are consistent with the 'handicap principle' in signalling.⁸⁷ In self-presentation (as in other spheres of exchange), it is the scarce and costly which is valued. 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 affluent than to the poor.⁸⁸

Class affects weight primarily through gender. Women's weight is more strongly determined by socio-economic status than men's, and women also care more about it.⁸⁹ Americans weight surveys are coy about social class. There is however one socio-economic study of the national health survey of 1971-4, compared here with the British one of 1986-7. The gap in time brings the incomes closer together. Table 3 describes the two social extremes in the UK and the USA. It shows poor, uneducated women as being both stouter and smaller than affluent, educated ones: higher-class women are thinner: the difference in BMI between lower and upper class women was between two and three units, while American and British men of both social extremes differed very little from each other, apart from well-off American men being heavier.

What caused what? Was it the slim women who got ahead, or were women who were socially ahead also more capable of slimming? American research suggests that economic rewards to slimness, are not in terms of direct levels of pay. There is a small penalty for unattractiveness, and a small premium for attractiveness, but these are gender-blind, and the contribution of body-weight is not statistically significant.⁹⁰

Table 3. Mean Weight, Height, BMI and Social Class of Adults, USA 1971-4, UK 1986-7.

| Social | Men | Women | Men | Men | Women | Women | Men | Women |
|--------|-----|-------|-----|-----|-------|-------|-----|-------|
|--------|-----|-------|-----|-----|-------|-------|-----|-------|

⁸⁷ Zahavi and Zahavi, *The Handicap Principle*; Rodin, *Body Traps*, p. 111.

⁸⁸ Brown and Konner, 'An Anthropological Perspective', p. 42.

⁸⁹ Sobal and Stunkard, 'Socioeconomic Status and Obesity', pp. 261-262, 267-268.

⁹⁰ Hamermesh and Biddle, 'Beauty and the Labor Market'.

| Category | n | n | Height m. | Weight kgs | Height m. | Weight kgs | BMI | BMI |
|------------------------|------|------|-----------|------------|-----------|------------|------|--------|
| USA Income | | | | | | | | |
| ≥\$15000 | 857 | 1215 | 1.76 | 79.8 | 1.62 | 63.0 | 25.8 | 24.0 |
| ≤\$4000 | 1196 | 2072 | 1.74 | 74.4 | 1.61 | 68.0 | 24.5 | 26.2 |
| probability | | | <0.001 | <0.001 | <0.001 | <0.001 | | |
| USA Education | | | | | | | | |
| ≥13 years | 1224 | 1714 | 1.77 | 78.9 | 1.63 | 63.0 | 25.3 | 23.7 |
| ≤ 9 years | 1750 | 1990 | 1.72 | 75.3 | 1.59 | 67.6 | 25.3 | 26.6 |
| probability | | | <0.001 | <0.001 | <0.001 | <0.001 | | |
| UK Social Class | | | | | | | | |
| 1+2 | 405 | 401 | 1.76 | 76.2 | 1.63 | 62.7 | 24.7 | 23.8 |
| 4+5 | 189 | 235 | 1.74 | 74.9 | 1.60 | 65.9 | 24.8 | 25.8 |
| probability | | | >0.5 | 0.2 | >0.5 | 0.005 | >0.5 | <0.001 |

Sources: (USA) Robinson Fulwood, *Height and Weight of Adults, Ages 18-74 Years, by Socioeconomic and Geographic Variables, United States Vital and Health Statistics*, ser. 11. Data from the national health survey, no. 224, (Washington, DC, 1981), tables 1, 4, 13, 16. (Great Britain) Janet Gregory, Kate Foster, Hazel Tyler and Martin Wiseman, *The Dietary and Nutritional Survey of British Adults* (London, 1990), table 15.11.

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.

The rewards for body-shape accrue through the competition for mates. The most attractive women, other things equal, get the best men.⁹¹ Female mating competition is more acute than male competition. Women seek men who are typically older, more educated and better off than themselves.⁹² The age, the income, and the education pyramids taper towards the top, so there are more female seekers than males sought. These were also the decades of female entry into higher education and well-paid employment, which reduced the relative number of males with comparable or superior attributes.⁹³ Women with high education and occupational achievement are less likely to be married.⁹⁴ Women typically marry men who are two to three

⁹¹ Orbach, *Fat*, pp. 31-32; Freedman, *Beauty Bound*, ch. 8; Rodin, *Body Traps*, p. 104; Mori et al, "Eating Lightly", p. 693.

⁹² Ellis, 'Evolution of Sexual Attraction'; Guttentag and Secord, *Too Many Women?*

⁹³ Goldin, *Understanding the Gender Gap*, pp. 215-217.

⁹⁴ Joshi, 'Combining Employment and Child-Rearing', pp. 101, 113; Ermisch, *Fewer Babies, Longer Lives*, p. 9.

years older.⁹⁵ Fig. 4 shows several different measures of the male/female sex ratio. A glance at the whole cluster for each census year indicates that 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 (fig. 4).⁹⁶ It was during this period that the ‘cult of thinness’ emerged.⁹⁷

