‘Lifestyle’, heart disease, and the British public: c.1950 to c.2000

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I, Peder Matthias Clark, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Signed:

Abstract

This thesis looks at how and why 'lifestyle' (understood as diet, exercise and other health behaviours) became the primary focus of public health in post-war Britain. It uses Britain's biggest killer - heart disease - as a lens through which to view this paradigm, tracing lifestyle's development from its roots in risk-factor epidemiology, through health promotion campaigns, to its embedment in the practices of everyday life. Lifestyle's origins in post-war social medicine and epidemiology are explored through two case studies. Firstly, the identification of physical inactivity as a risk factor, and how exercise was reinvented as a preventive health activity, consciously practiced to compensate for sedentary working lives. The second explores how research on sugar, a putative risk factor for heart disease, was unsuccessful, with its nutritional, rather than epidemiological, approach. Such epidemiological research was translated into the political and policy spheres via the consensus for prevention that developed in 1970s. This viewed lifestyle as a means of halting the rise of non-communicable diseases such as heart disease, and the concomitant burden that they placed on the welfare state. Lifestyle was conceived as a set of practices that individual citizens were encouraged to perform as a *quid pro quo* for the continuation of the NHS free at the point of delivery. This focus on personal responsibility continued into the 1980s, as a major campaign on heart disease tried to persuade a sceptical public to exercise and eat healthily. In doing so, it appealed to Thatcherite values of self-reliance and family values, suggesting a confluence between lifestyle public health, neoliberalism and social conservatism. However, an explicitly class-based analysis of public health also emerged

concurrently. Health inequalities research, specifically the Whitehall studies, disrupted the lifestyle paradigm, highlighting the structural determinants of health and suggesting an alternative narrative for public health in Britain.

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List of Abbreviations

ABPI – Association of the British Pharmaceutical Industry
AIDS – Acquired Immune Deficiency Syndrome
BBC – British Broadcasting Corporation
BCS – British Cardiac Society
BDDH – Butterfield Day Devito Hockney
BHF – British Heart Foundation
BMA – British Medical Association
BMJ – British Medical Journal
BNF – British Nutritional Foundation
CHC – Community Health Councils
CHD – Coronary Heart Disease
COMA – Committee on Medical Aspects of Food and Nutrition Policy
CPG – Coronary Prevention Group
DH – Department of Health
DHSS – Department of Health and Social Security
ECG – echocardiogram
FT – The Financial Times
HEA – Health Education Authority
HEC – Health Education Council
IHD – Ischaemic Heart Disease
ITV – Independent Television
KCL – King's College London
LAYH – Look After Your Heart
LSE – London School of Economics and Political Science
LSHTM – London School of Hygiene and Tropical Medicine
MAFF – Ministry for Agriculture, Fisheries and Food
MOH – Medical Officer of Health
MRC – Medical Research Council
NACNE – National Advisory Committee on Nutrition Education
NHS – National Health Service
OHE – Office of Health Economics
PA – Parliamentary Archives
RCP – Royal College of Physicians
QEC – Queen Elizabeth College
SMRU – Social Medicine Research Unit
TNA – The National Archives
UCL – University College London
WHO – World Health Organization

Introduction

As the dog days of summer drew to a close in 2018 and this thesis neared its completion, a news story circulated in most national British newspapers that 'four in five adults [were] at risk of early death, heart-age test shows'.[1] The articles linked to an online questionnaire that 1.9 million people had already completed. Hosted by Public Health England, it asked individuals to fill out a number of personal details, from biological age and postcode, to blood-pressure and cholesterol levels. From these inputs, a 'heart-age' was calculated and the participant provided with brief advice on what steps they might take to lower this metric. In *The Guardian* the following Saturday, a full-page spread was given over to detailing 'how changes in lifestyle can make a big difference'. It interviewed 'five experts' – mostly heart disease researchers – for their thoughts on what the newspaper's readers might do to improve the health of their heart, which included taking more exercise, improving diet, stopping smoking, and reducing stress.[2]

Such stories illustrate the continuing salience of discourses about lifestyle, and particularly its relationship with heart disease, to British public health, the media and everyday life. This thesis uses coronary heart disease as a tracer condition to explore the history of how lifestyle – a shorthand for diet, exercise, smoking, and

[1] Campbell D (2018) "Four in Five Adults at Risk of Early Death, Heart-Age Test Shows" *The Guardian* Tuesday 4 September https://www.theguardian.com/society/2018/sep/04/four-in-five-adults-at-risk-of-early-death-heart-age-test-shows Last accessed 12 September 2018

[2] Devlin H (2018) "Young at Heart: How Changes in Lifestyle can Make Difference" *The Guardian* Saturday 8 September: 5

drinking, amongst other "health behaviours" – became the focus of British public health in the latter half of the twentieth century. It traces lifestyle's origins from the emergence of risk-factor epidemiology in the 1950s up until the health promotion campaigns of the late 1980s. It examines the continuity and change that has characterised the research, policy, politics and cultural discourse of an individualised approach to disease prevention in post-war Britain. Through the use of a selection of important case studies, a narrative is traced that outlines lifestyle's epistemic roots, its translation into government policy, and its communication to the British public. While the hegemonic status of lifestyle in contemporary public health has been noted by sociologists and philosophers such as David Armstrong, Nike Ayo, Deborah Lupton and Christopher Mayes amongst others, this thesis also seeks to complicate that narrative.[3] It notes how the construction of some aspects of lifestyle public health, most particularly diet, were contingent and contested. Health inequalities research and advocacy also played a major role in disrupting lifestyle as a dominant discourse, providing a counter-narrative for both the major influences on the public's health, and public health policy and practice, in late twentieth century Britain.

[3] Armstrong D (1983) *Political Anatomy of the Body: Medical Knowledge in Britain in the Twentieth Century* (Cambridge: Cambridge University Press); Ayo N (2012) "Understanding Health Promotion in a Neoliberal Climate and the Making of Health Conscious Citizens" *Critical Public Health* 22(1): 99-105; Peterson A and Lupton D (1996) *The New Public Health: Discourses, Knowledges, Strategies* (London: Sage); Lupton D and Chapman S (1995) "'A Healthy Lifestyle might be the Death of You': Discourses on Diet, Cholesterol Control and Heart Disease in the Press and Among the Lay Public" *Sociology of Health & Illness* 17: 477-494; Mayes C (2016) *The Biopolitics of Lifestyle: Foucault, Ethics and Healthy Choices* (Abingdon: Routledge); Hughes M (1994) "The Risks of Lifestyle and the Diseases of Civilisation" *Annual Review of Health Social Science* 4(1): 57-78; Hansen E and Easthope G (2007) *Lifestyle in Medicine* (London: Routledge).

Both lifestyle and heart disease are significant topics of historical inquiry, as respectively, an important part of the practice of everyday life, and the biggest killer in post-war Britain. This thesis also contends however that their study provides a deeper understanding of, and a new perspective on, many other central concerns of modern British history. The welfare state, citizenship, the mass media, the uses of scientific knowledge in the public sphere, neoliberalism, and class are hugely significant topics in the latter half of the twentieth century that are analysed throughout the thesis. Heart disease research emerged in the 1950s during the early years of the welfare state and the end of rationing, and the scientific evidence on exercise and nutrition was shaped by these contexts. Chapter One looks at how exercise was reconceived as an individual practice, distinct from its interwar conception as a communal citizenly duty. Similarly, the way that this evidence was communicated to the public was also influenced by broader cultural ideas about citizenship, the 'affluent society', and the changing British diet. Chapter Two looks at the translation of research on sugar into the public sphere through official dietary advice, newspaper comment pieces, and popular science books. The way in which such knowledge was received by politicians and policymakers during the 1970s also spoke to the importance placed on scientific evidence, particularly that which related to social issues. The same decade's debates about the welfare state, and the apparent ideological pivot from social democracy to neoliberal governmentality, was significant for the development of the lifestyle paradigm. Chapter Three meanwhile discusses how the practice of citizenship in Britain was redefined in the 1970s as financial pressures on the welfare state coincided with widespread interest in prevention of disease through lifestyle changes of the British

public. Messages that aimed at preventing ill-health by encouraging individual behavioural change continued to be broadcast to the British public, primarily through the popular press and television, into the next decade. Chapter Four discusses this confluence between the priniciples of lifestyle public health and dominant moral regimes in Thatcherite Britain. However, the rise of health inequalities research in the 1980s, anticipated by the rediscovery of poverty in the 1960s, responded to the widening income inequality in Britain and the apparent inadequacy of the lifestyle paradigm to explain wide disparities in heart disease. Chapter Five looks at the use of class by epidemiological researchers, and how that disrupted the narrative of lifestyle public health. These broad themes will be explored in greater depth in the Conclusion.

This introduction explains what the objects of inquiry are in this thesis, defines key terms, draws boundaries of inclusion and exclusion, sketches out its overarching argument, critically reviews the relevant theoretical and empirical literature, discusses methodology and finally provides brief synopses of each chapter.

Definition of terms

As the medical sociologist Mildred Blaxter noted in the early 1990s, '"lifestyle" is a vague term'.[4] For the historian, such conceptual fuzziness is both a blessing and a

[4] Blaxter M (1990) *Health and Lifestyles* (London: Routledge), 5. Similar sentiments are expressed in Coreil J et al (1985) "Life Style – An Emergent Concept in the Sociomedical Sciences" *Culture, Medicine and Psychiatry* 9(4): 423-37 and Coreil J and Levin JS (1984) "A Critique of the Life Style Concept in Public Health Education" *International Quarterly of Community Health Education* 5(2): 103-114.

curse. Its lack of definition means that lifestyle could potentially be used to explore many different aspects of life in post-war Britain, but by the same token, the question hovers: what exactly does it mean? Furthermore, the term, as with all language, does not remain static throughout the period studied. Such linguistic instability makes it difficult to trace as well as occasionally anachronistic in descriptive usage. Indeed, the word 'lifestyle' was arguably not in common usage until the 1970s, but has clear antecedents in, for example, phrases such as 'ways of living' or 'modes of life', discussed in Chapters One and Two respectively.

Nonetheless, Blaxter's discussion of the word, although rooted in the specificity of both the cultural context that she was writing in during the 1980s, and the research on which she was reporting, offers a useful introduction to its two common usages across this thesis.[5] Blaxter offers two definitions; a narrow one that refers to, '[i]n the context of health, choices about food, about smoking and drinking, and about the way in which leisure time is spent'.[6] These 'personal behaviours which are known to be risk factors' as they related to heart disease, are the primary focus of this thesis. But the 'wide[r] definition' that Blaxter provides, the 'economic and cultural dimensions' of lifestyle, for example 'the way the life of the city may inevitably be different from that of the country', is also an important aspect of the thesis. For Blaxter, 'income, work, housing, and the physical and social environments are also part of ways of living'. These comments on one level speak

[5] Blaxter's book discusses the Health and Lifestyle Survey of 9,003 British men and women interviewed between autumn 1984 and summer 1985. Ibid.: 9.
[6] Ibid.: 5.

to the singularity of the decade in which she was writing, as health inequalities researchers attempted to highlight the structural determinants of heart disease, a history explored in the final chapter. But it is also important to acknowledge how these two definitions necessarily impinge upon and interact with each other. Lifestyle is both a discrete set of risk factors for developing certain conditions, but it also can refer to everyday lived experience. For example, Chapter One discusses how shifts in Britain's economic and working life influenced people's daily physical activity. Or the consumption of sugar, considered in the second chapter, can be viewed as both a scientifically researched risk factor and something that millions stirred unthinkingly into their morning coffee or tea. Blaxter makes a useful distinction between lifestyle as 'voluntary' – something more or less consciously practiced – and the general mode of life. This thesis concentrates on the former whilst explaining how changes in wider British life over the period influenced understandings of lifestyle as a risk factor and as preventive health practice.

The thesis aims however to be alert to other definitions and critiques of lifestyle that were beginning to emerge from medical sociology and philosophy when Blaxter was writing. Such Foucauldian analyses have been summarised recently by Mayes' biopolitical conception of lifestyle as a 'network of disparate ideas, beliefs and practices through which individual choices and bodies are governed'.[7] This highlights the important power dynamics inherent in the lifestyle paradigm, but, this thesis argues, is inadequate for a nuanced historical understanding of the

[7] Mayes C (2016): 2.

concept. By treating lifestyle as a system of 'governmentality', its political and policy aspects are highlighted, at the expense of its cultural and social features. Consequently the lived experience and agency of the "governed bodies" – in this case the British public – are underplayed. Blaxter's definition is more satisfactory for the purposes of this thesis, because it highlights the interrelationship between the 'ideas, beliefs and practices' generated by experts and the ways in which they are then re-contextualised, practiced, resisted and subverted in day-to-day existence.

This thesis provides historical context and understanding to this 'vague term' of lifestyle by tethering it to the specific, yet common condition of "heart disease". By looking at how lifestyle developed through research, policy, health promotion and cultural discourse on and about heart disease, the paradigm is given an empirical, historically researched grounding. The lifestyle paradigm is therefore viewed through the lens of heart disease, the leading cause of death in Britain during the post-war period. Ironically however, at the start of the 1950s, it was unclear to researchers what heart disease was, and indeed, the extent to which it was preventable.[8] Clinically, coronary heart disease describes what happens when the heart's blood supply is blocked or interrupted by a build-up of fatty deposits (artheroma) in the coronary arteries. This process is called atherosclerosis. Common symptoms are angina (chest pain), shortness of breath, and ultimately, heart attacks. In the inter-war years, there had been a classificatory change from

[8] Steinberg D (2007) *The Cholesterol Wars: The Skeptics vs. the Preponderance of Evidence* (San Diego, CA: Academic Press): 10.

describing a patient's symptoms ('angina pectoris') to the more anatomical term 'coronary heart disease', a history related by Robert A. Aronowitz.[9] This descriptive shift meant that coronary heart disease loomed into focus both as a novel diagnostic term and as an epidemiological phenomenon. Again, because of the fluidity of language, especially medical (as Aaronowitz has discussed), over the time period, there is a risk of anachronism. Disparate clinical terms used from the 1950s to the 1990s, such as "ischaemic heart disease", "coronary thrombosis", "atherosclerosis", "angina pectoris" and so on, are, for the purposes of this thesis, considered under the umbrella term of 'coronary heart disease'.

Heart disease has been chosen as the tracer condition to explore lifestyle as it related to public health for two reasons. Firstly, that epidemiological research conducted from the 1950s onwards, such as that discussed in Chapters One, Two and Five, indicated that the condition was statistically strongly correlated, not to say caused, by personal behaviours, such as a diet rich in fats, physical inactivity and smoking. Derived from probabilistic methods pioneered by the Framingham study (discussed in more detail later), these so-called 'risk factors' were key elements of what would be described as lifestyle public health. Secondly, heart disease was Britain's biggest killer for much of the second half of the twentieth century. It first came to public attention as the leading cause of mortality for middle-aged men – the stalwarts of the post-war economy – before being

[9] Aronowitz RA (1998) "From the Patient's Angina Pectoris to the Cardiologist's Coronary Heart Disease" in Aronowitz RA *Making Sense of Illness: Science, Society and Disease* (Cambridge: Cambridge University Press): 84-110.

acknowledged as a major public health issue as the heart attacks suffered by younger people became noticeable. Medical sociologists such as Mel Bartley and David Armstrong have challenged the existence of this apparent epidemic of heart disease, suggesting it was more artefactual than actual; or in other words recognised more because of different certification of disease in earlier periods (amongst other reasons) than because of a "real" increase.[10] Such assertions have, in their turn, been robustly refuted.[11] Regardless, as Jerry Morris, a leading epidemiologist stated in the immediate post-war period, 'w]hether coronary heart disease as an epidemic phenomenon, is new or merely newly recognised, there is no doubt that to-day it has become a major problem.'[12] In other words, irrespective of the numbers, there was a perception amongst scientific communities and amongst the general public in most Western countries, that heart disease was a public health problem. Although rates (per 100,000) of coronary mortality started to decline for all age groups from the 1970s onwards, the crude number of deaths was at its height in the 1980s, the decade in which heart disease attracted the most public attention and political action.[13] While heart disease has

[10] Bartley M (1985) "Coronary Heart Disease and the Public Health 1850-1983" *Sociology of Health and Illness* 7(3): 289-313; Armstrong D (2014) "Chronic Illness: A Revisionist Account" *Sociology of Health and Illness* 36(1): 15-27.
[11] Gilleard C and Higgs P (2014) "Revisionist or Simply Wrong? A Response to Armstrong's Article on Chronic Illness" *Sociology of Health and Illness* 36(7): 1111-5.
[12] Memorandum from the SMRU, n.d. (probably 1949/50), TNA FD 1/286.
[13] Allender S et al (2008) "Patterns of coronary heart disease mortality over the 20th century in England and Wales: Possible plateaus in the rate of decline" *BMC Public Health* 2008, 8:148 https://doi.org/10.1186/1471-2458-8-148

been challenged by cancer as the leading cause of death in the UK, it still causes more than a quarter (26 per cent) of all deaths.[14]

If "lifestyle" and "heart disease" are mutable concepts throughout this period, then "the British public" are infinitely more so. The "British public" are present in this thesis both as an imagined community – by researchers, policymakers, politicians, public health workers, advertising agencies and the media – but also as a diverse body of social groups made up of "ordinary" individuals with ways of living, and ways of knowing, that challenged expert and elite assumptions about them. The ways in which the British public were mobilised rhetorically, and in terms of the different identities that made up that whole, were subject to considerable flux in the post-war period. Indeed, as Alex Mold and colleagues have recently noted in their study of the public and its relationship to public health in post-war Britain, 'it is clear that there was not one "public" but many "publics", as well as various different ways of seeing these.'[15] The shifting and myriad permutations of class, ethnicity, gender, employment status, geography and other identities or groupings throughout the latter half of the twentieth century are too numerous to describe adequately in this short section. Suffice to say however, the way that the British public were imagined, communicated with, and the way that they responded to discourses about lifestyle and heart disease, is a significant category of analysis throughout this thesis.

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[14] British Heart Foundation (2018) *UK Factsheet: August 2018* https://www.bhf.org.uk/-/media/files/research/heart-statistics/bhf-cvd-statistics---uk-factsheet.pdf Last accessed 28 September 2018

[15] Mold A et al. (2019, forthcoming) *Placing the 'Public' in Public Health in Post-War Britain, 1948 - 2012* (London: Palgrave Macmillan).

Scope, focus and argument

In a thesis that attempts to grapple with these three complex, mutable and entangled subjects, for the sake of coherency and brevity it is important to explain what is being considered within the scope of this thesis, and what is being excluded, and why.

This thesis traces the development of lifestyle as a paradigm in post-war public health, viewed through the lens of heart disease. It starts in the early 1950s, with the emergence of both risk factor epidemiology and public acknowledgement of heart disease as a 'modern epidemic'.[16] It explores the ways in which two important elements of lifestyle – physical activity and diet – were researched and constructed. It investigates how lifestyle, as an individualised response to heart disease and other non-communicable disease, was embedded in public health policy, through the consensus for disease prevention in the 1970s. Lifestyle approaches to prevention that highlighted personal responsibility were then communicated to the British public during the late 1980s by health promotion campaigns. This narrative is however complicated by the final chapter of the thesis, which looks at a counter-narrative of post-war public health, that nonetheless had its roots in risk-factor epidemiology. Health inequalities research during the 1980s disrupted the lifestyle paradigm, highlighting the structural and socioeconomic causes of disease rather than individual behaviours. The thesis finishes in the

[16] Morris JN (1955) "Coronary Thrombosis: a Modern Epidemic" *The Listener* 65(1397): 995-997

1990s, as health inequalities became more influential on public health policy and practice, and a new era of target-led public health was ushered in by *The Health of the Nation* green paper.[17] While lifestyle as a paradigm had been disrupted, it continued to persist, as evidenced by the anecdote recounted at the beginning of this introduction.

This thesis therefore focuses primarily on diet and exercise as elements of the lifestyle paradigm. However, the observant reader will note that smoking was also included in the definitions of lifestyle offered above. While the consumption of cigarettes was an integral part of the lifestyle paradigm, and was widely acknowledged as a major risk factor for heart disease, it will not form a central part of this thesis. This is for reasons both historical and historiographical. Firstly, the epidemiological studies that established smoking as a health risk, conducted by Richard Doll and Austin Bradford Hill, were primarily concerned with lung cancer.[18] Following the Framingham cohort study, smoking effectively entered the canon of risk factors rapidly and fairly uncontroversially, at least amongst heart disease researchers.[19] Smoking therefore was not a main object of study by epidemiologists primarily concered with heart disease, but was also quickly assimilated into an understanding of heart disease caused by personal behaviours.

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[17] Department of Health (1991) *The Health of the Nation: A Consultative Document for Health in England* (London: Her Majesty's Stationery Office).

[18] Doll R and AB Hill (1950) "Smoking and Carcinoma of the Lung" *British Medical Journal* 2(4682): 739–748.

[19] Doyle JT et al (1962) "Cigarette Smoking and Coronary Heart Disease: Combined Experience of the Framingham and Albany Studies" *New England Journal of Medicine* 266: 796-801; Oppenheimer GM (2010) "Framingham Heart Study: The First 20 Years" *Progress in Cardiovascular Diseases* 53: 55-61.

It was an ever-present in lifestyle public health from the 1960s onwards, a history explored extensively by Virginia Berridge's *Marketing Health*.[20] Other aspects of smoking in Britain, from visual and popular culture to its relationship to the politics of the left, have been investigated by historians such as Penny Tinkler, Matthew Hilton, Rosemary Elliott and Paolo Palladino.[21] It is not this thesis' intention to emulate that scholarship, and while undoubtedly there are more histories to be written on tobacco and smoking in post-war Britain, this is not one of them. On the other hand, smoking does of course feature throughout the thesis; as a risk factor, as a confounder of other risk factors, as a point of comparison (for example, to sugar), and as a key feature of policy in the 1970s and health promotion campaigns related to heart disease during the 1980s. Smoking therefore is an everpresent in this thesis, but as a important piece of context rather than significant object of study.

This thesis also largely – although not entirely – bypasses local implementation of heart disease prevention strategies. While concentrating on the research, policy, political and cultural aspects of lifestyle and public health, the locus is primarily

[20] Berridge V (2007) *Marketing Health: Smoking and the Discourse of Public Health in Britain, 1945-2000* (Oxford: Oxford University Press). See also Berridge V and Loughlin K (2005) "Smoking and the New Health Education in Britain 1950s–1970s" *American Journal of Public Health* 95(6): 956-964.

[21] Tinkler, P (2006) *Smoke Signals: Women, Smoking and Visual Culture in Britain* (London: Berg); Hilton M (2000) *Smoking in British Popular Culture 1800-2000: Perfect Pleasures* (Manchester: Manchester University Press); Elliott R (2007) *Women and Smoking since 1890* (London: Routledge); Palladino P (2001) "Discourses of Smoking, Health, and the Just Society: Yesterday, Today, and the Return of the Same?" *Social History of Medicine* 14(2): 313-335; Welshman J (2004) "Smoking, Science, and Medicine", 326-333 in Gilman SL and Zhou Xun (eds.) *Smoke: A Global History of Smoking* (London: Reaktion Books).

national. Research, where it concentrated on professional groups in specific geographies, such as civil servants and bus drivers in London, had a tendency to either underplay the specificities of local context, or assume that what was true of the research population was also more universally applicable. National policy was not oblivious to local context – for example, health promotion campaigns in the 1980s were conscious of the higher rates of heart disease in the north of England – but was also, by its very nature, characterised by a one-size-fits-all approach. Similarly, the British public's response to heart disease campaigns was occasionally variegated by regional or national differences – such as working class men in the pubs of Sheffield, or those in post-mining communities in south Wales – but generally its response was viewed through the prism of marketing reports or audience focus groups. Local 'service public health', represented by the pre-1974 Medical Officers of Health (MOsH), or the post-reorganisation community physicians are perhaps conspicuous by their absence in the thesis, but the explanation for this is not an oversight of their activities. Prevention campaigns against heart disease were largely led by national agencies, not the bread-and-butter of local public health officials. As historian Jane Lewis has suggested, local public health tended to follow rather than lead; this thesis therefore concentrates on those at the forefront of the lifestyle paradigm.[22]

[22] Lewis J (1986) *What Price Community Medicine?: The Philosophy, Practice, and Politics of Public Health since 1919* (Brighton: Wheatsheaf Books). John Welshman's study of public health in Leicester up until 1974 also provides evidence of local public health's relative lack of interest in heart disease. Welshman J (2000) *Municipal Medicine: Public Health in Twentieth-Century Britain* (Oxford: Peter Lang). Lewis's thesis has been subjected to reassessment in the historiography of post-war Medical Officers of Health. For example, see Gorsky M (2007) "Local Leadership in Public Health: The Role of the Medical Officer of Health in Britain, 1872-1974" *Journal of Epidemiology and Community Health* 61(6): 468-

Relevant literature

This thesis presents new scholarship on the development of lifestyle as a paradigm in post-war British public health, but of course is in conversation with a well-established literature, briefly outlined here. For the purposes of this introduction and the sake of clarity, relevant scholarship will be broadly divided into three categories: that which explores antecedents to lifestyle, major related historical studies and theoretical approaches.

While this thesis argues that lifestyle developed as a distinctive and significant paradigm in post-war Britain, there are also obvious continuities with earlier twentieth century philosophies, and even with Victorian ideas of healthy 'habits'. This section outlines the noteworthy studies in these areas, before explaining why, despite apparent similarities, lifestyle was a distinctive development.

Histories of nineteenth century public health have understandably focused on that century's major concern with sanitation, infant mortality and the prevention of infectious diseases, the biggest causes of mortality.[23] Tom Crook's recent study of

472 as well as Welshman J (1997) "The Medical Officer of Health in England and Wales, 1900–1974: Watchdog or Lapdog?" *Journal of Public Health Medicine* 19: 443–50.

[23] Selected general histories of Victorian and Edwardian public health include Wohl AS (1984) *Endangered Lives: Public Health in Victorian Britain* (London: Methuen); Hardy A (1993) *The Epidemic Streets: Infectious Disease and the Rise of Preventive Medicine, 1856-1900* (Oxford: Oxford University Press); Worboys M (2000) *Spreading Germs: Disease Theories and Medical Practice in Britain 1865-1900* (Cambridge: Cambridge University Press); Gilbert PK (2007) *The Citizen's Body: Desire, Health and the Social in Victorian England* (Columbus: Ohio State University Press); Baldwin, P (1999) *Contagion and the State in Europe, 1830-1930* (Cambridge: Cambridge University Press)*;* Eyler JM (1997) *Sir*

the development of 'modern' public health however presents some precursors to lifestyle.[24] For Crook what 'defines the modernity of England's [Victorian] public health system' was 'the problem of working with the public as both an object and a subject of governance'.[25] Although such cooperation was predominantly in the realms of smallpox vaccination and sanitation, Crook also highlights the publication of a number of books and pamphlets that aimed to inculcate 'habits' of 'personal hygiene' amongst the public by social reformers. Some of these discussed 'general rules of conduct' such as 'regular exercise and fresh air; sensible clothing; personal cleanliness; and moderate intake of food and drink'.[26] Such advice was predicated on the understanding that while the state and 'public hygiene' could prevent some diseases, without such behaviours, 'the burden of sickness and suffering be but half removed.'[27] These personal activities and conduct were described as 'habits', and relied on individualised self-reliance, but were also contingent on the 'environmental and educational stimulus' to 'be maintained over time'.[28] In other words, a rhetoric not too dissimilar to lifestyle public health is discernible. The individual was responsible for prevention of disease, instructed and supported by relevant literature and technologies. In Victorian times, one example might be the

Arthur Newsholme and State Medicine, 1885-1935 (Cambridge: Cambridge University Press); Eyler JM (1979) *Victorian Social Medicine: The Ideas and Methods of William Farr* (Baltimore, MD: Johns Hopkins University Press).

[24] Crook T (2016) *Governing Systems: Modernity and the Making of Public Health in England, 1830-1910* (Berkeley, CA: University of California Press).

[25] Ibid.: 245.

[26] Ibid.: 247.

[27] Parkes EA (1876) *Manuals of Health: On Personal Care of Health* (London: Society for Promoting Christian Knowledge): 5 quoted in Crook (2016): 247.

[28] Ibid.: 248.

revival of Roman-Turkish baths; in post-war Britain, the emergence of municipal leisure centres.

Another important aspect of public health in the nineteenth century for the later emergence of risk factor epidemiology, is the development of what might be termed, *pace* Michel Foucault, the statistical 'gaze'.[29] The wider use of statistics in public discourse throughout the nineteenth century has been noted by amongst others, Theodore M. Porter.[30]

As historians such as Simon Szreter have discussed, the collection and compilation of statistics by the General Register Office (GRO) assisted the tracking of epidemic diseases, and was used by social reformers to advocate for change.[31] The development of these vital statistics was essential to heart disease being identified as an epidemic in the next century, and similarly, were used for political purposes

[29] The concept of the 'gaze' as a means of governance of individuals through surveillance and social mores rather than explicit force is articulated at length in Foucault M (1977) *Discipline and Punish* (London: Allen Lane). A contrasting, anti-Foucauldian perspective in the British context is provided by Edward Higgs who has argued that the collection of information by the state from early modernity was empowering to private individuals with respect to the rights afforded to them in terms of property and rate-paying. Higgs E (2004) *The Information State in England: The Central Collection of Information on Citizens since 1500* (Basingstoke: Palgrave Macmillan).

[30] Porter TM (1986) *The Rise of Statistical Thinking, 1820-1990* (Princeton, NJ: Princeton University Press). See also Crook T and O'Hara G (eds.) (2011) *Statistics and the Public Sphere: Numbers and the People in Modern Britain, c. 1800-2000* (Abingdon: Routledge).

[31] Szreter S (1991) "The GRO and the Public Health Movement in Britain, 1837–1914" *Social History of Medicine* 4(3): 435–463. General histories pertaining to the GRO are provided by Glass DV (1973) *Numbering the People: the Eighteenth-century Population Controversy and the Development of Census and Vital Statistics in Britain* (Farnborough: D. C. Heath) and Higgs E (2004) *Life, Death and Statistics : Civil Registration, Censuses and the Work of the General Register Office, 1836-1952* (Hatfield : Local Population Studies).

by both state and non-state actors to leverage support for research and policy interventions.

Moving further into the twentieth century, a wide range of scholarship has identified various movements, particularly in the interwar years, that highlighted diet and exercise as activities practiced for good health. Ina Zweiniger-Bargielowska has discussed the physical culture movement of the late Victorian and Edwardian era, noting popularisers such as Eugen Sandow and Frederick Arthur Hornibrook. The latter's *The Culture of the Abdomen* is suggested as being particularly influential, remaining in print until the 1960s. These popularisers were reflective of wider concerns about physical degeneracy 'due to the corrupting influence of modern urban lifestyles in general and an unhealthy diet in particular'.[32] But if these sentiments hint towards a eugenicist agenda – and certainly there is evidence that such thinking was prevalent[33] – Dorothy Porter has suggested a more nuanced interpretation, arguing that Medical Officers of Health in Edwardian Britain 'recognised that poverty was still the main challenge of preventative medicine'.[34] Zweiniger-Bargielowska links the establishment of the New Health Society in 1925 with the 'wider health and life reform movement which originated

[32] Zweiniger-Bargielowska I (2005) "*The Culture of the Abdomen*: Obesity and Reducing in Britain, circa 1900–1939" *Journal of British Studies* 44(2): 242.
[33] Jones G (1986) *Social Hygiene in Twentieth Century Britain* (London: Croom Helm); Searle GR (1976) *Eugenics and Politics in Britain, 1900-1914* (Leyden: Noordhoff International Publishing); Soloway RA (1990) *Demography and Degeneration: Eugenics and the Declining Birthrate in Twentieth-Century Britain* (Chapel Hill, NC: University of North Carolina Press).
[34] Porter D (1991) "'Enemies of the Race': Biologism, Environmentalism, and Public Health in Edwardian England" *Victorian Studies* 34(2): 167.

in the nineteenth century',[35] noting their ambitions to '"convert what is a rapidly degenerating community . . . a C3 nation, into an A1 nation composed of healthy, vigorous members, whose bodies will be able to avoid and combat disease."'[36] Although a somewhat eccentric outfit, the New Health Society, alongside similar bodies such as the Sunlight League and Men's Dress Reform Party, were representative of broader attitudes towards physical activity and diet ('increased consumption of fresh fruit and vegetables'[37]). James Stark has recently highlighted this latter point, arguing that in 'an era of widespread anxiety about the health, fertility, and fitness of both individuals and nations', moral positions such as 'the need to combine a diet of moderation with exercise, especially that rooted in physical culture, and the superior nutritional qualities of raw or very lightly cooked food' were widely adopted.[38] Similar movements have been identified in the United States, some of which specifically mentioned the rising tide of chronic diseases as justification for their health advice.[39] The increasing trafficking of cultural ideas between Britain and the US, particularly amongst Progressives, meant that such beliefs would not have gone unnoticed.[40] The establishment of the

[35] Zweiniger-Bargielowska I (2007) "Raising a Nation of 'Good Animals': The New Health Society and Health Education Campaigns in Interwar Britain" *Social History of Medicine* 20(1): 75.
[36] Presidential Address, New Health, February 1927, 35. Quoted in Zweiniger-Bargielowska I (2005): 241.
[37] Ibid., 85.
[38] Stark JF (2018) "'Replace them by Salads and Vegetables': Dietary Innovation, Youthfulness, and Authority, 1900–1939" *Global Food History* 4(2): 143.
[39] For example, Veit HZ (2013) *Modern Food, Moral Food: Self-control, Science, and the Rise of Modern American Eating in the early Twentieth Century* (Chapel Hill: University of North Carolina Press); Hirschbein LD (1999) "Masculinity, Work, and the Fountain of Youth: Irving Fisher and the Life Extension Institute, 1914-31" *Canadian Bulletin for the History of Medicine* 16: 89-144.
[40] Rodgers DT (1998) *Atlantic Crossings: Social Politics in a Progressive Age* (Cambridge, MA: Harvard University Press).

Central Council for Health Education in 1927, and the 1937 Ministry of Health and Board of Education's health and fitness campaign – 'a multi-media propaganda effort' – provide further evidence of a burgeoning interwar interest in diet and exercise, supported by governmental efforts to communicate these ideas to the British public.[41]

What this brief sketch of the literature demonstrates is that lifestyle public health was certainly not without its antecedents. Diet and exercise were part of public health discourse since the Victorian era, and achieved new urgency in the interwar years. Concerns about modern urban ways of living, unhealthy diets, and the prevention of disease through physical culture would all be echoed in the latter half of the twentieth century. However, this thesis argues that lifestyle was a distinct development in post-war Britain. The development of risk factor epidemiology, and the emergence of heart disease as an epidemic, provided a new, scientifically-rationalised impetus to discourses around diet and exercise. Furthermore, the rapid de-industrialisation of post-war Britain, concerns about the cost of chronic diseases to the nascent welfare state, and the emphasis on personal responsibility and individualism all influenced lifestyle public health's development and particular characteristics.

[41] Zweiniger-Bargielowska I (2007): 86. See also Zweiniger-Bargielowska I (2005) *Managing the Body: Beauty, Health and Fitness in Britain, 1880–1939* (Oxford: Oxford University Press).

This context of this post-war world, and in particular its scientific and bio-medical climate is now considered. Major books by George Weisz, on the topic of chronic disease, and William G. Rothstein, on the rise of risk factor epidemiology, inevitably influence the first two chapters in particular. Weisz's *Chronic Disease in the Twentieth Century* outlines the largely American context of 'large scale public and political concern'[42] with non-communicable diseases, predominantly heart disease and cancer. Weisz's principal argument concerns his close interrogation of the 'imprecise and elastic'[43] term of "chronic disease", and the various rhetorical uses to which the notion has been put in terms of marshalling resources for biomedicine and prevention. While this line of reasoning is distinct from this thesis' analytical focus, Weisz's outline of the reasons behind chronic disease's ascendency in public discourse is highly relevant, particularly his contention that it involved political choices as much as it was a natural or inevitable result of the epidemiological transition and the increasing 'surveillance medicine' argued for by sociologists such as Armstrong.[44] The epidemiologic transition described the shift in mortality burden from communicable or infectious diseases to non-communicable diseases (such as heart disease and cancer) and was observed in many Western nations in the middle of the twentieth century.[45] Weisz briefly describes the British context,

[42] Weisz G (2014) *Chronic Disease in the Twentieth Century: A History* (Baltimore, MD: Johns Hopkins Press).
[43] Ibid.: 7.
[44] Armstrong D (1995) "The Rise of Surveillance Medicine" *Sociology of Health and Illness* 17(3): 393-404.
[45] Omran AR (2005) [1971], "The Epidemiological Transition: A Theory of the Epidemiology of Population Change" *The Milbank Quarterly* 83(4): 731–57. For further historical context see also Weisz G and Olszynko-Gryn J (2010) "The Theory of Epidemiologic Transition: The Origins of a Citation Classic" *Journal of History of Medicine and Allied Sciences* 65(3): 287-326.

mainly as a point of comparison, an 'alternative path' to his primarily American interest.[46] Nonetheless several pages are devoted to the career of Jerry Morris, a key figure in post-war British public health, and one of the major protagonists in the first chapter of this thesis. Weisz relies predominantly on the scholarship of Dorothy Porter and Virginia Berridge (discussed further below), and mostly focuses on Morris' conception of chronic disease in his influential book *Uses of Epidemiology*.[47]

Rothstein's book *Public Health and the Risk Factor* concerns the development of the concept of the 'risk factor', and its roots in the insurance industry of the early 1900s. The rise of risk factor epidemiology is integral to the discussion of this thesis, as indicated by Rothstein's opening sentences:

> 'One of the fundamental transformations in twentieth century public health and medicine has been the widespread acceptance of a new concept of the causes of chronic and degenerative disease. This is the lifestyle theory … [a]ccording to [this] theory, the behaviours involved in healthy lifestyles can increase or decrease the probability that an individual will develop particular diseases.'[48]

[46] Weisz (2014): 176.
[47] Ibid.: 188-194; Morris JN (1957) *Uses of Epidemiology* (Edinburgh: E&S Livingstone).
[48] Rothstein WG (2003) *Public Health and the Risk Factor: A History of an uneven Medical Revolution* (Rochester, NY: University of Rochester Press): 1.