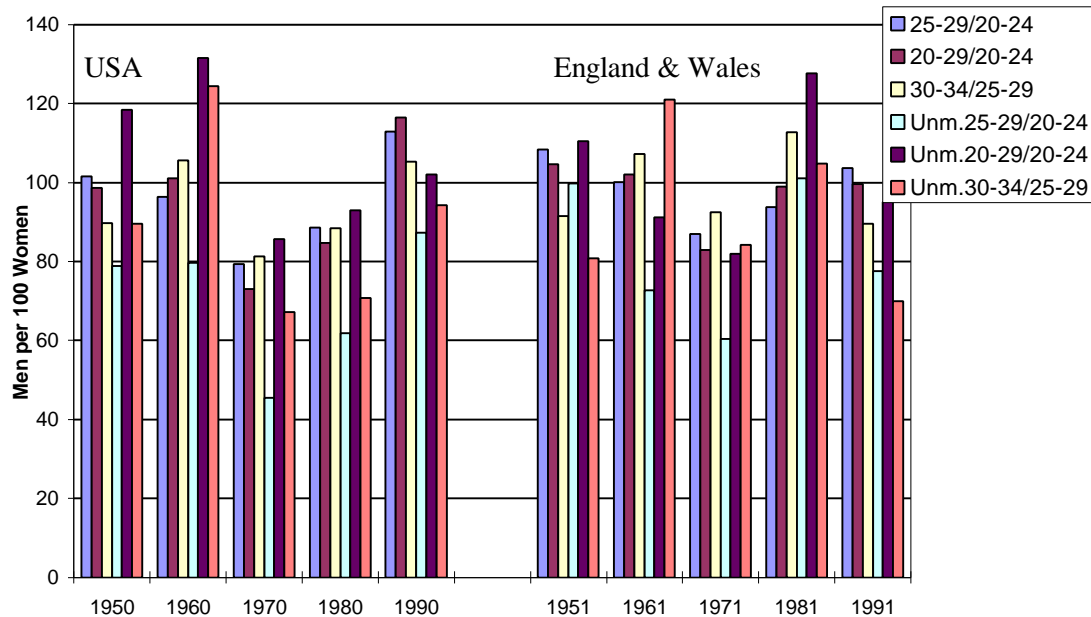


Figure 4. Ratios of Eligible Men per 100 Women, Selected Age Groups, Total and Unmarried, USA and England and Wales, 1950-1991.

Sources: USA Bureau of Census, *Historical Statistics of the United States from Colonial Times to 1970* (CD edition, New York, 1998); *Ibid.*, *Statistical Abstract of the United States*; B. R. Mitchell, *British Historical Statistics* (Cambridge, 1988); Great Britain, Office of Population, Censuses & Surveys, *1991 Census: Sex, Age and Marital Status, Great Britain* (London, 1993).

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

Body-weight is one way for women to compete with each other. The weight target was set at the low end of the normal range, and indeed, below it.⁹⁸ American women sought a lower weight for themselves than what men found attractive.⁹⁹ 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.¹⁰⁰

⁹⁵ Coleman and Salt, *British Population*, fig. 5.1, p. 181; United States, *Historical Statistics of the US*, table A158-159, vol. 1, p. 19..

⁹⁶ As noted by Guttentag and Secord, *Too Many Women?*

⁹⁷ Seid, *Never too Thin*, chs. 7-10.

⁹⁸ Rodin et al. , ‘Women and Weight’, pp. 281-4.

⁹⁹ Fallon and Rozin, ‘Sex Differences’; Rodin et al, ‘Women and Weight’, pp. 287-291.

¹⁰⁰ Stein and Nemeroff, ‘Moral Overtones of Food’; Pliner and Chaiken, ‘Eating, Social Motives and Self-Presentation’.

Overweight is 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.'¹⁰¹ Food has symbolic power, signifying masculinity and femininity, weakness and strength, high and low prestige.¹⁰² Some foods acquire an association with virtue or with moral failing: the self-help slimming movement (like its model Alcoholics Anonymous) has evangelical undertones.¹⁰³

Many more women diet than men, and (comparing BMI outcomes) women succeed better than men, suggesting that more is at stake for women.¹⁰⁴ 'Physical attractiveness and weight are still the chief and most wholeheartedly sanctioned domains in which women are encouraged to contend with each other.'¹⁰⁵ In one study, women of average weight reported 1-2 dates per week, overweight women about one per month.¹⁰⁶ Women did not reject 'the Beauty Myth'. Many more read *Cosmopolitan* than the feminist magazines.

Body-weight affects the outcomes of courtship. 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 that way.¹⁰⁷ Obese women were more likely to be downwardly mobile.¹⁰⁸ In New York in the 1950s, 12 percent of upwardly mobile women were obese, as compared with 22 percent of the downwardly mobile, with no comparable trend for men.¹⁰⁹ In a large American study in the 1980s, differences in marriage probabilities and in spouse's earnings accounted for 50 to 95 percent of the lower economic status of obese women, and visually unattractive women married less educated men: 'the great majority (as much as 96 percent) 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.'¹¹⁰ Overweight women married less often, were poorer, and finished their education earlier than other women, and than men of the same position.¹¹¹

¹⁰¹ Green, *Fat Housewife*, pp. 27, 56; see Allon, 'Stigma of Obesity'; Hesse-Biber, *An I Thin Enough?*, p. 4 and ch. 2.

¹⁰² Twigg, 'Vegetarianism'.

¹⁰³ Stuart and Mitchell, 'Self-help Groups'; Sobal, 'Group Dieting'; Goldstein, *Addiction*, p. 132; Seid, *Never too Thin*, p. 168.

¹⁰⁴ Horm and Anderson, 'Who in America is Trying to Lose Weight?'

¹⁰⁵ Rodin, *Body Traps*, p. 95.

¹⁰⁶ Stake and Lauer, 'The Consequences of being Overweight', p. 38.

¹⁰⁷ Knight and Jack, *Heights and Weights*, pp. 15, 18.

¹⁰⁸ Braddon et al., 'Onset of Obesity', p. 301.

¹⁰⁹ Goldblatt et al., 'Social Factors in Obesity', p. 1040.

¹¹⁰ Averett and Korneman, 'Economic Reality of the Beauty Myth', p. 327; Hamermesh and Biddle, 'Beauty and the Labor Market', p. 1189.

¹¹¹ Gortmaker et al., 'Social and Economic Consequences of Overweight'.