For Rothstein, the basis of this 'concept' or 'theory' is the risk factor. Rothstein cites the Framingham cohort study, initiated in 1948 in the eponymous town in Massachusetts, as coining the term 'risk factor'. Gerald Oppenheimer, alongside Robert A. Aaronowitz and Mervyn Susser, have contributed to a substantial albeit narrative historiography of Framingham.[49] Élodie Giroux has critiqued Framingham, suggesting (in agreement with Rothstein) that the study encouraged 'an individualised preventive approach to CVD [cardiovascular disease]'[50] that neglected social and environmental influences on disease.

Framingham was instigated to investigate the causes of cardiovascular disease in post-war America, and tracked the health of 5,127 individuals free of heart disease at the time of registration. They were medically examined every two years, providing accurate information on their personal behaviours, as well as 'all manifestations of coronary heart disease, not just deaths or myocardial infarctions.'[51] Framingham is important to this thesis, in that it both provided a methodological model for epidemiologists to emulate (as was explicitly the case in

[49] Oppenheimer G (2006) "Profiling Risk: The Emergence of Coronary Heart Disease Epidemiology in the U.S. 1947-1970" *International Journal of Epidemiology* 35: 515-519; Oppenheimer G (2005) "Becoming the Framingham Study, 1947-1950" *American Journal of Public Health* 95: 602-610; Oppenheimer G (2010) "Framingham: The First 20 Years" *Progress in Cardiovascular Diseases* 53: 55-6; Aronowitz RA (1998) *Making Sense of Illness: Science, Society, and Disease* (Cambridge: Cambridge University Press): 118-122; Susser M (1985) "Epidemiology in the United States after World War II: The Evolution of Technique" *Epidemiologic Reviews* 7: 147–177

[50] Giroux É (2012) "The Framingham Study and the Constitution of a Restrictive Concept of Risk Factor" *Social History of Medicine* 26(1): 97. See also Giroux É (2011) "Origines de l'Étude Prospective De Cohorte : Épidémiologie Cardio-Vasculaire Américaine et Étude de Framingham [The Origins of the Prospective Cohort Study: American Cardiovascular Epidemiology and the Framingham Heart Study" *Revue d'Histoire des Sciences* 64: 297-318.

[51] Rothstein WG (2003): 280.

terms of the first Whitehall study), but also a point of international comparison for the heart disease risk factors that they investigated.

Risk factor epidemiology was also necessarily an international discipline, with heart disease a major killer in most Western countries in the immediate post-war period. The extent to which this model was adopted in European contexts has been explored by Carsten Timmermann in his study of heart disease epidemiology in East and West Germany. Timmermann suggests that despite the obvious political differences between the two states, the risk factor model was largely embraced, albeit in adapted forms.[52] This thesis agrees that the risk factor model, and by extension the lifestyle theory, proved remarkably malleable to both geographical and political context. This is further illustrated by Martin Moore's recent work on epidemiologists in former British colonies who 'harness[ed] the power of difference' between those populations to inform knowledge about heart disease and other chronic conditions in Britain.[53] Indeed, this relationship is made clear in Chapters One and Two, with a number of researchers, such as A.G. Shaper and Hugh Trowell, having worked for considerable periods of time in Commonwealth countries.

Dorothy Porter's work on twentieth century public health has also been hugely influential on this thesis. In particular, her collected essays on social medicine and

[52] Timmermann C (2012) "Appropriating Risk Factors: The Reception of an American Approach to Chronic Disease in the two German States, c. 1950–1990" *Social History of Medicine* 25(1): 157–174.
[53] Moore MD (2016) "Harnessing the Power of Difference: Colonialism and British Chronic Disease Research, 1940–1975" *Social History of Medicine* 29(2): 384–404.

citizenship have shaped the arguments made in the first chapter.[54] Porter contends that the social medicine movement, which spanned either side of the Second World War and represented by figures such as John Ryle, paved the way for lifestyle public health. Social medicine, although perhaps as vaguely defined as lifestyle, was, according to Porter, 'a set of ideals that a range of medical intellectuals attempted to transform into an academic discipline and a preventive practice.'[55] These medical intellectuals, including Jerry Morris, were social reformers, intrigued by the application of sociological perspectives and social survey techniques to problems that would otherwise have been thought of as purely biomedical. Porter argues persuasively that while social medicine was successful in so far as it convinced epidemiologists to pay more attention to the social, this interest extended more to personal behaviours than structural or environmental influences on health.[56] This thesis agrees with Porter's characterisation of the immediate post-war period, and suggests that this relative neglect of the structural had far-reaching consequences, especially for the development of health policy in the 1970s, characterised by the preventative consensus discussed in Chapter Three. On the other hand, there was a return to a class-based analytic of public health in the early 1980s with the field of health inequalities.

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[54] Porter D (2011) *Health Citizenship: Essays in Social Medicine and Biomedical Politics* (Berkeley, CA: University of California Press).
[55] Porter D (2002) "From Social Structure to Social Behaviour in Britain after the Second World War" *Contemporary British History* 16(3): 58-80.
[56] Ibid. See also Porter D (2007) "Calculating Health and Social change: An Essay on Jerry Morris and Late-Modernist Epidemiology" *International Journal of Epidemiology* 36(6): 1180–1184; Porter D (2006) "How Did Social Medicine Evolve, and Where Is It Heading?" *PLoS Med* 3(10): e399.

Virginia Berridge's research is also indispensable to the ideas explored in this thesis. Berridge's work on Jerry Morris, smoking, health education and health inequalities permeates most chapters. Berridge's consideration of Morris is more sympathetic than Porter's, and has been important to this thesis in pointing the way to his research efforts on exercise.[57] As delineated above, Berridge's *Marketing Health* not only details the development of smoking as a risk factor and smoking as an element of lifestyle public health, it more importantly analyses the significant shifts in public health's attempts to communicate with the public.[58] Of particular relevance to this thesis is public health's increasing use of the mass media, a theme further explored in Berridge's work with Kelly Loughlin. The evolution of the use of advertising techniques followed by social marketing to warn the public of the dangers of smoking from the 1950s to the 1970s provides a context for Chapter Four's consideration of the *Look After Your Heart* (*LAYH*) health promotion campaign.[59] Finally, Berridge's work on the 1980 Black report, as well as the witness seminar and special issue of *Contemporary British History* on the topic, has provided essential framing to the discussions on health inequalities in the final chapter.[60]

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[57] Berridge V (2001) "Jerry Morris" *International Journal of Epidemiology* 30(5): 1141-1145.
[58] Berridge V (2007).
[59] Berridge V and Loughlin K (2005); Berridge V (2007) "Medicine and the Public: The 1962 Report of the Royal College of Physicians and the New Public Health" *Bulletin of the History of Medicine* 81(1): 286-311. See also Mold A (2017) "'Everybody Likes a Drink. Nobody Likes a Drunk'. Alcohol, Health Education and the Public in 1970s Britain" *Social History of Medicine* 30(3): 612–636
[60] Berridge V (2002) "Introduction: Inequalities and Health" *Contemporary British History* 16(3): 1-10; Berridge V (2002, ed.) "The Black Report and *The Health Divide*" *Contemporary British History* 16(3): 131-172; Berridge V (2002) "The Origin of the Black Report: A Conversation with Richard Wilkinson" *Contemporary British History* 16(3): 120-122.

Alongside engaging with the extant historical literature, this thesis is also in conversation with theoretical and sociological approaches to lifestyle public health, both explicitly and implicitly. As mentioned in the opening paragraphs, since the 1980s there has been a number of theoretical critiques of lifestyle public health, typically influenced by Michel Foucault. This section will briefly discuss the major interventions, before outlining how this body of literature has influenced the thesis' argument.

Probably the first major critic of "lifestyle", in the late 1970s and early 1980s was political economist Robert Crawford. Describing predominantly the north American context, he described what he viewed as 'healthism'.[61] According to Crawford, a 'victim blaming ideology' had emerged, which 'argues that individuals, if they take appropriate actions, if they, in other words, adopt life-styles which avoid unhealthy behavior, may prevent most diseases'.[62] Crawford saw this ideology as emerging from three distinct but intertwined developments. Firstly, the critiques of the 'limits of medicine' popularised by those such as Ivan Illich which had achieved significant cultural weight as the 1970s wore on, combined with the emergence of self-care and women's movements.[63] Although Crawford generally saw these as

[61] Crawford R (1980) "Healthism and the Medicalization of Everyday Life" *International Journal of Health Services* 10(3): 365-388. See also 'lifestylism' in Skrabanek P (1994) *The Death of Humane Medicine and the Rise of Coercive Healthism* (London: Social Affairs Unit), as well as Rose N (1999) *Powers of Freedom: Reframing Political Thought* (Cambridge: Cambridge University Press): 74, 86-87.
[62] Crawford R (1977) "You are Dangerous to Your Health: The Ideology and Politics of Victim Blaming" *International Journal of Health Services* 7(4): 665.
[63] Ibid., 664; Illich I (1975) *Medical Nemesis: The Expropriation of Health* (London: Calder & Boyars).

positive developments, he also believed that the reverse of this self-reliance and mistrust of the medical profession was increased expectation that the individual was responsible for his or her own health. Secondly, the economic crisis of the 1970s, experienced by most Western countries, meant that on a policy and political level, governments saw self-management and personal responsibility as a way of containing healthcare costs.[64] This prevention as cost-saving argument is explored in more detail in Chapter Three, but briefly, certainly in a UK context this was how it was framed. Finally, Crawford viewed victim-blaming as a manifestation of a moral climate and philosophy in which individualism was highlighted, self-discipline was lauded, and that the problems of heart disease and other so-called diseases of civilisation could be glossed with the assertion that 'people are really suffering from over-indulgence of the good society'.[65] Given Crawford's disciplinary background, it is unsurprising that he felt that the structural and class explanations of disease causation were neglected, concluding that the

> 'ideology of individual responsibility promotes a concept of wise living which views the individual as essentially independent of his or her surroundings, unconstrained by social events and processes.'[66]

Crawford's and similar critiques of 'healthism' are highly useful frameworks for this thesis, suggesting a nexus between preventative health, popular individualism and

[64] Ibid., 665, 668-671.
[65] Ibid., 672.
[66] Ibid., 677.

emergent neo-liberal governments in Britain and the US in the late 1970s and 1980s, all of which is explored in Chapter Four. Crawford's analysis, alongside recent critiques from "inside" epidemiology such as Nancy Krieger's theoretical work,[67] is also instructive for Chapter Five's discussion of the health inequalities field which sought to highlight the structural and socioeconomic determinants of heart disease and other conditions previously considered lifestyle diseases. What 'healthism' perhaps lacks however is any analysis of its roots; situated in the present of the 1980s, it neglected to explore how and why preventative health had emerged into political and public consciousness, independently of economic pressures. For theoretical insights into this, it is necessary to turn to some of the Foucauldian scholarship that surfaced in the mid 1980s and 1990s.

David Armstrong's *Political Anatomy of the Body*, published in 1983, was perhaps the most influential Foucauldian-derived critique of lifestyle public health. Armstrong's argument was that the 'clinical gaze' of the late eighteenth century described by Foucault's *Birth of the Clinic*[68] had been extended by the 'technologies of the survey' in nineteenth century Britain.[69] Surveys and the collection of vital statistics evolved into modern epidemiology to form 'an overall system of disciplinary power',[70] giving medicine quantitative purview of everything from child health and psychiatry to general practice and geriatrics. But for Armstrong, the

[67] Krieger N (2012) "Who and What is a 'Population'? Historical Debates, Current Controversies, and Implications for Understanding 'Population Health' and Rectifying Health Inequities" *Milbank Health Quarterly* 90: 634-681; Krieger N (2011) *Epidemiology and the People's Health* (Oxford: Oxford University Press).
[68] Foucault M (2002) [1973] *The Birth of the Clinic* (London: Routledge).
[69] Armstrong D (1983): 43.
[70] Ibid.: 54

'disciplines of the survey' were most significant for those nearest their development, or in other words, public health.[71] Armstrong's principal contention was that epidemiology had given medicine, and by extension the state, new ways of knowing and surveilling populations in the latter half of the twentieth century. But although *Political Anatomy of the Body* hints towards the implications of this knowledge, it fell short of describing the disciplinary potentialities that such surveillance afforded.

Armstrong's 1995 article "The Rise of Surveillance Medicine" did however describe these implications, arguing that the development of modern epidemiology resulted in a 'fundamental remapping of the spaces of illness'. It achieved this, according to Armstrong, by developing statistical methods and surveillance tactics that could predict the likelihood of illness in otherwise 'seemingly healthy populations'.[72] By the calculation of sickness and death statistically correlated with certain habits and behaviours, modern medicine and public health could identify health and unhealthy lifestyles. In this way, discourses of health shifted from merely the 'symptoms, signs and diseases [that] were located in the body … to an extracorporeal space - often represented by the notion of "lifestyle" - to identify the precursors of future illness.'[73] From this knowledge, it was possible to proscribe activities such as smoking, and recommend others, such as exercise or a low-fat diet.

[71] Ibid.: 93.
[72] Armstrong D (1995): 393.
[73] Ibid.: 401.

There is much to admire in Armstrong's analysis, and its insights are observable at many points in this thesis. For example, the first two chapters concern the development of this surveillance medicine, while the third and fourth illustrate how the implications of this new found knowledge were applied. Armstrong's argument that conceptions of health began to 'place emphasis on a temporal axis'[74] and health promotion's 'attempting to transform the future by changing the health attitudes and health behaviours of the present' are particular pertinent to these chapters. However, this thesis also departs from Armstrong's critique at a number of crucial junctures. While the development of modern epidemiology did permit new ways of knowing about populations, its knowledge was always imperfect, a point illustrated by Chapter Two and its discussion of the sugar and fat hypotheses for heart disease. The knowledge and "facts" produced by risk-factor epidemiology was always contingent and contested; Armstrong's argument overstates its hegemony. Similarly, Chapter Four notes how populations spoke back to and resisted the messages of lifestyle public health, while Chapter Five shows that the methods of risk-factor epidemiology could also be used to construct disruptive, more radical narratives about health, in this case that of health inequalities.[75] Ultimately Armstrong's critique is at once both too overwrought and too simplistic; this thesis argues its Foucauldian analysis overstates the power of

[74] Ibid.

[75] As an aside it is worth noting that the supervisor of Armstrong's PhD – on which *Political anatomy of the body* was based – Margot Jefferys was highly influential on the health inequalities field in the 1980s (see Chapter Four).

risk-factor epidemiology as a knowledge discourse, while underplaying the agency of the populations under surveillance.

Deborah Lupton's work, in partnership with others such as Simon Chapman and Alan Peterson, has focused less on the means through which medical knowledge was acquired, and more on the ends to which it has been put. In many ways this echoes Crawford's arguments – that lifestyle and 'healthism' has highlighted personal responsibility for health at the expense of structural, social and economic influences – but pays closer attention to the discourses of public health itself, rather than the broader political climate.[76] Similarly Lupton's work on risk, informed by Ulrich Beck, Mary Douglas and Foucault, explored how the probabilistically derived concept of risk has been operationalised by public health promotion campaigns.[77] For Lupton, this resulted in 'the *fin de millennium* mood of the late 20th century' whereby the body 'has become a commodified and regulated object that must be strictly monitored by its owner to prevent lapses into health-threatening behaviors as identified by risk discourse.'[78] However, Lupton's qualitative research also informed her theoretical work, permitting the public to speak back to this disciplinary regime, constructing their own versions of lifestyle and its relation to disease causation.[79]

[76] Petersen A and Lupton D (1996).
[77] Lupton D (1993) "Risk as Moral Danger: The Social and Political Functions of Risk Discourse in Public Health" *International Journal of Health Services* 23(3): 425-435; Beck U (1992) *Risk Society: Towards a New Modernity* (London: Sage); Douglas M (2001) [1966] *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London: Routledge); Douglas M and Wildavsky A (1982) *Risk and Culture* (Oxford: Basil Blackwell).
[78] Lupton (1993): 433.
[79] Lupton D and Chapman S (1995).

Crucially, it this latter aspect that makes Lupton's work an essential framework for this thesis. Lupton effectively synthesises the insights of Crawford and Armstrong by highlighting both lifestyle's disciplinary regime as well as its roots in risk-factor epidemiology. While her identification of the influence on public health ideology of risk discourse and the consequent shift to a focus on individual behaviours is useful, Lupton's most important intervention is that, whilst powerful, the lifestyle narrative has not been entirely hegemonic. Indeed this thesis argues that it never was; the development of the particularities of risk discourse was contingent and negotiated between scientific factions (for example in Chapter Two). The public adapted, reinterpreted and disrupted the messages of lifestyles themselves, as Chapter Four discusses. And finally, as Chapter Five makes clear, there were also those inside public health seeking to highlight the structural and socioeconomic dimensions to health.

Methodology

This thesis is based upon five case studies concerning heart disease in post-war Britain that illustrate the evolution of lifestyle as a dominant paradigm in public health, and the way that that development interacted with the British public. The general criteria by which they were selected was as follows. Firstly, each case study obviously had to concern heart disease in some way. For some chapters, this is more apparent than others. For example, Chapter Four's discussion of *Look After Your Heart* concerns the first English health promotion campaign exclusively

dealing with the prevention on the condition, and so was an obvious candidate for inclusion. Chapter Three however deals with a series of policy documents that represent the preoccupation with prevention that was prevalent during the 1970s. While not exclusively focussed on the condition, heart disease figured prominently in these discussions, as Britain's biggest killer, and as an example of how preventative action could be mobilised. Secondly, each case study had to illustrate the development of lifestyle as a paradigm. Again, different chapters approach the issue from different perspectives. For example, Chapter One looks at how the foundations of lifestyle public health were laid by Jerry Morris' book *Uses of Epidemiology*, and its discussion of 'ways of living'. On the other hand, Chapter Two discusses lifestyle in a more abstract sense; sugar as both an ingredient in the everyday diets of the British public, but also as a potential risk factor for heart disease. Chapter Five also approaches lifestyle from a sideways angle, looking at how it was disrupted by the Whitehall studies and the health inequalities field. Finally, the case study should, of course, concern the public. Again, this could be addressed in different ways. Chapters One, Two and Five investigate how biomedical researchers working on heart disease thought about the British public, but also how they attempted to translate their research into the public sphere, through popular science books, policy committees and to a certain extent, the mass media. Chapter Three deals predominantly with the political and policy sphere, and how the British public were imagined. Chapter Four discusses how the British public were communicated to, and how they responded to this communication.

Although all of these case studies provide different perspectives on the intersection between heart disease, lifestyle and the British public in post-war Britain, it could never be an exhaustive or comprehensive history, particularly over the almost half a century timeframe considered. There are gaps, omississions and oversights. Inevitably, the selection of these case studies has meant the prioritisation of certain narratives. As one brief example, Chapter Four looks closely at the English *Look After Your Heart* health promotion programme, but could have considered in more detail the Heartbeat Wales campaign that preceded it. That it does not is partly a function of the availability and accessibility of archival material, partly because the *Look After Your Heart* campaign covered a larger public that the Welsh campaign, and partly because the audiovisual material that the English campaign used was representative of wider shifts in health promotion techniques during the 1980s. In other words, decisions such as these have been made for every thesis chapter. An assessment of the historical significance of the episode, the availability of archival material, and how representative it is of broader trends in public health and wider British society during the period, has resulted in the selection of these five chapters.

For each chapter a range of archival sources has been used, in an attempt to provide a balanced perspective on each topic. For example, Chapter Two uses the records of British nutritionist John Yudkin's employers at Queen Elizabeth College, the deliberations of a government committee to which he contributed, and private correspondence between him and two other researchers concerned with the links between sugar and heart disease. While this provides an insight into different

aspects of Yudkin's career, and by extension, the place of sugar in postwar Britain, there are obvious limitations to this archival approach. These are both practical and theoretical. As one example from this thesis, the records of Yudkin's department at Queen Elizabeth College contain little detail on their activities, other than information on the funding. This means that information on the planning and conducting of research can only be gleaned from the published papers of the group, without any detail about their deliberations which might provide insight. Archives are of course a record of what has been chosen to be remembered, what contemporary authorities considered to be of value from their own age for future generations to pore over – or as Foucault puts it a 'system of enuncability' and the 'law of what can be said'.[80] The curation and conservation of an archive has implications for the histories that can be written.

This thesis partially circumnavigates these issues however with its focus on the British public and their central importance to the thesis. While archival research naturally forms the basis of the empirical evidence for this thesis, particular attention has been paid to discussions of lifestyle and heart disease in the public sphere. Publications in medical journals, articles in newspapers and magazines, popular science books and, particularly in the case of Chapters Four and Five, television programmes, have all been important sources. While how scientists, policymakers, politicians and public health workers viewed their public is a significant strand of this thesis, how their ideas were presented to that public is

[80] Foucault M (1972) *The Archaeology of Knowledge and the Discourse of Language* (New York: Pantheon): 129.

also an important aspect. This communication of these ideas cannot only be found in archival sources, but in print publications and mass media broadcasts.

A further research method in the contemporary historian's toolkit is oral history interviews. Their use was considered for this thesis, but ultimately rejected. This decision was reached for a number of reasons. Firstly, such interviews would only have been possible for Chapters Three, Four and Five, because many of the key figures in previous chapters have passed away. For the remaining chapters, there was sufficient archival material and other sources to provide answers to the historical questions posed. Furthermore, for those individuals that might have been interviewed, there were already interviews available in the public sphere. The well-polished anecdotes that were presented in such interviews suggested that further interlocution might not yield new insights. Finally, the pressures of time meant that the scheduling of interviews in time for thesis completion was unmanageable.

Having iterated these methodological considerations alongside the historical and theoretical literature that this thesis engages with, the final section of this introduction turns to précising each chapter, highlighting the key arguments contained within each one.

Chapter synopses

Chapter One concerns the work of the Social Medicine Research Unit (SMRU), a small research team funded by the Medical Research Council and founded by the

epidemiologist Jerry Morris and the social policy researcher Richard Titmuss. The chapter uses the SMRU's research on heart disease and physical activity from the 1950s to the 1970s to explore how the methodologies of risk factor epidemiology was applied in the context of post-war Britain to re-invent exercise as a scientifically rational, individualised, modern 'way of living' which became a central tenet of public health's focus on lifestyle. It argues that Morris' *Uses of Epidemiology*, as a hugely influential tract for a new generation of epidemiologists and public health workers, articulated the principles of what would become lifestyle public health. As the name of the SMRU implies, Morris was strongly influenced by the social medicine movement that bookended the Second World War, but as Dorothy Porter has suggested, switched his attention from 'social structure to social behaviour'.[81] But this chapter suggests that this shift, while representative of wider sentiments in public health, was also influenced by structural changes in post-war Britain. The 'modern epidemic' of heart disease, which Morris brought to public attention, emerged at the same time as a decline in physically strenuous manual labour. Exercise was consequently constructed by Morris and the SMRU as an individualised response to a societal trend; exercise was something consciously performed to protect against heart disease and compensate for a sedentary desk job. The epidemiologists' risk factor was translated into activities that the British public were encouraged to practice as part of their everyday lives. In short, this chapter argues that Morris and the SMRU both articulated the principles of lifestyle public health, and demonstrated how

[81] Porter D (2002).

epidemiological research could be used to propose individualised solutions to an epidemic seemingly caused by shifts in the post-war labour market.

Chapter One uses as its archival sources the records of the SMRU held at The National Archives (TNA); the wartime correspondence between Titmuss and Morris held at the London School of Economics and Political Science (LSE); and the private papers of Morris held at the London School of Hygiene and Tropical Medicine (LSHTM).

If Chapter One examines how risk factors were built, Chapter Two explores how and why they were also highly contested. This chapter explores how diet became a controversial risk factor for heart disease, as researchers on both sides of the Atlantic argued about whether the consumption of fat or sugar was to blame for the epidemic of heart disease. This chapter uses the figure of John Yudkin, Britain's most prominent and outspoken nutritional researcher, to explore these issues. In doing so, this chapter casts light on how diet, as an integral part of lifestyle public health, was shaped and influenced by disagreements between scientists. In particular, Yudkin clashed with Ancel Keys, the globally renowned nutritionist who is credited with establishing saturated fats as a cause of heart disease. These disagreements took place throughout the 1960s and 1970s across academic journals, private correspondence and in the press. Influenced by Bruno Latour's work on the way in which scientific facts are constructed and communicated in the public sphere, this chapter argues that Yudkin's arguments against sugar failed to gain traction amongst his peers for a number of reasons. These were scientific, as

he favoured animal and human experiments over the longitudinal cohort studies used by his rivals. They were personal, in that even with those broadly supportive of his arguments, Yudkin could not find agreement. They were structural, in that Yudkin received support for his research predominantly from the food industry rather than government biomedical funding sources, undermining his credibility. Furthermore, the chapter explores how shifts in British post-war diets and the place of sugar in everyday life influenced Yudkin's theories, and how dietary recommendations to be communicated back to the public were developed by the Committee on the Medical Aspects of Food and Nutrition Policy (COMA). In summary, this chapter complicates the argument made in the first chapter, showing how the construction of risk factors was highly contingent, and that particularly diet was (and remains) a contested aspect of lifestyle public health.

Chapter Two uses as its sources the archives of Queen Elizabeth College, where Yudkin conducted most of his research, held at Kings College London; the correspondence between Yudkin and two other researchers who held similar views on sugar, Peter Cleave and Hugh Trowell, held by the Wellcome Library; and finally, the papers of COMA collected at TNA.

Having explored how heart disease epidemiology did (and did not) construct risk factors as the building blocks of lifestyle public health, the third chapter explores how this paradigm began to be translated into a political, policy and public context. It looks at the trend for prevention that emerged in the 1970s, and how diet, exercise and smoking were essential elements of this discourse. A number of

reports and policy documents were published on prevention, most prominently the 1976 government discussion paper *Prevention and Health: Everybody's Business*. The document emphasised personal responsibility for a healthy lifestyle, which was framed as a *quid pro quo* for a NHS that remained free at the point of use, as the global financial crisis and rise in non-communicable conditions such as heart disease began to stretch the health service. Chapter three argues that this is the juncture at which lifestyle began to enter the public and political sphere, no longer just the preserve of epidemiologists and the public health community. This emergence into public consciousness coincided with a rise in popular individualism and neoliberal discourses of personal responsibility, but the nascent lifestyle paradigm was also attenuated by misgivings about the role of health education and public apathy towards the tenets of prevention.

Chapter Three uses the papers documenting the planning and publication of *Prevention and Health* held at TNA; and papers held at the Parliamentary Archive detailing the House of Commons inquiry into preventative medicine.

While the third chapter discusses how lifestyle became embedded in public health policy and political discourse, Chapter Four explores how this was communicated to the public. It studies *Look After Your Heart* (LAYH), a generously funded and energetic health promotion campaign launched by the Health Education Authority in 1987. In common with the HIV/AIDS campaign of the same era, LAYH made extensive use of the mass media, both in terms of newspaper advertisements, and television spots. This chapter pays particular attention to these visual sources,

arguing that a healthy lifestyle was presented as a personal responsibility, merging with Thatcherite values of familial duty and self-reliance. But the advertisements were also highly self-reflexive, anticipating the scepticism of the public towards their messaging. The chapter suggests that the public were indeed cynical about lifestyle public health, developing their own 'lay epidemiology' to understand heart disease and its relation to diet, exercise and smoking. Such lay attitudes were highlighted by critics of lifestyle public health who used the voices of the public to illustrate its contradictions and weaknesses. To summarise, this chapter looks at the moment when lifestyle truly went public, filling the nation's newspapers, television screens and billboards, but also when the public spoke back, rejecting official discourses of health and lifestyle for their own forms of folk knowledge.

This chapter uses the uncatalogued papers of the Health Education Authority, held by the Wellcome Library; and the board papers of its preceding organisation, the Health Education Council, held at TNA.

Where the preceding four chapters of the thesis have traced the development of lifestyle public health from its roots in post-war risk factor epidemiology, embedment in health policy, and communication to – and reinterpretation by – the British public, the final chapter presents an alternative narrative. It suggests that the emergence of the health inequalities field in the 1980s disrupted the narrative of lifestyle public health, highlighting the socioeconomic and structural determinants of disease. It uses the two Whitehall cohort studies of London-based civil servants, research that uncovered large differentials in heart disease between

employment grades, and has subsequently been used as a byword for health inequalities. The first Whitehall study was initiated as a conventional lifestyle risk-factor cohort study, paying particular attention to diet, exercise and smoking, but because such large disparities between grades were observed, the second was instigated to investigate these disparities instead. Chapter Five looks at how the Whitehall studies used class, borrowing Raymond Williams' definition of "class" as an analytic framework, before discussing the rhetorical uses to which the studies were put by their respective directors, Geoffrey Rose and Michael Marmot. The implications of their work for public health and wider politics is discussed, and health inequalities' challenge to lifestyle public health is evaluated. This final chapter complicates the current historiographical narrative of lifestyle public health as a straight-forward development from risk factor epidemiology to Foucauldian disciplinary regime, suggesting that the same methodologies could also develop a critique of health and its relation to society that was more structural and comparatively radical.

The fifth chapter uses the newly catalogued archive of the first Whitehall study held by LSHTM, alongside private papers provided by researchers working on the ongoing second Whitehall study at University College London (UCL).

Concluding remarks

As the opening comments of this thesis make clear, lifestyle as a dominant paradigm of public health policy and practice has not disappeared from public

discourse in the first quarter of the twenty-first century. This thesis explores the rich history behind this resilience, using post-war Britain's biggest killer to investigate what the development of lifestyle public health tells us about health, citizenship, the welfare state and everyday life in post-war Britain.

Chapter One: The invention of exercise: Jerry Morris and the Social Medicine Research Unit, 1948 - 1975

Introduction

In September 2009, shortly before his death, the *Financial Times* ran a weekend magazine feature on British epidemiologist Professor Jeremiah "Jerry" Morris, headlined "The man who invented exercise".[1] Two months later, Morris's obituarists echoed this appraisal. Virginia Berridge, writing in *The Guardian*, asserted that Morris 'was the first researcher to demonstrate the connection between exercise and health'.[2] This reputation was largely predicated on the research he conducted with the Social Medicine Research Unit (SMRU), and in particular, the London Transport Workers study. This study, the results of which were first published in *The Lancet* in 1953, established a link between physical activity and coronary heart disease by noting the lower rates of morbidity and mortality among bus conductors compared to their more sedentary bus driver colleagues.[3]

As Berridge noted later in her obituary, Morris' career was not limited to investigating the health impacts of physical activity:

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[1] Kuper S (2009) "The Man who Invented Exercise" *Financial Times* Saturday 12 September https://www.ft.com/content/e6ff90ea-9da2-11de-9f4a-00144feabdc0 Last accessed 27 January 2017.
[2] Berridge V (2009) "Jerry Morris Obituary" *The Guardian* Thursday 3 December https://www.theguardian.com/science/2009/dec/03/jerry-morris-obituary Last accessed 27 January 2017.
[3] Morris JN et al (1953a) "Coronary Heart Disease and Physical Activity of Work." *The Lancet* 262(6795): 1053-1057; Morris JN et al (1953b) "Coronary Heart Disease and Physical Activity of Work" *The Lancet* 262(6796): 1111-1120.

> 'He also helped redefine public health with a focus on the role that lifestyle plays in the development of chronic disease, and provided the research tools for investigating the determinants of health.'[4]

Morris's contribution to the development of public health in the twentieth century has been a matter of interest to historians, most notably Berridge and Dorothy Porter, particularly in exploring the short-lived 'social medicine' movement of the post-war years.[5] Morris's 1955 article "Uses of Epidemiology" and 1957 book of the same name provided a handbook for researchers interested in exploring the distribution and possible causes of diseases.[6] Morris's reputation has also been burnished by contemporary epidemiologists such as George Davey Smith and Nancy Krieger, as well as by the many students taught by Morris at the London School of Hygiene and Tropical Medicine (LSHTM).[7] Morris's friendships with

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[4] Berridge, V (2009) "Jerry Morris Obituary" *The Guardian* Thursday 3 December https://www.theguardian.com/science/2009/dec/03/jerry-morris-obituary Last accessed 27 January 2017.

[5] Porter D (2002) "From Social Structure to Social Behavior: Social Medicine and Class Culture in Britain after the Second World War" *Contemporary British History* 16:58-80; Porter D (2007) "Calculating Health and Social Change: An Essay on Jerry Morris and Late-Modernist Epidemiology" *International Journal of Epidemiology* 36: 1180-1184.

[6] Morris JN (1955a) "Uses of Epidemiology" *British Medical Journal* 2(4936): 395-401; Morris JN (1957) *Uses of Epidemiology* (Edinburgh: E&S Livingstone).

[7] Davey Smith, G (2001) "The Uses of 'Uses of Epidemiology'" *International Journal of Epidemiology* 30(5): 1146-1155; Krieger N (2007) "Commentary: Ways of Asking and Ways of Living: Reflections on the 50th Anniversary of Morris' Ever-Useful Uses of Epidemiology" *International Journal of Epidemiology* 36(6): 1173-80; Morris directed the two-year MSc in Community Medicine from 1968 to 1979 and could be found in his office at LSHTM up until a few weeks before his death. Tributes from former students of Morris are excerpted in Loughlin K (2001) "Epidemiology, Social Medicine and Public Health. A Celebration of the 90th Birthday of Professor JN Morris" *International Journal of Epidemiology* 30(5): 1198-1199.

influential figures in post-war British health and social policy, such as Richard Titmuss and Brian Abel-Smith, have also been noted.[8]

However, Morris's personal renown has perhaps also obscured the contribution of the SMRU to coronary heart disease research.[9] Arguably more significant in shaping public health and wider cultural attitudes to exercise were the studies that followed the London Transport Workers study, exploring leisure-time rather than occupational physical activity. The SMRU in its later years also served as an effective apprenticeship for epidemiologists such as A.G. "Gerry" Shaper and Hugh Tunstall-Pedoe, who would go to lead the British Regional Heart Study (BRHS) and Scottish Heart Health Study respectively.

This chapter situates the research of the SMRU, particularly that which related to physical activity and coronary heart disease, in the context of the birth of lifestyle as a focus of public health in post-war Britain. It explores the twin strands of Morris's posthumous reputation, both as the inventor of exercise and as 'the doyen of postwar British epidemiology'.[10] It makes three substantive arguments: firstly, that the SMRU established the evidence for physical activity as an important risk factor for coronary heart disease; secondly, that it developed the idea of exercise

[8] Oakley A (1991) "Eugenics, Social Medicine and the Career of Richard Titmuss in Britain 1935-50" *British Journal of Sociology* 42(2): 165-194; Sheard S (2013) *The Passionate Economist: how Brian Abel-Smith shaped Global Health and Social Welfare* (Bristol: Policy Press).

[9] To date there has been one historical study of the SMRU's work. See Murphy S (1999) "The Early Days of the MRC Social Medicine Research Unit" *Social History of Medicine* 12(3): 389-406.

[10] Bartley M (1985) "Coronary Heart Disease and the Public Health 1850-1983" *Sociology of Health and Illness* 7(3): 290.

as a self-consciously modern response to a modern epidemic apparently born out of shifts in the post-industrial labour market; and finally, that Morris's *Uses of Epidemiology,* written while director of the SMRU but emerging out of his prior interest in "social medicine", laid the ideological foundations for British public health's focus on lifestyle.

In making these arguments, this chapter draws on existing historical work on exercise, social medicine and chronic disease, as well as the sociological literature that has critiqued public health's focus on individuals' lifestyle. It follows on chronologically from Ina Zweiniger-Bargielowska's study of the physical culture of the earlier half of the twentieth century, and argues that although there was some continuity, Morris and the SMRU's conception of exercise was very different, and bound up in some of the 'political positivism' or 'a belief in the reciprocity between positivist science and socialism' that Porter describes as being emblematic of post-war social medicine.[11] The chapter also agrees with Porter's thesis that *Uses of Epidemiology* anticipated many of the developments in epidemiology over the latter half of the twentieth century, and can be seen as a late modernist iteration of the field, consciously engaged with 'reducing the burden of the metabolic, malignant and degenerative diseases that characterized late industrial societies.'[12]

[11] Porter D (2007): 1181. See also Porter D (1997) "The Decline of Social Medicine in Britain in the 1960s" in Porter D (ed.) *Social Medicine and Medical Sociology in the Twentieth Century* (Amsterdam: Rodopi): 98-103.
[12] Porter D (2007): 1183.

Such chronic diseases, and in particular coronary heart disease, have recently been the subject of historical interest, most notably by George Weisz, William G. Rothstein, Robert A. Aronowitz and Gerald Oppenheimer.[13] They trace the development of 'risk factor' epidemiology, for the most part in the American context of the Framingham study in a small town in Massachusetts. This chapter details how the SMRU explored similar ground in a British context, employing comparable methods to investigate the aetiology of coronary heart disease, but also went further in establishing the evidence for exercise as preventive action for individuals to combat the risk factor of physical inactivity. Such scientific evidence for individual behaviours that apparently protected against heart disease would contribute to both the preventive consensus of the 1970s, discussed in Chapter Three, and the health promotion campaigns of the 1980s, covered by Chapter Four.

Finally, the chapter also incorporates the critiques of sociologists such as David Armstrong, who have situated the roots of individualised, lifestyle public health in the post-war social medicine movement of Morris and his peers.[14] This chapter provides nuance to their narrative through close historical reading of the SMRU's activities, and argues that while their research, and especially Morris's *Uses of*

[13] Weisz G (2014) *Chronic Disease in the Twentieth Century: A History* (Baltimore: Johns Hopkins University Press); Rothstein WG (2003) *Public Health and the Risk Factor: A History of an Uneven Medical Revolution* (Rochester: University of Rochester); Aronowitz RA (1998) *Making Sense of illness: Science, Society And Disease* (Cambridge: Cambridge University Press), 110-144; Oppenheimer G (2006) "Profiling Risk: The Emergence of Coronary Heart Disease Epidemiology in the U.S.: 1947-1970" *International Journal of Epidemiology* 35: 515-519; Oppenheimer, G (2005) "Becoming the Framingham Study, 1947-1950" *American Journal of Public Health* 95: 602-610.

[14] Armstrong D (1983) *Political Anatomy of the Body: Medical Knowledge in Britain in the Twentieth Century* (Cambridge: Cambridge University Press)*;* Armstrong, D (1995) "The Rise Of Surveillance Medicine" *Sociology Of Health & Illness* 17(3): 393-401.

Epidemiology, marked the emergence of a focus on the behaviour of individuals, it was also tempered by a concern with environment and wider structural influences. The chapter historicises the SMRU's "invention" of exercise as a preventive health practice in response to a perceived societal problem brought about by transformations in the labour market. The SMRU constructed physical inactivity as a risk-factor, and laid the foundations for lifestyle public health, but this early iteration was always contingent, often contradictory and inconsistent.

The chapter takes a chronological approach to discussing these issues, commencing with Morris and Titmuss' establishment of SMRU in 1948 and the context of social medicine in post-war Britain, exploring the circumstances and influences on Morris as he was writing *Uses of Epidemiology,* before concentrating on the later years of the SMRU in which its research was concentrated on coronary heart disease and physical activity. The chapter uses as its sources the papers of the SMRU held by The National Archives (TNA); a selection of Richard Titmuss' archive at the London School of Economics and Political Science (LSE); and Morris's recently catalogued private papers at LSHTM.

The establishment of the Social Medicine Research Unit and the London Transport Workers study, 1948 - 1955

The SMRU was initiated in 1948, after a couple of years of planning by Morris and Richard Titmuss. But while the Unit itself was fairly quickly conceived, the two men's shared interest in "social medicine" went back several years. A brief sketch of Morris and Titmuss' backgrounds, and an explication of what social medicine

meant at this time is necessary to place the SMRU in context, and to see how the Unit's focus on heart disease and behavioural causes emerged. Morris had trained as a doctor, working with the celebrated cardiologist and clinical researcher Thomas Lewis, alongside his other protégés such as George Pickering and Harold Himsworth, who would also go on to have highly successful research careers working on hypertension and diabetes respectively.[15] Alongside this research, Morris's interest in both cardiovascular disease and its social determinants was piqued by his clinical caseload, as he observed a surfeit of juvenile rheumatic heart disease, while noting little mention of the condition by his colleagues who pursued private practice among the affluent clientele of Harley Street.[16] Titmuss was working as an insurance actuary when Morris first met him, but had written his well-received 1938 book *Poverty and Population*, which Morris had admiringly read. Morris quickly befriended him, a relationship that would be lifelong.[17]

The intellectual understanding between Morris and Titmuss was cemented by their joint work on a handful of papers during the Second World War, on rheumatic heart disease, juvenile rheumatism and peptic ulcer.[18] Morris wrote to Titmuss,

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[15] Peart WS (n.d.) "George White (Sir) Pickering" *Munk's Roll* VII: 464; http://munksroll.rcplondon.ac.uk/Biography/Details/3556 Last accessed 2 November 2018; Gale EAM (2013) "Commentary: The Hedgehog and the Fox: Sir Harold Himsworth (1905–93)" *International Journal of Epidemiology* 42(6): 1602–1607.

[16] Interview between Jerry Morris and Max Blythe, 9 May 1986, The Royal College of Physicians and Oxford Brookes University Medical Sciences Video Archive, MSVA 008.

[17] Oakley A (1991) "Eugenics, Social Medicine and the Career of Richard Titmuss in Britain 1935-50" *British Journal of Sociology* 42(2): 165-194.

[18] Morris JN and Titmuss RM (1944) "The Recent History of Rheumatic Heart Disease" *Medical Officer* 26 August 1944; Morris JN and Titmuss RM (1942) "The Epidemiology of Juvenile Rheumatism" *The Lancet* 240(6203): 59-63; Morris JN and Titmuss RM (1944) "Epidemiology of Peptic Ulcer: Vital Statistics" *The Lancet* 244(6331): 841-845. The first two of these were collected in edited and abridged form in Titmuss RM, ed. Oakley A,

and occasionally Titmuss' wife Kay, every couple of days between 1942 and 1944. Most of the correspondence concerned the work in hand, correcting statistics or arguing for a particular slant to be taken in the discussion part of the paper. But other parts revealed Morris's ambition, both for himself, and for his now firmly held belief in social medicine, which he believed to present a critical challenge to contemporary assumptions about public health:

> 'The whole existence of the social medicine movement is by implication, if not more directly, a damning criticism of 'public health' as she is considered.'[19]

He also believed in its broad application, prefiguring *Uses of Epidemiology*'s broad scope, arguing that it was 'too young to be limited as e.g. [epidemiologist John] Ryle suggests', and that what social medicine 'really implies is a certain type of approach to every aspect of health.'[20] The two men planned a jointly-penned 'masterpiece' proselytising these ideas entitled *The People's Health.*[21] Traces of it were apparent in the Airgraph correspondence, and Morris underlined his belief in social medicine's vital role in post-war 'Reconstruction … [b]ecause of the increasing mixing up of health and society'.'[22] The book never advanced beyond draft chapters, but arguably these plans prefigures Morris's *Uses of Epidemiology* in

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Barker J (2004) *Private Complaints and Public Health: Richard Titmuss on the National Health Service* (Bristol: Policy Press).

[19] JN Morris, Airgraph to RM Titmuss, 11 October 1942, LSE, TITMUSS 8/8.

[20] JN Morris, Airgraph to RM Titmuss, 23 October 1942, LSE, TITMUSS 8/8.

[21] Titmuss RM, ed. Oakley A, Barker J (2004) *Private Complaints and Public Health: Richard Titmuss on the National Health Service* (Bristol: Policy Press): 2.

[22] JN Morris, Airgraph to RM Titmuss, 13 July 1942, LSE, TITMUSS 8/8.

the next decade. Morris's commitment to – and ambitions for – the idea of social medicine is clear in this correspondence, but what did the term actually mean?

A similar question was posed the year prior to the establishment of the SMRU, by medical historian George Rosen in a 1947 article titled "What is social medicine? A genetic analysis of the concept".[23] Rosen attempted to give an international account of social medicine, incorporating the legacies of Belgian social worker René Sand, the German physician Rudolf Virchow, and the founder of "social hygiene" Alfred Grotjahn. One of Grotjahn's most important principles was expressed in the following rhetorical question:

> 'How can we prevent diseases or influence their course by social measures? This requires attention to the social and economic environment of the patient.'[24]

Rosen suggested that the common thread between the disparate philosophies that claimed the name of "social medicine" was this link between social conditions and disease, and that examples of such approaches could be seen 'in greater or lesser degree by the Scandinavian countries, the Soviet Union, Italy, France, Czechoslovakia, Switzerland, Holland, Belgium, and Yugoslavia.' Noting that 'in Great Britain as in the United States, interest in the development of a concept of

[23] Rosen G (1947) "What is Social Medicine? A Genetic Analysis of the Concept" *Bulletin of History of Medicine* 21(5): 674-733.
[24] Quoted in Rosen G (1948) "Approaches to a Concept of Social Medicine: A Historical Survey" *The Milbank Memorial Fund Quarterly* 26(1): 17.

social medicine is a recent phenomenon', Rosen identified Frances Crew and John Ryle as the leading contemporary British exponents.[25]

Writing half a century later, Dorothy and Roy Porter traced a longer history of social medicine in Britain, incorporating the debates around the physical deterioration of men of fighting age following the Boer War into their narrative. Leading public health expert Arthur Newsholme and the Chief Medical Officer George Newman were also described as key figures in the interwar period, agitating for preventive medicine with respective books on the subject.[26] Significantly, and in common with other historical treatments of social medicine, the Porters declined to offer a concise definition of social medicine, instead suggesting that it has always been a mutable concept. Indeed, as the correspondence between Morris and Titmuss indicated, and as the development of the SMRU would demonstrate, they shared some of Ryle's preoccupations while also exploring new avenues of inquiry. Nonetheless, despite the slipperiness of the term, Porter and Porter did suggest that common features of social medicine in its various iterations included a commitment to socioeconomic issues as important factors in disease distribution and causation, the use of statistics and social science methodologies to investigate these, and finally, a decidedly socialist bent in the political inclinations of many of its practitioners. All three of these characteristics would be apparent in the work of the SMRU.[27]

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[25] Ibid.: 18.
[26] Newsholme A (1927) *Evolution of Preventive Medicine* (London: Bailliere, Tindall and Cox); Newman G (1932) *The Rise of Preventive Medicine* (Oxford: Oxford University Press).
[27] Porter D and Porter R (1988) "What Was Social Medicine? An Historiographical Essay" *Journal of Historical Sociology* 1(1): 90-106.

Such traits also aligned the likes of the SMRU with wider developments in post-war Britain. The methods of the survey and sociological discourse were becoming increasingly influential in political and policy circles, as well as in wider cultural discourse. Mike Savage has argued that this 'creeping rise of the social science apparatus' has had significant impact on many aspects of post-war Britain, and certainly it is this chaper's argument that the application of these to the area of health was significant for the birth of lifestyle practices, most especially exercise.[28] But the welfare state development of 'a new interest in rational planning, which was to prove receptive to the social sciences' was also important for the SMRU, not least for the careers of its founders.[29] Their expertise, as well as Titmuss and Morris's political leanings – the latter described being 'brought up on a mixture of the Old Testament and the ILP [Independent Labour Party]' – meant their advice was often sought out by Whitehall.[30] Titmuss was an influential advisor on social policy to Labour governments up until his death in 1973, while Morris's input would be increasingly called upon by the DHSS throughout his career, as Chapter Three notes.

Nonetheless, such progress was hardly assured as social medicine was at an interesting juncture in the immediate postwar period, arguably caught between the widespread enthusiasm for social scientific methods, and the conservatism of

[28] Savage M (2010) *Identities and Social Change in Britain since 1940: The Politics of Method* (Oxford: Oxford University Press): 10.
[29] Ibid.: 67.
[30] Interview between Jerry Morris and Max Blythe, 9 May 1986, The Royal College of Physicians and Oxford Brookes University Medical Sciences Video Archive, MSVA 008

the medical establishment. An editorial in *The Times* of 18 August 1943 summarised the controversy:

> 'Recent letters in these columns from [prominent establishment physician] Sir Farquhar Buzzard and Professor John Ryle pleading for a wider understanding and fuller development of social medicine have provoked some criticism in the medical Press … Briefly put, the issue is between those who seek to make diagnosis merely an answer to the question "What has the patient got?" and those who see in the development of social medicine the possibility of widening the search for causation of disease by such questions as "What kind of person is this?" … Physicians of the former school still sometimes regard social medicine as a misty ambiguity or a political catchword, and speak of the supreme importance of the work done at the bedside.'[31]

This leader encapsulated two of the key binds in which social medicine found itself in postwar Britain, and anticipated many of the objections that Morris would face to his own work in the early years of the SMRU. Firstly, that much of the medical profession was cautiously but perhaps understandably concerned with diagnosing and treating the disease that presented itself to them in clinics and surgeries, and much less with the prevention of such conditions. Secondly, that social medicine as

[31] Anon (1943) "Cure and Prevention" *The Times* Wednesday 18 August, 49627: 5.

'the marriage of the social and medical sciences [as] part of a broader aim of creating a medicine of society for society'[32] was viewed by many doctors as being both vague and too political.

Ryle attempted to address some of these concerns with an article in the *British Medical Journal (BMJ)* in November 1943, discussing social medicine's 'meaning' and 'scope'. Having initially addressed his critics' perceived political misconception 'that social medicine and socialized (or State) medicine are synonymous' – the Beveridge report had been published a year prior – he nevertheless underlined its importance at this particular point in time and to the problems faced by the British society. Referencing the decline in infectious diseases and the concomitant increase in non-communicable disease, Ryle set out social medicine's stall:

> 'The idea that many noninfective diseases can also be considered as preventable and so may eventually be brought within the jurisdiction of a nation's health authority has sunk more slowly into the consciousness both of the profession and of the laity. But before our eyes and in the space of four years of war we have seen the work of the great students of nutrition bear fruit, a Ministry of Food established, and our people as a whole in better health through better feeding, in spite of many shortages, than they were in times of peace … There remain, however, other

[32] Porter D (2002) "From Social Structure to Social Behaviour in Britain after the Second World War" *Contemporary British History* 16(3): 61.

> diseases in plenty which must be regarded as in large degree preventable through socio-medical reforms: diseases which are associated with faulty habits of life or conditions of living; diseases too which are, in our existing order, becoming yearly more prevalent.'[33]

Again, this anticipated Morris's concerns over the coming years; the growing burden of non-communicable disease, particularly heart disease, the posited lifestyle and structural causes of these diseases, and the means of preventing them. Ryle referenced Morris and Titmuss' 1942 *Lancet* paper on rheumatic disease, and clearly there was a certain degree of mutual appreciation between the three men. Ann Oakley has noted that Ryle described the three wartime papers of Morris and Titmuss as 'the first example of a practical social medicine' (although he also opined that their paper on rheumatic heart disease was guilty of 'flogging the poverty horse too hard').[34]

Prior to the establishment of the SMRU, Morris completed a Diploma in Public Health at the LSHTM, and a fellowship in the US, funded by the Rockefeller Foundation. This brief stint was highly influential on Morris, or so he would claim to an American interviewer in his later years. The trip included both instruction in statistics at Johns Hopkins University, Baltimore, and perhaps equally significantly

[33] Ryle J (1944) "Social Medicine: Its Meaning and Its Scope" *BMJ* 2(4324): 634.
[34] Oakley A (1991): 183, 185.

in terms of Morris's continuing interest in coronary heart disease, a meeting with the researchers working to establish the Framingham Heart Study.[35]

Although this illustrates the personal link between Morris and the influential cohort study, the more important link was conceptual, as was the case for many working in coronary heart disease research in Western nations in the 1950s and 1960s. Framingham has been credited for introducing a number of highly influential innovations in epidemiology. Firstly, the use of the term 'risk factor' to describe the statistical correlation of a variable with incidence of disease, in the process becoming widespread shorthand for putative causes of disease. Secondly, and intrinsically connected with this first point, it popularised the idea of multiple causes of chronic disease, in opposition to the presumed single or sufficient cause of many infectious diseases. Thirdly, it established the longitudinal cohort study as the pre-eminent means of researching chronic disease. Finally, and more immediately, it provided a number of the risk factors that might be driving the nascent epidemic of coronary heart disease in the US and many other Western industrialised countries. [36]

[35] Interview between Jerry Morris and Henry Blackburn, 3 June 2002, unpublished. Transcripts are available on request from http://www.epi.umn.edu/cvdepi/people/oral-histories/ Last accessed 8 April 2019.

[36] For a more detailed discussion of Framingham's legacy, see Aronowitz RA (1998) "The Social Construction of Coronary Heart Disease Risk Factors" in Aronowitz RA *Making Sense of Illness: Science, Society and Disease* (Cambridge; Cambridge University Press): 111-145 and Oppenheimer GM (2010) "Framingham Heart Study: The First 20 Years" *Progress in Cardiovascular Diseases* 53: 55–61.

Nonetheless, Morris's avowal of the significance of the Rockefeller fellowship should perhaps not be taken too much at face value. Correspondence between Morris and his former LSHTM classmate Richard Schilling (then secretary of the industrial health research board at the MRC), and the drafts of the proposals for the SMRU suggest that Morris did not yet fully appreciate the significance of coronary heart disease, which was referred to in a single, casual sentence under a sub-section on 'Health in middle age': 'the social and occupational incidence of cardio-vascular disease would probably make a good starting point.'[37]

In fact, 'Operation Sir X.Y.' (as Schilling referred to the proposal, in reference to Sir Edward Mellanby, Secretary of the MRC), was mostly concerned with positioning the Unit in relation to its potential rivals and competitors, included Ryle's Institute of Social Medicine. Morris and Titmuss would have been aware that although there had been a recent glut of social medicine posts – at Oxford University in 1943, Edinburgh in 1944, and Birmingham in 1946 – they were occupied by Ryle, Crew and Thomas McKeown respectively, all vastly more experienced individuals.[38] Schilling also made the point that the relatively novel statistical techniques they intended to employ in their research were also in use elsewhere, noting that the Unit must be distinctive from the 'computors' of 'A.B.H. [Austin Bradford Hill]'s circus' at LSHTM.[39]

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[37] JN Morris, n.d., draft proposal for SMRU, LSHTM Archives GB 0809 Morris/01/01.
[38] Pemberton J (1997) "Social Medicine comes on the Scene in the United Kingdom, 1936-1960" *Journal of Public Health Medicine* 20(2): 149-153; Porter D (2002) "From Social Structure to Social Behaviour in Britain after the Second World War" *Contemporary British History* 16:3: 58-80.
[39] R Schilling, Letter to JN Morris, 26 December 1946, LSHTM Archives GB 0809 Morris/01/01.

Morris was appointed to the directorship of the newly formed Unit, with the MRC adjudging him to be 'a suitable person for [the] post' despite him being 'just 36 years of age'.[40] Titmuss joined him as deputy director and chief statistician, although his involvement was short-lived due to his new appointment as Professor of Social Administration at the LSE. However, the Unit's early years were beset by challenges, and Morris himself was clearly viewed as somewhat of a dissident by his superiors at the MRC. In common with Ryle, and influenced by his discussions with Titmuss, an important strand of Morris's belief in social medicine was its application of the emerging social sciences to medical problems, and for this purpose he had deliberately recruited a broad range of statisticians, social scientists and psychiatrists.[41] For some at the MRC, this type of approach was either the domain of the Ministry of Health, or insufficiently sophisticated to produce credible evidence for health issues. This all added up to what MRC memorandums referred to as the 'Morris problem', of which Shaun Murphy has produced a thorough account.[42]

Despite the lack of trust that Morris received from the MRC, and the unfocused nature of much of the Unit's activities, the work on coronary heart disease was

[40] MRC file note "Formation of an MRC Social Medicine Unit", n.d., LSHTM Archives GB 0809 Morris/01/01.
[41] Morris's thoughts on social medicine around this time were expounded to a public audience in a radio broadcast on the BBC's *Third Programme* on 24 September 1948 entitled "Medicine as Social Science and Social service".
[42] AM Thomson, letter to HP Himsworth, 16 June 1952, TNA FD 1/287; Murphy S (1999) "The Early Days of the MRC Social Medicine Research Unit" *Social History of Medicine* 12(3): 389-406.

starting to bear fruit. The motivation behind this research, in amongst the slew of other ideas that Morris had for the SMRU's work programme, was that '[w]hether coronary heart disease as an epidemic phenomenon, is new or merely newly recognised, there is no doubt that to-day it has become a major problem.'[43]

Indeed, in response to the MRC's criticism, Morris was bullish about this aspect of the Unit's programme, arguing that only a 'social medicine unit, combining special skills, and special interests in the historical trends and contemporary mass phenomena of the disease' would be able to study this 'major problem' that was exciting interest from many post-industrial nations such as 'North America, Scandinavia as well as in this country'.[44]

The SMRU therefore intended to perform 'reconnaissance'[45] on a public health issue that Morris argued, was otherwise 'ground … being very thinly covered'.[46] The research was broadly divided into two strands: firstly, reporting on the recent secular trends of this apparent epidemic of heart disease; and secondly, following hunches into its potential causes, by looking at '[i]ncidence and prevalence of coronary heart disease in middle-aged men, in relation to occupation; and, possibly, other large-scale environmental factors'.[47]

[43] Memorandum from the SMRU, n.d. (probably 1949/50), TNA FD 1/286.
[44] Memorandum from the Social Medicine Research Unit, 24 May 1952, TNA FD 1/286.
[45] Ibid.
[46] JN Morris "Research on Treatment and Prevention of Coronary Disease" 12 May 1952, TNA FD 1/286.
[47] "Statement of Research and Working Hypothesis", n.d. (probably November 1950), TNA FD 1/287.

On this first thread, the SMRU made good headway, confirming that the apparent epidemic of coronary heart disease was actual rather than artefactual using

> 'the records of several teaching hospitals and coroners' courts, from the statistics of the Registrar General, and from the literature. The evidence gathered supports the view that there has been some true increase of coronary thrombosis and coronary heart disease in this country during the present century. The increase may have begun about the close of the first World War.'[48]

The second objective proved more difficult to achieve. Morris and his colleagues targeted occupation as a key explanation for the epidemic, partly because it primarily appeared to be affecting middle-aged men, but also that '[t]he belief is also widespread that coronary disease is related to stress and strain' and so should consequently 'show some relation to occupation'.[49] The SMRU consequently set about trying to initiate a study in which they would be notified about any cases of coronary heart disease in a variety of different occupations. However, this plan ran into difficulties:

> 'it has not been possible to include anything like a complete cross-section of the community: e.g., important groups involving

[48] Ibid.
[49] Anon "Coronary Disease" n.d., TNA FD 1/287.

> different types of working conditions like coal miners, agricultural workers and dockers could not be covered because of the absence of any appropriate organisation with sufficient members or because of the inability or unwillingness of such organisations to cooperate.'[50]

Indeed, the National Dock Labour Board 'emphasized … that they do not wish the dockers to become "guinea pigs"' in such a study.[51]

Despite this enforced scaling back, promising results were soon gathered from London transport workers, demonstrating an unanticipated pattern of disease, and shifting decisively the scope and future direction of the Unit. Morris recalled that

> 'quite flukily, this is really one of these great chances, the very first results we got from London Transport, the first three months of notifications, they were entirely different between the two occupations on the London buses, drivers and conductors. They were just entirely different. All right, it doesn't mean anything in a few months, but if you want to go a year – there it was!'[52]

[50] SMRU "Coronary Disease: Personality, Work and Coronary Disease" n.d. (probably 1950/1), TNA FD 1/286.
[51] G Buchanan, letter to JM Rogan, 13 December 1948, TNA FD 1/286.
[52] Interview between Jerry Morris and Henry Blackburn, 3 June 2002, unpublished.

Morris and his colleagues hypothesised that the differences in mortality and morbidity from coronary heart disease between the two occupations would most likely be explained by the physical activity that each group of men took during the day. Bus drivers would be largely sedentary, remaining seated as they steered through the London traffic, while their conductor colleagues were on their feet, running up and down the stairs of the double-decker buses, collecting fares from passengers.

The first outputs from the study were published, on consecutive weeks in *The Lancet*. The first article confirmed what Morris had initially suspected: that the annual rate of coronary heart disease morbidity and mortality for bus drivers was statistically significantly higher than that for conductors.[53] To bolster these findings further, Morris and his colleagues published a second paper that subjected their hypothesis to closer scrutiny, revealing important aspects to their thinking about coronary heart disease and this important shift in the SMRU's focus from occupation to physical activity.[54] Firstly, that although the pattern was most striking among bus drivers and conductors, they sought to triangulate this finding with other professions where there was comparable differences in occupational physical activity. Pickings were slim from their own data, but they did manage to compare relatively sedentary telephonists with more active postmen, and revealed similar findings that confirmed the hypothesis.

[53] Morris JN et al (1953a).
[54] Morris JN et al (1953b).

The next stage of hypothesis testing was a comparison of their contemporary data with historical data from when '"[c]oronary thrombosis" was beginning to be commonly diagnosed in this country late in the 1920s'. Importantly, this analysis meant excluding the 'leading' and 'managerial' professions, and only including 'social classes III (skilled workers), iv (semi-skilled workers), and v (unskilled workers) which include a wide variety of heavy and light jobs.' Again, this historical study, and a further check against death certification ratified Morris and Heady's assumptions, but perhaps the wider significance of this test was that differences between classes were not examined. The focus of this analysis was between levels of physical activity within social class, bifurcated into "heavy" and "light" work, rather than between social classes.

Part of the reason for this was epidemiological rigour, as another member of the SMRU, Aubrey Kagan explained in a 1959 article. In order to establish that the disparity in disease was indeed due to physical activity rather than any other difference between the two groups, it was important that '[d]rivers and conductors have much in common as far as mode of life is concerned –working for the same firm, similar hours and wages, same health and welfare services, similar social background'.[55] Prior to the development of sufficient computing power to undertake multiple regression analyses, epidemiological studies made comparisons between groups that were broadly similar.[56] Consequently, it was difficult to

[55] Kagan A (1959) "Coronary Heart Disease and 'Way of Life': A Modern Approach to a Modern Disease" *Health Horizon* Summer 1959: 11.
[56] Batty GD et al (2010) "Walking Pace, Leisure Time Physical Activity, and Resting Heart Rate in Relation to Disease-Specific Mortality in London: 40 Years Follow-Up of the Original

compare different social classes and different occupations at the same time, without bringing into play many more other potentially confounding factors.[57]

Wider events may also have played a part. The selection of participants in the study, dictated by the recalcitrance of certain groups to be 'guinea pigs', meant that Morris was unable to include a wide selection of occupational groups, and was consequently largely unable to show differences between them in terms of socioeconomic status; he could not flog 'the poverty horse too hard'.[58] Contrary to Porter's assertion that 'Morris was moving beyond a conceptualization of social inequality based on social class', health inequalities were however, as sociologist Sally Macintyre identifies, an abiding concern of SMRU's work and were an example of a concern with health inequalities prior to the 1980 Black report.[59] Indeed, it would misrepresent the SMRU's position to suggest that the London Transport Workers study signalled an immediate shift away from a concern with structure or environment into investigating solely individual, lifestyle factors. This was also borne out in the second *Lancet* paper. When discussing alternative hypotheses for the difference in disease, Morris and his colleagues mused

Whitehall Study. An Update of Our Work with Professor Jerry N. Morris (1910–2009)" *Annals of Epidemiology* 20(9): 661.

[57] For a discussion of the development of statistical methods in post-war epidemiology, see Giroux É (2013) "The Framingham Study and the Constitution of a Restrictive Concept of Risk Factor" *Social History of Medicine* 26(1): 104-105.

[58] Oakley A (1991): 185.

[59] Porter D (2007): 1181; Macintyre S (2002) "Before and After the Black Report: Four Fallacies" *Contemporary British History* 16(3): 198-220.

> 'that since heavy workers live often in villages and small towns, and light workers in cities where medical facilities may have been better, the diagnosis of coronary heart disease – still a relatively "new" condition in 1930-32 – might have been more readily made in light workers.'[60]

Furthermore, 'psychological factors' were also very much a concern, and 'the problem … of intimate functional association of emotional equilibrium, for example, with a general physical attribute of work'.[61] Indeed, Morris and his colleagues would no doubt have been aware of the then fashionable research of Hans Selye, which popularised theories about stress, disease and the pace of modern life.[62] While the SMRU had pinpointed the 'widespread' belief that heart disease was related to 'the stress and strain' of contemporary existence as one of their motivations for initially investigating the link between occupation and heart disease, and, as we shall see, Morris would continue to casually refer to such theories in his public writings, stress was never seriously investigated by the Unit. Nonetheless, there were at least hints in the SMRU's work of the preoccupations of the Whitehall studies discussed in Chapter Five, in terms of both social class and stress.

[60] Morris JN et al (1953b): 1115.
[61] Ibid. 1118.
[62] Jackson, M (2014) "Evaluating the Role of Hans Selye in the Modern History of Stress" in Cantor D and Ramsden E. (eds.) *Stress, Shock, and Adaptation in the Twentieth Century* (Rochester, NY: University of Rochester Press): 21-48.

Finally, the second paper also indicated where the SMRU would take their coronary heart disease research next. Occupational health would be largely discarded, and physical activity taken up. As Morris and Heady mused, this would need to take into account what men were doing outside of their jobs, and how this might be changing,

> 'in a time of growth in the scale of enterprise, with increasing numbers of men engaged in management, administration, and the bureaucracy … we need evidence as to whether physical activity outside work (this may well also have diminished in recent years) in exercise and games, for example.'[63]

In the London Transport Workers study, the SMRU had, more by chance than design, provided evidence for physical inactivity as an important risk factor for coronary heart disease. Nonetheless, a distinction should be drawn between the attention that a paper receives at the time, and the retrospective glow that it emits on its path to becoming a citation classic. Ralph Paffenbarger, an American contemporary of Morris known for his own slightly later work on physical activity and coronary heart disease amongst Harvard alumni, attested that the wider medical community were somewhat sceptical of Morris's findings at the time.[64]

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[63] Morris JN et al (1953b): 1120.

[64] For an example of Paffenbarger's research, see Paffenbarger R et al (1966) "Chronic disease in Former College Students. I. Early Precursors of Fatal Coronary Heart Disease" *American Journal of Epidemiology* 83(2): 314-28. For Paffenbarger's comments on the reception of the two *Lancet* papers see Paffenbarger R et al (2001) "A History of Physical Activity, Cardiovascular Health and Longevity: The Scientific Contributions of Jeremy [sic] N Morris, DSc, DPH, FRCP" *International Journal of Epidemiology* 30(5): 1184-1192.

The SMRU were also clear that though they had thoroughly tested their hypotheses, further investigations were necessary. Concurrent to this pursuit of these new objects of inquiry however was Morris's continuing concern with social medicine, which was finding new avenues of its own to explore.

Uses of Epidemiology and its influence, 1955 - 1957

"Uses of Epidemiology" was first published as an article in the *BMJ* in August 1955, and its gestation appears to have been heavily influenced by the ongoing coronary heart disease work.[65] Worked up from a paper delivered to the Section of Preventative Medicine and Infectious Diseases at the Annual Meeting of the British Medical Association (BMA) in Glasgow in 1954, the *Glasgow Herald* reported that Morris warned of a 'gloomy outlook for the middle-aged man' with his presentation on 'the "Epidemiological Method"', as he noted the distribution of the '"modern" epidemics' of lung cancer and coronary heart disease. The newspaper went on to report Morris explicitly drawing a link between the London Transport Workers study as an example of how epidemiology could give 'a picture of the causes of diseases and what might be protective factors against a disease', anticipating the focus on prevention in the 1970s discussed in Chapter Three.[66]

[65] Morris JN (1955a).
[66] Anon "Gloomy Outlook for the Middle-Aged Man: Disquieting Mortality Trend" *Glasgow Herald*, n.d. (probably 1954), newspaper clipping in LSHTM Archives GB 0809 Morris/04/05.

Morris was influenced by his own epidemiological research, but he also sought to influence the wider field. Instigating broader interest in epidemiological investigations of the coronary heart disease epidemic was a tributary objective of "Uses of epidemiology". Morris had already outlined to his superiors at the MRC how sparsely populated he felt the field of coronary heart disease research was, and he underlined the point for a more public audience in a 1955 article in *The Listener*:

> 'Among non-medical people I meet, there is a widely prevalent idea that research into the possible connections between diseases like coronary thrombosis and the way people live is a leading activity of modern medicine. This idea is wrong. Many of the London Teaching Hospitals, for example, give little support to investigations such as I have been describing, and there are great provincial schools where the record is similar. This is undoubtedly one of the reasons for the slow progress being made in preventive medicine, and for its prevalent pessimism, compared with the massive achievement and faith in the future of the clinical branches.'[67]

[67] Morris JN (1955b) "Coronary Thrombosis: a Modern Epidemic" *The Listener* 65(1397): 997. *The Listener,* published from 1921 to 1991 by the British Broadcasting Corporation (BBC), was a weekly middle-brow publication that complemented and sometimes reproduced the content of its radio and televisual broadcasts.

The apparent objectives of "Uses of Epidemiology" then were two-fold; to convince the wider medical profession that epidemiology should be taken more seriously as a discipline; and that these methods should be applied more widely to modern epidemics such as coronary heart disease, and their possible links with lifestyle.

Morris presented his vision of epidemiology to the broad audience of doctors who read the *BMJ* as a fresh take on a classical tradition. Doffing his cap to the nineteenth century "pioneers" ('let me explain that what I am speaking of is the study of health and disease of populations and groups, the epidemiology of which [William] Farr, [John] Snow and [Joseph] Goldberger are the masters'),[68] Morris iterated seven uses of epidemiology, suggesting that his vision 'now offers the possibility of a new era of collaboration between public health workers and clinical medicine.'[69] Morris reckoned that this should be an equal partnership, although his conclusion, that epidemiology should 'complete', 'supplement' and ultimately 'abolish' the 'clinical picture' betrayed his own view of the relative importance of his own field.[70]

Morris was keen in the early years of the SMRU to distinguish what he was doing from 'straight epidemiology', but his perspective had evidently shifted somewhat by the time the book edition of *Uses of Epidemiology* was published in 1957. While the reasons for the expansion of the article into book form are obscured, it is not

[68] Morris JN (1955a): 395.
[69] Ibid.: 399.
[70] Ibid.: 401.

unreasonable to speculate that it was in some ways the realisation of the joint 'masterpiece' that Morris had planned with Titmuss in their wartime Airgraph correspondence. In that, Morris had argued that their views on social medicine were a vital and critical voice on some of the issues facing post-war Britain.

> 'I've sketched out an Introduction referring to the importance of S.M. [social medicine] in [post-war] Reconstruction … Because of the increasing mixing up of health and society[,] S-M [social medicine] is very important.'[71]

A decade on, and bruised by his encounters with the MRC, and perhaps cognisant of the political environment for left-leaning scientists, Morris had largely failed to articulate what social medicine might mean. But he could now apply his (and Titmuss') thinking about the relationship between society and health to the more established field of epidemiology.

While *Uses of Epidemiology* did not provide an entirely clean break from social medicine, as Morris would continue to write the occasional article outlining his ideas, there were a few telling sentences in one such article, published in 1959:

> 'Epidemiology is the main method of social-medical study, and it has suddenly become fashionable. Everybody wants

[71] JN Morris, Airgraph to RM Titmuss, 13 July 1942, LSE, TITMUSS 8/8.

> epidemiology. In the U.S.A. recently I saw the protocols of two dozen population studies in cardiovascular disease, most of them set up by clinicians.'[72]

Here, Morris conceded that a wider audience was more interested in the method of epidemiology rather than his ideology of social medicine.

There are four explanations for why *Uses of Epidemiology* achieved immediate acclaim in medical and public health circles, apparent from favourable reviews in the *BMJ*, *Nature* and the *Medical Officer,*[73] when Morris's efforts to gain traction for his vision of social medicine had fallen on harder ground. Firstly, Morris was making a name for himself with his coronary heart disease research, both within the medical establishment and with the wider public, as appearances on the *Third Programme* and the article in *The Listener* attest. Secondly, this research came at a time when the 'epidemiologic transition' from infections to non-communicable disease was becoming ever more apparent, meaning that Morris' research was on the public health issue of the day, affording it greater visibility.[74] As Weisz has noted, this transition was also redefining the role of epidemiology, and Morris was

[72] Morris JN (1959) "Social Medicine" *Journal of Medical Education* 34(12): 1159-1162.
[73] Davey Smith G (2001): 1146.
[74] A term coined by epidemiologist Abdel Omran to describe this pattern in developed nations, but as Ryle's "Social Medicine: Its Meaning and Its Scope" article in 1944 suggests, the phenomena was visible to many working in social medicine and epidemiology prior to Omran's paper. Omran AR (1971) "The Epidemiologic Transition" *Milbank Memorial Fund Quarterly* 49:509–538. See also Weisz G and Olszynko-Gryn J (2010) "The Theory of Epidemiologic Transition: the Origins of a Citation Classic" *Journal of the History of Medicine and Allied Sciences* 65(3): 287-326.

well placed to articulate this.[75] Similarly, Davey Smith has argued that 'no systematic approach to the population aspects of non-communicable disease existed at the end of the Second World War' and that consequently *Uses of Epidemiology* 'helped create the field that it documented'.[76] Thirdly, Morris's somewhat evangelical writing style was perhaps best tempered by the more technical language and statistical examples of epidemiology, while his earlier polemics on social medicine were slightly immature, unconnected to the pragmatics and reality of the health issues of the day. Finally, social medicine itself was proving itself to be a short-lived movement, whereas a redefinition of the more established discipline of epidemiology felt more apposite given the 'modern epidemic'.[77] Opposition from the more conservative elements of the medical establishment to social medicine, such as leading physician Lord Thomas Horder's dismissal of Ryle as having erroneously mixed it 'with his political views, which are markedly socialistic', could not so easily be substantiated.[78]

Uses of Epidemiology also anticipated three new directions for epidemiology in the second half of the twentieth century. Firstly, responding to the epidemiologic transition. Morris couched this in terms of his first 'use', historical study:

> 'For some the main interest of history is the light it can throw on the future … What seems to be keeping the male death rate in

[75] Weisz G (2014): 193-195.
[76] Davey Smith G (2001): 1146.
[77] Porter D (1997): 97–121.
[78] Quoted by Murphy S (1999): 403.

> middle age even as moderately satisfactory as it is now, is the balancing of those diseases which are increasing (such as 'coronary thrombosis') by those which are declining (tuberculosis and other infections). If the decline of the infectious diseases is halted before the modern epidemics are brought under control, the overall middle-aged male death rate will actually begin to rise.'[79]

In other words, epidemiology and by extension public health had a job to do in terms of arresting the modern epidemic of heart disease. The key to addressing this was looking at the historical data to establish some idea of apparent causes, and trying to eliminate or alter these in the future.

Secondly, and most specifically, Morris guardedly predicted the so-called 'cholesterol wars', and the part that epidemiology might play:

> 'Any of the 'uses' of epidemiology previously considered may throw up questions that can be formulated as hypotheses for testing … With what if any trends in food consumption do the mortality trends of coronary heart disease march? Not very comfortably with average calories, or with total fats, the per cent of calories derived from fats, the intake of animal fats, the supply

[79] Morris JN (1957): 7.

> of essential fatty acids, or pyridoxine; perhaps more readily with the consumption of vegetable fats and with the production of hydrogenated fats? Can these last be related to thrombosis and stenosis in atheromatous coronary arteries. This is the kind of hypothetical long shot that may emerge from study of time series.'[80]

These 'hypothetical long shots' would in fact be the basic ammunition in the long conflict over dietary fat, sugar and cholesterol, discussed in Chapter Two. After initial forays into these contested areas in the crucible of *The Lancet*'s letters page, Morris largely steered clear, at least in public discourse, preferring to concentrate on physical activity and social determinants.[81]

The third, and arguably most important, new direction followed on from these demographic insights. Studies that investigated heart disease, or any of the 'new diseases', had to consider them in terms of what Morris described as 'ways of living' and societal change. This meant opening up the field of epidemiology to consider a whole gamut of rapid advances in post-industrial contexts, taking in everything from

> 'the public health implications of the 1000 extra motor vehicles a day?; the modern distribution of poverty so different from the

[80] Morris JN (1957): 69.
[81] Morris JN (1956) "Fats and disease" *The Lancet* 267(6924): 687–690.