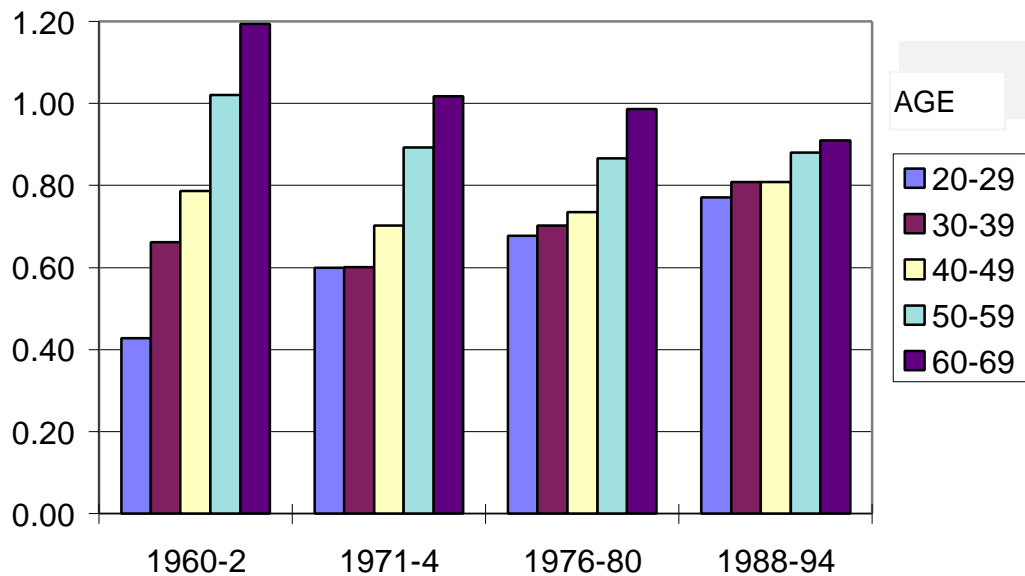


Figure 5. Ratio of proportion of overweight women to proportion of overweight men, USA 1960-1994. *Source:* NHANES surveys, Flegal et al, 'Overweight and Obesity in the United States: Prevalence and Trends, 1960-1994', *International Journal of Obesity*, vol. 22, tables 1-3.

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 become less competitive as they grew older, and the sex ratio has moved in their favour. On the other hand, older women have been getting thinner, perhaps under the influence of rising divorce rates.

Mating competition does not end with marriage. Attractive women experienced better sex lives and had more faithful husbands and lovers.¹¹² 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. Putting food on the family table was a management task of some complexity, which was taken for granted too easily. The preferences of different household members had to be considered, against the demands of variety, a balanced diet and a balanced budget. Time was made for shopping, storage, food preparation, serving, eating, and clearing up. Equipment was purchased and maintained. The effort was motivated by the web of exchange that sustains the role of women in families, and which lies outside the scope of this study.¹¹³

Women served a daily gift of food, in return for their men's presence as spouse and parent. '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.'¹¹⁴ Women

¹¹² Blumstein and Schwartz, *American Couples*, pp. 246-249, 266-267; Rodin, *Body Traps*, p. 106-107; also Green, *Diary*, pp. 30-31; Stuart and Jacobson, *Weight, Sex & Marriage*, pp. 98-102.

¹¹³ This is research in progress. On marital reciprocity, see e.g. Offer, 'Between the Gift and the Market', pp. 458-462; Orbach, pp. 32-34.

¹¹⁴ Currie, 'Trends in Food', fos. 1, 10-14.

claimed more satisfaction from cooking than from any other housework.¹¹⁵ Food preparation follows a cyclical and ritual pattern. With the decay of the 'three-meal system', breakfast may be hurried or skipped altogether, lunch a matter of grab as you can. 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.¹¹⁶ But a well-structured meat and two-vegs (or some ethnic variant) 'proper meal' for the whole family has remained the woman's ideal.¹¹⁷ 'A real cooked dinner is a meal (plateful) that requires more than one cooking technique, separate preparation of the various elements, all needing regulation and attention over a long enough cooking time.'¹¹⁸ In preparing the meal, men's expectations received the highest priority.¹¹⁹ During the 'proper meal' the family was a captive recipient of the wife and mother's gift, in a daily ritual that affirmed the family bond.¹²⁰ It fitted into a weekly cycle which still, in the 1990s, reached its climax in Britain with the Sunday dinner roast, and into longer cycles as well, of annual festive meals (Thanksgiving, Christmas, Passover) and life-cycle occasions (birthdays, weddings, funerals).¹²¹

To be effective, the gift has to be seen as both appropriate and as costly.¹²² Hence, the effort invested in a 'proper meal' has to be communicated. In London in the 1980s, an evening meal took a woman about half an hour to prepare, while Sunday dinner took about an hour. Seventy percent of meals were taken *en famille*.¹²³ A British survey of 1987 found that 61 'almost always', and another of 1993 found 73 percent of households, ate together on most days.¹²⁴ 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'.¹²⁵ The effect of convenience food and the microwave, however, is subtly to undermine this gift exchange by reducing the effort involved. Hence, the 'proper meal' persists. In Britain at least, a serious commitment to cooking survives the pressures towards a 'convenience' attitude in about a third of households.¹²⁶

¹¹⁵ Juster, 'Preferences for Work and Leisure', table 13.1, p. 336; Gershuny and Halpin, 'Time Use', table 9.4, pp. 200-201.

¹¹⁶ Mintel, *Snacking*, p. 9.

¹¹⁷ Charles and Kerr, *Women, Food and Families*, ch. 2; DeVault, *Feeding the Family*, pp. 37-38; Dare, 'Too Many Cooks'.

¹¹⁸ Murcott, 'Raw, Cooked and Proper Meals', p. 229.

¹¹⁹ Kerr and Charles, *Women, Food and Families*, pp. 67-76.

¹²⁰ In the British TV soap opera of the 1970s, *Butterflies*, the housewife Wendy's insecurity and misery arose from her inability to provide her husband and two sons with a 'proper meal.'

¹²¹ Warren, *Foods We Eat*, pp. 67-9; Marshall, 'Eating at Home'; Kerr and Charles, *Women, Food and Families*, ch. 2; DeVault, *Feeding the Family*, chs. 1, 3.

¹²² Offer, 'Economy of Regard', p. 454.

¹²³ Dare, 'Too Many Cooks', pp. 150-152.

¹²⁴ Mintel, *Snacking* (1987), table 11, p. 33; Marshall, 'Eating at Home', p. 277.

¹²⁵ Mintel, *Snacking*, p. 33.

¹²⁶ Davies and Madran, 'Time, Food Shopping', p. 13.

But convenience was telling. In the 1960s, British women spent about two hours a day cooking; by the 1980s, this had fallen by almost 45 minutes (table 4). American women were cooking less 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.¹²⁷ These trends have continued (fig. 5).

Table 4. Minutes per Day Spent in Food Preparation, UK and USA, c. 1961-1990

| Period | UK | | USA | |
|---------|-------|-----|-------|-----|
| | Women | Men | Women | Men |
| 1961-70 | 120 | 9 | 106 | 13 |
| 1971-82 | 103 | 11 | 88 | 12 |
| 1983-90 | 86 | 26 | 89 | 21 |
| 1995 | 60 | 35 | | |

Source: Research in progress by Prof. J. Gershuny. 1995, see fig. 6. Figures are controlled for employment and non-motherhood, both of which reduced time spent cooking, and both of which increased.

Figure 6 shows time spent cooking and eating, at home and outside, from time-diaries. Domestic cooking, eating and snacking has declined sharply, while time spent eating (and going) out, has increased for both sexes; in the case of men, actually overtaking time spent eating at home. Children are a factor. Childless households, rose from about 60 percent of the total in 1970, to more than 70 percent in 1997, with one-person households rising to one quarter.¹²⁸

¹²⁷ In a recent survey, 80 percent of women prepared every meal, while only 22 percent of men did the same. Nicolaas, *Cooking: Attitudes and Behaviour*, table 1, p. 2; For 1981, Robinson and Godbey, *Time for Life*, fig. 8, p. 101, estimate that men provided 23 percent of household cooking, and women 77 percent. An Australian survey (1993) found men doing 21% of food preparation (Baxter and Western, 'Satisfaction with Housework', table 2, p. 108).

¹²⁸ Bryson, Ken and Casper, Lynn M., 'Household and Family Characteristics', US. Census Bureau report no. P20-509, April 1998.

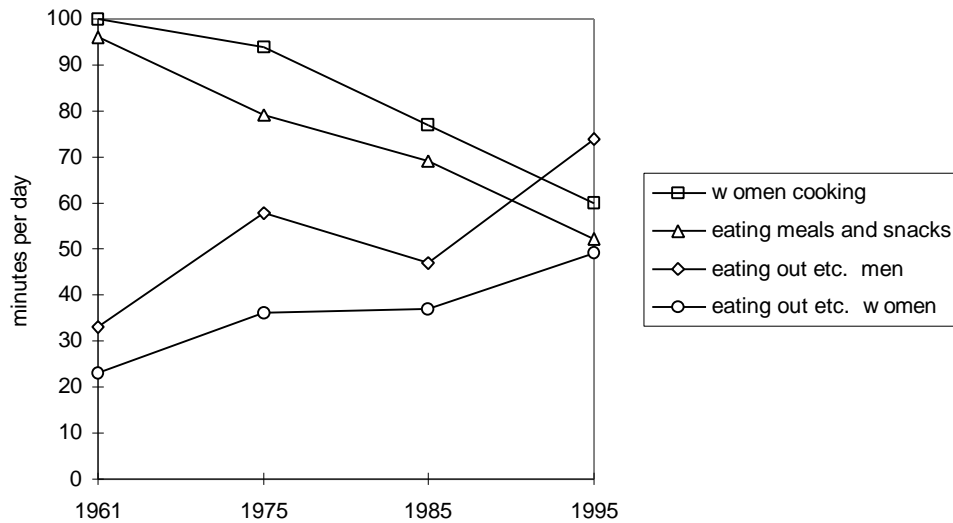


Figure 6. Minutes per Day spent in Eating-Related Activities, Great Britain 1961-1995. 'Eating out' includes pubs, cinema, theatre etc.

Source: J. Gershuny and K. Fisher, 'UK Leisure in the 20th Century', in A. H. Halsey, *British Social Trends in the 20th Century* (3rd edn., forthcoming 2000). The figures differ from table 4 due to different adjustments to status.

With food, women's mating interests diverge from their nurturing ones.¹²⁹ For men, the domestic meal restricts their exposure to food; for women, its preparation prolongs this exposure. Children are inimical to slimness. Pregnancy usually increases body weight.¹³⁰ Childcare 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.¹³¹ Giving way to children, women are exposed more strongly to sweet and savoury snacks.¹³² 'Junk food' is an easy way to silence children, and another is to place them in front of the television.¹³³ When the two practices are combined, the likelihood of obesity in childhood rises.¹³⁴ Metabolic rates decline while children are watching TV.¹³⁵ Nor are adults immune, as attested by the terms 'sofa slug' and 'couch potato'.¹³⁶ The family meal is also compromised. A recent British survey indicates that 50 percent of families in the North of England (38 percent in the south)

¹²⁹ Charles and Kerr, *Women, Food and Families*, p. 164; Green, *Diary*, p. 58.

¹³⁰ Rodin, *Body Traps*, p. 107.

¹³¹ Birch, Fisher and Grimm-Thomas, 'Children's Eating Habits', pp. 190, 200; Fumento, *Fat of the Land*, pp. 53-55.