> 1930s?; the sophistication of foods?; the rising consumption of sugar, our astonishing taste for sweets?; the derationing of fats?; more smoking in women?; more married women going out to work?; less physical activity in work and more bodily sloth generally?; multiple chemical and physical exposures, know and potentially hazardous?; the prodigious increase of medical treatments?; the 11-plus examination?; still increasing urbanization and sub-urbanization?; the rapid creation of new towns?; smokeless zones (still with sulphur)?; the building of new power stations? and what can we learn from other indicators of community health: crime, for example—the ups and downs of juvenile delinquency, and the apparent increase of sex crimes and of crimes of violence during a period when so much other crime is decreasing?'.[82]

This lengthy but by no means exhaustive list heralded an era in which all aspects of daily life were ripe for study by epidemiologists. The cohort study in particular allowed epidemiologists to study subjects for an extended period of time, sometimes a lifetime, and assess which of their 'ways of living' might be statistically associated with incidence of disease. The extent to which this particular method of biomedical research achieved primacy, at least in terms of establishing the evidence that formed the basis of the lifestyle paradigm, is illustrated by the following chapter. Cohort studies were the preeminent means of establishing the

[82] Morris JN (1955a): 396.

risk factors of everyday life, and other modes of scientific inquiry – experimental studies, animal studies, and so on – were considered insufficiently rigorous.

Contemporary epidemiologists Krieger and Davey Smith have provided separate analyses of the implications of *Uses of Epidemiology* for twentieth century epidemiology. Davey Smith comments on a significant trend during this period, arguing that '[t]he importance of the style of thinking advocated by Jerry Morris is increased by the tendency of epidemiology to concentrate more and more at the individual rather than population level'.[83] Krieger complicates this picture, drawing on Raymond Williams' conception of the individual being 'indivisible' from the group of which they are part, and that 'recognition of "individuality" does not imply embracing the philosophical stance of 'individualism'.[84] Krieger implies, convincingly, that this latter slippage lay at the heart of interpretations of *Uses of Epidemiology*; as an imperative to focus on the individual, and their 'ways of living'.

Porter has provided further historical analysis of this tendency. She argued that *Uses of Epidemiology* demonstrated Morris's declining interest in social class as an explanation for disease distribution, and that this 'allowed the deconstruction of the complexity of the social and biological relations of chronic diseases through the identification of "ways of living" as their primary cause.' From this, it followed that public health 'was able to offer the opportunity to prevent illness by changing

[83] Davey Smith G (2001): 1154.
[84] Krieger N (2007): 1176. The reference to Williams' work is Williams, R (1983) [1973] *Keywords: A Vocabulary of Culture and Society. Rev. edn.* (New York: Oxford University Press): 161-165.

social and individual behaviour'.[85] Although not explicitly mentioned by Porter, *Uses of Epidemiology* can also be placed in her analysis elsewhere of post-war public health, pursuing

> 'a new hegemonic mission for preventive medicine that looked to reform personal and social behaviour rather than the reform of social structure as the route to a healthy society.'[86]

Finally, Porter provided an important insight into *Uses of Epidemiology*'s embrace of 'post-war theoretical assumptions about the *embourgoisement* of technologically automated industrial societies dominated by middle-class structures and values universalized in mass culture'.[87] As analysis of the SMRU's later work will demonstrate, Morris investment in these beliefs was an important element of the self-consciously modern research by the Unit into physical activity and exercise.

In an attempt to instil the new approaches outlined in *Uses of Epidemiology* into the frontline of public health, Morris penned a complementary but perhaps more specific and pragmatic paper – "An epidemiological approach to coronary artery disease" – intended for Medical Officers of Health (MOsH), and published in their professional journal *The Medical Officer.* Morris stated in his first sentence that

[85] Porter D (2007): 1182.
[86] Porter D (2002): 76
[87] Porter D (2007): 1182

'[c]ardiovascular disease of middle-age shows every sign of becoming Public Health Problem No. 1',[88] a sentiment echoed by one of his presumed audience, J. Tudor Lewis, the MOH for Wandsworth:

> 'Much attention has been paid in recent years to the so-called "stress" diseases as a public health problem … such conditions as high blood pressure (hypertension) and diseases of the heart blood vessels (coronary arterial disease) which are in some ways thought to be possibly associated with the stresses and strains of modern urban civilization … it does seem that if public health departments are to carry out their primary function of safeguarding the health and well-being of the public, an attempt should be made to tackle this problem of coronary artery disease.'[89]

Studying the Medical Officer annual reports in London from the mid-1950s to early 1960s (via their digitised repository by the Wellcome Library) however suggests that MOsH were less concerned about coronary heart disease than Morris might have wished. Generally, MOsH restricted their commentary to observing that it was indeed a leading cause of mortality, and that, leaning on international evidence emerging from American epidemiologist Ancel Keys' research (discussed in Chapter

[88] Morris JN (1955c) "An Epidemiological Approach to Coronary Artery Disease" *Medical Officer* 94(18): 251-256.
[89] Tudor Lewis J (1955) *Annual Report of the Medical Officer of Health for the Year of 1955: Metropolitan Borough of Wandsworth* http://wellcomelibrary.org/item/b18251134 Last accessed 8 February 2017.

Two), it might be associated with diet.[90] In common with Paffenberger's account, there were no mention at this stage about a link with physical activity. The MOH for East Ham's comments were not untypical, as he considered it

> 'idle to speculate on this condition. It seems to strike active and sedentary persons alike, persons of a worrying disposition and those more phlegmatic, and it is extremely difficult to assess the place of alcohol in the causation.'[91]

Where more concrete action was recommended, MOsH emphasised that '[h]ealth education must still remain our most powerful weapon' and that although 'our knowledge as yet is scanty … good advice would be to eat enough but not too much, and to eat more fish and salads'.[92] A degree of fatalism was evident among the ranks of MOsH, which in some ways echoed the assumptions identified by Porter in *Uses of Epidemiology* regarding the '*embourgoisement*' of society, although with markedly different conclusions. Variations on the following rhetorical question echoed through a number of annual reports: 'Can there be

[90] Maddison J (1955) *Good Health in Twickenham: The Annual Report of the Medical Officer of Health* http://wellcomelibrary.org/item/b19879337 Last accessed 8 February 2017.
[91] Coleman JS (1957) *Annual Report of the Medical Officer of Health For the Years 1956 and 1957: County Borough of East Ham* http://wellcomelibrary.org/item/b19874844 Last accessed 8 February 2017.
[92] Clunie Harvey W (1960) *Annual Report of the Medical Officer of Health for the Year 1960: Borough of Southgate* http://wellcomelibrary.org/item/b19795178 Last accessed 8 February 2017; Boyd SA (1960) *Annual Report of the Medical Officer of Health for the Year 1960: Metropolitan Borough of Bethnal Green* http://wellcomelibrary.org/item/b18236911 Last accessed 8 February 2017.

much doubt, however, that coronary thrombosis is part of the price we pay for the high standard of living which we now enjoy?'[93]

'Ways of living' and the later years of the Social Medicine Research Unit: 1957 - 1975

In 1957, the SMRU moved from its cramped cabin headquarters at Central Middlesex Hospital to the laboratories of the Royal London Hospital in Ashfield Street. They were welcomed by an article in the in-house publication *The London Hospital Illustrated* that described the unit's research focus on '"populations" and special "groups" whose ways of living (economic standards, housing, work, habits and customs) can be studied, and some aspect of whose health, rather than on the individual patient'. It also noted that the Unit was working 'during a period of such drastic changes in the mode of life' and that 'if [coronary disease] is increasing there surely are causes of it to be found in people who are changing, in changes in the things they do, in the changing environment, in our changing social life.'[94]

The SMRU were very much aware of the 'drastic changes' occurring in post-war Britain, and attempted to direct their research accordingly. On the one hand, the SMRU needed to follow the leads it had already uncovered, and on the other as a

[93] Landon J (1961) *Annual Report of the Medical Officer of Health and Report on the School Health Service for the Year 1961: Borough of Bexley* http://wellcomelibrary.org/item/b19785331 Last accessed 8 February 2017. Similar views are expressed in MOH reports from Greenwich in 1959, Poplar in 1961 and Bexley again in 1963.

[94] Anon (1957) "Social Aspects of Medicine: Another Research Unit Joins 'The London'" *The London Hospital Illustrated*: 8. Newspaper clipping in LSHTM Archives GB 0809 Morris/03/02.

research unit interested in the social aspects of disease, it needed to respond to shifts in broader society. One of these changes was, according to Morris in his article in *The Listener*, the emergence of 'A Chairborne Generation'. What he meant by this was developments in the British labour market, or, as he termed it, the 'second industrial revolution – with its multiplication of machine power and mass production, growth in the scale of enterprise and of bureaucracy, and rise in the professions.'[95]

Morris argued that technological advancement was having a profound effect on people's working lives; fewer men were employed in physically strenuous manual labour, and many more were working in sedentary, deskbound jobs. Given the correlation found in the London Transport Workers study, and confirmed in further SMRU investigations, between physical activity and incidence of heart disease, these changes could have important consequences for the current epidemic among middle-aged men. As Morris also remarked, this was a question that up to this point, 'so far … has been studied only in terms of physical activity of *work*'. Given that Morris seemed to accept this macroeconomic development with all the historical inevitability of the first industrial revolution, the research question was therefore what steps might be taken by the deskbound employee to compensate for their sedentary working day; 'whether physical activities we engage in outside our work, particularly in leisure enjoyments, afford any protection.'[96]

[95] Morris JN (1955b): 996.
[96] Ibid.

Morris's claims were borne out by empirical evidence. Economic historian Andrew Newell has characterised the structural changes in the British labour market over the twentieth century as being driven by the 'engine' of 'technological process, which completely transformed the occupations, industries, hours of work, and, most of all, the standard of living of British workers'.[97] The results of this were clear. While in 1951 48.5 per cent of workers were employed in manual jobs, this had declined to 38.5 per cent by 1977. Over the same time period, employment in managerial, professional and technical occupations (i.e. sedentary desk work) had increased from 8.2 per cent to 26.7 per cent.[98]

However, Morris was far from single-minded in his consideration of the causes of the coronary epidemic. Morris wondered if his audience would 'like to hear something about tobacco', citing a recent American study that had demonstrated a large difference in heart disease between 'middle-aged men who smoked half a "pack" a day or more', and those who abstained from cigarettes. Diet was viewed as a given – 'there is no longer any doubt that there are connections between the way the body deals with fat, and the occurrence of coronary thrombosis' – a premature assertion given the controversy, discussed in Chapter Two, that erupted in the next decade. He also addressed the implicit assumptions of some of his MOH colleagues, as he discussed what he viewed as the patchy evidence on

[97] Newell, A (2007) "Structural Change" in Crafts N, Gazeley I, Newell A (eds) *Work and Pay in 20th Century Britain (*Oxford: Oxford University Press): 35.
[98] Ibid: 39.

> 'stress and strain, what is called the pace of modern living, as a possible factor, another element to be considered in that epochal social change of our time which must be responsible for the biological changes I have referred to.'[99]

By the same token, as the SMRU's research agenda progressed through the early 1960s, coronary heart disease research was not exclusively conducted on physical activity in leisure time. A multi-centre trial between Edinburgh, Budapest and Prague of clofibrate, a lipid-lowering agent intended to manage high cholesterol, occupied a good deal of time, but ultimately proved unsuccessful due to a number of adverse effects.[100] Another focus was on diet, in a study led by Jean Marr, with the researchers following workers from Barclays, Midland, National Provincial and Westminster banks. The results of these studies, when published a few years later in 1963, were however disappointing, with '[n]o closer association … evident between what these men ate and their individual cholesterol levels … diet thus does not seem to account for the wide range in cholesterol values that was found.'[101] A further item that appeared on the MRC report of a unit visit in early 1964 would also play an increasingly influential role in the SMRU's activities: '[f]urther studies on the hardness of water in relation to cardiovascular disease

[99] Morris JN (1955b): 997.
[100] Report of the Committee of Principal Investigators (1984) "WHO Cooperative Trial on Primary Prevention of Ischaemic Heart Disease with Clofibrate to Lower Serum Cholesterol: Final Mortality Follow-Up" *The Lancet* 324(8403): 600-604. See also TNA FD 12/524.
[101] Morris JN et al (1963) "Diet and Plasma Cholesterol in 99 Bank Men" *BMJ* 1(5330): 571–576.

need to be undertaken.'[102] This programme was birthed from an interest that Morris, Austin Heady and Margaret Crawford had developed in findings from Japan that 'the softer the water the higher the cardiovascular death-rate', and had subsequently investigated further in an ecological study of county boroughs in England and Wales.[103] These activities demonstrate that although the SMRU was committed to investigating 'ways of living' and certainly saw this as the most promising lead in terms of prevention, it was far from excluding structural or environmental causes of disease from its analyses.

As Britain's biggest killer, heart disease was increasingly attracting public and media attention. In 1963, *The Times'* Medical Correspondent tied in a report on the newly formed British Heart Foundation to comment upon the vexed state of play in investigating the causes of the cardiovascular epidemic, which, they reminded readers, '[i]n 1961 … represented just over 37 per cent of deaths from all causes and meant that this was the commonest cause of death'. Bemoaning that '[p]art of the trouble is that the experts cannot even achieve unanimity on such apparently elementary principles as terminology and definitions', the article did however offer a source of optimism for the future in the person of Morris. Quoting a speech given

[102] Anon "Note: Visit to Social Medicine Research Unit dated 7th February, 1964" 23 April 1964, TNA FD 12/519.
[103] Morris JN et al (1961) "Hardness of local water-supplies and mortality from cardiovascular disease in the County Boroughs of England and Wales" *The Lancet* 277(7182): 860-862; Morris and colleagues cited Kobayashi J (1957) "On Geographical Relationship Between the Chemical Nature of River Water and Death-Rate from Apoplexy (Preliminary Report)" *Berichte des Ohara Instituts für landwirtschaftliche Biologie* 11(1): 12-21.

to the Royal Society of Medicine the previous year, it reported Morris as remarking that:

> 'The hope persists that, as has happened so often before in public health, by alterations in responsible ways of living we may be able to control coronary occlusion and ischaemic heart disease – even before these intimate processes are understood.'[104]

Of these 'responsible ways of living', it was undoubtedly physical activity that most interested Morris. Speaking to the Royal Society the same year, he reminded his listeners of

> '[t]he Hippocratic principle that the *exercise* of functions is necessary for their health, that with disuse comes atrophy, is seen now to apply widely in physical, mental and social efficiency: physical activity thus is related to the blood cholesterol level and hypertensions, to coronary disease, and, of course, to obesity.'[105]

In acknowledging the long history of exercise as regimen however, he also highlighted its urgency for contemporary society. Two years earlier at a symposium at Yale, Morris claimed that '[r]eduction of physical activity is surely one of the

[104] Medical Correspondent (1963) "Science and Medicine: Problem of Heart Disease" *The Times* Friday 14 June 1963, 55727: 3.
[105] Morris JN et al. (1963) "Some Current Trends in Public Health [and Discussion]" *Proceedings of the Royal Society London Series B Biological Science* 159: 75.

characteristic social changes of the present century, and automation promises to finish the job.'[106] And although physical activity was clearly important, Morris admitted the complexity of interaction between social, biological and behavioural factors in the aetiology of coronary heart disease that meant the West should not leap to follow the example of their Cold War foes:

> 'Clearly, if the constitutional factors of inheritance and the influence of early environment are mainly responsible for the increase in [coronary heart disease], there will not be much benefit from prophylactic programs of mass physical culture such as the Russians and Chinese have now launched.'[107]

Such mass physical culture programmes had been a prominent feature of the interwar society in which Morris grew up, as Zweiniger-Bargieslowska has made apparent. They were for the most part not state directed, but largely organised by voluntary organisations, ranging from the Boy Scouts to the Men's Dress Reform Party, the Girl Guides to the Women's League of Health and Beauty, formed in the 1920s and 1930s. Nonetheless, there was certainly support from those working in public health and wider government for some of these groups, which resonated with the views of the Chief Medical Officer George Newman that 'the health and

[106] Morris JN (1961) "Epidemiological Aspects of Ischaemic Heart Disease" *Yale Journal of Biology and Medicine* 34(3-4): 361.
[107] Ibid: 364.

physique of the people' was the 'principle asset of a nation'.[108] These views had been codified in the 1937 White Paper inaugurating a National Fitness Campaign, with associated legislation to provide £2.4m over 3 years for propaganda, training of instructors and improved public facilities. In many ways this initiative was a response to Nazi Germany's hosting of the 1936 Olympics, and a certain admiration among a Board of Education delegation for the physical activity programmes organised by Kraft durch Freude (KdF, 'strength through joy') which was described as 'certainly the most agreeable and possibly the most instructive phenomenon of the Third Reich.'[109] Perhaps it was both this interwar voluntary tradition, and these uncomfortable echoes in wider public memory of mass exercise programmes' associations with totalitarian regimes historically and in contemporary Communist societies, that led Morris and the SMRU to focus on exercise as an individual leisure activity.

Regardless of the rationale for Morris's counselling against organised communal exercise programmes, he was however convinced that the 'habitually physically active' had far less coronary disease, that what disease there was came later in life, and was less severe.[110] If the new tranches of sedentary workers were unable to undertake sufficient physical activity in their working day, they would be well-advised to do so in their leisure time. To this end, a feasibility study of 117

[108] Newman, G (1919) *An Outline of the Practice of Preventive Medicine* London: Ministry of Health, quoted in Zweiniger-Bargielowska I (2010) *Managing the Body: Beauty, Health and Fitness in Britain, 1880 - 1939* (Oxford: Oxford University Press)*:* 55.
[109] Zweiniger-Bargielowska I (2010): 312-313.
[110] Morris JN (1961) "Epidemiological Aspects of Ischaemic Heart Disease" *Yale Journal of Biology and Medicine* 34(3-4): 364.

'executive-class' civil servants was conducted by Simon Yasin, to explore how physical activity outside of work could be recorded and assessed.

The publication of the results of this pilot in 1967 revealed the complex and involved nature of tracking these Treasury workers. These men were hardly typical of the wider workforce, but this was also the point, as the authors explained:

> 'There are large numbers of men in the age group 40-54; they tend to be drawn from a similar social background; occupational security is high and turnover low; their work is sedentary with few and definable exceptions; uniform records about their health and illness are maintained by the Treasury Medical Service; they are accessible for study, and we know them to be interested, co-operative, articulate, methodical, and time-conscious.'[111]

The men 'were seen four times - once every 3 or 4 months during the period March, 1964, to May, 1965, and were asked how they spent their leisure time for 2 consecutive days.' The interviews were highly detailed; participants were asked to describe every activity lasting longer than five minutes on the days in question so that they were 'reconstructed from the time the subject rose in the morning until he retired for the night.' From this intense surveillance 'a score' was developed 'that would reflect the overall activity of each individual and permit grouping and

[111] Yasin S et al. (1967) "Assessment of habitual physical activity apart from occupation" *British Journal of Preventive and Social Medicine* 21(4): 163.

comparison of the men.'[112] These scores were on a sliding scale of five categories of activities, ranging from 'Sedentary' to 'Sport'. Those in the former category were allocated one point per each five minutes spent, and included activities such as 'Watching T.V.' or 'Reading'. Those in the 'Sport' section such as 'Tennis' or 'Swimming' accrued five points for each five minutes expended, while those in the 'Strenuous' categorisation scored four points, and included activity such as 'Decorating' or 'Digging in the garden'.[113]

Of course, as a feasibility study, its real purpose was to assess whether the detailed interviews conducted could be validated against some other, easier to record proxy measure for use in a larger prospective study. Nonetheless, it also pointed to some interesting directions. Firstly, that despite the homogenous nature of the sample in terms of socioeconomic and cultural backgrounds, there were marked differences in physical activity in leisure time between the men. Secondly, the potential application of the proposed larger study to health education activities was spelled out: 'Support of the hypothesis that physical activity in leisure protects against coronary heart disease would provide the basis for campaigns to increase the leisure activity of men in sedentary occupation.'[114] This evidence would indeed help form the 'basis' of the preventive consensus of the 1970s, discussed in Chapter Three, and the health promotion campaign Look After Your Heart in the 1980s, discussed in Chapter Four.

[112] Ibid: 164.
[113] Ibid.
[114] Ibid: 168.

Following the success of this feasibility exercise, the SMRU set about establishing a larger cohort study of civil servants to investigate the links between leisure-time physical activity and coronary heart disease. Between 1968 and 1970, 16,882 male executive-grade civil servants aged between 40 and 65 across six government departments were recruited to the study.[115] The men's leisure-time activity was based on a questionnaire, and a diary that the men kept themselves, similar to the feasibility study. Notifications of episodes of heart disease were then sent to the study team.

The results were at first slightly puzzling. The SMRU looked initially at total physical activity, but saw no clear relationship with that and rates of heart disease. Flummoxed, the team divided the men in to two groups; those that participated in 'vigorous exercise' and those that did not, finding that 'the men suffering their first coronary were much less likely to have taken any vigorous exercise on the two days studied than their matched controls.'[116]

However, defining what constituted 'vigorous exercise' was problematic, and reflected the mores of the social class to which the civil servants belonged. The men were 'great gardeners, but the amount of effort put into gardening in physical terms can be very variable'. They were also 'great "Do it Yourselfers", painting and

[115] Morris, JN et al (1973) "Vigorous Exercise in Leisure-Time and the Incidence of Coronary Heart Disease" *The Lancet* 301(7799): 333-339.
[116] Morris JN (1979) "Evidence for the Benefits of Exercise from Epidemiological Studies" *British Journal of Sports Medicine* 12: 221.

decorating', but neither of these two activities, though nominally recorded under 'Strenuous' in the feasibility study, were considered sufficiently exerting to be protective. Instead, activities that involved a calorific expenditure of over 7.5kcal per minute such as 'digging, swimming, tennis, hill climbing, running, squash, vigorous walking at over four miles per hour, cycling, tree felling' were included; 'only the heaviest "Do it Yourself" qualified.'[117]

Having distinguished between the men in this manner, Morris and his colleagues could report in 1973 that '11% of the men who developed coronary disease, compared with 26% of the controls, reported such vigorous activities'.[118] The echocardiogram (ECG) measurement performed on a subset of the cohort reinforced these important findings: 'the ones reporting vigorous physical exercise showed far fewer ECG changes suggestive of ischaemia than their less vigorous controls, 4.8% against 10.4% when standardised for age.'[119]

This, rather than the earlier London busmen study, was the point at which exercise, as the 21st century headline writers of the *FT* might have understood it, was invented. Exercise was defined, not as a quotidian byproduct of an active and physically strenuous job, but as a set of leisure-time activities that had to be consciously performed to a certain level of vigour to compensate for an individual's sedentary day job. As Morris explained: 'Vigorous exercise is very different from

[117] Ibid: 221.
[118] Morris JN et al (1973): 333.
[119] Morris JN (1979): 221.

just a general increase in physical activity, and a clear message is needed as to which forms of exercise are most beneficial.'[120]

Furthermore, this research had provided scientific evidence of exercise for use in the public sphere. Only a dozen years prior, the Central Council of Physical Recreation had published a report *Sport in the Community* that had vaguely opined:

> 'We have not in the course of hearing the evidence found any unequivocal connexion between taking exercise and being healthy … But there is certainly in the lives of many a feeling of well being, which at any rate follows exercising the body and whether or not the exercise can scientifically be said to cause the well being.'[121]

A talk delivered by Morris to an audience in New York in 1975 illustrated his views on where this evidence might lead, and demonstrated both the caution of the epidemiologist and the zeal of the social reformer. At first, Morris added several caveats to the evidence that he and his colleagues had unearthed, particularly given that what might be true in male, middle-aged civil servants might not be applicable across age, sex and class boundaries. Acknowledging that 'possible

[120] Ibid: 222.
[121] Quoted in Davies M (1968) "The Case for Exercise" *The Times* Saturday 9 March, 57196: 9.

sources of error and bias are infinite', Morris echoed a criticism that would become familiar to those of his profession over the following decades:

> 'Quite simply, there is no proof in the conventional sense that by altering behavior in accord with the results of the observational studies which have been carried out – controlling weight, abandoning cigarettes, taking adequate exercise, or lowering blood pressure and lipid values in middle age – individual risk and population incidence will be lowered.'[122]

However, he concluded by underlining the common sense aspects of the lifestyle changes that public health should advocate:

> 'We cannot avoid or postpone making decisions; the risks of inaction could well be greater than those of action. The position is, however, not quite as difficult as it appears superficially. If we consider for a moment what is now being proposed controlling weight, rejecting cigarettes, taking adequate exercise – it is plain that all these recommendations make good sense in themselves, whether or not they will reduce the risks of coronary heart disease.'[123]

[122]Morris JN (1975) "Primary Prevention of Heart Attack" *Bulletin of New York Academy of Medicine* 51(1): 69.
[123] Ibid.: 71.

Clearly, it was not so much that the SMRU had provided inarguable scientific evidence in support of exercise, but that what "proof" it had provided had sufficiently emboldened public health advocates like Morris to make the moral and political arguments in favour of lifestyle changes such as exercise. Morris articulated what would become the central premise of public health's focus on lifestyle. Physical inactivity, alongside smoking and, to a lesser extent at this stage diet, had been demonstrated, as far as was possible epidemiologically and probabilistically, to impact upon an individual's health. It followed that behaviour change to address these risk factors should be counselled. As Rothstein notes, '[t]he idea that the maintenance of health requires continuous personal care and attention is an ancient one', but what Morris and many other like-minded public health reformers brought to the 'aphorisms' of old was a new, scientific and statistically-based rationale.[124]

Rothstein's critique is that this focus on lifestyle and the individual's behaviour follows from the methods deployed by 'risk factor' epidemiology.[125] Indeed, this had explicitly been described by Morris in *Uses of Epidemiology*, where he explained that the

[124] Rothstein WG (2003) *Public Health and the Risk Factor: A History of an Uneven Medical Revolution* (Rochester: University of Rochester): 1-2.
[125] Ibid.: 1-9.

> ‘risks, chances and probabilities for the individual can be predicted, on average, from analysis of the collective experience of large numbers of representative individuals with the characteristics in question.’[126]

Rothstein’s analysis was pre-figured in a UK context by David Armstrong, in his critique of the rise of risk factor epidemiology and its predictive potentialities, arguing that it constituted ‘the problematisation of normality, the redrawing of the relationship between symptom, sign and illness, and the localisation of illness outside the corporeal space of the body.’[127] This ‘extracorporeal space’ was for Armstrong, ‘often represented by the notion of “lifestyle”’ – the practice of behaviours intended to reduce the future probability of disease. Armstrong, like Rothstein, links this focus with the epidemiological methods employed, and what he describes as the “technologies of the survey”. In Armstrong’s mind, this type of surveillance had social and political consequences:

> “The survey therefore constituted an apparatus for distributing the effects of a disciplinary gaze throughout society a device for individualizing through measuring the difference between people; a means of constructing healthy bodies through the analysis of the normal.”[128]

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[126] Morris JN (1975) *Uses of Epidemiology. Third edition* (Edinburgh: Churchill Livingstone): 98.
[127] Armstrong D (1995): 401.
[128] Armstrong D (1983): 53.

Armstrong cites *Uses of Epidemiology* as a key tract in developing the 'ideal technique' of the survey.[129]

Indeed, the SMRU did recruit (compliant) individuals in the form of civil servants to undertake very detailed self-surveillance, noting down daily activities of longer than five minutes before categorising them, and then calculating the risk of an episode of heart disease. The leisure study of civil servants can be viewed as both a response to the structural transformation of the labour market and the apparent health problem associated with it, as well as an example of the arguably indivisible link between Armstrong's 'surveillance medicine' and public health's focus on lifestyle.

Conclusion

The hyperbole of the *FT* headline of 2009 hardly needed to be punctured, as it was by a correspondent the week following the original article, noting that Morris sat in a long tradition of 'advocates of the benefits of exercise'.[130] Neither the SMRU, or Morris personally, for all their achievements, truly invented exercise. Zweiniger-

[129] Ibid: 93-95

[130] Among the antecedents noted by David Waller of SW19 were Friedrich Ludwig Jahn (1778-1855), the so-called *Turnvater*, or father of German gymnastics, Per Henrik and Hjalmar Ling, the father-and-son pioneers of a rival Swedish system and Eugen Sandow (1867-1925), the Prussian strongman who became a music-hall sensation in late Victorian London and whose "physical culture" system was apparently widely adopted. Waller D (2009) "Letters: Pioneers in Pursuit of Perky Pectorals", *Financial Times* Saturday 19 September. http://www.ft.com/cms/s/0/66c4cb8a-a4b3-11de-92d4-00144feabdc0.html Last accessed 27 January 2017.

Bargielowska links exercise's interwar popularity with concerns about 'physical deterioration' and the decline of the nation (and empire).[131] Similarly, Porter has traced the 'physical culture patriotism in the years before the Second World War', and the SMRU's research has to be placed in this longer historical context.[132]

But perhaps what the headline did point to was the wider role of exercise as emblematic of modernity, of progress, of something that needed to be "invented". This chapter has argued that Morris and the SMRU certainly viewed it in this light. Exercise was a response to a modern epidemic (coronary heart disease), a result of modern 'ways of living' brought about by a modern macroeconomic shift (an increase in deskbound work), and an emblem of a modern form of public health (social medicine). The way in which many MOsH framed coronary heart disease as an inevitable sequela of post-war improvements in standards of living reinforced this. Both the problem and the solution to the modern epidemic of coronary heart disease were to be found in 'ways of living'; a sedentary day-job compared with an active weekend.

In common with Armstrong and Rothstein, this chapter has argued that this conception of the problem and its solution is to a large extent indivisible from the methods of risk factor epidemiology, which were powerfully and influentially described by Morris's *Uses of Epidemiology*, and implemented in the leisure cohort

[131] Zweiniger-Bargielowska I (2010). See also Zweiniger-Bargielowska, I (2007) "Raising a Nation of 'Good Animals': The New Health Society and Health Education Campaigns in Interwar Britain" *Social History of Medicine* 20(1): 73–89.
[132] Porter D (2011) *Health Citizenship: Essays in Social Medicine and Biomedical Politics* (Berkeley, CA: University of California): 76.

study. However, it has also contended that the SMRU's work was built on a much broader understanding of environmental and structural factors, rooted in social medicine, than Armstrong and Rothstein's analysis of post-war epidemiology has allowed. In fact, the SMRU's construction of exercise itself was contingent on an understanding of contemporary structural changes, albeit one that nonetheless led to the conclusion that it was the individual's own responsibility to adapt to these shifts.

Of course, the SMRU's critique and engagement with these fundamental shifts was only ever partial; they used as their subjects middle-aged men of certain class, ethnic and socioeconomic backgrounds. Those with more working class occupations were either unwilling themselves to be treated as 'guinea pigs' in such studies, or were excluded because their lives and careers were too peripatetic to be suitable for long-term epidemiological cohort studies. Similarly, younger age groups were largely unconsidered because heart disease would take too long to manifest itself among these cohorts. Ethnic minorities and women's heart disease were barely considered by coronary heart disease epidemiologists until later in the century.[133]

[133] However, Martin Moore considers the role that British epidemiologists played in using heart disease reseach in post-colonial settings to inform their understandings of the condition in the domestic contexts. Moore MD (2016) 'Harnessing the Power of Difference: Colonialism and British Chronic Disease Research, 1940–1975' *Social History of Medicine* 29(2): 384–404. It was not until the late 1990s that a study of women's heart disase, the British Women's Heart and Health Study, was established. Some of this gender bias is explained by the epidemiological data, which suggests that mortality from coronary heart disease has consistently been higher in males than in females throughout the second half of the twentieth century. Griffiths C and Brock A (2003) "Twentieth century mortality trends in England and Wales" *Health Statistics Quarterly* 18: 5-17

Turning to the question of the SMRU's legacy, undoubtedly within the world of public health the Unit was highly influential. Firstly, it successfully linked physical inactivity with the risk of heart disease, at that time the largest cause of mortality in Britain. In providing epidemiological evidence for the promotion of exercise, building one of the central tenets of public health's focus on 'lifestyle' or 'ways of living'. Finally, *Uses of Epidemiology*, influenced by Morris's work at the Unit, created a template for what Armstrong described as 'surveillance medicine', the dominant paradigm of late twentieth century public health and healthcare.

Of course, the wider cultural influence of the SMRU's research is necessarily more diffuse and difficult to trace alongside other developments in post-industrial consumer societies. As Porter has argued, '[c]ommercialized physical culture expanded slowly after the Second World War up to the late 1970s and then made an exponential leap.'[134] Similarly, James Vernon has commented that by the early 21st century

> 'the display and use of health and fitness products, or even employing personal trainer, became a sign of … the virtuous exercise of personal responsibility … the sight of Britons jogging on the street would be [remarkable] to some one from the 1970s'.[135]

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https://www.ons.gov.uk/ons/rel/hsq/health-statistics-quarterly/no--18--summer-2003/health-statistics-quarterly.pdf#page=6 Last accessed 6 February 2017.

[134] Porter (2011): 77.

[135] Vernon J (2017) *Modern Britain: 1750 to the Present* (Cambridge: Cambridge University Press): 506.

Exercise therefore has become a highly visible feature of contemporary culture, a much wider phenonemenon than can be investigated here. Participation in sports and exercise, surveyed via the General Household Survey every three years starting in 1973, increased steadily amongst the British public, albeit with a class and gender gradient. For example, in 1977, 50 per cent of "professional" men had exercised in the last month, while for working class women, it was a mere ten per cent. By 1997, the equivalent figures were 57 per cent and 35 per cent respectively.[136]

If Morris and his colleagues at the SMRU did not invent exercise, what has been argued in this chapter is that their work instead represented the reinvention of exercise. Rather than the interwar construction of exercise as the group action of responsible citizens in pursuit of the national health, exercise in postwar Britain was reconstituted as a scientifically rational, individualised, modern 'way of living' which, alongside eating healthily and not smoking, was a central tenet of public health's focus on lifestyle. The former is investigated in the next chapter, which looks at dietary and nutrional research in post-war Britain, specifically that which sought to investigate the putatitive link between sugar and heart disease. Where this chapter has demonstrated how risk factors – the foundations of the lifestyle paradigm – such as exercise were successfully constructed, Chapter Two looks at how not to build a risk factor. By exploring the failure of sugar to be recognised as a

[136] Offer A (2001) "Body Weight and Self-Control in the United States and Britain since the 1950s" *Social History of Medicine* 14(1): 103.

risk factor for heart disease, it addresses 'the hypothetical long shots' that Morris spoke of, and shows that the development of the lifestyle paradigm was messy, contested and contingent. The scientific evidence produced by the SMRU on physical activity passed quickly, and relatively uncontroversially into accepted wisdom, while the evidence on diet, and particularly sugar, was bitterly disputed, and indeed continues to arouse strong feelings to this day.[137] This debate throughout the 1960s and into the 1970s illustrates the importance of how evidence was developed – as well as how it was communicated to the British public – in constructing the lifestyle paradigm.

[137] Bosely S (2018) "Butter Nonsense: The Rise of the Cholesterol Deniers" *The Guardian* Tuesday 30 October https://www.theguardian.com/lifeandstyle/2018/oct/30/butter-nonsense-the-rise-of-the-cholesterol-deniers Last accessed 12 February 2019.

Chapter Two: 'A dietary cause of some of the ills of civilisation'?: Sugar, John Yudkin, and how not to build a risk factor, 1958 - 1981

Introduction

On 12 February 1981, Hugh Trowell wrote to John Yudkin, continuing the on-and-off correspondence that the pair of nutritionists had had over the last couple of years, on the issue of dietary sucrose:

> 'The overwhelming fact remains and it is this. For about 20 years you, also [Thomas L. ("Peter")] Cleave, also [Aharon] Cohen and others in a series of papers in medical journals and books have suggested that high sucrose intakes in man are a major factor in diabetes type II, CHD [coronary heart disease], obesity etc … In spite of all this there is a very solid consensus of opinion in the nutritionist and in the medical persons that the case is unproved … Few have confirmed your high sucrose intakes in CHD. No Standard textbook of nutrition supports you. It is this heavy unanimous vote against sucrose as a real factor in these diseases that counts.'[1]

This damning indictment of Yudkin's life's work might have shocked him, particularly given Trowell had, at one time, held somewhat similar beliefs. On the other hand, it would not; Yudkin was well used to swimming against the tide of

[1] HC Trowell, letter to J Yudkin, 12 February 1981, Wellcome Library PP/HCT/B/3/14.

scientific opinion, and it could also be said, the vacillations in Trowell's attitude towards him. Nevertheless, this blunt yet accurate description of a 'very solid consensus' may well have stung for Yudkin, convenor of the first graduate degree in nutrition at Queen Elizabeth College, London, veteran of governmental dietary committees, and a scientist described by *New Scientist* in 1961 as 'something of – literally – a household word for his views on diet.'[2]

This latter characterisation speaks to a dichotomy in Yudkin's reputation throughout his life. As the *New Scientist* profile noted, he possessed a 'notable gift for popularization, whether in writing or talking',[3] which was evident in the success of two popular science books, *This Slimming Business*,[4] which sold over 200,000 copies and *Pure, White and Deadly*, his 1972 diatribe against sugar.[5] However, this talent was offset by his inability to persuade his peers of his theories, clashing with them in the letters pages of newspapers, medical journals, and in private correspondence. His arguments were with those who held diametrically opposing views, such as Ancel Keys, the globally renowned epidemiologist whose work on dietary fats, cholesterol and heart disease represented scientific orthodoxy on the issue, or his colleagues on the Committee on the Medical Aspects of Food and Nutrition Policy (COMA). But such disagreements were also with those who held similar views on the role of sugar in causing heart disease, such as Trowell and

[2] Anon (1961) "Profile: Professor John Yudkin - Pioneer and Propagandist of Nutrition" *New Scientist* 10(236): 448.
[3] Ibid.
[4] Yudkin J (1958) *This Slimming Business* (London: Penguin).
[5] Yudkin J (1972) *Pure, White and Deadly: The Problem of Sugar* (London: Davis-Poynter). The sales figures for *This Slimming Business* are taken from the back cover.