¹³² Charles and Kerr, *Women, Food and Families*, pp. 95-104

¹³³ Dietz and Strasburger, 'Children, Adolescents and Television', p. 8; Fumento, *Fat of the Land*, pp. 53-55.

¹³⁴ Dietz and Strasburger, 'Children, Adolescents and Television', pp. 13-14.

¹³⁵ Klesges et al, 'Effects of Television on Metabolic Rate'.

¹³⁶ Green, *Diary*, p. 22, 42; *New Shorter Oxford Dictionary*.

watch TV while having dinner, often with a tray on their laps.¹³⁷ 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.¹³⁸ The stresses of marriage also disinhibit eating, and eating can become part of implicit bargaining about sexual exchange, signalling availability or withdrawal.¹³⁹

IV

The rise of body-weight across the board may be seen as a response to external shocks that have disrupted the equilibria of weight control.¹⁴⁰ 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 includes food choice, exercise, eating disorders, normative defiance, and acceptance.

If women are driven to slimness by the competition for attractiveness, 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.¹⁴¹ 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.¹⁴² 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.¹⁴³ Despite some industry resistance, lighter eating became an official health objective.¹⁴⁴ 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.

¹³⁷ Millar, 'Traditional Meals in Decline'.

¹³⁸ Oropesa, 'Using the Service Economy'; Bonke, 'Economic Influences on Food Choice'. The relation between income and eating out is not straightforward. The convenience of eating out is counteracted by a commitment to family eating.

¹³⁹ Stuart and Jacobson, *Weight, Sex & Marriage*.

¹⁴⁰ Fischler, 'Gastro-nomie et Gastro-anomie'.

¹⁴¹ Twigg, 'Vegetarianism'; Levenstein, *Revolution at the Table*, pp. 154-155.

¹⁴² Levenstein, *Paradox of Plenty*, ch. 13.

¹⁴³ U.S. Senate, *Dietary Goals*; Seid, *Never Too Thin*, p. 176; Great Britain, *Diet and Cardiovascular Disease*; British Medical Association, *Diet, Nutrition and Health*.

¹⁴⁴ Cannon, *Politics of Food*; Walker and Cannon, *Food Scandal*; Seid, *Never Too Thin*, pp. 191-199; Great Britain, *Health of the Nation*, pp. 46-64.

broccoli, yoghurt), and to more sophisticated ones (e.g. wine, cheese, pasta). Similar changes have occurred in Britain.¹⁴⁵

Figure 5 shows changes in consumption from supply-side sources. This is perhaps a more static picture than is warranted. Some of the important changes are *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 higher calorie intake. Three differences stand out: Americans eat more meat, while the British eat more vegetables and cereals; and while Americans are consuming more sugar, the British have curbed their sweet tooth.

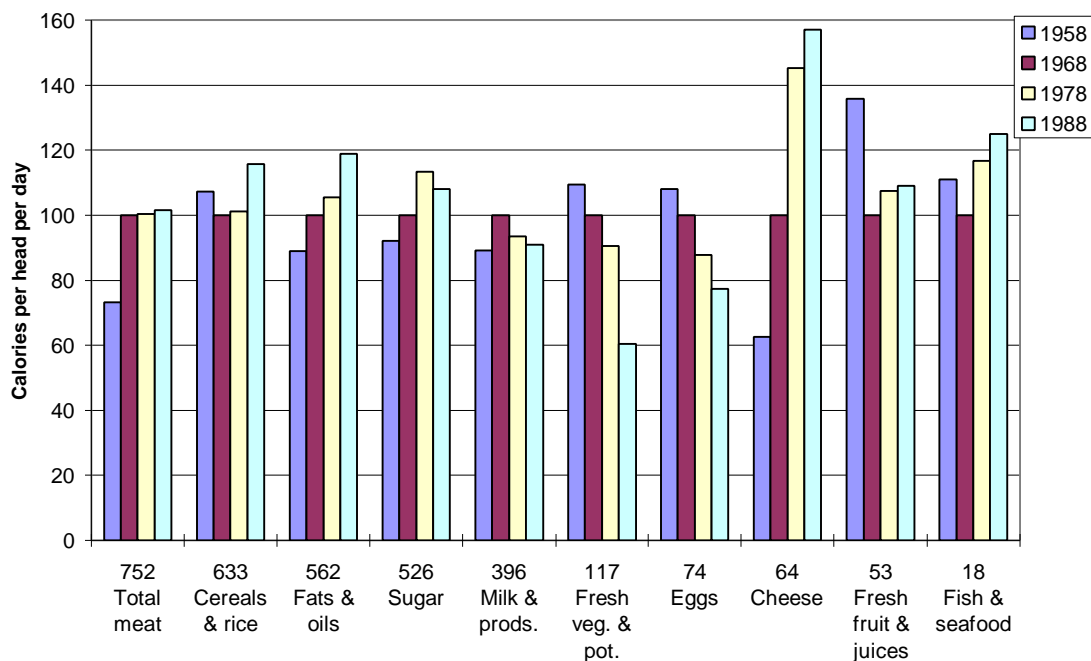


Figure 5a. Index of consumption of selected foods in the USA, in calories per head per day, 1958-1988. 100=1968, absolute values for 1968, total = 3195. *Source: OECD Food Statistics*

These changes involve some self-deception. There was a shift from ‘heavy’ meat (beef, pork, mutton) to ‘light’ meat, but consumption overall has increased substantially.¹⁴⁶ Artificial sweeteners only accounted for about 7 percent in terms of sugar equivalents.¹⁴⁷ Low-fat ‘lite’ foods are often almost as high in calories as regular foods.¹⁴⁸ 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).¹⁴⁹

¹⁴⁵ Putnam, 'Food Consumption', p. 2; Ritson and Hutchins, 'The Consumption Revolution'.