Cleave. Indeed, Yudkin was apparently so out of step with the scientific consensus that nutritionist Sheldon Reiser summed up his reputation to American journalist Gary Taubes:

> 'Yudkin was so discredited … He was ridiculed in a way. And anybody else who said something bad about sucrose, they'd say, "He's just like Yudkin."'[6]

As Chapter One illustrates, since the 1950s the tools of modern epidemiology had been used to develop theories about an array of risk factors for heart disease: exercise, smoking, and most controversially diet. In this regard, Keys and the apparent success of the fat hypothesis have received substantial attention in recent years from historians such as Sarah W. Tracy, Todd M. Olszewski, Ann F. La Berge and Adele H. Hite.[7] However, if this victory has been well documented, it is also important in exploring the history of the lifestyle paradigm to examine the theories around the dietary element that failed to win over the scientific community: sugar. As historian Guy Ortolano suggests about 1960s Britain, albeit

[6] Taubes G (2011) "Is Sugar Toxic?" *New York Times Magazine* Wednesday 13 April http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html Last accessed 8 July 2016.

[7] Tracy is currently writing a biography of Keys. Tracy SW (2018) "A Global Journey – Ancel Keys, the FAO, and the Rise of Transnational Heart Disease Epidemiology, 1949–1958" *International History Review*: 5 DOI: 10.1080/07075332.2018.1464045; Olszewski TM (2015) "The Causal Conundrum: The Diet-Heart Debates and the Management of Uncertainty in American Medicine" *Journal of the History of Medicine and Allied Sciences* 70(2): 218-249; La Berge AF (2008) "How the Ideology of Low Fat Conquered America" *Journal of History of Medicine and Allied Sciences* 63(2): 139-177; Hite AH (2018) "Nutritional Epidemiology of Chronic Disease and Defining 'Healthy Diet'" *Global Food History* 4(2): 207-225.

in a different context, '[a]ttention to that full range of ideas is especially important in studying the recent past', arguing against 'a whiggish selectivity favouring realized ideas … when what emerged in each case was produced through engagement with ideas that were subsequently discarded.'[8]. This chapter argues that by using the figure of Yudkin – the most prominent British nutritionist of his age – to trace the debate about dietary sucrose, the history of a risk-factor that never was – a discarded idea – can be recovered. In doing so, it demonstrates how ideas about diet, and lifestyle, were constructed; why some ideas succeeded, and others did not.

On the other hand, there is a risk of committing precisely the 'presentist' fallacy which Ortolano cautions against (and indeed this is the teleological trap that popular historical polemics such as Taubes' *The Case Against Sugar* fall into).[9] The very recent history of sugar, as historian James Walvin writes in his 2017 book, is as a 'subject of contentious social and political debate … as parents are discouraged – by doctors, newspapers and politicians – from consuming too much'. Walvin goes on to note that sugar has, in the early twenty-first century, been conferred 'pariah status', when 'within living memory, it was widely viewed both as a necessity *and* a pleasurable essential'.[10] Indeed for Sidney Mintz, in his outstanding, anthropologically informed history *Sweetness and Power*, the place of sugar in

[8] Ortolano G (2011) "Planning the Urban Future in 1960s Britain" *The Historical Journal* 54(2): 506-507.
[9] Taubes G (2017) *The Case Against Sugar* (New York: Alfred A. Knopf).
[10] Walvin J (2017) *Sugar: The World Corrupted, from Slavery to Obesity* (London: Robinson): xx.

British society from the beginning of its widespread consumption in the nineteenth century onwards, was as an affordable luxury for the working-classes. Rich in the 'affective weight of sweetness',[11] it provided respite from the toil of everyday life, serving 'to make a busy life seem less so; in the pause that refreshes it eased, or seemed to ease, the changes back and forth from work to rest'.[12] Walvin's analysis, in common with his acknowledged progenitors Elizabeth Abbott and Mintz, focuses on the economic and political aspects of its history, understandably and importantly highlighting its role in British imperialism and the global slave trade from the sixteenth to the nineteenth century.[13] But what Walvin correctly identifies, in his comments on 'within living memory', is that within this *longue durée*, there has also been a decisive shift in the last few decades. Although Walvin perhaps overstates its 'pariah status', sugar is now regarded by a significant number of researchers, policymakers and the wider public as an important risk factor for obesity, and by extension heart disease and Type II diabetes.[14] The celebrity chef and food campaigner Jamie Oliver led a 2015 'crusade' against sugar in the British diet,[15] while some public health advocates have even suggested that 'sugar is the new tobacco'.[16] In Britain, a so-called "sin tax" was introduced on

[11] Mintz S (1985) *Sweetness and Power: The Place of Sugar in Modern History* (Harmondsworth: Penguin): 208.
[12] ibid.: 186.
[13] Abbott E (2008) *Sugar: A Bittersweet History* (London: Duckworth Overlook).
[14] Te Morenga L et al (2013) "Dietary Sugars and Body Weight: Systematic Review and Meta-Analyses of Randomised Controlled Trials and Cohort Studies" *BMJ* 2013; 346: e7492.
[15] Boseley S (2015) "Jamie Oliver's Sugar Rush: A Crusade to Save Britain's Health" *The Guardian* Thursday 27 August https://www.theguardian.com/lifeandstyle/2015/aug/27/jamie-oliver-sugar-rush-channel-4-crusade-save-britain-health Last accessed 13 February 2019.
[16] Poulter S (2014) "Sugar is 'the New Tobacco': Health Chiefs Tell Food Giants to Slash Levels by a Third" *The Daily Mail* Thursday 9 January

sugar sweetened soft drinks in 2018 to discourage their consumption.[17] Although this recent revival of sugar as a health risk is beyond its scope, the events described in this chapter nevertheless evidently prefigure these developments. The cultural memory of the arguments of the 1960s, and Yudkin's reputational rehabilitation by prominent anti-sugar campaigners such as American paediatrician Bob Lustig, have evidently in some way contributed to this recent discourse. How does this initial failure to develop sugar as a plausible or credible risk factor in the twentieth century link to its remaking in the twenty-first? While unable to comprehensively answer this complex question, this chapter explores the beginnings of the process that Walvin describes. Where the first chapter of this thesis described the construction of a risk-factor and its influence on lifestyle public health, this chapter complicates that narrative by showing how *not* to build a risk factor.

This chapter therefore uses Yudkin as an avatar to trace the major debates over diet as a cause of heart disease in post-war Britain. Following the philosopher of science and technology Bruno Latour's injunction to 'follow [the scientist] through society', it attempts to open the 'black box' of 'fact-making' regarding sugar as a potential risk factor, and through the public and private correspondence of Yudkin, to examine the 'rhetoric' and discourse of the 'controversy'.[18] Firstly, it uses Yudkin's ideas about nutrition to explore the place of sugar in people's lives and

https://www.dailymail.co.uk/health/article-2536180/Sugar-new-tobacco-Health-chiefs-tell-food-giants-slash-levels-third.html Last accessed 13 February 2019.

[17] Triggle N (2018) "Soft Drink Sugar Tax Starts, but will It Work?" *BBC News* Saturday 6 April https://www.bbc.co.uk/news/health-43659124 Last accessed 13 February 2019.

[18] Latour B (1987) *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge, MA: Harvard University Press): 1-61.

diets in post-war Britain, and his public, and often bitter, clashes with Keys. Secondly it examines Yudkin's correspondence with Peter Cleave and Hugh Trowell, two researchers who held similar views to Yudkin, but nevertheless disagreed with him. The chapter finally turns to Yudkin's role on COMA and its influential report on diet and heart disease, eventually published in 1974. Broadly characterising these respective groups, it looks at Yudkin's foes, would-be allies, and those that were initially undecided about his theories. This chapter explores Yudkin's ideas about the role of sugar in society, both for the consumer and the industry, to illustrate how sugar, and diet more broadly, were included (or not) in the risk factor, and by extension, lifestyle paradigm. While stopping short of discussing in detail the recent revival of Yudkin's reputation, it nonetheless pays attention to the longevity of his theories in terms of contemporary dietary discourse. By examining the politics of nutritional research, the chapter demonstrates how science is translated into the public sphere, and how it is not.

'Nutrition and the affluent society': Yudkin and sugar in 1950s Britain

Combining his education in bio-chemistry and medicine, Yudkin came to the field of nutrition in 1938 at the age of 28, working in the Dunn Nutrition Laboratory in Cambridge. While his PhD research under the leading microbiologist Marjorie Stephenson had focussed on enzymes,[19] he demonstrated a concern with broader social issues with wartime surveys of school-children that demonstrated 'there was

[19] Štrbáňová S (2016) *Holding Hands with Bacteria: The Life and Work of Marjory Stephenson* (Heidelberg: Springer): 40.

no need to supplement their normal diet with vitamin pills'. This interest was pursued further following his appointment in 1945 to the chair of physiology at the King's College of Household and Social Science in London (later to become Queen Elizabeth's College), and his founding in 1954 of the first undergraduate nutrition degree in Europe.[20] Nutritional science was a discipline growing in influence and visibility, a consequence of its pronounced role in the administration and planning of rationing during and immediately after the Second World War.[21] But as historian David F. Smith has discussed, this higher profile brought conflicting claims to legitimacy in the field, arguing that Yudkin's ambitions for his department 'were probably … seen by [Edward] Mellanby and the MRC, as in opposition to their own plans for [Benjamin] Platt and the development of the Nutrition Department' at LSHTM.[22] Platt's department was more bio-medically focussed than Yudkin's, which was rooted in domestic science but with ambitions towards a greater focus on the social and psychological aspects of nutrition. Smith noted Yudkin's 'consequential isolation from medical education or clinical practice', whilst also acknowledging Yudkin's attempts to maintain a foot in the medical camp, for example his contribution to the British Medical Association's 1950 Report on Nutrition, and continuing interest in so-called 'diseases of civilisation' such as heart disease.[23]

[20] Anon (1961) "Profile: Professor John Yudkin - Pioneer and Propagandist of nutrition" *New Scientist* 10(236): 449.
[21] Zweiniger-Bargieslowska I (2002) *Austerity in Britain: Rationing, Controls, and Consumption, 1939-1955* (Oxford: Oxford University Press); Smith DF (1997) "Nutrition Science and the two World Wars" in Smith DF (ed.) *Nutrition in Britain: Science, scientists and politics in the twentieth century* (London: Routledge): 142-165.
[22] Smith DF (1986) *Nutrition in Britain in the Twentieth Century* (Unpublished PhD thesis: University of Edinburgh): 281.
[23] Ibid.: 281-282.

An articulate and entertaining essayist, who had been encouraged to write for a wider audience by the novelist and chemist C.P. Snow while at Cambridge, Yudkin published prolifically for both scientific journals and the popular press throughout the 1950s and 1960s.[24] While his scientific output concerned his ongoing research on the role of dietary sucrose and heart disease, his work for newspapers such as the *Sunday Mirror* and mainstream publishers such as Penguin, focussed on dietary advice and slimming. Yudkin saw a clear link between his scientific work and his public advocacy. Writing in his introduction to *This Slimming Business*, he noted that while conventionally it was understood that 'what is good enough for *The Lancet* or the *Biochemical Journal* is pretty poor reading for Mr and Mrs Jones', he argued that it was a scientist's job 'to see our work in relation to society as a whole … [and] in particular … that nutrition is a science which first and last is concerned with the people.'[25] Consequently, in a separate book of recipes, Yudkin advised his readers to follow a diet based on his scientific research, advocating 'cut[ting] down as much as possible on foods containing carbohydrates (starch, sugar)' while they could 'eat as much as you like of those foods which contain no sugar or starch – meat, fish, eggs, cream, butter, and margarine'. If the reader followed these instructions, 'three things will happen'. They would lose 'their excessive weight', would 'not feel hungry', and finally, would 'reach a level of health you have forgotten – or even never knew – to be yours.'[26]

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[24] Anon (1961) "Profile: Professor John Yudkin - Pioneer and Propagandist of nutrition" *New Scientist* 10(236): 449.
[25] Yudkin J (1958) *This Slimming Business* (London: Penguin): 12.
[26] Yudkin J and Chappell, G (1961) *The Slimmer's Cookbook* (London: MacGibbon and Kee): 7.

Placing aside these bold claims to be returned to later, it is worth at this stage sketching out the society to which Yudkin was dispensing this particular lifestyle advice, and how even at this point, he was going somewhat against received opinion. As the previous chapter has discussed, everyday life was going through significant changes in post-war Britain, in terms of types of work, and in leisure pursuits, with the advent of television. But dietary habits were also changing, developments that did not go unnoticed by those researching heart disease. Of course, the most visible change was the end of food rationing in 1953, and this resulted in a population 'hungry for the foods that been hard to get for so long' and a resultant sharp rise in consumption of 'white bread, sugar, butter, eggs, meat, sweets and alcohol'.[27] However, this initial increase largely levelled out, with one notable exception. Data from the National Food Survey suggested that 'the proportion of energy derived from fat [increased] from about 35 per cent during the rationing years to 40 per cent in the early 1960s'.[28]

By the mid-1950s, dietary fat had come under increasing suspicion for its potential role in raising blood cholesterol levels and consequently causing atherosclerosis. Experiments with cholesterol-fed rabbits by the Russian pathologist Nikolai Nikolaevich Anichkov in 1904[29] had been latterly followed by studies with small

[27] Buss DH (1993) "The British Diet since the End of Food Rationing' in Geissler C and Oddy DJ *Food, Diet and Economic Change Past and Present* (Leicester: Leicester University Press): 121. For a discussion of rationing, its effect on British diets and public health, see Zweiniger-Bargielowska I (2000) *Austerity in Britain: Rationing, Controls, and Consumption, 1939-1955* (Oxford: Oxford University Press).
[28] Ibid.: 130.
[29] There are detailed accounts in medical journals of Anichkov and his experiments, for example, Steinberg D (2004) "An Interpretive History of the Cholesterol Controversy: Part I" *Journal of Lipid Research* 45: 1583-1593; Konstantinov IE et al. (2006) "Nikolai N.

numbers of human subjects that showed 'good correlations between elevated concentrations of plasma lipoproteins [which carry cholesterol] and relative risk of clinical coronary heart disease'.[30] Ancel Keys, an American nutritionist and epidemiologist who had already achieved an 'international reputation' for his war-time work on military rations (the K ration, 'a compact, lightweight, calorie-dense … techno-meal'[31]), sensing an important avenue of inquiry, 'launched a local study of men, lifestyle, and heart disease in Minneapolis and St. Paul, Minnesota in 1948.'[32] Keys, similar to Morris in his *Uses of Epidemiology* discussed in chapter one, was interested in these men's 'mode of life'.[33] Unlike Morris however, and perhaps unsurprisingly for a man who had made his name as a nutritionist, Keys was more interested in the men's diets than their exercise habits. Writing in 1953,[34] Keys 'constructed the diet-heart hypothesis based on a set of interrelated statistical associations'. He argued that because 'clinical and laboratory data … indicated that total blood cholesterol levels were associated with dietary fat intake', as well as population data on blood cholesterol from a number of different countries, it was

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Anichkov and His Theory of Atherosclerosis" *Texas Heart Institute Journal* 33(4): 417–423; Finking G and Hanke H (1997) "Nikolaj Nikolajewitsch Anitschkow (1885-1964) Established the Cholesterol-Fed Rabbit as a Model for Atherosclerosis Research" *Atherosclerosis* 135(1): 1-7; Stehbens WE (1999) "Anitschkow and the Cholesterol Over-Fed Rabbit" *Cardiovascular Pathology* 8(3): 177-8.

[30] Steinberg D (2005) "An Interpretive History of the Cholesterol Controversy: Part II: The Early Evidence Linking Hypercholesterolemia to Coronary Disease in Humans" *Journal of Lipid Researc*h 46: 179.

[31] Tracy SW (2018): 5.

[32] Ibid.

[33] Keys A (1948) "Mode of Life and the Development of Heart Disease: Research for a Preventive Hygiene," *Bulletin of the Chicago Heart Association* 26: 3–6.

[34] Keys A (1953) "Atherosclerosis: A Problem in Newer Public Health" *Journal of the Mount Sinai Hospital* 20: 135.

reasonable to argue that 'Americans' increasingly fatty diets were linked to their increased mortality from degenerative heart disease'.[35]

Although Keys and colleagues were careful to disavow a definitive link between obesity and heart disease in their 1963 paper on American businessmen (who 'in general do tend to be heavier and fatter than men in most other populations'[36]), there was also a wider societal shift, as historian Martha Kirby suggests in her study of dietary change and post-war Britain, noting that

> '[d]uring the early 1950s, one can trace a tension between the decline of older concerns (regarding low body weight and insufficient national nutrition) and the development of a new discourse over body weight and slimming.'[37]

Historian Rachel Meach has recently analysed Yudkin's attempts to tap into this 'new discourse' through his popular writings, in particular his guides to slimming and weight-loss. For Meach, these represent Yudkin's highly-gendered attempts to tap into 'popular culture and advertising', and argues that 'the language used to communicate … to the public exploited cultural concerns regarding body weight

[35] Olszewski TM (2015): 223.
[36] Keys A et al (1963) "Coronary Heart Disease among Minnesota Business and Professional Men Followed Fifteen Years" *Circulation* 28(3): 390
[37] Kirby M (2012) "Too Much of a Good Thing? Society, Affluence and Obesity in Britain, 1940-1970" *eSharp* 18: 44-63.

and [feminine] body image.'[38] While heart disease was conceived of as a primarily male disease, affecting men of working age, popular dietary advice was very much targeted at women, perhaps reflecting their status as perceived gatekeepers to the family diet.[39] Such tropes would persist well into the late twentieth-century, and raises question about who was the target of lifestyle messaging. Arguably it was not until the 1980s that public health gave serious consideration to this question, as Chapters Four and Five discuss.

Keys was also keen to exploit the slimming discourse of the 1950s and 1960s, producing popular diet books to proselytise the practical implications of his own nutritional research.[40] Indeed, both Yudkin and Keys were attuned to the zeitgeist, dropping reference to *The Affluent Society*, the economist J.K. Galbraith's influential 1958 book.[41] But while both could agree that Western diets were a major contributory factor to increasing rates of heart disease in the US and UK, Yudkin and Keys disagreed over whether this was due to high levels of fat or sugar. This difference of opinion would spill over into personal enmity between the two men. Following this controversy closely, as Latour suggests, allows us to see how

[38] Meach R (2018) "From John Yudkin to Jamie Oliver: A Short but Sweet History on the War against Sugar" in Gentilcore D and Smith M (eds.) *Proteins, Pathologies and Politics: Dietary Innovation and Disease from the Nineteenth Century* (London: Bloomsbury): 101.
[39] Zweiniger-Bargielowska I (2001) "Housewifery" in Zweiniger-Bargielowska I (ed.) *Women in Twentieth Century Britain: Social, Cultural and Political Change* (Harlow: Pearson Education, 2001): 149-164.
[40] Keys wrote three recipe books with his wife, biochemist Margaret Haney Keys between 1959 and 1975. Keys A and Keys M (1959) *Eat Well and Stay Well* (Garden City, NY: Doubleday); Keys A and Keys M (1967) *The Benevolent Bean* (Garden City, NY: Doubleday); Keys A and Keys M (1975) *How to Eat Well and Stay Well the Mediterranean Way* (Garden City, NY: Doubleday and Company).
[41] Tracy (2018):3, Yudkin J (1963a) "Nutrition in the Affluent Society" *Medical World* 99: 579-86.

scientific facts are constructed, what sources of scientific authority are claimed, and how an important element of lifestyle public health – diet – was shaped.

Science and technology theorist Karin Garrety has previously mobilised Latour's 'actor network theory' to portray Keys as 'a successful Latourian network-builder', highlighting his use of the media and professional networks to effectively promulgate his theories.[42] Olszewski has also illustrated how Keys' research effectively traversed both public and medical spheres, with his appearances on the front-cover of *Time* magazine and best-selling cook books.[43] As Garrety noted however, this 'success' was 'a long and complex process which cannot be divorced from the cultural, political and economic circumstances of post-war America'.[44] Examining the losing side in this controversy means paying attention to the particular circumstances of the British context. The following section will therefore focus on Yudkin's arguments against Keys, the positions he outlined, and how his work was reflective of wider British attitudes to diet and coronary heart disease.

'Awkward facts': Yudkin's arguments with Keys, 1957 - 1971

In 1957 Yudkin fired the first salvo in what would be a long-running war with Keys in an article in *The Lancet*.[45] Writing that '[m]uch has been written about the role of dietary factors in causing coronary thrombosis' and that 'many believe that the

[42] Garrety K (1997) "Social Worlds, Actor-Networks and Controversy: The Case of Cholesterol, Dietary Fat and Heart Disease" *Social Studies of Science* 27(5): 735.
[43] Olszewski TM (2015): 241.
[44] Garrety K (1997): 757.
[45] Yudkin J (1957) "Diet and Coronary Thrombosis: Hypothesis and Fact" *The Lancet* 273(6987): 155-162.

disease is related to the amount of dietary fat, or of a particular sort of fat', Yudkin questioned this emerging orthodoxy, and the 'epidemiological nature' of the evidence presented. Without mentioning Keys by name, he noted that '[w]e are told, for example, that the higher the average fat-consumption in a country, the higher the mortality due to coronary thrombosis', a position supported by Keys, and a supposition that would form the basis and rationale for his Seven Countries study.[46] Yudkin went on: '[f]rom time to time, however, it becomes evident that some of the epidemiological data do not fit these simple hypotheses', before proceeding to eviscerate prevailing opinions.[47] Examining data from 15 countries, and looking for relationships between total fats consumed, animal fats and vegetable fats, Yudkin found none. There was however 'a better relationship with intake of sugar than with any other nutrient we have examined'.[48] Furthermore, when exploring historical data for Britain since 1928 '[b]y far the best correlation I have found with trends in coronary mortality is in the number of radio and television licences [and] there is nearly as good a correlation with the number of registered motor-vehicles.'[49]

At this stage Yudkin was trying to question basic assumptions rather than necessarily make a strong case for sugar. By providing 'awkward facts', he wanted to dispel the 'uneasy feeling that both the proponents and opponents of a dietary

[46] Keys A (ed.) (1980) *Seven Countries: A Multivariate Analysis of Death and Coronary Heart Disease* (Cambridge, MA: Harvard University Press).
[47] Yudkin J (1957): 155.
[48] Ibid.: 157.
[49] Ibid.: 159.

hypothesis are quoting only those data which support their view.'[50] Indeed, for Yudkin at this stage, any consideration of coronary heart disease had to be multifactorial. For example, quoting the work of the SMRU approvingly, Yudkin wrote that 'I find it difficult to imagine that there are significant differences in diets between bus drivers and bus conductors', and that therefore researchers should not narrowly pursue the diet-heart hypothesis.[51]

The following year, Yudkin reiterated his criticisms in a review of the epidemiology of heart disease, taking particular pains to examine Keys' claims, as 'the most diligent worker in this field'.[52] Whilst hardly performing a hatchet job, Yudkin did demonstrate that the evidence was more ambiguous than the simple '[d]ietary (saturated) fat → hypercholesterolemia → atherosclerosis → coronary thrombosis' that Keys and others' research 'most forcibly promulgated'.[53] He also accused him of underplaying the role of obesity: 'Keys has denied the role of obesity … Yet other workers have found, at least in some groups, that over-weight people have a higher rate of coronary disease.'[54] Finally, he suggested that

> 'Keys maintains that there is little or no relationship of blood cholesterol (and coronary disease) with activity. But much of the evidence which he and his supporters adduce is of the

[50] Ibid.: 155.
[51] Ibid.: 161.
[52] Yudkin J (1958) "Epidemiology of Coronary Disease" *Progress in Cardiovascular Diseases* 1(2): 118.
[53] Ibid.: 116.
[54] Ibid.: 123.

> anecdotal variety … I do not suggest that diminished physical activity is the sole cause of coronary thrombosis. I stress it only to show that existing epidemiologic data support this hypothesis just as well as, if not better than, the hypothesis of a single dietary factor. In general, it is difficult to avoid the conclusion that the evidence adds up to a multiple aetiology of coronary disease.'[55]

What this lengthy quote illustrates is that Yudkin, although cutting in his remarks, was not quite the 'conviction nutritionist', as his successor as head of Nutrition at Queen Elizabeth College Stewart Truswell recently described him.[56] However, Yudkin may have been guilty at this early stage of slightly misrepresenting Keys. In *Eat Well and Stay Well*, the jointly written recipe book between Keys and his wife Margaret that appeared a year after Yudkin's criticisms, their 'dietary guidelines for prevention of coronary heart disease' included a number of recommendations that ran counter to Yudkin's characterisation. The first guideline recommended '[d]o not get fat, if you are fat, reduce', whilst '[a]void[ing] heavy use of salt and refined sugar' and '[g]et plenty of exercise and outdoor recreation' were also advised by the Minnesotan couple.[57]

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[55] Ibid.: 132.
[56] Trussell AS (2013) "Re: Sugar and the Heart: Old Ideas Revisited" http://www.bmj.com/content/346/bmj.e7800/rr/626611 Last accessed 20 August 2018.
[57] Nestle M (2007) *Food Politics: How The Food Industry Influences Nutrition And Health. Revised and Expanded Edition* (Berkeley, CA: University of California Press): 39, reproduced from Keys A and Keys M (1959) *Eat Well and Stay Well* (New York: Doubleday).

Nonetheless, Yudkin appeared more interested in the bigger picture, both in terms of lifestyle (or Keys' 'mode of life') and in terms of comments on the socio-economic distribution of heart disease (a theme returned to in chapter five). Noting 'coronary mortality of the professional groups is about twice that of the semi-skilled' and comparing margarine and sugar consumption, he could nonetheless find 'no obvious dietary explanation for the differences in mortality in the different occupation groups'.[58]

As well as critiquing the existing literature on heart disease, Yudkin was also developing his ideas about sugar, drawing on his observations about Britain's changing diet, not least the relationship between its 'nutritional value' and 'palatability'.[59] He argued that in man's 'natural environment', there was an intrinsic link between how tasty and appealing a food was, and its nutritional quality. For example, the 'substances which make fruit tasty are sugars, organic acids, and flavours; these provide only calories, whereas the fruit itself also provides vitamin C and several mineral elements.'[60] In an age of processed food, this relationship became uncoupled, as producers could now make food lacking in nutritional value palatable, chiefly, he suggested, by the addition of sugar which

> 'can be used in innumerable ways, with cereals, cocoa powder, fruit flavours, and other derivatives mostly of plant or synthetic origin, to

[58] Yudkin J (1958): 122.
[59] Yudkin J (1963a) "Nutrition and Palatability with Special Reference to Obesity, Myocardial Infarction, and other Diseases Of Civilisation" *The Lancet* 281(7295): 1335-1338.
[60] Ibid.: 1335.

> give an enormous range of highly palatable foods - cakes, biscuits, sweets and chocolates, icecream, and fizzy drinks. Moreover, our taste for sugar appears to be one that grows on what it feeds, so that we tend to like our food sweeter and sweeter. In due course, we find that even soups and vegetables are improved in flavour with sugar.'[61]

He argued that with the end of rationing, and new food technologies eradicating hunger and scarcity, people increasingly ate based on taste, rather than nutritional value; '[i]ncreasing wealth leads to an increase in the consumption of sugar as well as of protein and fat'.[62] In 'the affluent society', the vast majority of people in Western countries were

> 'surrounded by a huge and increasing variety of foods … many of them within economic reach … [u]nless we demand caviar and champagne, it is true to say that most of us can have almost anything we want, whenever we wish.'[63]

It also followed that if people enjoyed their food, they ate more, beyond the point of satiation. In short, Yudkin argued, this meant that the British public 'now eat in two weeks the amount of sugar our ancestors of 200 years ago ate in a whole

[61] Ibid.: 1336.
[62] Ibid.
[63] Yudkin J (1963a): 582.

year'. In 'looking for a dietary cause of some of the ills of civilisation', coronary heart disease amongst them, Yudkin argued that the scientist 'should look at the most significant changes in man's diet'.[64] Dietary sucrose stood out for Yudkin, 'far more than, for example, the changes in dietary fats' and that furthermore, there was now 'an increasing amount of evidence, both epidemiological and experimental' that sugar 'is the likely dietary component'.[65] Citing his own research, and that of Aharon Cohen's work on atherosclerosis in Yemenite Jews,[66] it was clear that Yudkin was ever more convinced of the importance of sugar, a position that would place him on a collision course with the world's best known nutritionist.

As the 1960s wore on, Yudkin continued to reiterate his claim that sugar was the dietary element most responsible for the epidemic of coronary heart disease both in the popular and medical press, but it was an original article, and a subsequent response to the Harvard nutritionist Frederick J. Stare, in *Nutrition Today* that really riled Keys.[67] In its reiteration of familiar Yudkin positions, similar to those outlined above, it is difficult in retrospect to touch on what moved Keys to pen 'a memorandum which he sent to a large number of scientists working in this field.'[68] Certainly however he was irritated by the 'publicity given' to the article, backed up

[64] Yudkin J (1963b): 1336-1337.
[65] Yudkin J (1963c) "Dietary Carbohydrate and Ischemic Heart Disease" *American Heart Journal* 66: 835-6.
[66] Cohen AM (1963) "Fats and Carbohydrates as Factors in Atherosclerosis and Diabetes in Yemenite Jews" *American Heart Journal* 65: 291-293.
[67] Yudkin J (1969) "Sucrose and Heart Disease" *Nutrition Today* 4(1): 16-20; Yudkin J (1970) "More about Sucrose and Atherosclerosis" *Nutrition Today* 5(3): 15.
[68] Yudkin J (1972)*:* 163.

by '[p]ropaganda pieces, sponsored by commercial interests, in the daily press', which Keys claimed 'mislead the public into believing that Yudkin's theory is an important scientific issue'. According to Keys

> 'the truth is quite different. Yudkin's views are not even mentioned in recent congresses and symposia concerned with coronary heart disease and its etiology … I personally can testify that [they] were not even debated. This is not a case of unjustly ignoring the teaching of a prophet; Yudkin's arguments so clearly lack substance … that experienced workers in the field are simply not interested.'[69]

Keys went on to dismiss, albeit in slightly more refined language, what he saw as Yudkin's four main arguments in a ten page article in *Atherosclerosis* in 1971.[70] Firstly, he attacked Yudkin's use of population statistics in his 1957 paper which had compared sugar consumption across 15 countries. Keys forcefully argued that Yudkin was just as guilty of cherry-picking as those he accused of doing the same, stating that '[t]he countries selected … did not include those with very high sugar consumption, such as Cuba, Colombia and Venezuela, which also happen to have a very low incidence of CHD.'[71] Secondly, he contended that Yudkin's argument that historical trends in sugar consumption over the last century and longer were

[69] Keys A (1970) "Dietary Sucrose and Coronary Heart Disease" Private collection, courtesy of Henry Blackburn, available at http://www.epi.umn.edu/cvdepi/wp-content/uploads/2018/03/A-Keys-reply-to-Yudkins-1969-70-claims-for-Sucrose-and-CHD.-4-pgs.pdf Last accessed 19 August 2018.
[70] Keys A (1971) "Sucrose in the Diet and Coronary Heart Disease" *Atherosclerosis* 14: 193-202.
[71] Ibid.: 194.

aligned with the increase in heart disease were also fallacious, because 'only in relatively recent years is it possible to estimate the actual frequency of CHD from vital statistics'.[72] Thirdly, he examined Yudkin's claim that 'men with coronary heart disease commonly prove to be unusually heavy consumers of sugar'. Keys suggested this was based on a small 1964 study that

> 'indicate no attention to the most rudimentary requirements of sampling … Worse still for his case, convincing proof that his generalizations are simply erroneous is provided by the unvarying reports of 6 other groups of investigators'.[73]

Keys finished by attacking Yudkin's use of experimental studies, in which human volunteers and animals were fed high levels of carbohydrates in the form of starch or sucrose, or a combination of the two. Keys disparaged 'the relevance of these short-term experiments to long-term national diets' as 'highly questionable' and published 'in a trade paper of the dairy industry'.[74] In summary, Keys' view was that, as he argued in the memorandum

> 'as scientists we must object to publicity given to arguments based on non-existent or thoroughly discredited "evidence". The public is ill served by being exposed to Yudkin's personal gospel'.[75]

[72] Ibid.: 197.
[73] Ibid.
[74] Ibid.: 199.
[75] Keys A (1970).

A number of interesting strands emerge from Keys' attack. The first is the repeated reference to Yudkin's ties with industry. Secondly, the primacy given to epidemiological evidence over experimental studies, and more specifically, evidence from large cohort studies. Finally, the rhetorical marshalling of that evidence to build up scientific credibility in a way that Yudkin was quite unable to achieve.

Yudkin's relationship with the food industry, and how it might have influenced his position on sugar, excited a lot of comment, both at the time and in retrospect. What is apparent is that Yudkin received funding for his research activities whilst at Queen Elizabeth College from a wide range of corporate benefactors, including but not limited to British Drug Houses, Allen and Hanbury's (both later incorporated into Glaxo), Servier pharmaceuticals, Carter's (the then manufacturers of Ribena), Wall's ice cream, the International Dairy Foundation, United Biscuits, Ranks Hovis McDougall, Heinz, Bayer pharmaceuticals, the National Dairy Council, Bovril, General Foods, McVitie and Price, Cadbury's, Unilever, Nestlé, Marks and Spencer, and Hermes Sweeteners.[76] Much of this funding did not have specific conditions attached, although the grant from Bayer totalling £3,850 a year (approximately £65,000 in today's money) was specifically earmarked for Yudkin's research 'on the metabolic effects of sugar in relation to heart disease.'[77] Colleagues such as Research Sociologist J.C. McKenzie were also encouraged to write to various

[76] Various correspondence, Kings College London Archives, Queen Elizabeth College QAS/GPF3/1.
[77] J Yudkin, letter to The Principal, Queen Elizabeth College, 5 July 1967 KCL Archives, Queen Elizabeth College QAS/GPF3/1.

companies to solicit financial support.[78] Yudkin was disarmingly candid about these corporate relationships. Noting that Tate and Lyle, the sugar manufacturers, once invited him to apply for a grant before retracting the offer, he drily commented that it was 'silly of them really as if sugar is a killer they surely should be the first to know and be off making railway engines or nail varnish.' In the same interview he anticipated some of the criticisms that his opponents such as Keys had made in acknowledging that some of his funders had a vested interest in funding his research 'like the dairy industry who want to distract from the dangers of their own products'.[79]

Of course, Yudkin was hardly alone in receiving sponsorship from the food industry to support his research. Indeed, the work of many of those who Yudkin clashed with, such as Stare and Keys, have in recent years been the subject of exposés of funding by the sugar industry which contemporary critics have argued 'derail[ed] the discussion about sugar for decades'.[80] A major contention of Yudkin's contemporary advocates is that his work failed because it was stymied by the sugar industry. Yudkin's former colleague Richard Bruckdorfer reported in Jacques Peretti's 2012 BBC TV documentary *The Men That Made Us Fat* that

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[78] JC McKenzie, letter to Mr Colin Golby, Schwerin Research Ltd, 5 July 1963, KCL Archives, Queen Elizabeth College QAS/GPF3/1.
[79] Brittain V (1972) "Not so Sweet on Sugar." *The Times* Monday 26 June 58514: 9.
[80] Stanton Glantz, quoted in O'Connor A (2016) "How the Sugar Industry Shifted Blame to Fat" *New York Times* Monday 12 September https://www.nytimes.com/2016/09/13/well/eat/how-the-sugar-industry-shifted-blame-to-fat.html Last accessed 25 August 2018. The newspaper article refers to a paper authored by Glantz and others which discusses internal documents from the sugar industry which detailed funding for various scientists including Stare and their influential reviews of the evidence on heart disease and its links to sugar and fat. Kearns CE et al "Sugar Industry and Coronary Heart Disease Research: A Historical Analysis of Internal Industry Documents" *JAMA Internal Medicine* 176(11): 1680-1685.

> 'There was a huge lobby from industry, and particularly from the British [and] American sugar industry, which he complained bitterly about … he thought that they were subverting some of his ideas as it wasn't convenient to them.'[81]

This idea of a 'sugar conspiracy' has become integral to contemporary understandings of Yudkin's work, and certainly the last chapter of the revised and expanded edition of *Pure, White and Deadly* entitled 'Attack is the best defence' was concerned with attempts by the sugar industry to smear, denigrate and prevent his research being presented. For example, Yudkin reported that the World Sugar Research Organisation described *Pure, White and Deadly* as 'science fiction' in an article commenting on the book, with the headline '"For your dustbin"'. Yudkin initiated a libel lawsuit and received legal costs and a retraction in print.[82] More seriously, Yudkin alleged that sugar industry representation on the British Nutrition Foundation prevented him receiving funding from that organisation, despite the international reputation that Yudkin's Queen Elizabeth College enjoyed at the time.[83] Yudkin also reported that a conference that he had organised on carbohydrates in nutrition was cancelled with less than two weeks' notice following an intervention by a representative of Coca-Cola who was concerned at the

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[81] *The Men Who Made Us Fat: Episode 1* (2012). Broadcast 14 June 2012 [TV programme] BBC 2: FreshOne Productions for BBC. Available at https://search.wellcomelibrary.org/iii/encore/record/C__Rb1820278?lang=eng Last accessed 8 April 2019.
[82] Yudkin J (2012) *Pure, White and Deadly: How Sugar Is Killing Us and What We Can Do to Stop It* (London: Penguin)*:* 168.
[83] Ibid.: 175-177.

potential content of some of the speaker's presentation on a new artificial sweetener, aspartame.[84] However, the suggestion of an organised conspiracy arguably both takes him too much at his word and ignores his own food industry links, as historians David Merritt Johns and Gerald M. Oppenheimer have argued.[85] Rather what Yudkin's testimony and Keys critique reveal is firstly the keen and generously funded interest that the food industry took in nutritional health research, and the ways in which this might impact on public consumption of their products.[86] Secondly, that wariness by public heath figures about the potentially distorting influence of such funding is nothing new. Finally however, and following on from the previous point, more puritanical attitudes towards industry funding developed in the last two decades of the twentieth century, as Virginia Berridge has suggested.[87] This is further illustrated by comments that Yudkin made in 1984 in response to investigative journalist Geoffrey Cannon's criticism of links between the food industry and nutritionists (the context to which is discussed further in Chapter Four):

> '[Cannon's] indictment of food manufacturers in general is unwarranted. There may be no saints … but neither are they all sinners. Moreover, it is a slur on the integrity of many

[84] Ibid.: 178-179.
[85] John DM and Oppenheimer GM (2018) "Was there ever really a 'sugar conspiracy'?" *Science* 359(6377): 747-750.
[86] For a discussion of how the food industry, and specifically Unilever as the manufacturers of Flora margarine, used health claims about their products for marketing purposes, see Hand J (2017) "Marketing Health Education: Advertising Margarine and Visualising Health in Britain from 1964–c.2000" *Contemporary British History* 31(4): 477–500.
[87] Berridge V (1997) "Why have Attitudes to Industry Funding of Research Changed?" *Addiction* 92(8): 965-968.

> nutritionists to imply that those who advise food manufacturers are inevitably tainted because they help them in nefarious activities in undermining the health of the community.'[88]

In other words, Yudkin's attitude towards funding was somewhat equivocal, and it should be noted that even in the contemporary climate, fierce critics of the food industry such as Marion Nestle also, in considering her own positionality, concede that some industry funding, particularly for expensive research, may be virtually unavoidable.[89]

This funding economy also influenced the types of research that could be undertaken, linking it to Keys' second criticism of Yudkin, that the latter's research was too reliant on animal, ecological and small case-control studies, rather than the large cohort studies such as Framingham that had emerged as the preeminent method of risk-factor epidemiology. As journalist Helen Pearson has documented, longitudinal studies of any duration require consistent, long-term funding.[90] Yudkin complained widely that a lack of financial resources, particularly from government sources, was the reason why he was unable to launch a cohort study to test his sugar-heart disease hypothesis. In an article with *The Daily Mirror* in 1964 which portrayed him as the 'Professor with the begging bowl', Yudkin alongside others, grumbled that the funding that they received from the MRC was insufficient for

[88] Anon (1984) "Talkback: The Food Scandal" *The Times* Friday 29 June 61870: 9.
[89] Nestle M (2007): xvi.
[90] Pearson H (2016) *The Life Project: The Extraordinary Story of our Ordinary Lives* (London: Allen Lane).

anything more than a 'small-scale survey' and not the 'all-out research effort' needed.[91] As a consequence, Yudkin felt obliged to apply for funding from food companies, but in contrast to leading epidemiologists such as Morris (discussed in chapter one), Keys, and Geoffrey Rose (discussed in chapter five), Yudkin was never able to run a cohort study to further his case.

Yudkin's willingness to consider evidence that was not recent cohort studies or clinical trials may also have counted against in him. Keys, as noted earlier, criticized Yudkin for looking at pre-war data, suggesting methods of recording mortality from heart disease were insufficiently inaccurate to be relevant to contemporary concerns. Yudkin's arguments on the other hand were rooted in his understanding of how human diets had changed not only over the last two hundred years, but ultimately millennia. Yudkin co-authored papers with historians such as Derek Oddy and Theo Barker as well as archaeologists,[92] and argued that man's '"ideal" diet' as a hunter-gatherer had been disrupted by an era of intensive agriculture followed by mass food production and preservation technologies. This resulted in 'diseases of civilisation'; in their mildest forms expressed by common allergies to wheat and dairy, and most seriously in the epidemics of heart disease and diabetes then common to Western nations.[93] Such evolutionary arguments were considered

[91] Anon (1964) "The Professor with the Begging Bowl" *Daily Mirror* Thursday 10 September: 13.
[92] Barker TC, Oddy DJ, Yudkin J (1970) *The Dietary Surveys of Dr Edward Smith 1862–3: A New Assessment* (London: Staples Press); Oddy DJ and Yudkin J (1969) "An Evaluation of English Diets of the 1860s" *The Proceedings of the Nutrition Society* 28: A13–A14.
[93] Yudkin J (1969) "Archeology and the Nutritionist" in Ucko PJ and Dimbleby GW *The Domestication and Exploitation of Plants and Animals* (Chicago: Aldine Atherton): 547-552.

somewhat esoteric by at least one of Yudkin's peers.[94] Furthermore, his position as a nutritionist, rather than as a medical epidemiologist perhaps also did his cause no good; as Trowell noted,

> 'I feel that we might have nowadays more agreement about the role of sucrose in health and disease if you had been Head of a Department of Clinical Nutrition at a London teaching hospital with patients under you, medical students to teach and colleagues with whom to discuss agreements and disagreements.'[95]

In short, as Latour has explained, the establishment of scientific "facts" depends on both reference to other scientists' work viewed as credible, and the mobilisation of 'allies and resources'.[96] Clearly, Yudkin was unable to corral either appropriate resources or scientific credibility. As the next section discusses, neither was he able to mobilise allies.

'The overwhelming fact': Yudkin, Cleave and Trowell as potential allies, 1958 - 1982

Although the most prominent and most outspoken, Yudkin was hardly the only nutritionist suggesting that sugar had far more of a role in heart disease than epidemiological orthodoxy would allow. The section explores the views of two of Yudkin's fellow travellers in Britain – Peter Cleave and Hugh Trowell – and the disagreements between them, as a means of exploring how their inability to build a

[94] FG Young to J Yudkin, "Diet and cardiovascular disease" 1 September 1971 TNA MH 148/441.
[95] HC Trowell, letter to J Yudkin, 20 December 1981, Wellcome Library PP/HCT/B/3/14. Emphasis in original.
[96] Latour B (1987): 31-39, 162-176.

coalition contributed to sugar's effective exclusion from dietary advice. Indeed, this failure is illustrative of Latour's 'quandary of fact-builders', as they 'enrol many others so that they participate in the continuing construction of the fact', whilst also having 'to control each of these people so that they pass the claim along without transforming it either into some other claim or into someone else's claim.' This 'difficult task' was beyond Yudkin, Cleave, or Trowell, as the debates amongst the trio in the letters' pages of journals and private correspondence demonstrate.[97]

Of the three, Cleave had perhaps the most unusual background. The majority of his career had been spent as a naval surgeon, albeit with a strong interest in diet and nutrition and particularly fibre, but these ideas did not attract much public attention until after his retirement in 1962.[98] Cleave first came to Yudkin's notice in 1958, when the latter wrote a 'pleasantly favourable review' of the former's short book *Fat Consumption and Coronary Disease*[99] for *Family Doctor* under the pseudonym John Clyde.[100] Noting the author's 'basic assumption that man, if left to choose from natural foods, would instinctively choose those which are necessary for health', Yudkin agreed that the reason 'he does not always do so nowadays is explained by the conditions of civilised life … often eat[ing] for other reasons than hunger'.[101] This was a Darwinian position akin to what Yudkin would articulate in

[97] Latour B (1987): 206-207.
[98] Cummings JH and Engineer A (2018) "Denis Burkitt and the Origins of the Dietary Fibre Hypothesis" *Nutrition Research Reviews* 31(1): 2.
[99] Cleave TL (1957) *Fat Consumption and Coronary Disease* (Bristol: John Wright).
[100] H Flack, letter to TL Cleave, 13 June 1958, Wellcome Library PP/TLC/C/1/5.
[101] Clyde J (1958) "About Fats and Coronary trouble" *Family Doctor*, August 1958. Clipping in Wellcome Library PP/TLC/C/1/5.

the early 1960s with his work on 'diseases of civilisation',[102] a similarity Yudkin commented on to Cleave, writing

> 'I wonder whether you realise how close your ideas and mine are in some respects, though in others we come to quite different conclusions … I too believe that coronary thrombosis, obesity, and probably such other diseases … are [at] least partly caused by the change in diet from that of our ancestors'.[103]

As the archive file of their correspondence with its hand-written warning by Cleave to the reader, 'Beware of disturbing order or you'll go mad' reveals, he chronologically and assiduously tracked his differences with Yudkin.[104] An annotated copy of Yudkin's 1957 *Lancet* paper demonstrates Cleave's early but private disagreement with him ('This paper does NOT point to sugar as the cause of CT [coronary thrombosis]'),[105] but it was the resemblance of Yudkin's early 1960s work to his own theories that upset Cleave. The precise nature of this disgruntlement is unclear,[106] but it resulted in Cleave attempting to report Yudkin to the British Medical Association for a breach of their Ethical Code.[107] This

[102] Yudkin J (1963b).
[103] J Yudkin, letter to TL Cleave, 8 February 1963, Wellcome Library PP/TLC/C/1/5.
[104] Hand-written note, Wellcome Library PP/TLC/C/1/5.
[105] Yudkin J (1957), copy annotated by TL Cleave, Wellcome Library PP/TLC/C/1/5. Emphasis in original.
[106] From Yudkin's letter it is ambiguous whether Cleave though Yudkin was accusing him of plagiarism or whether Cleave suspected Yudkin of the same. J Yudkin, letter to TL Cleave, 29 July 1963 Wellcome Library PP/TLC/C/1/5.
[107] SJ Hadfield, letter to TL Cleave, 4 August 1964 Wellcome Library PP/TLC/C/1/5.

complaint was dropped, but Cleave continued to quarrel with Yudkin in the pages of the Lancet, putting forward his view

> 'fundamentally at variance with Professor Yudkin's conceptions … that it is only *refined* carbohydrates (refined sugar and refined flour) that cause disease … in their natural form … the human body is adapted to their consumption from immemorial time.'[108]

In their private correspondence, Yudkin had been insistent that although their 'only difference' – the key shift of 'the advances in food technology' which had 'increase[d] the amount of carbohydrate in man's diet' – it was 'a major one'.[109] Yudkin was dismissive of Cleave's arguments that it was the processing of cereals that caused diseases of civilisation; 'a change to whole-meal bread and unrefined sugar would produce only a marginal difference to the supply of nutrients'.[110] For Yudkin, it was the total increase in the consumption of carbohydrates, particularly sugar, that new food technologies had enabled that was the problem, not whether they were refined or otherwise. A small difference perhaps, but one that for Cleave was significant. In an irate letter, Cleave informed Yudkin that he would

> 'be taking extraordinary trouble to define the difference between my conception and yours, and the fundamental importance of this

[108] Cleave TL (1964) "Dietary Fat and Dietary Sugar" *The Lancet* 284(7352): 206-207.
[109] J Yudkin, letter to TL Cleave, 8 February 1963, Wellcome Library PP/TLC/C/1/5.
[110] Yudkin J "Diet and the Nation's Health" Armstrong Memorial Lecture delivered to the Royal Society of Arts, 7 February 1962, Wellcome Library PP/TLC/C/1/5.

difference in the treatment of obesity and certain related conditions.'[111]

Cleave expanded his argument about what he termed 'the saccharine diseases' in a book co-written with a South African doctor G.D. Campbell, who had previously researched the role of sucrose in diabetes amongst the Zulu population.[112] Published in 1966, *Diabetes, Coronary Thrombosis and the Saccharine Disease*[113] was widely reviewed, with the *BMJ* praising its 'evangelical fervour' and that while it 'infuriates', it was also 'exciting, interesting and thought-provoking'.[114] Having read the book, Yudkin remained unconvinced: 'there is much in it with which I whole-heartedly agree. There is much, however, in which I think the two authors are in error.'[115]

What these exchanges illustrate is two points. Firstly, that what to outsiders might appear as small differences between the two men, were, to the protagonists themselves, the subject of anguished correspondence and strongly expressed disagreement. This difference in opinion meant that neither man could agree on what the British public should be advised to consume: wholemeal bread or white bread, brown sugar or white sugar.[116] Secondly, that these differences combined

[111] TL Cleave, letter to J Yudkin, 12 September 1964 Wellcome Library PP/TLC/C/1/5.
[112] Campbell GD (1996) "Cleave The Colossus And The History Of The 'Saccharine Disease' Concept" *Nutrition and Health* 11: 1-11.
[113] Cleave TL and Campbell GD (1966) *Diabetes, Coronary Thrombosis and the Saccharine Disease* (Bristol: John Wright).
[114] Dunlop D (1966) "The Saccharine Disease" *BMJ* 2(5530): 163.
[115] Yudkin J (1969) "Sucrose, Flesh, Fat, and Atherosclerosis" *Nutrition Today* 4(4): 29.
[116] TL Cleave, GD Campbell, NS Painter, joint letter to unknown journal editor, n.d. possibly 1970, Wellcome Library PP/TLC/C/1/5.

with (rather than in spite of) the close alignment of their beliefs meant that their relationship was sullied by professional jealousies and territorial marking, rather than alliance building. This illustrates Latour's point, that 'the claim' (in this case about sugar) may be transformed into 'some other claim' (about refined carbohydrates) or simply becomes 'someone else's claim' (Cleaves' fear of plagiarism), and consequently lose its rhetorical value and scientific credibility.

Yudkin's interactions with Trowell, nearly a decade later, were hardly less fraught. By this point in the early 1980s, Yudkin's influence was waning, but popular and political interest in diet and nutrition was at its peak, as chapter four will explore. Similarly, Trowell was long since retired, having spent his medical career in Kenya and Uganda, before returning to Britain in 1958 to write *Non-Infective Disease in Africa*,[117] a book that discussed the prevalence and pathogenesis of conditions such as coronary heart disease and diabetes in sub-Saharan Africa. Trowell was intrigued by the 'rare occurrence' of these diseases in this setting compared to their status as 'major problems in Europe and North America'.[118] Put in touch with Cleave by Denis Burkitt, his former colleague in Uganda, Trowell attempted to triangulate his epidemiological findings from African contexts with Cleave's theories about sugar and refined carbohydrates. Like Yudkin however, Trowell found Cleave prickly and suspicious of those with similar ideas: 'Trowell, a sensitive man, felt slighted and

[117] Trowell HC (1960) *Non-Infective Disease in Africa : The Peculiarities of medical Non-Infective Diseases in the Indigenous Inhabitants of Africa South of the Sahara* (London: E. Arnold).
[118] Cummings JH and Engineer A (2018): 7.

never got over it'.[119] Nonetheless, Trowell maintained an interest in diet and what he termed 'Western diseases', editing a book with Burkitt discussing 'their emergence and prevention',[120] prompting his correspondence with Yudkin.

Their correspondence largely centred around two points; firstly, scientific methods, and secondly, the potential of fibre to mitigate the harms of sugar consumption. Yudkin wrote to the *BMJ* noting the publication of Trowell and Burkitt's book and questioning their assertion that 'there is little hard evidence that would warrant a recommendation for dietary change in these [Western] countries.' For Yudkin, there was

> 'a great deal of evidence, from experiments with laboratory animals and with human subjects … to indict sugar as a likely cause of at least two of the "Western diseases," coronary heart disease and diabetes … the average consumption is now about 1 kg a week in Western countries, 25 times what it was before the industrial revolution.'[121]

Trowell responded to Yudkin asking him if there was an 'average safe level of total sucrose consumption',[122] to which Yudkin replied that was 'impossible', enclosing

[119] Heaton KW (1990) "Hubert Carey Trowell" *Munk's Roll* IX: 533 http://munksroll.rcplondon.ac.uk/Biography/Details/4494 Last accessed 1 September 2018.
[120] Trowell HC and Burkitt DP (1981) *Western Diseases, their Emergence and Prevention* (London : E. Arnold).
[121] Yudkin J (1981) "Diseases of Modern Civilisation" *BMJ* 283(6304): 1466.
[122] HC Trowell, letter to J Yudkin, 20 December 1981, Wellcome Library PP/HCT/B/3/14.

reprints of his most recent human and animal experiments.[123] In Trowell's response, he questioned Yudkin's relationship with Cleave, and wondered 'why so little support for the role of sucrose … in spite of Cleave's book and your articles and experiments?'. Part of the answer for Trowell was Yudkin's reliance on experimental rather than epidemiological evidence:

> 'I doubt whether the changes that occur on the very high sucrose diets eaten for a few weeks can throw much light on those occurring in the majority of Western adults, eating far less sucrose for a lifetime.'[124]

This spoke to a long-running thread of criticism against Yudkin's work, voiced by Keys amongst others, that his short-term animal and human volunteer experiments were irrelevant to the everyday lives of the average person living in Western countries. These, they argued, could be better captured by longitudinal cohort studies. Yudkin's response to this critique had hardened by the late 1970s, as he started to point out what he viewed as 'the limitations of epidemiology'.[125] While it was an 'invaluable tool in the search for the cause of disease', it was also 'necessary to add to it the results of [laboratory and experimental] research'. Venting his frustration at the scions of risk-factor epidemiology, he concluded that 'it is extraordinary that, despite the frequency with which workers insist that

[123] J Yudkin, letter to HC Trowell, 31 December 1981, Wellcome Library PP/HCT/B/3/14.
[124] HC Trowell, letter to J Yudkin, 12 January 1982, Wellcome Library PP/HCT/B/3/14.
[125] Yudkin J (1978a) "Dietary Factors in Arteriosclerosis: Sucrose" *Lipids* 13(5): 370.

association is not proof of cause, so many of them proceed as if that is just what it is.'[126]

Trowell's 'doubt' was also given short shrift in Yudkin's 'forthright' response. Yudkin rejected Trowell's comment that the levels of sucrose in experiments were too high, 'a comment that is constantly made, too, by our critics in the sugar industry'. He suggested that many people, such as 'teenage boys, on average, take twice the national average'. He rejected the criticism 'that one cannot draw acceptable conclusions from animal experiments', arguing that if 'this approach had been adopted throughout the history of medicine, we would have had no … penicillin, insulin … [Robert] Koch would not have discovered the cause of tuberculosis.' He then turned to what would be the second major strand of their disagreement. Stimulated in part by 'Cleave's book', Trowell, 'consider[ed] sucrose as injurious and fibre as protective',[127] based off his work with Burkitt (acknowledged as the 'Fibre Man' for his influential research[128]). Yudkin rejected this, stating that 'in our own experiments with animals, the addition of fibre to the diet did not prevent the changes associated with high sugar intake'.[129] Furthermore, Yudkin was privately sceptical of 'the current obsession with high fibre diets', suggesting that it 'comes largely because of the encouragement given to it by such people whose name I can't mention such as Kellogg's.'[130] By spring

[126] Yudkin J (1978b) "Metabolic Epidemiology" *The Lancet* 311(8062): 500.
[127] HC Trowell, letter to J Yudkin, 12 January 1982, Wellcome Library PP/HCT/B/3/14.
[128] Kellock B (1985) *The Fibre Man: The Life-Story of Dr Denis Burkitt* (Tring: Lion Publishing).
[129] J Yudkin, letter to HC Trowell, 11 March 1982, Wellcome Library PP/HCT/B/3/14.
[130] Interview between J Yudkin and David F. Smith, 27 November 1979, unpublished. With thanks to the Centre for the History of Medicine, University of Glasgow for the transcript.

1982, yet another potential ally for Yudkin had withered on the vine, as he lamented that 'it is clear that that discussion by letter is laborious and not – it seems – very productive.'[131]

Yudkin's correspondence with Cleave and Trowell ultimately reveal his inability over several decades to build an alliance that could successfully further 'the claim' that dietary sugar was an important risk factor for heart disease. Perhaps this was partly due to the personality and standing of the men concerned; all were past the age of retirement, outside of the mainstream of medical research, and, to varying degrees, somewhat eccentric and irascible. Yudkin's dismissal of the theories, methods and research results of those whose research most closely aligned with his own was summed up by Trowell's passing comment to him about Cleave:

> 'I regret that [Cleave] never mentioned any of your experiments in his book, but discussed your views only to challenge them in several places. Equally I have always wondered what you made of his contribution, for as yet I have traced no word of him in your writings.'[132]

Such mutual suspicion, combined with Yudkin's at least partial rejection of the risk-factor epidemiology paradigm, contributed to the failure of recommendations on sugar to be seriously considered in discussions on dietary guidance. The next

[131] J Yudkin, letter to HC Trowell, 16 February 1982, Wellcome Library PP/HCT/B/3/14.
[132] HC Trowell, letter to J Yudkin, 12 January 1982, Wellcome Library PP/HCT/B/3/14.

section will explore this issue in greater detail by examining Yudkin's involvement in the COMA panel on diet and coronary heart disease.

'Ugly facts': Yudkin and the COMA advisory panel, 1970 - 1974

Yudkin's inability to mobilise allies was further starkly illustrated by his involvement in the production of an influential report by COMA, finally published in 1974 as *Diet and coronary heart disease*.[133] The Advisory Panel established to produce the report was chaired by the endocrinologist Frank Young, and made up of most of the prominent researchers then active in looking at heart disease, including Morris, J.R.A. Mitchell and Michael Oliver, as well as nutritionists with an interest in the field, such as LSHTM's John Waterlow. As historian Mark Bufton has discussed, the process took four years, assessing over 400 academic articles, and yet 'minutes of COMA meetings show that there was widespread disagreement on all but the most basic of issues'.[134] Oliver was the most combative in the group – busily correcting drafts and provocatively asking for a draft of Keys' *Atherosclerosis* article to be circulated around the panel, fully cognisant of its comments pertaining to Yudkin[135] – but ultimately Yudkin was the outsider.

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[133] Department of Health and Social Security (1974) *Diet and Coronary Heart Disease: Report of the Advisory Panel of the Committee on Medical Aspects of Food Policy (Nutrition) on Diet in Relation to Cardiovascular and Cerebrovascular Disease* (London: Her Majesty's Stationery Office).

[134] Bufton MW (2001) "Coronary Heart Disease versus BSE: Characterising Official British Expert Advisory Committees" *Science and Public Policy* 28(5): 384. See also Bufton MW (2005) "British Expert Advice on Diet and Heart Disease c.1945-2000" in Berridge V (ed.) *Making Health Policy: Networks in Research and Policy after 1945* (New York: Rodopi): 130-134.

[135] FG Young to LG Smith "Panel on Cardiovascular and Cerebrovascular Disease" 7 May 1971 TNA MH 148/616.

A flavour of the panel's deliberations is indicated by Yudkin's comment in one meeting that he 'found it interesting that different people could use the same information and yet come to diametrically opposed conclusions.'[136] Critically appraising the evidence for clinical trials of dietary change, he remained insistent that there was 'no acceptable evidence that alterations in dietary fat alone can prevent primary or secondary cardiovascular … disease'.[137] He was equally adamant that the link between dietary sucrose and heart disease be highlighted in the final draft. Writing a four-page open letter to his fellow panellists, Yudkin expressed his frustration that they had not considered evidence from animal studies, and arguing that greater coverage be given to his concerns as the 'few lines referring to sucrose in the conclusion seemed to me … to be excessively terse and dismissive.'[138] No one else would acquiesce to such a demand, presumably influenced by a 1970 working group convened by the MRC that had 'failed to find evidence for such a significant relationship.'[139]

But beyond the internecine squabbling of the panel, there was also an interesting insight into Yudkin's views on the relationship between the report's conclusions and its intended audience, the British public. For example, Yudkin drafted a set of

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[136] Anon, "Committee on Medical Aspects of Food Policy Panel on Diet in Relation to Cardiovascular and Cerebrovascular Disease: Minutes of the Fourth Meeting held on 19th May 1971", TNA MH 148/441.
[137] J Yudkin and RHJ Watson "The Effect of Dietary Change in Atherosclerotic Disease" January 1971 TNA MH 148/616.
[138] J Yudkin, letter to FG Young, 8 November 1971, TNA MH 148/617.
[139] Anon "Committee on Medical Aspects of Food Policy: Report of the Panel on Diet in Relation to Cardiovascular and Cerebrovascular Disease. Third Draft" n.d. probably late 1971, TNA MH 148/617; Anon (1970) "Dietary Sugar Intake in Men with Myocardial Infarction. Report to the Medical Research Council by Its Working-Party on the Relationship between Dietary Sugar Intake and Arterial Disease" *The Lancet* 2(7686): 1265-71.

position points for the report, recognising that it was 'impossible not to make recommendations in regard to diet', which should be based on three principles: that they 'reduce the risk of I.H.D.', 'produce other benefits' and finally 'produce no ill effects'. Looking at saturated fat, polyunsaturated fat, sucrose and salt in turn, he concluded that there was insufficient evidence on any of these dietary elements that they reduce the risk of heart disease. However, for sugar he argued that 'the current high levels of consumption are factors in the prevalence of obesity and dental caries … in addition it may also play a part in … diabetes and peptic ulceration'. Despite acknowledging that 'the majority of members of the committee are not satisfied that a reduction of sugar intake will reduce the risk of IHD [ischaemic heart disease]', Yudkin believed a report on heart disease and diet should nonetheless 'recommend without reservation a reduction in sugar intake'. This was clearly wishful thinking, but what Yudkin wanted to avoid was a situation where the report made no clear recommendations on any dietary elements, as this would be a tacit 'endorsement by us of the view that current patterns of eating are, in our present state of knowledge, beyond criticism.'[140] In other words, even though there was disagreement among experts in the field, people should be told to make common-sense lifestyle changes that would not necessarily have any impact on heart disease but would nonetheless possibly have an impact on obesity and or dental caries. It was also a change of tack from Yudkin, who had earlier in his career argued that those concerned about heart disease, as a condition with multi-factorial causes, should avoid focussing on one dietary element over another.

[140] Anon "Suggested Recommendations: Professor J. Yudkin" n.d. probably February 1972, TNA MH 148/618.

Having accused Keys of being 'dogmatic',[141] the same charge, certainly in his exchanges with the COMA panel, could certainly be levelled at him.

Indeed, this latter point was in some ways the crux of the disagreement between Yudkin and his peers, especially Keys. The binary opposition between the two of them, between sugar and fat, and the Manichean rhetoric that both employed, meant that there would inevitably be a losing side. Rachel Meach suggests that 'Gyorgy Scrinis['s] concept of "nutritionism"' is helpful in explaining this conflict. Scrinis contends that from the 1960s onwards, there was 'an increasing tendency towards a reductive understanding of nutrients in which foods became distinguished as either "good" or "bad".' This focus on single nutrients, and especially fat, excluded the 'role of food production techniques, additives or the metabolic interaction of different nutrients'.[142] These binary and reductionist distinctions made it impossible for either side to concede that the other might have a point, that heart disease might be multifactorial, and the hardening of Yudkin's stance over time illustrated this problem.

Young, frustrated by the continuing impasse, wrote a 'firm and forthright' memorandum asking that 'after 3 years of discussion the Panel must now make up its mind to report or to resign.'[143] In response, 'Yudkin wrote to say he must either resign or put in a minority report',[144] but was eventually coaxed by Young to instead draft a highly technical 'note of reservation' that was included at the back

[141] Yudkin J (1972): 16.
[142] Meach R (2018): 98. Meach cites Scrinis G (2013) *Nutritionism: The Science and Politics of Dietary Advice* (New York: Columbia University Press).
[143] FG Young, "Memorandum from the Chairman", 9 April 1973, TNA MH 148/621.
[144] SJ Darke, letter to MM Disselduff et al, 29 May 1973, TNA MH 148/621.

of the report. This unusual step was news to the rest of the panel, who were unsurprisingly unhappy about its insertion, and presumably its claims that Yudkin's 'colleagues had "exaggerated the possible role of dietary fat" in causing heart disease and had "minimized the possible" role of dietary sucrose.'[145]

The debate played out in the weeks and months following the publication of the report in the national press, with Yudkin writing a 1,500 word article in *The Times* giving a layman's account of his views. He appealed to a sense of clear logic amongst his readership, stating

> 'it is difficult to imagine that we need one sort of diet to help prevent heart disease, a different diet to help prevent diabetes, a third diet to help avoid obesity, and a fourth diet to improve nutrient intake. On the other hand, there is excellent advice that taking less sugar can do all of these things.'[146]

Again, Yudkin was attempting to translate his scientific understanding to a public audience, with an awareness that the public were more sympathetic to his views than other researchers. The causes of heart disease, diabetes and obesity might be multifactorial, but according to him dietary sucrose was a common factor for all of them. The link with obesity was particularly important for Yudkin with his track record on slimming advice, as he continued to recommend 'eliminating as much as possible the sugar in your tea and coffee and sugary soft drinks, and alcoholic

[145] Bufton MW (2001): 384; DHSS (1974): 35.
[146] Yudkin J (1974a) "Why Suspicion Falls on Sugar as a Major Cause of Heart Disease" *The Times* Tuesday 11 July 59136: 16.

drinks, and cakes, biscuits, confectionary and ice cream.'[147] For Yudkin, a change in Britain's dietary lifestyle was a message that the public needed to hear, even in advance of a scientific consensus, because 'there is certainly no health risk in eating less sugar since there is absolutely no physiological need for this substance.'[148]

Yudkin's views were again refuted by the medical establishment, this time in the form of a response article by Gilbert Thompson, a researcher at the Royal Postgraduate Medical School, Hammersmith Hospital. Thompson took Yudkin to task, attacking the apparent simplicity of his message by quoting Thomas Huxley (a contemporary of Darwin and strong advocate for evolutionary theory): '"the great tragedy of science: the slaying of a beautiful hypothesis by an ugly fact"'. The 'ugly facts of the saturated fat theory' were to Thompson and the majority of heart disease researchers preferable to 'the elegant but largely circumstantial evidence of the sugar hypothesis'. Like Yudkin, he appealed to the readership to make up their own minds, but was confident he had the rest of his profession on side, citing the 'many authoritative bodies' in Western nations – such as the COMA panel – that had 'counselled their entire populations to reduce their intake of saturated fats.'[149]

Indeed, COMA had surveyed dietary advice from a number of developed countries from Scandinavia to New Zealand.[150] Three years later, in 1977, the US Senate's

[147] Yudkin J (1974b) "When a Diet is Forever" *The Times* Wednesday 17 April 59066: 10.
[148] Yudkin J (1974a): 16.
[149] Thompson G (1974) "Beware Sweet Reason in the Search for Causes of Heart Disease." *The Times* Wednesday 31 July 59153: 16.
[150] Anon, "Survey of Semi-Official Recommendations about Dietary Change", 5 January 1972 TNA MH 148/617.

Select Committee on Nutrition and Human Needs released its influential "Dietary Goals in the United States" after several years of evidence gathering consultation, including inviting Yudkin, Aharon Cohen and Peter Cleave to make representations.[151] Despite this, it reinforced the 'ideology of low fat' in American nutritional circles, and amongst the broader public.[152] Yudkin, during the COMA advisory panel, had suggested that '[i]n spite of Ancel Keys, there has been an increasing disillusion with the "fat theory" during the last few years.'[153] Such optimism on his part was misplaced however, as science journalist Gary Taubes has argued that the publication of "Dietary Goals" 'shifted the controversy irrevocably in favor of Keys' hypothesis.'[154] Certainly in the UK, dietary recommendations from government and medical authorities did not afford dietary sucrose as much importance as dietary fat,[155] and Yudkin's work somewhat faded from view, embraced by 'cranks' rather than the general public.[156]

[151] Taubes G (2017): 169.
[152] La Berge AF (2008); Hite AH (2018).
[153] J Yudkin, letter to FG Young, 8 November 1971, TNA MH 148/617.
[154] Taubes G (2009) *The Diet Delusion* (London: Vermillion): 44.
[155] Bufton M (2001): 384-385.
[156] Interview between J. Yudkin and David F. Smith, 27 November 1979.

Conclusion

This chapter concludes by reiterating the same question that Trowell asked: 'why so little support for the role of sucrose … in spite of Cleave's book and [Yudkin's] articles and experiments?'[157] Clearly, Yudkin was not the 'Latourian network-builder' that Keys was; his inability to build alliances, even with peers sympathetic to his views such as Cleave and Trowell, evidently hampered the development of a scientific consensus around sugar. He could be dismissive of those who disagreed with him or whose results conflicted with his own findings, suggesting, for example, that '[t]he inability of other workers to confirm this observation may be due to faults in the design of their studies.'[158] His frustration that his animal and human experiments were not given due credence by his peers developed into borderline contempt for epidemiological cohort studies. Yudkin was a complex and contradictory man. On the one hand he held a variegated and broad-minded view of sugar in the place of British society, informed by the history, economics, and sensorial experience of food. On the other he could be close-minded and pedantic about other's research interests, for example in his treatment of Trowell and Cleave's theories about fibre. In a similar fashion, while Yudkin was consistent from his 1958 book *This Slimming Business* on in suggesting the deleterious health effects of sugar, he had become less and less nuanced in his position on heart disease, becoming more and more insistent that sugar was a significant risk factor,

[157] HC Trowell, letter to J Yudkin, 12 January 1982, Wellcome Library PP/HCT/B/3/14.
[158] Yudkin J (1978a): 370.

to the exclusion of considering other risk factors, such as exercise or smoking.[159]

Yudkin occasionally reflected, as one might, on why his theories about sugar did not have greater purchase within the scientific community. One of his theories was that his colleagues resented his media profile:

> 'There is, I am afraid, still a common feeling among academics of all callings that it is not quite nice for a university professor to appear on the radio or television or in the popular press and talk to ordinary people about his work … the value and importance of his own research work is inevitably diminished in the eyes of many in the academic establishment.'[160]

Keys had however largely maintained credibility amongst his peers, while he had also 'been able to bypass the medical establishment by taking [his] recommendations to the public directly'.[161] Nonetheless, Yudkin's populist leanings may have affected his standing. A contemporaneous, and not unsympathetic review of *Pure, White and Deadly* suggested that '[t]he style is Barbara Cartland' and that Yudkin had 'produced a nutritional novelette; a book that almost parodies the literary style of so many others that lie on the "Health" shelves of public libraries.'[162] Indeed, such rhetorical leanings could teeter on the brink of iconoclasm. Both critics and proponents tended to use theological nomenclature

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[159] See for example, Yudkin J (1970) 'Sugar, Cigarettes and Heart Disease' *The Lancet* 295(7656): 1111
[160] Yudkin J (1972): 164.
[161] Olszewski T (2014): 241.
[162] Cowhig J (1972) "Review: Pure White and Deadly: The Problem of Sugar" *New Scientist* 55(803): 48-49.

when discussing him; for example, Keys' disparaging use of the word 'prophet' and 'gospel',[163] or an article floridly describing Yudkin as 'that voice crying in the biliousness of overfed parts of the world with religious fervour'.[164] Similar descriptions continue to this day, with a 2012 review of *Pure, White and Deadly* positing Yudkin as playing 'a largely unacknowledged role as John the Baptist to a multitude of low carb[ohydrate] prophets.'[165]

For Yudkin and his contemporary acolytes however, the major reason for his warnings going unheeded was the malfeasance of the sugar industry, a narrative repeated by historians such as Walvin and Harvey Levenstein.[166] Yet while there is no doubt that the food industry influenced nutritional research, this chapter has suggested that it may have done so in more subtle and insidious ways than outright skulduggery. Yudkin and his department received, and were grateful for, large amounts of funding from all sectors of the food industry. It would be naïve to suggest that the sugar industry played no part in limiting his work's impact, but in Yudkin's own words, it is difficult to find the full-blown 'sugar conspiracy' that contemporary journalists have tried to:

> "[I]t would not be rewarding to search for an organized dirty tricks department; it seems to be more an instinctive protective

[163] Keys A (1970) "Dietary Sucrose and Coronary Heart Disease".
[164] Howard P (1974) "A Voice in the Biliousness Launches Nutrient Drive" *The Times* Friday 5 April 59057: 4.
[165] Winkler JT (2012) "Medical Classics: Pure, White and Deadly" *BMJ* 2012;345: e8612.
[166] Walvin J (2018): 237; Levenstein H (2012) *Fear of Food: A History of Why We Worry about What We Eat* (Chicago, IL: University of Chicago Press): 146-147.

> action of those in the trade to deny any cover-up of the ills produced by their product, or any wrong-doing of their fraternity. The result is such a compact nucleus of power that, like a magnet surrounded by a strong induction coil, it produces a field of influence that invisibly affects many of those not in direct contact with the centre."[167]

While this closing analysis has been largely addressed the reasons why Yudkin, the individual, rather than the ideas that he represented, failed, they also point to the wider picture of why it was saturated fat, rather than sugar, that was commonly blamed as the dietary element responsible for the heart disease epidemic. As Olszewski concluded in his study of the American, Keysian context, the controversy 'raised questions about the value of epidemiological research, the kinds of conclusions it could provide, and what comprised proper medical research'.[168] Yudkin's frustrations were two-fold; firstly, that other types of evidence were increasingly inadmissible for the biomedical community, and secondly, that this had consequences beyond the discussions of scientists, as dietary guidelines were produced for the public. The hegemony of epidemiological studies over other types of research was not just felt by Yudkin; the fibre hypothesis was also 'frequently criticised' because it was not backed up by strong enough epidemiological evidence.[169]

[167] Yudkin J (2012): 188.
[168] Olszewski TM (2015): 249.
[169] Yudkin J (1978): 500.

The argument between Yudkin and Keys was a transatlantic one, and consequently became an international conversation, but for Yudkin, it was also very much rooted in what he viewed as the realities of the British diet. In contrast to some of his peers such as Cleave and Trowell, whose theories on sugar had been influenced by their professional lives in international contexts, Yudkin's career was largely spent in Britain. Consequently his views, and his status as Britain's most prominent nutritionist, were reflective of and in conversation with wider understandings of the British diet. Yudkin's analysis of the changes in the modern British diet, with its increasing reliance on processed food and burgeoning taste for sweetness, was accurate, even if the conclusions that he reached were contestable. What an inquiry into Yudkin's writings adds beyond the data from the National Food Survey so familiar to food and economic historians, is both the uses to which that data was put at the time, and the scientific and to a lesser extent, cultural conversation around it. Yudkin argued that sugar had become an integral part of the British diet and way of life, and that this was having devastating consequences for the public's health. He saw two ways to address this. Firstly, to publicise his findings to as wide an audience as possible, in the mediums of both popular science books and slimming guides. Secondly, to proselytise to his colleagues on the Committee on the Medical Aspects of Food and Nutrition Policy in the hope of influencing governmental dietary advice. Improving the public's health was then, for Yudkin as with Morris, a matter of persuading the British public to make better individual decisions about their lifestyles.