¹⁴⁶ USDA, 'World Per Capita Consumption of Red Meat and Poultry, 1975-91', (n.d.), stock #91004

¹⁴⁷ Fine, Heasman and Leopold, *Consumption*, appendix I, pp. 222-223, table 6.6, p. 143. The statement applies to the late 1980s.

¹⁴⁸ Fumento, *Fat of the Land*, pp. 80-81.

¹⁴⁹ USDA, Economic Research Service, 'Food Consumption, Prices, and Expenditures' (Feb. 1996), Stock #89015B.

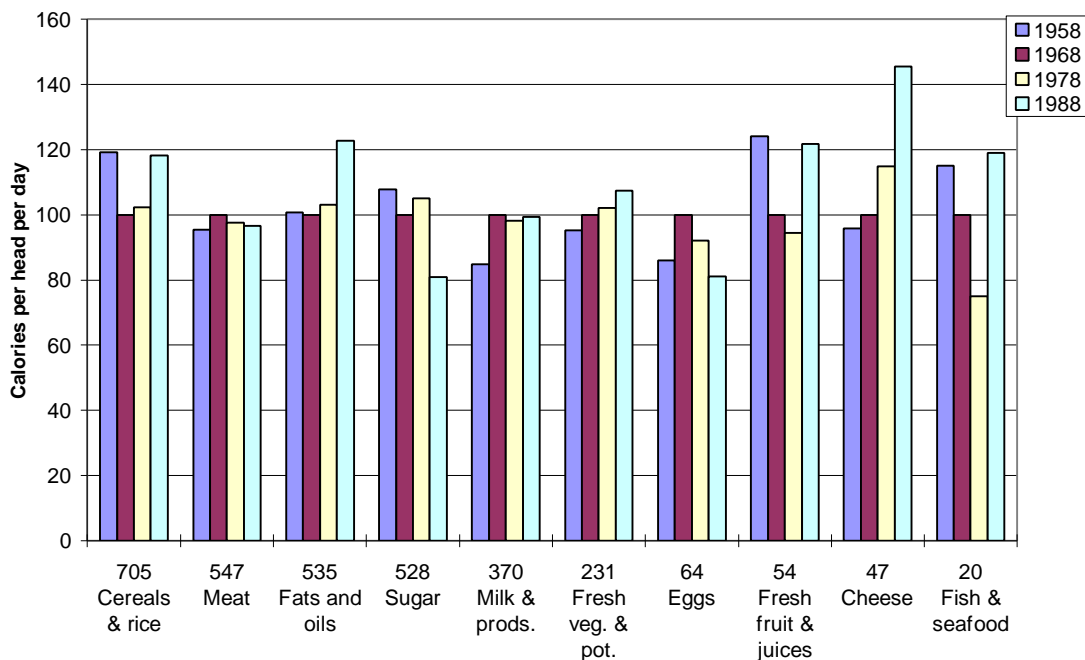


Figure 5b. Index of Consumption of Selected Foods in the UK, in calories per head per day, 1958-1988. 100=1968, absolute values for 1968, total = 3101. *Source: OECD Food Statistics*

‘Light foods’ tend to be more expensive than the dietary staples. Poor families find it more difficult to produce balanced diets within their budget constraints.¹⁵⁰ On the other hand, the lower social grades consume ‘junk food’ more heavily, e.g. 14 percent of class AB are ‘heavy users’ of potato crisps, as against 27 and 30 percent respectively for classes C2 and D.¹⁵¹ There are large differences in household consumption, and the well-off spend more on food than the poor, especially on high-cost foods.¹⁵² 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.¹⁵³ On the other hand, morbidity and mortality in these diseases has been decreasing quite sharply, and life expectation is rising. The causal directions are still unclear.

Another response was to exercise: ‘Joggers have become an almost familiar sight thruout America in the last year, [1968].’¹⁵⁴ Exercise swept the United States in the 1970s and 1980s.¹⁵⁵ Stationary bikes became a spare-bedroom fixture, and younger people spent long

¹⁵⁰ Charles and Kerr, *Women, Food and Families*, pp. 167-178; DeVault, *Feeding the Family*, ch. 7; McKenzie, ‘Economic Influences’; Charlton and Quaife, ‘Trends in Diet’, pp. 105-106.

¹⁵¹ Ratcliff, *Snack Foods*, table 20, p. 46. Similar gradients are found for other ‘junk’ foods.

¹⁵² McKenzie, ‘Economic Influences’; Chesher, ‘Household Composition’, p. 57.

¹⁵³ Charlton and Quaife, ‘Trends in Diet’, pp. 97-98, 104-106; Black et al, *Inequalities in Health*, pp. 290-296.

¹⁵⁴ *Chicago Tribune*, 9 July 1968; the first recorded instance in the *Oxford English Dictionary*.

¹⁵⁵ Gillick, ‘Health Promotion’; Yates, ‘Running’; Seid, *Never too Thin?*, pp. 181-186.

hours ‘working out’. Fitness clubs were a £1bn industry in the UK by 1998.¹⁵⁶ Bodily exertion at work has declined with manual employment. 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. Table 5 is an indicator that exercise (like other forms of self-control) increases with education and income (table 5). It also supports the notion that weight control is motivated by courtship. Exercise is as frequent among the never married, as amongst the highest earners and the best educated.