Following his death in 1995, there has also been an intriguing post-script to Yudkin's story. As research emerged that appeared to echo Yudkin's findings, American paediatrician and sugar campaigner Bob Lustig uploaded a 90 minute lecture *Sugar: The Bitter Truth* to YouTube in 2009 that, at the time of writing, had been viewed 8.1 million times.[170] Having been alerted to Yudkin's work by Australian colleagues at a conference in 2008, Lustig had become a self-styled 'disciple' of Yudkin, and copies of the long out-of-print *Pure, White and Deadly* were fetching huge prices on the second-hand market.[171] Penguin responded by reissuing the book in 2012, with an introduction written by Lustig.[172] Media attention on Yudkin has rocketed in the past few years, with lengthy articles in the *British Medical Journal (BMJ),*[173] *the Daily Telegraph*[174] and *the Guardian*.[175] The latter newspaper's "long read" article, entitled 'The sugar conspiracy' generated over 1.1 million views in less than ten days, highlighting the popularity of anti-sugar sentiment in an era of #cleanliving Instagram hash-tags.[176] As a recent review noted, the 'pendulum has now swung in the opposite direction', with both popular

[170] University of California TV "Sugar: The Bitter Truth" Series: UCSF Mini Medical School for the Public [7/2009] [Health and Medicine] [Show ID: 16717] https://www.youtube.com/watch?v=dBnniua6-oM Last accessed 22 March 2019.
[171] Wagner D (2012) "Pure, White, and Out of Print: How a Sugar Screed Became a Rare Collectible" *The Atlantic* 28 August https://www.theatlantic.com/entertainment/archive/2012/08/pure-white-and-out-print-how-sugar-screed-became-rare-collectible/324186/ Last accessed 7 September 2018.
[172] Yudkin J (2012).
[173] Watts G (2013) "Sugar and the heart: Old Ideas Revisited" *BMJ* 2013;346:e7800 http://www.bmj.com/content/346/bmj.e7800 Last accessed 17 July 2016.
[174] Llewellyn Smith J (2014) "John Yudkin: The Man who Tried to Warn Us about Sugar" http://www.telegraph.co.uk/lifestyle/wellbeing/diet/10634081/John-Yudkin-the-man-who-tried-to-warn-us-about-sugar.html Last accessed 17 July 2016.
[175] Leslie I (2016) "The Sugar Conspiracy" *The Guardian* Thursday 7 April 2016 https://www.theguardian.com/society/2016/apr/07/the-sugar-conspiracy-robert-lustig-john-yudkin Last accessed 17 July 2016.
[176] Anon (2016) "The Grazer" *The Guardian* Saturday 16 April, *Cook* Supplement: 11

and scientific opinion taking the threat of sugar to human health much more seriously. The same review noted that 'SFA [saturate fatty acids] is now believed to play a much smaller role in CHD [coronary heart disease] than was previously believed while that of sugar, whole grains, and cereal fiber have moved in the opposite direction.'[177] While exploring in any detail this more recent history is beyond the scope of the current chapter, it may well be that Yudkin's popularisation of his theories laid the groundwork for this swing of the 'pendulum'. Residual cultural memory of Yudkin, a figure with a wide readership for his slimming guides and popular science books, as well as the attractive mythology of martyrdom at the hands of the sugar industry, may have in some way contributed to the sustained revival of anti-sugar sentiment in popular discourse.

Nevertheless, diet, as an integral part of lifestyle public health, was throughout the post-war period a highly contested issue. Its funding, the methods for its research, and the implications for advice to the British public were all the topic of debate in newspapers, medical journals and private correspondence. This chapter has also explored how scientists, and in particular nutritionists, developed their ideas about the role of sugar in the British diet, and its repercussions for heart disease. Ultimately, proponents of saturated fats as a principal cause of coronary heart disease won the battle, with their ability to, as Latour suggests, harness allies, resources and scientific credibility in a way that Yudkin and others such as Trowell

[177] Temple NJ (2018) "Fat, Sugar, Whole Grains and Heart Disease: 50 Years of Confusion" *Nutrients* 10(1): 39.

and Cleave were manifestly unable.

Chapters One and Two have concerned the establishment of the scientific evidence on lifestyle, and its contestation. Both have addressed how protagonists such as Morris and Yudkin attempted to communicate, to a limited degree, the pragmatic implications of their research to the British public. Chapter Three now moves on to how this scientific knowledge was mobilised both more emphatically and more broadly, as it entered the political and policy sphere. Indeed, Morris and Yudkin have walk-on parts in this narrative, but the scope of the next chapter is necessarily wider than these first two chapters, which have sought to illuminate the bigger picture through the close details of small case studies. Morris and Yudkin's work was part of a wider conversation about disease prevention in biomedical circles, which would eventually enter political and policy circles in the 1970s. Chapter Three goes on to explore how this trend for prevention facilitated the development of an individualised, lifestyle solution to the financial problems of, and chronic disease burden on, the NHS.

Chapter Three: Everybody's business? Prevention, heart disease and the public in the 1970s

Introduction

In March 1976, the four governments of the United Kingdom published *Prevention and Health: Everybody's Business*, a joint discussion paper which outlined 'a reassessment of public and personal health'. It argued that one potential solution to the financial problems then facing the National Health Service (NHS) was a shift from a curative service to one that promoted health instead. Prevention, it reckoned, was better than cure, not least for the NHS' bottom line. Furthermore, in facing what the report described as 'the problems of today and tomorrow', it was necessary for everybody to take 'personal responsibility'. Stating that '[w]e as a society are becoming increasingly aware of how much depends on the attitude and actions of the individual about his health',[1] it drew attention to some of 'those diseases the cause of which and the solution to which can be laid at the door of man's behaviour'.[2] Citing 'smoking-related diseases, alcoholism and other drug dependencies, obesity and its consequences, and the sexually transmitted diseases', it concluded that 'it is clear that the weight of responsibility … lies on the shoulders of the individual himself'.[3]

[1] Department of Health and Social Security (DHSS) (1976) *Prevention and Health: Everybody's Business. A Reassessment of Public and Personal Health* (London: Her Majesty's Stationery Office (HMSO)): 7.
[2] DHSS (1976): 31.
[3] DHSS (1976): 38.

Prevention and Health was just one of a profusion of publications and reports on disease prevention during the 1970s. Concurrent to *Prevention and Health* was a report produced by a joint working group of the Royal College of Physicians (RCP) and the British Cardiac Society (BCS), looking at Britain's biggest killer, entitled *Prevention of Coronary Heart Disease*.[4] Shortly after, an inquiry into 'preventive medicine' by the Social Services and Employment Sub-Committee of the Expenditure Committee of the House of Commons, was also published.[5] A White ("command") paper was produced by the government in response to the latter inquiry,[6] and booklets on a variety of topics were produced as tributaries to the main *Prevention and Health* publication.

Prevention and Health marked the juncture at which lifestyle – the focus on smoking, drinking, diet and exercise – became codified in public health policy. It drew public attention to non-communicable diseases, particularly coronary heart disease, as the predominant causes of morbidity and mortality in the UK. It presented the responsibility for the prevention of these diseases almost entirely within the ambit of the public themselves. Indeed, Charles Webster suggests that '[i]n essence, the sick were accused of bringing ill health upon themselves and

[4] Royal College of Physicians and British Cardiac Society (1976) "Prevention of coronary heart disease. Report of a Joint Working Party of the Royal College of Physicians of London and the British Cardiac Society" *Journal of the Royal College of Physicians London* 10(3): 1-18.

[5] Expenditure Committee (1977a) *First Report from the Expenditure Committee together with the Minutes of Evidence taken before the Social Services and Employment Sub-Committee in Sessions 1975-76 and 1976-77, Appendices and Index. Preventive Medicine. Volume I. Report.* (London: HMSO).

[6] DHSS (1977a) *Prevention and Health. Command Paper 7047* (London: HMSO).

thereby wasting the resources of the NHS'.[7] By the quantities in which they ate, drank, smoked, and exercised, the public would be responsible for preventing disease; or conversely, bringing it upon themselves.

This chapter uses *Prevention and Health* to explore this preoccupation with lifestyle and prevention, and what it reveals about public health in Britain, political attitudes to the NHS in the 1970s, and the changing relationship between citizenship and the welfare state. While the idea of prevention was hardly new, it acquired a fresh political salience during this decade. This was at least partly a result of the epidemiological research of the previous couple of decades, explored in the first two chapters. The research of the SMRU on the benefits of 'vigorous exercise' would be cited widely by proponents of prevention, while both the controversy between Yudkin and Keys, as well as the deliberations of the Committee on Medical Aspects of Food Policy (COMA) and its recommendations for the British diet were also essential context. The putative means of prevention by behaviour change in exercise, smoking, and to a lesser extent diet, had been reasonably firmly established, and politicians and policymakers were keen to explore their potential. Virginia Berridge has noted that

> '[b]y the 1970s, a new style of public health was emergent, both nationally within the UK and internationally as well … [which] stressed the role of individual prevention and responsibility for

[7] Webster C (2002) *The National Health Service: A Political History*. *Second Edition* (Oxford: Oxford University Press): 137.

> health, with its roots in the earlier 1950s epidemiological "paradigm shift" epitomized by smoking and lung cancer. The concept of the "risk-avoiding individual" replaced the mass vaccination campaign image of 1950s public health.'[8]

At the same time as the emergence of the "risk-avoiding individual", governments across the world, and particularly in Britain, were dealing with a series of challenges to the status quo of the welfare state, from fiscal squeezes brought about by oil crises to ideological attacks from the New Right or what Geoff Eley describes as the 'long and painful dismantling' of the post-war settlement.[9] *Prevention and Health* explicitly addressed the first of these, with its optimistic belief that prevention might hold the key to the NHS financial shortfalls. The latter critiques were more implicitly acknowledged, revealed by health minister David Owen's comment to *The Times* immediately prior to publication that 'a basic

[8] Berridge V (2003) "Post-war Smoking Policy in the UK and the Redefinition of Public Health" *Twentieth Century British History* 14(1): 73.

[9] Eley G (2007) "Historicizing the Global, Politicizing Capital: Giving the Present a Name" *History Workshop Journal* 63(1): 166. For more context on the economic circumstances in which British policymakers were operating, see Coopey R and Woodward N (1996) "The British Economy in the 1970s: An Overview" in Coopey R and Woodward N (eds) *Britain in the 1970s: The Troubled Economy* (London: UCL Press): 1–33. The historiography of the 1970s has (broadly) posited the decade in terms of the International Monetary Fund crisis of late 1976, the lead-up to the so-called Winter of Discontent of 1979, and the apparent popular rejection of social democracy that the election of Margaret Thatcher represented. This orthodoxy is represented in academic and popular histories by Turner A (2008) *Crisis? What Crisis? Britain in the 1970s* (London: Aurum); Sandbrook D (2012) *Seasons in the Sun: The Battle for Britain 1974–79* (London: Allen Lane). More nuanced accounts include Moran J (2010) ''Stand Up and Be Counted': Hughie Green, the 1970s and Popular Memory', *History Workshop Journal* 70(1): 172–198; Beckett A (2009) *When the Lights Went Out: Britain in the Seventies* (London: Faber). For this context specifically related to the NHS, see Klein R (2006) *The New Politics of the NHS: From Creation to Reinvention*. *Fifth Edition.* (Oxford: Radcliffe): 77-80 and Webster C (2012): 72-74.

rethink of a lot of different attitudes concerning health service provision' was needed.[10]

This conflation between the focus on the individual's role in preventing ill health and the challenges facing the health service was at the heart of *Prevention and Health*, but it also provides a lens with which to view a broader picture of the citizen and their relationship to the welfare state. Because prevention was 'everybody's business', no citizen was excused from adapting or changing their lifestyle accordingly. Personal responsibility was emphasised, and even, as discussions of the draft will reveal, was considered as part of the social contract for a health service free at the point of use. Indeed, the actions of the individual in attending to aspects of diet, consumption and exercise considered healthy, were part of what Matthew Grant describes as 'active citizenship'.[11] *Prevention and Health*'s focus on personal responsibility also provides an example of an appeal to what recent scholarship has identified as the 'popular individualism' of the 1970s, in which through the rise of identity politics, the British public began to envisage themselves in more personal, and less collective, terms.[12] The moment of crisis that this decade has come to represent was also a time of opportunity, in which 'a diverse "marketplace of ideas" could flourish'.[13] This attempt at fresh thinking was

[10] Hodgkinson N (1976) "Change in Attitude to NHS sought" *The Times* Monday 9 February 59623: 1.
[11] Grant M (2016) "Historicising Citizenship in Post-War Britain" *The Historical Journal* 59(4): 1187-1206.
[12] Robinson E et al (2017) "Telling Stories about Post-war Britain: Popular Individualism and the 'Crisis' of the 1970s" *Twentieth Century British History* 28(2): 268-304.
[13] Ibid., 272. The phrase 'marketplace of ideas' is taken from the political economist Peter A. Hall who used it to describe the options open to British economic policymakers in the

apparent in *Prevention and Health*, with its eyes trained on 'today and tomorrow' and its ideas about 'action which individuals take in relation to the health and well being of themselves and their family.'[14]

The tensions between these two concepts illustrate the contradictions at the heart of *Prevention and Health* during this pivotal decade for the welfare state. While 'popular individualism', by its very nature, largely describes a bottom-up concept, *Prevention and Health* suggests that policymakers and politicians were starting to conceive of the British public in this way, ahead of its apparent apex in the 1980s. For Emily Robinson and her colleagues, individualism was not 'the result of Thatcher … If anything, it was a cause of Thatcherism'.[15] Personal responsibility and such individualism were elided by *Prevention and Health*. The type of citizen that the document's authors had in mind was a somewhat classless, self-sufficient individual who nonetheless paid attention to and participated in debates about social and political issues, such as the budgetary pressures on the NHS or the rising tide of non-communicable diseases. Surprisingly, Grant's 'active citizenship' neglects to mention health, but this useful conception, in tandem with his historicisation of 'legal' and 'formal citizenship', sheds light on the preventative agenda's expectations of the 'good' citizen, and their role in ensuring that the NHS was still a viable pillar of the welfare state. Finally, and paying due attention to Grant's insistence that citizenship is 'a concept with historically and culturally

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mid-to-late 1970s. Hall PA (1993) "Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain" *Comparative Politics* 25(3): 275-296.

[14] DHSS (1976): 96.

[15] Robinson et al (2017): 303-304.

specific meanings', it is also vital to place prevention in the context of discourse around the NHS going into the 1970s.[16] Alongside its first major reorganisation in 1974, fundamental questions were being asked of the NHS, as illustrated by a widely-viewed television programme marking its twentieth anniversary in 1968, which punningly and provocatively posed the question of whether the British public were getting *Something for Nothing.*[17] While, as shall be demonstrated, debates around preventive health had international salience, it was in the political and social context of Britain that they gained particular traction.

In exploring these issues, this chapter will first detail – with a particular focus on heart disease – the medical, political and policymaking consensus that was built up around prevention in the early 1970s, before closely examining the construction of a discourse around personal responsibility in *Prevention and Health* itself, and finally assessing the success or otherwise of the preventative agenda in engaging the public and achieving Owen's 'basic rethink'.

The chapter uses as its primary sources the Department of Health and Social Security (DHSS) documents surrounding the discussion document and subsequent

[16] Grant M (2016): 1204.
[17] Begley P et al. (eds.), *The 1974 NHS Reorganisation: The Transcript of a Witness Seminar*, held 9 November 2016 at the University of Liverpool in London, published by the Department of Public Health and Policy, University of Liverpool, 2017, https://www.liverpool.ac.uk/media/livacuk/iphs/researchgroups/governanceofhealth/PDF1,-,1974_.pdf, last accessed 11 February 2019; J *Something for Nothing: A Birthday Celebration* (1968). Broadcast 27 June 1968 [TV programme] BBC 1: James Burke http://www.bbc.co.uk/archive/nhs/5157.shtml Last accessed 2 August 2018. See also discussion of this programme and its handling of race in Bivins R (2017) "Picturing Race in the British National Health Service, 1948-1988" *Twentieth Century British History* 28(1): 107-108.

white paper's gestation, publication and dissemination held at The National Archives (TNA), and the unpublished evidence to the House of Commons inquiry, held by The Parliamentary Archives.

'Lip service': creating a consensus around prevention, 1971 - 1975

In delivering a speech to the Royal Society of Health's Congress of 1971, the Chief Medical Officer (CMO) Sir George Godber gave his thoughts on what he viewed as the key challenges for preventative medicine for the rest of the decade.[18] In looking forward, he was also obliged to glance back, noting the longer history of prevention. Godber's speech marked a crossroads, heralding the efforts of Victorian social reformers such as Edwin Chadwick and former CMO John Simon in preventing infectious diseases, while acknowledging that the public health service was facing new challenges. If environmentally-induced diseases such as cholera and typhoid had largely been left behind in the nineteenth century, and in Berridge's words, the 'revolution in high-tech medicine of the 1950s had removed the need to worry about such epidemic incursions: penicillin, the antibiotics would deal with it all', what then were the new frontiers of preventative medicine? [19] As

[18] Godber had been CMO since 1960, and had lent significant support to efforts to highlight the health risks of smoking, such as his role in the Royal College of Physicians' highly influential report on the issue in 1962. For more on Godber, see Sheard S and Donaldson L (2005) *The Nation's Doctor: The Role of the Chief Medical Officer 1855-1998* (Oxford: Radcliffe): 201-204. For more on the report and its legacy, see Berridge V (2007) "Medicine and the Public: The 1962 Report of the Royal College of Physicians and the New Public Health" *Bulletin of the History of Medicine* 81(1): 286–311.

[19] Berridge V (2007) *Marketing Health: Smoking and the Discourse of Public Health in Britain, 1945-2000* (Oxford: Oxford University Press): 209. For a history of Victorian efforts to combat infectious diseases such as cholera and typhoid, see Hardy A (1993) *The Epidemic Streets: Infectious Diseases and the Rise of Preventive Medicine 1856-1900* (Oxford: Clarendon Press).

the research discussed in Chapters One and Two indicated, the public health concerns of post-war Britain were shifting to non-communicable diseases. Lack of physical activity, and the over-abundance of the post-war British diet had been strongly implicated in the rise of 'modern' epidemics such as heart disease, and so naturally Godber believed that making the British public better informed about the consequences of their actions (or inaction) was paramount to prevention in the 1970s. For Godber, there was an urgency to which

> 'preventive medicine must somehow convey its message more effectively to the general public … health education is most needed to persuade people to do or refrain from doing things for themselves for their long term benefit.'[20]

Indeed, Godber's thoughts were reflective of broader 'signs of a change of direction for health education',[21] signalled by the Cohen report in 1962,[22] and the formation of the Health Education Council in 1968.[23] If Godber's overview had included more recent history, he might also have noted his predecessor George Newman's treatise on 'Preventive Medicine',[24] or the the interwar efforts of the

[20] Godber G (1971) "Preventive Medicine in the '70s" *Journal of the Royal Society of Health* 91(4): 171.
[21] Mold A (2017) "'Everybody Likes a Drink. Nobody Likes a Drunk'. Alcohol, Health Education and the Public in 1970s Britain" *Social History of Medicine* 30(3): 617.
[22] Central Health Services Council and Scottish Health Services Council (1964) *Health Education* (London: HMSO).
[23] Sutherland I (1987) *Health Education—Half a Policy, 1968–86: Rise and Fall of the Health Education Council* (Cambridge: NEC Publications).
[24] Newman G (1932) *The Rise of Preventive Medicine* (Oxford: Oxford University Press). For a discussion of Newman's book and attitude towards prevention, see Sheard S and Donaldson L (2005): 93-94. See also Seymour JK (2012) *Citizenship, the State and the Chief*

Central Council for Health Education from 1927 with its 'ideals of morality and citizenship'.[25] Indeed, there would be some continuity with such initiatives within the preventive consensus of the 1970s, but also much that was new. While ideals of citizenship were certainly carried over, they were given a different edge, firstly by an emphasis on personal responsibility, and secondly by the citizen's relationship to the welfare state, which was, as discussed below, in an extended moment of crisis throughout the decade.

In 1972, Jerry Morris gave his own take on Godber's theme in an address at the Royal Society of Medicine. Supplementing the CMO's narrower focus, Morris spoke of 'four principles of attack, four strategies' to prevention in 'a society like ours, its health problems dominated by the "chronic diseases"'.[26] These were: 'The Quality of Medical Care'; 'Early Diagnosis'; 'Protecting the Vulnerable Individual', and finally 'A Healthier Mode of Life'. In terms of protecting the individual, and mindful of the forceful debates on dietrary fat and sugars discussed in Chapter Two, Morris suggested that

> 'One of the malnutritions of affluence is the rising consumption particularly of dairy fat …. Whatever the confused story of

Medical Officer: Sir George Newman and Interwar Health Policy (Unpublished PhD thesis, University of London).

[25] Welshman J (1997) "Bringing Beauty and Brightness to the Back Streets': Health Education and Public Health in England and Wales, 1890-1940" *Health Education Journal* 56(2): 202. See also Blythe M (1987) *A History of the Central Council for Health Education, 1927–1968* (Unpublished DPhil thesis, University of Oxford, Green College).

[26] Morris JN (1973) "Four Cheers for Prevention" *Proceedings of the Royal Society of Medicine* 66: 225-232.

> national diets vis-a-vis coronary disease, to depend more each year on these would make little sense and is quite unlikely to be healthy.'[27]

Acknowledging that manufacturers and industry had a part to play, Morris nonetheless turned his mind to the consumer, arguing that to 'influence the social pattern and prevalent lifestyles and shift norms of behaviour … is far the best way' to address poor diet and low exercise levels. Morris concluded therefore that '[p]revention today is often a matter of individual and family behaviour in a society too often exerting the wrong pressures.'[28]

Later in the decade, Tom Meade, the director of the Medical Research Council's Epidemiology and Medical Care Unit, penned an article in *The Lancet* which encapsulated the abiding concerns of the preventative agenda in the 1970s. Meade developed the themes of Godber and Morris, emphasising the need for better communication and a focus on chronic diseases, but also folding in a third, particularly politically important aspect: the economic imperative to prevent. Observing that in the wake of the 1973 OPEC oil crisis and the ensuing global recession, 'resources have become increasingly stretched over the past few years' and that '[l]ike virtually all health-care systems, the NHS is geared predominantly to a policy of managing established disease', Meade argued it was 'quite simply,

[27] Morris JN (1973): 229.
[28] Ibid.

coping with the wreckage of our failures to prevent'.[29] Drawing on Archie Cochrane's 1972 pamphlet *Effectiveness and Efficiency*[30], Meade noted that while 'the central dilemma for health care at the present time' was not new, he thought its 'intensity' was, throwing out a challenge: 'are we serious about prevention? Are we serious about "trying to turn off the tap"?'[31]

Indeed, given the economic climate, and the solution that it might offer to the problem of ever more finite resources, discussions around prevention could hardly remain limited to public health circles. By this point '[i]n the mid-1970s', as historian Rodney Lowe pointed out, 'the welfare state in Britain was, or at least was widely considered to be, in crisis.'[32] Rudolf Klein suggests that this 'rhetoric of financial crisis rose to a crescendo in the second half of the 1970s' and provided 'background music' to much of the public and political discourse around the NHS during this period.[33] In 1978, the Office of Health Economics summed up the key features of this debate. Firstly, that 'even when adjusted for the falling value of the pound … the NHS costs three times as much as when it was first established'. Secondly, that this increase was particularly acute during this decade, and not matched by macroeconomic performance; NHS costs had 'risen by 39 per cent since 1970, as compared to a 13 per cent growth in Gross National Product.'[34] As

[29] Meade TW (1975) "Our Lives and Hard Times" *The Lancet* 2 (7944): 1053-1054
[30] Cochrane AL (1972) *Effectiveness and Efficiency: Random Reflections on Health Services* (London: Nuffield Provincials Hospital Trust).
[31] Meade TW (1975): 1054.
[32] Lowe R (1999) *The Welfare State in Britain since 1945. Second Edition.* (Basingstoke: Macmillan): 1.
[33] Klein R (2006): 79.
[34] Office of Health Economics (1978) *OHE Briefing: The Cost of the NHS, October 1978*. https://www.ohe.org/publications/cost-nhs Last accessed 19 November 2018.

early as 1972 the Conservative Political Centre (CPC) published a pamphlet by Trevor Weston, a GP known for his occasional appearances on *Women's Hour*, entitled *How is the Health Service?* This made an argument that would be wearily familiar by decade's close: that in an increasingly stretched NHS, more focus was needed on personal, preventative health initiatives, such as health education, early diagnosis and screening.[35] This political intervention also illustrated the shift in attitudes towards prevention that had occurred over the last couple of decades. Whereas in the 1940s and 1950s, and as Chapter One discusses, social medicine, and by extension prevention, had been enthusiastically advanced by figures on the left while viewed suspiciously by conservative elements of the medical establishment, the solution that prevention might hold to the travails of the NHS meant that it was embraced across the political spectrum in the 1970s.

But it was the report penned under the name of the Canadian Minister for Health and Welfare Marc Lalonde, entitled *A New Perspective on the Health of Canadians*,[36] that would provide the impetus for prevention to be seriously investigated in British political and policy circles.[37] Rapidly published as a working paper, the Lalonde report introduced the conceptual framework of the "health field", in which 'human biology, lifestyle, environment and health care

[35] Weston T (1972) *How is the Health Service?* (London: Conservative Political Centre).
[36] Lalonde M (1974) *A New Perspective on the Health of Canadians* (Ottawa: Government of Canada).
[37] For an account of the gestation of the Lalonde report which suggests that the report had none of the extensive consultation of comparable policy documents, see Laframboise H (1990) "Non-Participative Policy Development: The Genesis of 'A New Perspective on the Health of Canadians'" *Journal of Public Health Policy* 11(3): 316-322.

organization'[38] were the four components that influenced health and disease. Drawing on contemporaneous critiques by British epidemiologist and medical historian Thomas McKeown, it 'shattered the conventional belief that healthcare services were the foundation for future improvements in population health.'[39] *A New Perspective* quoted McKeown's contention, based on historical demographic data, that '[p]ast improvement has been due mainly to modification of behaviour and changes in the environment and it is to these same influences that we must look particularly for further advance.'[40] McKeown's controversial argument, that improvements in life expectancy were attributable to factors other than medical care, was heavily contested throughout the late 1960s and early 1970s, but proved highly influential for advocates of prevention.

The Lalonde report also suggested that 'high-risk populations', such as '"candidates for coronaries"', could be identified; 'an obese man who gets little or no exercise, ingests excessive amounts of animal fats, smokes cigarettes, drinks a lot of coffee and works in a high pressure job' was one such example.[41] Using this analysis, *A New Perspective* proposed, alongside complementary regulatory, research, healthcare efficiency and goal-setting strategies, the development of a

[38] Lalonde M (1974): 31.
[39] MacDougall H (2007) "Reinventing Public Health: A New Perspective on the Health of Canadians and Its International Impact" *Journal of Epidemiology and Community Health* 61(11): 956.
[40] Lalonde M (1974): 13, quoted from McKeown T (1972) "An Interpretation of the Modern Rise in Population in Europe" *Population Studies* 27: 345. See also Szreter S (1988) "The Importance of Social Intervention in Britain's Mortality Decline c. 1850–1914: A Reinterpretation of the Role of Public Health" *Social History of Medicine* 1: 1–38 and Szreter S (2002) "Rethinking McKeown: The Relationship Between Public Health and Social Change" *American Journal of Public Health* 92(5): 722-725.
[41] Lalonde M (1974): 39.

health promotion strategy, 'aimed at informing, influencing and assisting both individuals and organizations so that they will accept more responsibility and be more active in matters affecting mental and physical health.'[42]

Godber, writing in 1977, articulated the prevailing contemporary judgement on the Lalonde report, stating that it 'had a worldwide effect in making governments as well as the health professions realize that the promotion of health in future depends more on the pattern of living adopted by the individual than on technical or allied procedures.'[43] However, beneath this apparent clarity of purpose, political theorists have identified the use of the document by different factions that reveal more about the reader than the text. Theodore R. Marmor and Albert Weale have suggested that 'its diverse, and sometimes inconsistent, messages can be picked out and amplified by various self-interested groups to their own advantage.'[44] For example, Robert Evans has noted that the private companies could seize upon the lifestyle aspects for marketing purposes, federal and government bodies could use it to justify increased control over healthcare costs,[45] while more radical critiques suggested the way in which the lifestyle message was adopted meant that structural determinants of health were neglected.[46]

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[42] Lalonde M (1974): 66.
[43] Godber G (1977) "McKeown's "The Role of Medicine": Comments from a Former Chief Medical Officer" *Milbank Memorial Fund Quarterly* 55(3): 373.
[44] Marmor TR and Weale A (2012) "A New Perspective on Health? Learning from Lalonde" in Marmor TR and Klein R *Politics, Health, and Health Care: Selected Essays* (New Haven: Yale): 510-511
[45] Evans R (1982) "A Retrospective on the 'New Perspective'" *Journal of Health Politics, Policy and Law* 7(2): 325-344.
[46] Marmor TR and Weale A (2012): 511.

Indeed, perhaps the principle of prevention, which few could argue with, provided cover for a diverse range of interests throughout the 1970s in the UK. Likewise, both the novel status of the Lalonde report, and its apparent pliability, made it attractive to policymakers across the world. An editorial in *The Lancet* praised *A New Perspective* as a 'radical rethink' after 'no end of lip-service to the cause of prevention', concluding that '[o]thers outside Canada will certainly profit by listening; perhaps they can also join in.'[47]

In England, the recently promoted Minister of State for Health and Social Security David Owen was keen to do just that. Owen, a rare example of a clinically trained health minister,[48] but perhaps more importantly both a forceful personality and political opportunist, had read *A New Perspective* in the summer of 1974 and expressed a desire for the Department of Health and Social Security (DHSS) to produce its own policy discussion document on preventative health.[49] Owen suggested that 'it should deal with fluoridation, smoking, obesity and diet, exercise, screening techniques (particularly genetic) and occupational health'.[50]

Work began in earnest on what would become *Prevention and Health* in February 1975. A retired epidemiologist and former Principal Medical Officer in DHSS, G.

[47] Anon (1975) "Towards Prevention" *The Lancet* 305(7902): 318.
[48] Webster characterises Owen's tenure at DHSS as being "both energetic and innovative", while noting that he "was only the third medically qualified politician to hold a senior ministerial office in the health department since the formation of the Ministry of Health in 1919", Webster C (2002): 67.
[49] JJA Reid, letter to J Brotherston, 7 January 1975 TNA MH 150/829.
[50] JJA Reid, JJA Reid, memorandum to H Yellowlees and P Rogers, 18 October 1974 TNA MH 150/829.

Wynne Griffith was commissioned to write a draft, with a steering committee chaired by the deputy CMO John Reid to review the field and steer the document towards publication. It was agreed that representatives from Scotland, Wales and Northern Ireland health departments would ensure 'a full United Kingdom approach to the subject'.[51] Like *A New Perspective*, 'it was not to be a statement of Government policy; it was to be a consultative document'.[52] At this early stage, its ambitions were modest. It was intended to provoke discussion, but not too much. Clearly with one eye on the excitement that the Lalonde report had produced, the steering group noted that:

> '[i]t would be extremely important to avoid the appearance of announcing a brave new era of prevention, and thereby creating irresistible public pressures; the consultative process would need to be carefully controlled, lest it generate impetus in unproductive directions.'[53]

The early discussions of the working group centred on economic concerns and general principles, but in medical circles, much of the imperative for prevention was concerned with coronary heart disease. It had been frequently used as a prime example by general prevention pieces, such as *A New Perspective* or Morris' "Four Cheers for Prevention", and a spate of research articles and opinion pieces

[51] JJA Reid, letter to T Baird, 10 March 1975 TNA MH 150/829.
[52] AD Johnson and A Yarrow "Minutes of first meeting of the steering committee for the consultative paper on preventive medicine, 25 March 1975" TNA MH 150/829.
[53] AD Johnson and A Yarrow "Minutes of first meeting of the steering committee for the consultative paper on preventive medicine, 25 March 1975" TNA MH 150/829.

continued to appear in the medical press. One of the more influential was penned in 1973 by Richard Turner and Keith Ball (who would play a founding role in the 1980s pressure group Coronary Prevention Group), and promised 'a counter-blast to present inactivity'. Claiming that '[c]riticism and apathy concerning the prevention of coronary heart-disease (C.H.D.) is often based on ignorance of what has already been established', it vigorously argued that '[s]ince complete proof may never be forthcoming, action should be taken now on the basis of strong probability.'[54] After running through the most common risk factors (diet, smoking, physical inactivity, stress), and noting that they were 'not only individually adverse, but cumulative', Turner and Ball proposed that screening for disease in 'symptom-free individuals at high risk' via 'regular health examinations' was the only way to prevent '[p]otentially the greatest epidemic man has faced'. [55] Screening for cervical cancer via the smear test had been introduced by the NHS in 1967, while debates on screening for other conditions centred on technical issues such as the sensitivity and specificity of any proposed tests, as well as the availability of resources.[56] Turner and Ball's proposal suggested that following initial screening, the physician could then provide tailored lifestyle advice to the individual; the authors shrugged off the resource implications of such a comprehensive programme by insisting that

[54] Turner R and Ball K (1973) "Prevention of coronary heart-disease: A counterblast to present inactivity" *The Lancet* 302(7838): 1137–1140.
[55] Ibid.: 1140.
[56] Löwy I (2011) *A Woman's Disease: The History of Cervical Cancer* (Oxford: Oxford University Press), 107–28; Wilson JMG and Jungner G (1968) *Principles and Practice of Screening for Disease. Public Health Papers 34* (Geneva: World Health Organization).

> ‘The cost would be small compared with the saving which would result … in Britain little more than lip-service is being paid to prevention … Far larger sums are being spent on the provision of acute coronary care and facilities for myocardial re-vascularisation than on tackling the problem of preventing the condition ever occurring.’[57]

Ball and Turner proposed a personalised lifestyle approach, using evidence collected from epidemiological studies to calculate the risk of future disease for an individual, based on their behaviours. An editorial in the Lancet the following year however revealed some of the contradictions inherent in this type of programme. Whilst acknowledging the weight of epidemiological evidence that accumulated over the last twenty or so years, it outlined the pitfalls of applying this at an individual level:

> ‘All that is known from epidemiology and group studies which depend on statistical expression of mean differences should be emphasised as representing just that, a mean difference between compared groups. Identification of a susceptible individual has never really been achieved except through a gross averaged assessment of accumulated risk factors … a prediction within a

[57] Turner R and Ball K (1973): 1139-1140.

high risk group on the basis of multiple factors still produces incorrect forecasts more often than correct ones.'[58]

Indeed, the dilemma of whether to take a targeted or universal approach is one that would dog preventative health well into the 1980s, as Chapter Five will reveal with its discussion of Geoffrey Rose's "Sick Individuals and Sick Populations".[59]

Despite this rare exposé of the 'black box'[60] of risk factor epidemiology, *The Lancet* stopped short of condemning an approach that focussed on the individual. While the journal's editorial writers believed the implementation of a screening programme would not be merited, 'we should accept the hotchpotch of hard evidence, suggestion, and faith as our guideline'. Individuals should be given lifestyle advice that was 'reasonable as well as objective', and that in some areas, such instruction could be given with more conviction: 'Smoking is a hazard to health and can be positively discouraged.'[61] The two articles had contrasting views on the credibility of epidemiological evidence, but shared a belief in firstly the intrinsic value of lifestyle advice, and secondly a largely unstated assumption that, if such suggestions were delivered by a credible source, such as a medical professional, that it would be acted upon by members of the public. Such

[58] Anon (1974) "Can I Avoid a Heart Attack?" *The Lancet* 303(7858): 607.
[59] Rose G (1985) "Sick Individuals and Sick Populations" *International Journal of Epidemiology* 14(1): 32-38.
[60] Philosopher Bruno Latour has described how the 'technical aspects of science' are subject to 'black-boxing'. The methods by which scientific knowledge is constructed is no longer visible once the the 'fact' has been established. Latour B (1987) *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge, MA: Harvard University Press): 21.
[61] Anon (1974): 607.

suppositions would underpin much of the political and policy debate around prevention.

Both Ball and Turner were parties to an announcement that would further draw the DHSS steering committee's attention to heart disease. They were members of a joint working party convened between the BCS and RCP that announced its intention to publish a report on the prevention of coronary heart disease at the same time as the proposed DHSS document, in early 1976. This concerned some members of the DHSS group, who worried that 'definitive publications [that] might emanate from different bodies' would compete with their own work. One solution to this problem of primacy was that it be 'printed and circulated in the Health and Social Subjects series … if there was a definite offer to do this I think that it would be accepted'.[62] Such an invitation was never made, but this example illustrates on the one hand the large degree of consensus on principles between the different groups, and on the other the sense of competition that was felt, a consequence of so much overlapping activity on prevention.

Meanwhile, the drafting of the DHSS document continued apace. These drafts, and comments on the work-in-progress from civil servants, reveal the different conceptions of prevention being explored. Griffith defined preventative medicine 'as the application of knowledge with the aim of preventing disease, disability, injury or premature death'. Griffith argued that this was 'everybody's business: not

[62] G Ford, letter to JJA Reid, 10 March 1975 TNA MH 150/829.

only doctors and not only health professionals but the individual member of the public too'.[63] Commentators were largely in agreement with this statement, but felt that it might go further too, asking rhetorically: 'Since what is everyman's business is often no one's responsibility, could responsibility be emphasised?'[64]

While Griffith's conception of prevention was broad and intended to encompass such diverse areas of prevention as accident prevention, infectious disease, unwanted pregnancies and fluoridation of water, some of his civil servant colleagues clearly had in mind the lifestyles of individuals:

> 'I would like to see even more emphasis on the need for a change of social habits in improving health and in particular not to put the onus on Government to seek to change them but make it clear how much it rests on people themselves.'[65]

But if prevention was an individual responsibility, it was also a citizenly duty. Increasing demand for the the NHS as a result of so-called diseases of affluence such as coronary heart disease or lung cancer, was to a certain extent a driving force for the fashion for prevention, particularly from those on the right of politics, as illustrated by the CPC's pamphlet. Aware that it might be politically contentious, nonetheless members of the working party felt it merited exploring:

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[63] GW Griffith "Outline: Draft consultative document on preventive medicine" 27 January 1975 TNA MH 150/829.
[64] EE Simpson, letter to JJA Reid, 4 March 1975 TNA MH 150/829.
[65] P Rogers, letter to JJA Reid, 3 March 1975 TNA MH 150/829.