Table 5. Exercise, Drinking and Smoking, USA 1990. (percent, age 18 plus)

| Characteristic | Exercise or sport regularly | two plus drinks a day | Current smoker | BMI 27.8+ M 27.3+ F |
|------------------------|-----------------------------|-----------------------|----------------|------------------------|
| <i>All persons</i> | 40.7 | 5.5 | 25.5 | 27.5 |
| Male | 44 | 9.7 | 28.4 | 29.6 |
| Female | 37.7 | 1.7 | 22.8 | 25.6 |
| <i>Marital status:</i> | | | | |
| Currently married | 39.4 | 5.3 | 24.6 | 29.2 |
| Formerly married | 34.3 | 5.3 | 30.3 | 29.1 |
| Never married | 51.3 | 6.6 | 24.3 | 19.8 |
| <i>Education:</i> | | | | |
| Less than 12 years | 25.9 | 5.1 | 31.8 | 32.7 |
| 12 years | 37 | 5.9 | 29.6 | 28.6 |
| More than 12 years | 52.1 | 5.4 | 18.3 | 23.8 |
| <i>Income:</i> | | | | |
| Less than \$10,000 | 32.9 | 4.8 | 31.6 | 29.3 |
| \$10,000 to \$19,999 | 32.3 | 4.9 | 29.8 | 28.5 |
| \$20,000 to \$34,999 | 40.5 | 5.8 | 26.9 | 28.2 |
| \$35,000 to \$49,999 | 46.1 | 5.6 | 23.4 | 27.8 |
| \$50,000 or more | 51.7 | 6.7 | 19.3 | 24.9 |

Source: U.S. Bureau of Census, *Statistical Abstract of the United States, 1995* (Washington, D.C., 1996) table 221, p. 145.

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 6). Both class and gender were converging over time.

¹⁵⁶ Marks, ‘Gym Industry’, p. 8.

Table 6. 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).

| Class | Professional | | Intermediate | | Manual | |
|------------------------------|--------------|-----------|--------------|-----------|-----------|-----------|
| Gender | Men | Women | Men | Women | Men | Women |
| All years¹ | 55 | 39 | 44 | 29 | 40 | 23 |
| 1977 | 50 | 27 | 39 | 20 | 29 | 10 |
| 1987 | 59 | 46 | 50 | 36 | 48 | 29 |
| 1997 | 57 | 45 | 48 | 42 | 46 | 35 |

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

¹ Annual, 1977 to 1997.

Slimming is a repudiation of the prior ‘eating decision’. In the 1980s, about 23 percent of American men, and 40 percent of women, were trying to lose weight.¹⁵⁷ In the UK, only 4 percent of men, and 12 percent of women were on a slimming diet.¹⁵⁸ Both success and failure are expensive. In 1990, some \$8.4bn were being spent in the US on products for serious dieters, with about \$33bn being spent on slimming as a whole.¹⁵⁹ The direct treatment costs of obesity were placed somewhat higher, at \$45.8bn.¹⁶⁰ Together, what may be termed the money ‘regret costs’ of eating and drinking came to about 15 percent of the outlays, comparable to all the increment in food and alcohol outlays since 1965.¹⁶¹

Thousands of diet books attest that losing weight is a major emotional and cognitive undertaking, which commonly ends in failure.¹⁶² Success is a notable achievement, justifying celebration in a book, and providing credibility for a career as a slimming guru.¹⁶³ This was Rosemary Green’s motivation to begin her diary, but even the incentive of desperately needed money was to no avail. After years of agonizing 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.¹⁶⁴ Nigel Lawson, former Chancellor of the Exchequer, also recorded his slimming ordeal in a book. Like Mrs Green, he handed control to his spouse. ‘Few of the things I have

¹⁵⁷ Horm and Anderson, ‘Who in America’, table 2, 674; Market research places the level much higher (Rodin, *Body Traps*, p. 166).

¹⁵⁸ Gregory et al, *Dietary and Nutritional Survey*, p. 48.

¹⁵⁹ Armstrong and Mallory, ‘The Diet Business’; Miller, ‘Diets Incorporated’, p. 56, cited in Rodin, *Body Traps*, p. 166.

¹⁶⁰ Colditz, ‘Economic Costs of Obesity’; Hughes and McGuire, ‘Review of Economic Analysis of Obesity’, p. 258.

¹⁶¹ Sources, n. 7, above.

¹⁶² Stuart and Mitchell, ‘Self-help Groups’, pp. 347-349; Stunkard, ‘The Social Environment’, pp. 440-445.

¹⁶³ Fumento, *Fat of the Land*, ch. 6.

¹⁶⁴ Green, *Diary*, pp. 336-338.

done in a not uneventful life generated as much media interest,' he wrote.¹⁶⁵ These successful dieters both conform with Ainslie's model of self-control: since available rewards were impossible to resist, their strategy was to place food under the strict control of an external ally, to define 'bright lines' and adopt strict personal rules, and to establish routines.¹⁶⁶

But self-control can go too far. A second epidemic, of eating disorders, has emerged since the 1970s. Anorexia and bulimia are unknown outside the affluent world. They affect young women mainly, especially in college.¹⁶⁷ Clinical diagnosis is infrequent, but in milder forms these disorders affect substantial numbers.¹⁶⁸ Serious depression rose strongly in the 1970s and early 1980s, affecting young women (25-35) at almost twice the rate as young men. Women born in 1957-1963 had an incidence of serious depression of 12.5 percent.¹⁶⁹ This has been linked with eating disorders and weight concerns, but could also be related to the effect of lower sex-ratios on women's bargaining position both in courtship and within marriage.¹⁷⁰ 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 could afford to relax a little: they 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.¹⁷¹ Likewise, the convergence of female and male BMIs in the 1990s (fig. 1) is consistent with the rise in male sex ratios during those years. Rising divorce and a weakened family in the 1970s and 1980s are also consistent with this perspective. 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.¹⁷²

Black women were the most obese of all social groups (fig. 1). For them, sex ratios were much the worst. Black males are disproportionately absent on military service or in prison, and fall victim excessively to accidents and violence. They achieve less in education than black women. The black family is in severe crisis, with the majority of multi-person households now headed by women.¹⁷³ In these circumstances, competition for males has become irrelevant. Black men have similar BMIs to whites, but black women are two BMI units heavier than white women.¹⁷⁴ For black women, thin is not attractive; 'white' body norms

¹⁶⁵ Lawson, *Nigel Lawson Diet Book*, pp. 63-4.

¹⁶⁶ Ainslie, *Picoeconomics*, pp. 162-170, 296-297, and *passim*.

¹⁶⁷ Gordon, *Anorexia and Bulimia*, pp. 33-49.

¹⁶⁸ Mitchell and Eckert, 'Scope and Significance', pp. 628-629; Herman and Polivy, 'What does Abnormal Eating tell Us'; Polivy and Herman., 'Diagnosis and Treatment'.

¹⁶⁹ Klerman, 'Current Age of Youthful Melancholia', fig. 5, p. 9.

¹⁷⁰ McCarthy, 'The Thin Ideal'.

¹⁷¹ Heatherton et al., 'A 10-Year Longitudinal Study'.

¹⁷² 292,942 liposuction operations. American Academy of Cosmetic Surgery, 'Statistics', www.cosmeticsurgeryonline.com/consumer/stats/1996percent.html.

¹⁷³ Guttentag and Secord, *Too Many Women?*, ch. 8.

¹⁷⁴ Kuczmarski et al., 'Increasing Prevalence', table 4, p. 209.

are rejected.¹⁷⁵ With mating prospects so limited, there was little point in the trying to push body weight below its natural equilibrium.

Two other responses are acceptance and defiance. When not everyone can win it is reasonable to withdraw from competition. Feminist writers of the 1970s and 1980s recommended accepting one's body.¹⁷⁶ The National Association to Advance Fat Acceptance advocates 'Fat Pride'. *Playboy* had an obese 'Playmate of the Year' in 1993.¹⁷⁷ Several influences are acting to relax weight norms. Sex ratios are improving in favour of women (fig. 3). The eclipse of militant feminism may not be unrelated. Overweight is becoming a majority condition.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 As Rosemary Green's overweight sister told her, 'Well I'm happy... I had to worry about every bite I took. Now I eat whatever I want.'¹⁸⁰

V

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.¹⁸¹ 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 4.4kg, and women 5.0 kgs. They were more than twice as likely to become overweight as non-smokers.¹⁸²

The addictive attributes of psychoactive substances help to clarify the challenge of self-control. 'Clearly, food is the number one abused substance, at least in developed countries'.¹⁸³ Addictive substances stimulate sources of pleasure in the middle brain. They amplify rewards that are already present. If the interval between doses is short enough to allow tolerance to build up, a greater dose will be required for the same level of bliss. Stimulation is required more often, the reward is less intense, until the cycle escalates into the frenzy of an alcoholic, a two-pack smoker, or a crack addict.¹⁸⁴ Finally, the substance is taken not in order to feel better, but simply to avoid feeling worse.

¹⁷⁵ Heble and Heatherton, 'The Stigma of Obesity in Women'.

¹⁷⁶ Orbach, *Fat is a Feminist Issue*, e.g. pp. 14, 31-32.

¹⁷⁷ NAAFA homepage, <http://www.naafa.org/> (1998). On the 'Fatlash', see Fumento, *Fat of the Land*, pp. 38-43, 115-122.

¹⁷⁸ Polivy and Herman, 'Diagnosis and Treatment'.

¹⁷⁹ Hamermesh and Biddle, 'Beauty and the Labor Market'; Stunkard and Wadden, 'Psychological Aspects'.

¹⁸⁰ Green, *Diary*, p. 96.

¹⁸¹ Sources as n. 7, above.

¹⁸² Flegal et al., 'The Influence of Smoking Cessation'; In Britain, men non-smokers were heavier than smokers, but women were not. Gregory et al., *Dietary and Nutritional Survey*, p. 229.

¹⁸³ Wright, 'Triumph of Obesity?', p. 637.

¹⁸⁴ Goldstein, *Addiction*, ch. 6.

Ainslie states that in conditions of abundance, it is scarcity that becomes scarce. The challenge is not to *maximise* consumption, but to pace it down to the rate of optimal reward.¹⁸⁵ Pacing requires self-control, and self-control requires knowledge and other resources. 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.

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.¹⁸⁶ 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, and to the blandishments of its suppliers (table 5).¹⁸⁷

The decline of smoking is paralleled by epidemics of obesity and slimming. New rewards are thrown up by affluence faster than it takes to master the previous ones, so that overall, despite growing wealth, self-control declines. Obesity shows how abundance, through cheapness, variety, novelty, and choice, can make a mockery of the rational consumer, how it entices only in order to humiliate. The *challenge* of affluence is to attain the requisite level of self-control. This also puts an unfamiliar face on the question of equity. The backhand of affluence hits the poor more than the rich. The well-to-do have more capacity to pace and defer their consumption and to exercise self-control. From this aspect, abundance does not solve the problem of equity, but exacerbates it. In the most extreme form, this can be observed in the fate of the aboriginal peoples of North America and Australia. With their indigenous cultures destroyed, and in a state of extreme material poverty, they are defenceless in the face of alcohol and food. Rosemary Green, the fat housewife, exposed to constant mental, social and economic stress, her feminine identity in question, also experienced abundance as a trap. Abundance, in other respects so welcome, presented her with a problem that growing numbers have been unable to solve.

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¹⁸⁵ Ainslie, *Picoeconomics*, pp. 256-273, 293-300.

¹⁸⁶ Brown, *American Standards of Living*, p. 232

¹⁸⁷ Doll, 'Tobacco: A Medical History'; Also Flegal et al, 'The Influence of Smoking Cessation', table 1, p. 1167; Brown, *American Standards of Living*, 416; Doll et al., 'Trends in Mortality', fig. 9.2, p. 132.

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