> 'I have in mind here a discussion of the attitudes and degree of responsibility it is reasonable to expect from the good citizen as a quid pro quo for a 'free' comprehensive Health Service. It brings in such matters as safety on the roads and in sport, drink and driving, family planning as well as some angles on such things as obesity and smoking … This may be a difficult subject, but I should have thought worth tackling.'[66]

The ongoing financial constraints in the NHS added a further dimension, with Griffith arguing that a symbiotic relationship existed between healthcare use and prevention:

> 'Public education should be directed both at inculcating healthy ways of living and at more intelligent use of services; in that way it should be possible to release resources for prevention.'[67]

More sceptical civil servants disagreed, scoffing that

> 'any claim that greater emphasis on preventive medicine would enable us to contain the cost the NHS would be found … to be as fallacious as the Beveridge theory that the demand for Health

[66] FD Beddard, memorandum to JJA Reid, 1 July 1974 TNA MH 150/829.
[67] GW Griffith "Outline: Draft consultative document on preventive medicine" 27 January 1975 TNA MH 150/829.

> Services would flatten out as the nation's health was improved by the Service.'[68]

Similarly optimistically, Reid also saw the 1974 reorganisation of the NHS as a good opportunity, believing that 'the time is now ripe for a gradual reorientation of the Health Service towards prevention'.[69] The restructure had moved the public health service from local government into the NHS, but it was not this development that the working group had in mind.[70] Rather, the creation of Community Health Councils (CHCs), intended to increase patient voice and public participation in NHS decision-making,[71] were seen by Reid as 'a valuable potential opportunity for involving the public in prevention'.[72] Although this opportunity was never exploited, it does point to the vital role that was conceived for the public in prevention:

> 'I think it is crucial to involve both the health professions and the public. Unless we carry the former with us there is unlikely to be much practical outcome from the exercise; and unless the public

[68] CL Bourton, letter to JJA Reid, 14 March 1975 TNA MH 150/829.
[69] JJA Reid, memorandum to H Yellowlees and P Rogers, 18 October 1974 TNA MH 150/829.
[70] Reference to the abolition of the post of Medical Officer of Health in early drafts of the preventative document would cause controversy, with DHSS civil servants asking Griffith to redraft sections so that it did not appear critical of the reorganisation. See, for example, NM Hale, letter to JJA Reid 16 October 1975 TNA MH 154/986.
[71] For a contemporaneous assessment of CHCs, see Klein R and Lewis J (1976) *The Politics of Consumer Representation: A Study of Community Health Councils* (London: Centre for Studies in Social Policy). For a historical assessment of CHCs' activities in the 1970s, see Mold A (2015) *Making the Patient-Consumer: Patient Organisations and Health Consumerism* (Manchester: Manchester University Press): 42-68.
[72] JJA Reid "Preventive medicine" 17 July 1974, TNA MH 150/829.

feel involved, prevention will continue to earn little more than lip service.'[73]

This anxiety about 'lip service' and engaging the public extended to discussions about the intended audience of the document, and were amplified by concerns with Griffith's somewhat ponderous style. One civil servant described it as 'yet another text book' albeit with a 'slightly idiosyncratic point of view',[74] while another complained that 'it is difficult to decide at whom it is directed … It contains the sort of material one tends to find in articles of the "Whither Medicine?" type which appear in medical journals on centenary occasions.'[75] These problems went beyond the lack of punch in the prose, and made it difficult for the working group to imagine how the document could foster discussion among the public, as they warned Reid to 'watch that the final results … really highlight the consultative nature of the document and the areas in which response is particularly required.'[76]

Different models of prevention had been proposed, from individual screening to the involvement of CHCs, and different imperatives drove various actors, from cost containment to halting the coronary heart disease epidemic. What most could agree upon however was that preventative efforts required the public's participation, and that as part of this, the individual needed to take responsibility

[73] JJA Reid, memorandum to H Yellowlees and P Rogers, 18 October 1974 TNA MH 150/829.
[74] DHD Burbridge, letter to JJA Reid, 4 March 1975 TNA MH 150/829.
[75] T Geffen, letter to JJA Reid, 3 March 1975 TNA MH 150/829.
[76] FD Beddard, letter to JJA Reid, 3 March 1975 TNA MH 150/829.

for his or her own health. Enough 'lip service' had been paid to the concept; action was needed.

'Personal responsibility': lifestyle as preventative medicine, 1975 - 1977

Outside of Alexander Fleming House, word was getting around that the DHSS was planning to publish a document on prevention. Two exchanges in the House of Commons in the summer of 1975 prompted Owen to publicly announce the proposed paper. The first, in late June, asked the Secretary of State for Social Services (Barbara Castle) if 'she is satisfied with the proportion of expenditure on the health and social services which is spent on preventive work', to which Owen replied that 'for both humanitarian and economic reasons the Government are anxious that where practicable greater priority should be given to the development of preventive services' and consequently the discussion document would be published the following year.[77] A further question, from Janet Fookes MP two months later, demanded 'a high-level inquiry into the possibility of extending the scope of preventive medicine', stating that 'we have in the past paid too little attention to the old adage about prevention being better than cure'. Owen agreed that 'we pay too much lip service … if there is any responsibility for the lack of action on preventive medicine it probably lies in this House'.[78]

[77] Written Answers (Commons): Social Services "Preventive Work" (HC Deb 30 June 1975 vol 894 cc277-8W).
[78] Commons Sitting: Social Services "Preventive Medicine" HC Deb 05 August 1975 vol 897 cc215-6.

Evidently, MPs on both sides of the House saw this as a challenge. Within a couple of months, and apparently prompted by Owen's statement, a parliamentary inquiry had been initiated on preventative medicine, led by the Social Services and Employment Sub-Committee of the Expenditure Committee. This meant that there were now three separate reports on prevention being compiled simultaneously; the sub-committee's inquiry, the DHSS discussion document, and the BCS/ RCP report on heart disease.

If in retrospect all this activity might appear to be a duplication of effort, similar thoughts were voiced at the time.[79] Nonetheless, the process by which the House of Commons sub-committee reached their conclusions was distinct. As a parliamentary inquiry, views were actively sought from the health professions, experts and academics, industry, civil society and the public themselves. The sub-committee held 23 oral evidence sessions, and included over a hundred pieces of written evidence in their deliberations. Exploring some of this evidence provides a wider perspective on views of prevention than that in the drafting of the DHSS discussion document, which may only reflect those of policymaking elites. Although memoranda were received from organisations as diverse as the Scottish Whisky Association and the Family Planning Association, this discussion concentrates on evidence pertaining to heart disease and its risk factors, such as smoking, diet and exercise.

[79] The British Medical Association wrote to the secretariat of the sub-committee asking 'In view of the conflict of time-tabling, could you please tell me the relationship of the document by Dr. Owen to the work of your Sub-Committee … Are these two separate and unrelated exercises, or have they a connection?' AJG Dickens, letter to A Milner-Barry, Parliamentary Archives HC/CP/5017.

An eight-strong delegation from the British Medical Association (BMA) provided oral evidence in May 1976. The memorandum the BMA submitted before this appearance was a curious mix of futuristic and reactionary rhetoric. On the one hand it referenced Alvin Toffler's *Future Shock*[80] to support their assertion that 'the pace of change within the human race is undoubtedly accelerating at a faster and faster rate' and that consequently individuals had to 'make more adjustments throughout his life either than his father or still more his grandfather'. It railed against the pernicious influence of corporate interests, and in particular the tobacco industry, in distorting public health priorities. But a few paragraphs later however, the BMA were suggesting that despite this environment, 'education should be directed … towards increasing the individual's own sense of responsibility for health.' It followed this with a quite astonishing section, suggesting that unhealthy persons might be made to feel more than mere responsibility:

> 'There is at present no stigma attaching to an admission of medically confirmed ill health, although such ill health may be nothing more than a disguised manifestation of inadequacy. No one willingly admits that they have failed to achieve their social ambitions or to be successful in their career. If ill-health were to

[80] Published in 1970, Toffler's international best-seller made the argument that in the rapid technological advancement of "developed" post-industrial economies, people were left disorientated and disconnected from the society around them. Toffler A (1970) *Future Shock* (London: Bodley Head).

> be regarded in the same light as social or economic inadequacy it could no longer be excused as being an unavoidable consequence of external and uncontrollable events.'[81]

Unsurprisingly, the BMA's representatives were quizzed on whether they thought that it 'is the way we live that is really the main cause of the diseases that afflict us, and our behaviour is responsible'. The BMA affirmed that this was indeed their position.[82]

The extent to which such views were shared by other representatives of the medical profession is not altogether clear. The RCP, concentrated their evidence on the then hot topic of fluoridation and dental decay,[83] while the Society of Community Medicine, a small body representing some thousand community physicians, took a diametrically opposed view to the BMA. They argued that

> 'Whilst the importance of adequate exercise, a suitable diet, and avoidance of cigarette smoking in minimising risk of coronary thrombosis are all well known, the Society of Community Medicine has the impression that educational campaigns fail to

[81] Expenditure Committee (1977c) *First Report from the Expenditure Committee together with the Minutes of Evidence taken before the Social Services and Employment Sub-Committee in Sessions 1975-76 and 1976-77, Appendices and Index. Preventive Medicine. Volume III. Minutes of evidence 5th May-15th July 1976, appendices and index* (London: HMSO): 581.
[82] Expenditure Committee (1977c): 581-582.
[83] O'Hara G (2017) *The Politics of Water in Post-War Britain* (London: Palgrave Macmillan): 215-247.

> persuade more than a minority of individuals to alter their way of life.'[84]

Oddly, Alexander "Sandy" Macara, a public health lecturer at Bristol University who would go on to be chair of council for the BMA in the 1990s, gave evidence on behalf of both the BMA and the Socety of Community Medicine. While this may reveal no more than the conflict of interests of one man, it might also reflect the prevailing tensions in medical and public health circles. A conviction that the individual was largely responsible for his or her own ill health was countered by a scepticism that health education messages could compensate for the wider influences at play in post-industrial societies. Or, as Macara suggested, in expressing his own ambivalence toward health education and how out of step that might be with broader social mores, 'the whole trend in behavioural patterns in society in the last ten or twenty years has been antagonistic to the sort of message which we should wish to convey'.[85]

This assessment was echoed by some of the experts and academics that the inquiry called upon. John Yudkin, while giving evidence primarily on his particular interest in sugar and its putative link to heart disease, noted that 'experience with cigarette smoking has demonstrated that giving people information does not necessarily produce changes in behaviour.'[86] John Butterfield, a leading authority on diabetes,

[84] Expenditure Committee (1977c): 748.
[85] Expenditure Committee (1977c): 755.
[86] Expenditure Committee (1977b) *First Report from the Expenditure Committee together with the Minutes of Evidence taken before the Social Services and Employment Sub-*

disagreed with most of the particulars of Yudkin's evidence, but shared his views on health education and its limited role in affecting individual behaviour.[87] Representatives from the London School of Hygiene and Tropical Medicine (LSHTM), while condemning much health education as 'conventional propaganda from governmental sources', gave a qualified endorsement of 'major community developments with emphasis on group action and mutual support, if we are to alter prevailing norms of behaviour'.[88]

What of the 'very powerful commercial interests'[89] that had been identified by the BMA as militating against effective health education campaigns? While many witnesses who worked in public health had criticised elements of the food and tobacco industries, evidence provided by individuals representing such corporate interests demonstrated a more complicated and conflicted relationship between the two factions. For example, the Tobacco Research Council revealed that they continued to provide funding for a number of epidemiological studies, including the Whitehall study of civil servants led by Donald Reid, who had provided evidence to the inquiry on behalf of LSHTM.[90] Alongside providing funding for such research activities, corporations were also keen to use epidemiological data to bolster their own arguments regarding prevention, especially when it might dovetail with the promotion of their products. The manufacturers of Flora

Committee in Sessions 1975-76 and 1976-77, Appendices and Index. Preventive Medicine. Volume II. Minutes of Evidence 10th December 1975-28th April 1976 (London: HMSO): 336.
[87] Expenditure Committee (1977b): 473-475.
[88] Expenditure Committee (1977b): 505.
[89] Expenditure Committee (1977c): 580.
[90] Expenditure Committee (1977c): 805.

margarine, van den Berghs and Juergens Limited, repeatedly lobbied the inquiry and ministers more widely to endorse poly-unsaturated fats, as well as noting that Jerry Morris, in giving evidence, had mentioned their product by name.[91] Other food industry bodies, such as the National Dairy Council, highlighted uncertainty in the research literature to try to prevent the committee forming adverse opinions about milk, butter, and its potential link to coronary heart disease.[92] Finally, the John Lewis Partnership highlighted the preventative work they were conducting with their employees, offering screening for cardiovascular disease, and fitness campaigns for staff, a model that would be adopted as part of the *Look After Your Heart* campaign in the 1980s.[93]

The response from wider civil society was muted. For example, the British Heart Foundation (BHF) were extremely brief in their response. Noting that 'much has been said and written on [lifestyle] which is still under investigation', they merely enclosed Morris et al's 1973 article reporting on the Social Medicine Research Unit's recent cohort study of civil servant's physical activity in leisure time.[94] Interest from the wider public was also limited. While one correspondent was 'extremely concerned' about the 'possibility of introducing measures to further control the freedom of the individual in his drinking, smoking and physical habits',

[91] GI Grant, letter to A Milner-Barry, n.d. (probably February 1976), Parliamentary Archives HC/CP/5079.
[92] National Dairy Council (1976) "The controversy regarding the relationship between fats and heart disease" Parliamentary Archives HC/CP/5059.
[93] WM Dixon, letter to A Milner-Barry, 2 January 1976 Parliamentary Archives HC/CP/5046.
[94] EBW Cardiff, letter to A Milner-Barry, 16 January 1976 HC/CP/5016. The paper the BHF enclosed was Morris et al (1973) "Vigorous Exercise in Leisure-Time and the Incidence of Coronary Heart Disease" *The Lancet* 301(7799): 333-339.

there is little evidence that many of his 'fellow citizens' joined his petition for the Committee to 'give us back our England'.[95]

What all this evidence reveals is the cleavages between the DHSS view on prevention, and the wider discourse. There was widespread agreement that prevention should be pursued, both as a general principle for a hard-pressed health service, and as the means under which any number of interests could pursue their own ends. There was also consensus that the lifestyle of individuals needed to be changed as a crucial element of the preventative agenda, but how this would be achieved was open to interpretation. The DHSS position lagged somewhat behind broader expert opinion. While officials were keen on health education, a small but significant tranche of experts already saw it as a busted flush that would only make a difference to a few individuals. Communicating to the public that it was better for their health to not smoke, drink less, eat healthily and exercise more was a long way from people actually taking action. Indeed, at a meeting of the Chief Scientists Research Committee, Morris had asked whether the discussion document 'should not be more interested in behaviour change rather than education … He pointed out the need to change climates of opinion … [and] that this involved many matters which are not the prerogative of health departments, for example taxation, advertising and so on.'[96]

[95] TKH Priestnall, letter to A Milner-Barry, 4 January 1977 Parliamentary Archives HC/CP/5092.
[96] A Yarrow, letter to GW Griffiths, 30 April 1975 TNA MH 150/829.

While the House of Commons inquiry continued its deliberations, both the DHSS and the BCS/ RCP working groups published their missives. *Prevention and health: Everybody's Business* was the first out, published on 16 March 1976. Its publication was trailed by an interview with Owen, in which he linked the document with another consultative document shortly to be released by DHSS, on *Priorities for Health and Social Services in England*.[97] Again, Owen tied the prevention agenda into the financial pressures on the NHS, and that

> 'community health councils could be very important in orienting people towards a philosophy that health is not just something that is provided by the NHS, but that each individual has responsibility for his own wellbeing.'[98]

Prevention and Health had over the course of a couple of years' gestation gone through a number of iterations, not the least of which was a rewrite by a professional journalist. Indeed, the presentation of the document was considered as important as the content in drawing the public's attention to it: 'it should have an eye catching and glossy cover (but not appear to be extravagantly printed'.[99] Even the colour of the cover merited debate, with Owen personally suggesting that it should have a red cover to distinguish it from an usual government "green"

[97] DHSS (1976b) *Priorities for Health and Personal Social Services in England* (London: HMSO).
[98] Hodgkinson N (1976) "Change in Attitude to NHS Sought" *The Times* Monday 9 February 59623: 1.
[99] Anon, "Note of a meeting with Minister of State (Health) on 9 July 1975 to discuss the consultative document on preventive medicine", n.d. TNA MH 150/830.

consultative paper, and so 'blur its status'[100]. The booklet was sold through government bookshops to the general public, and even the retail price of the document had been considered; 'a priced document will attract more interest and prestige and … would be more widely available than a Departmental document.'[101] Unfortunately, hopes for widespread media coverage that would excite a nationwide conversation about *Prevention and Health* were scuppered by wider political events, with Harold Wilson announcing his resignation as Prime Minister on the same day.[102]

As for its message, what would be come known as the 'red book' offered a brief history lesson, outlining the successes of the prevention and near eradication of much infectious disease, before turning to '[s]ome problems of today and tomorrow'. It noted the major causes of mortality to be 'heart disease, cancer and stroke, in that order', and warned that 'affluence is not an unqualified boon … it has opened the door to [diseases] arising, for instance, from unwise behaviour and over-indulgence in one form or another'[103]. It outlined two contrasting philosophies ('Some would put the emphasis on the role of the individual… others would say that the Government should impose more control or do more to educate and persuade the public')[104] before making clear which side *Prevention and Health*

[100] AD Bacon, letter to Hodgetts, 4 November 1974 TNA MH 148/691.
[101] A Yarrow and EL Mayston "Consultative document on prevention – distribution arrangements" 5 December 1975 TNA MH 154/986.
[102] R Myers, hand-written note, 3 August 1976 TNA MH 148/1166.
[103] DHSS (1976a): 31.
[104] DHSS (1976a): 92-93.

came down on: 'today, prevention depends on the attitude of the individual to his own lifestyle'.[105]

The reasons why the document was so strong on personal responsibility are worth disentangling. Perhaps partly it can be explained by the desire to produce a document that would be 'reasonably controversial in order to enlist the attention of outside readers in the subject of prevention generally'.[106] While this is plausible, the extent to which the document was steered by the views of Owen is apparent from his personal reflections in *In Sickness and In Health: The Politics of Medicine*, published in the same year:

> '[*Prevention and Health*] has the object of changing public attitudes so that the National Health Service is not seen as the sole provider of health in this country, but that each of us should develop a responsibility for our own health … We live in a free society where people can do what they like to themselves, but individuals cannot abdicate from their responsibility for their own health … The public puts considerable pressure on doctors to provide health to order while consciously abusing its own health.'[107]

[105] DHSS (1976a): 95.
[106] NM Hale "Draft of consultative document on preventive medicine" 17 November 1975 TNA MH 154/986.
[107] Owen D (1976) *In Sickness and In Health: The Politics of Medicine* (London: Quartet Books): 114-115.

Owen's views were to a certain extent reflective of the wider medical profession as evidenced by the BMA's memorandum to the parliamentary inquiry. A note by the civil servants drafting *Prevention and Health* also suggests that they were conscious of a broader consensus on the individual's role in prevention:

> 'The general philosophy of personal responsibility will be attacked by those who believe that the fault always lies with the "system" or by those who would blame their genes for everything … But I would remind you that other commentators have suggested we emphasise the personal responsibility angle even more than we do.'[108]

Prevention of Coronary Heart Disease emerged a fortnight later. The BCS/ RCP joint working group largely held to what had become the orthodox position on prevention. Noting the 'multifactorial concept of risk', it argued that there was 'considerable evidence that the causes of CHD … are rooted in the modern, affluent way of life'.[109] Its recommendations concentrated on diet, smoking and exercise; despite Turner and Ball's presence on the group, mass screening for heart disease fell by the wayside. To achieve these recommendations, the document considered that a 'comprehensive public and professional educational programme will be

[108] Anon "Observations on the general comments" n.d. probably October 1975 TNA MH 154/987
[109] Royal College of Physicians and British Cardiac Society (1976): 2.

needed, together with the involvement and co-operation of food manufacturers, educational authorities and the mass media'.[110]

If these positions seemed to chime almost perfectly with *Prevention and Health*, such suspicions were confirmed by Gerry Shaper, the chair of the working party, telling *The Times* that 'Prevention is now everybody's business'.[111] Furthermore, the report was circulated to all doctors, with a covering note by the CMO, commending its recommendations to their attention.

Both *Prevention and Health* and *Prevention of coronary heart disease* had placed personal responsibility and lifestyle at the heart of their messaging on preventative health. Both marked the point at which lifestyle became embedded in government health policy. The importance of engaging the public, and educating them to smoke less, exercise more and eat more healthily, was strongly emphasised. But although this consensus had been reached, it had yet to be effectively communicated. The following section explores the responses to *Prevention and Health*, and argues that it was this engagement with the public that represented the limits of the preventive agenda.

[110] Royal College of Physicians and British Cardiac Society (1976): 4.
[111] Hodgkinson N (1976) "Ministry Circulates Guide on Avoiding Heart Disease." *The Times* Thursday 8 April 59674:1. Throughout the production of *Prevention and Health* there had been an ongoing dialogue between the BCS/ RCP working party and DHSS officials. For example G Ford, letter to A Yarrow, 15 July 1975 TNA MH 150/830.

‘A publicity exercise’: engaging the public, 1977 - 1978

The DHSS had intended to start a conversation about prevention, and to that end organised a symposium to discuss *Prevention and Health* held at Imperial College London in July 1976. Unsurprisingly, the tone was largely consensual, with Owen giving the opening address and Norman Hale from DHSS presenting evidence that he claimed meant that *Prevention and Health* was ‘starting to achieve its initial object of re-kindling a nationwide interest in prevention’.[112] Despite its poor initial press coverage, the DHSS had been broadly pleased with the response to the document, noting that many of the professional bodies, including the BMA, Royal College of General Practitioners, Health Education Council and Faculty of Community Medicine had given it ‘an enthusiastic reception’[113]. Morris however, in an address that otherwise argued the ‘case for prevention’ sounded a rare note of dissent, noting that

> ‘Today’s emphasis on personal responsibility for health, on the need for the individual to alter his style of life, is right and necessary and represents a real and major shift. But it is only half the story, and I wonder if we are getting the balance right.’[114]

[112] DHSS (1977b) *Prevention and Health: Everybody's Business. Symposium on 'Involvement in Prevention', 22 July 1976, Imperial College, London : Report of Proceedings* (London: HMSO): 10.
[113] Anon “Strategy on prevention: Note for Secretary of State” n.d. (probably February 1976), TNA MH 148/691.
[114] DHSS (1977b): 7.

Others were starting to ask the same question. The House of Commons sub-committee had completed its inquiry in April 1977, and published what the *British Medical Journal (BMJ)* described as "a concise and uncompromising report'[115]. Underplaying the personal responsibility narrative of *Prevention and Health*, it was determined to tell the other side of the story, recommending much more government action. The report made 58 recommendations, many of which would prove to be prescient of later developments in public health policy, ranging from suggestions that proportions of saturated and polyunsaturated fats be included on food labelling, to a call for a ban on smoking in public places. Very few concerned the behaviour of individuals, twelve concerned health education, and the majority concerned administrative, legislative or fiscal steps that the government should take. The report was also much taken with the issue of finance. While *Prevention and Health* had vaguely suggested that prevention might help with the parlous finances of the health service, the inquiry's report recommended cutting high technology medicine to pay for, as one example, health education on heart disease. [116]

As a parliamentary inquiry, the government was obliged to react in the form of a command (or White) paper. Ministerial responsibility for this response had also switched to the new Secretary of State, David Ennals. Civil servants checked off each of the recommendations, recording whether the DHSS accepted each one, or not. But beyond this painstaking exercise, they also wished to defend the stance

[115] Anon (1977) "Prevention Priorities" *BMJ* 1(1283): 989.
[116] Expenditure Committee (1977a): 304-309.

adopted in *Prevention and Health*. It is at this point that some of the contradictions of the preventative consensus built up throughout the 1970s became most apparent. Civil servants had fretted about how without further government action, and the partnership of the public in prevention, *Prevention and Health* would amount to little more than 'a publicity exercise'.[117] The model of prevention that had been built since the beginning of the decade had been predicated upon the lifestyle causes of chronic disease, which involved individuals taking more responsibility for their own health. But if the public could not be persuaded, where did that leave prevention? The "red book" had sold well, earning a fourth reprint and 80,000 copies disseminated in six months.[118] Despite this public interest and its status as a consultative document, there was no formal mechanism however to involve the public. As the parliamentary inquiry had found, those members of the public that did respond unprompted tended to be on the fringes of mainstream opinion. The government could continue to bang the drum for prevention, but without the participation of the public in either word or action, it was an empty sound. The boundaries of the preventative consensus had been reached.

If there were questions about the means of prevention, there was also scepticism about the methods. A growing disquiet about the merits of health education had been developing as an undercurrent throughout the parliamentary inquiry by

[117] EL Marston, letter to Cornish, 6 February 1977 TNA MH 148/691.
[118] Geddes D (1976) "£600,000 for Family Planning" *The Times* Wednesday 20 October 59839: 4.

witnesses such as the Society of Community Medicine, Yudkin and LSHTM. Owen himself wondered at its merits:

> 'People generally recognise the ill effects of sloth, gluttony and intemperance and would like to be fitter, but they do little about it. Health education to the community and counselling of the individual on many of these subjects are relatively ineffective. To give a concrete illustration, surveys carried out on behalf of the Health Education Council have shown that over 95 per cent of young people are now aware that cigarette smoking causes lung cancer, yet the change in behaviour, implied by this knowledge, has been slight.'[119]

This was a strange admission from a minister that had just authorised the publication of *Prevention and Health*, but it does however amply illustrate the dichotomy at the heart of this concept of prevention. Individuals' lifestyles were considered responsible for the proliferation of chronic diseases, but health education was, in many people's estimation, more or less futile.

Despite this growing atmosphere of scepticism, the command paper itself sought to reframe the debate around health education, with the accompanying press

[119] Owen D (1976): 105.

release self-reflexively stating that 'too often the message … is "don't"'[120]. This represented a subtle shift away from the "red book". A more permissive narrative was provided, highlighting the positive aspects of a healthy lifestyle. Rather than the government telling the individual that they should change their behaviour, it reimagined this personal responsibility as 'positive steps for healthy living'[121]. But it had little new to report in policy terms, a mere 18 months after the publication of the "red book". Instead, it trailed forthcoming booklets in the *Prevention and Health* series, on pregnancy and childbirth, occupational health services, and diet. Most contentiously, it rejected the inquiry's recommendations on reallocating more funding to prevention.[122]

The White paper received a poor hearing in the press. Ennals had privately expressed anxieties that the document was 'too vague on food, diet and exercise', and that it should 'have something stronger to say' on smoking.[123] Those fears were realised by the *BMJ*, which lambasted the document as 'chicken-hearted'. 'For the last two years' it complained

> 'the DHSS has been singing the praises of a preventive approach to health, and the stream of exhortations, warnings, and advice

[120] DHSS press release "White Paper on 'Prevention and Health': government re-commitment to priority for prevention", 15 December 1977 TNA BS 6/2828.
[121] DHSS (1977a): 39.
[122] DHSS (1977a): 76-80.
[123] M Moodie, memo to Benner, 3 October 1977 TNA MH 148/691.

seems never-ending: yet in terms of positive action the Government has done virtually nothing.'[124]

Even the Journal of the Royal Society of Health, a much gentler periodical, was no kinder. 'It is tempting to apply … the schoolmaster's comment "This boy thinks. When will he act?"' it mused, before concluding that a 'bolder approach to prevention would have been appreciated'.[125]

Although these reviews expressed frustration at government inaction, and a scepticism about the merits of health education, the DHSS were neither persuaded to increase their activities nor abandon the programme they had started. Two of the follow-up booklets to *Prevention and Health*, of which there were ultimately half-a-dozen, concerned heart disease. Both demonstrate the consensus on prevention to be fractured, but not entirely broken. Again, its limits were the public with whom the booklets tried to communicate.

Eating for Health was the first, concerned with diet and nutrition. Like its parent publication *Prevention and Health*, the document struggled to imagine its audience, or indeed its purpose. Intended as 'simple intelligible-to-the-layman guidance' both to the general populace and 'particular groups of the population and circumstances',[126] a retired lecturer in nutrition from LSHTM, T.P. Eddy was

[124] Anon (1977) "Targets for Prevention" *BMJ* 2(6103): 1621.
[125] Anon (1978) "Prevention and Health" *Royal Society of Health Journal* 98(2): 1.
[126] JB Sharp, letter to SJ Darke and A Yarrow, 12 August 1977 TNA MH 148/1429.

commissioned to write it. Civil servants agreed that there was a 'need for sound official advice … in view of various "rogue" articles at present being circulated', but wary of becoming embroiled in the continuing controversy concerning nutrition and heart disease, it was felt that 'in view of our ignorance, the less detail about diet and disease the better'.[127]

But the pitfalls of such a general and unfocussed approach became quickly apparent. One commentator registered their dislike of the term 'balanced diet', arguing that it had become 'a cliché'.[128] Another agreed, arguing that 'a completely different approach' was needed; that the 'main public concern regarding food is the cost'.[129] The section on heart disease and diet needed to be rewritten to address the 'confusion in the public and professional minds'.[130] As a further safeguard, the drafting group sought advice from COMA, and explicitly mentioned their contribution to the report in the press release to give Ennals 'shelter' should he be questioned too closely on 'how he gets his hard facts'.[131]

Eating for Health emerged then as a product of a increasingly untenable consensus, a timid document that in trying not to offend, appealed to no-one. The contradictions of *Prevention and Health* were repackaged, with Ennals telling the press that 'it is not the job of Government to tell people what to eat' but that it should 'make sure that people know what is good for their health and what is not'.

[127] PD Whiteman, letter to SJ Darke 24 May 1977 TNA MH 148/1429.
[128] SJ Darke, letter to WG Burgess February 1977 TNA MH 148/1429.
[129] MM Disselduff, letter to WG Burgess 7 March 1977 TNA MH 148/1429.
[130] SJ Darke, letter to TP Eddy 16 January 1978 TNA MH 148/1429.
[131] B Abel-Smith, letter to A Yarrow 12 September 1978 MH 148/1431.

In other words, it was not the government's role to take action, but to provide advice to individuals. The limits of this approach were even underlined in Ennals' briefing; the message of health education might be 'pretty obvious [but] not everyone puts into practice what is widely known'.[132]

Like *Prevention and Health*, it discussed risk factors and diseases of affluence, but was markedly more cautious in its debating the role of the individual, especially with regards to heart disease. 'So little is known about cause of the disease', it argued, 'that confident prediction about any individual is not possible … only for cigarette smoking can it be said with certainty that to give up smoking reduces the risk.'[133]

Jerry Morris had been commissioned to write the booklet on heart disease in 1977, but it did not appear until after the Conservative election victory of 1979.[134] *Avoiding Heart Attacks*, eventually published in 1981, was interesting less for its content, which was familiar in terms of terms of its discussion of risk factors, diseases of affluence, and so on, but rather the degree of continuity it demonstrated between political administrations. Popular memory, and to a certain extent historians, have characterised health policy between the Labour and Thatcher governments as being distinct, with the publication of the Black report on

[132] B Abel-Smith, "Statement form Mr Ennals on 'Eating for Health'", 12 September 1978 TNA MH 148/1431.
[133] DHSS (1978): 69.
[134] EL Mayston, letter to JB Sharp 12 December 1977 TNA MH 148/1430.

health inequalities as the definitive break.[135] *Avoiding Heart Attacks*, while admittedly a minor example and the last in the *Prevention and Health* booklet series, demonstrated that at least on the issue of lifestyle public health, there was stability. This continuity was extended, as the following chapter will discuss, with the health promotion campaign *Look After Your Heart* later in the decade. Furthermore, it illustrates that despite reservations, influential actors in public health such as Morris were still prepared to endorse the consensus position on prevention, as an issue of individual lifestyles.

In the DHSS' attempts to communicate and publicise their preventative agenda, the limits of the consensus were exposed. Without the participation of the public, and with growing concern about the efficacy of health education, prevention was indeed in danger of becoming little more than a 'publicity exercise'.

Conclusion

Prevention as a paradigm was developed in the early 1970s, as a response to epidemiological studies that had highlighted smoking, diet and physical inactivity as risk factors for chronic disease, especially heart disease. This reaction was catalysed by the financial pressures the health service was experiencing, the 1974 reorganisation of the NHS, and international interest in the Lalonde report. Such widespread interest resulted in three different but contemporaneous reports on

[135] Berridge V (ed.) (2002) "The Black Report and The Health Divide" *Contemporary British History* 16(3): 131-172.

prevention in 1976 and 1977. All three emphasised, to varying degrees, personal responsibility and lifestyle as important tenets of prevention.

The preventive consensus also arrived at a key moment in modern British history, as the 'classic welfare state' envisioned by Beveridge and the post-war generation gave way to a more amorphous structure, and the era of social democracy slowly mutated into the neoliberalism of the 1980s and 1990s.[136] That the preventive consensus should emerge during this decade was more than coincidental. The new conception of lifestyle as prevention – an individualised, scientifically rational set of behaviours – encapsulated this hinge between social democracy and neoliberalism. It was on the one hand 'everybody's business', a collective citizenly practice, a *quid pro quo* for the continuing existence of a NHS free at the point of use, as the founders of the welfare state had imagined it. On the other, it was also a matter of personal responsibility, with the onus for health cast on to the individual rather than the state. The principles of prevention therefore achieved buy-in from a diverse range of political positions, but its contradictions also rapidly became apparent, and would be ever more so in the next decade. Prominent figures such as Morris were keen to endorse prevention during the 1970s, but by the following decade those on the left had once more renewed their interest in structural and materialist explanations for health, typified by the health inequalities research discussed in Chapter Five. Meanwhile, as suggested above, though Conservative

[136] For a discussion of the 'classic welfare state', from 1945 until its apparent demise in 1975, see Lowe (1999): 67-300, and particularly 167-197 on the NHS. For a broad survey of Britain's path from social democracy to neo-liberalism, see Vernon J (2017) *Modern Britain, 1750 to the Present* (Cambridge: Cambridge University Press): 476–516.

public health policy in the 1980s can be viewed as a continuation of the preventive consensus, it was also robustly criticised by those on the left as the shortcomings of health education were exposed, as Chapter Four explores. In other words, this chapter suggests that the preventive consensus of the 1970s was a shortly lived phenomenon, that arguably could only have occurred in the political, economic and ideological upheaval of that decade.

This consensus on prevention can also be viewed in the context of an emerging revisionist historiography of the 1970s which has argued that popular individualism was an important precondition for the Thatcher years, rather than the result of her premiership.[137] *Prevention and Health* demonstrates that 'the cult of individual responsibility' did not start with Thatcher or the New Right.[138] Rather, Owen and the DHSS had attempted to embed an individualised, lifestyle approach to public health policy that was sustained by the succeeding Conservative administration. Follow-up booklets on *Prevention and Health*, on topics such as diet, alcohol, and avoiding heart attacks, continued into the early years of the 1980s.[139] In highlighting personal responsibility, and later, the slightly shifted focus to the positive aspects of a healthy lifestyle, the prevention agenda articulated by *Prevention and Health* can potentially be seen as governmental attempts, albeit

[137] Robinson E et al (2017). See also Black L and Pemberton H (2013) "The Benighted Decade? Reassessing the 1970s" in Black L, Pemberton H and Thane P (eds) *Reassessing 1970s Britain* (Manchester: Manchester University Press).
[138] See citing and discussion of sociologist Harriet Bradley in Robinson et al (2017): 8.
[139] DHSS (1978) *Prevention and Health: Eating for Health*, (London: HMSO); DHSS (1981) *Prevention and Health: Drinking Sensibly* (London: HMSO); DHSS (1981) *Prevention and Health: Avoiding Heart Attacks* (London: HMSO). For a discussion of *Drinking Sensibly*, see Mold (2017): 631-634.

clumsy, to harness popular individualism. Furthermore, it reveals that advocates of these preventative strategies viewed the public in such terms too: as a group of autonomous individuals, free to change their lifestyle regardless of structural or socioeconomic factors.

The document sought to speak to the British public as individuals, but also as a homogenous group ('everybody's business'). Such ideas about the British public might be viewed in retrospect as naïve, but was perhaps reflective of the document's broader thrust, which not only sought to indiscriminately address a British public, but also, despite its status as a consultative document, did not encourage or even seriously anticipate them speaking back. Little agency was afforded the British public. The consultative process was so 'carefully controlled' that it was practically non-existant, with the fear of 'creating irresistible public pressures' never close to being realised. Therefore the public were imagined as willing receptacles for lifestyle advice, but also as excitable, ignorant and ill-informed. Essentially the preventive consensus was that if only the public knew better, they would change their behaviour. To ask them their views, or reasons for their lifestyle, risked 'generat[ing] impetus in unproductive directions'. This paternalistic, condescending approach sat at odds with the mood of the age and its scepticism towards medicine more broadly, for example the popularity of Ivan Illich's *Medical Nemesis*.[140] Furthermore, such an attitude jarred with the nods towards popular individualism found elsewhere in *Prevention and Health*.

[140] Illich I (1975) *Medical Nemesis: The Expropriation of Health* (London : Calder & Boyars).

The contradictions and conservatism of such an approach were rapidly exposed. Without any formal mechanism to engage the public, *Prevention and Health* was arguably no more than a publicity exercise. By the end of the decade, Owen's 'basic rethink' had curdled into follow-up booklets offering diffident advice. An unwillingness to reallocate resources from conventional, curative medicine meant that the preventative agenda was long on words and short on action. Health education, as the proposed means of communicating prevention to the public, was subject to increasing scrutiny, and in some critics' eyes, already found to be wanting. The limits of the preventative consensus had been found with the public. 'Everybody's business', to paraphrase one participant at the *Prevention and Health* symposium, all too easily became 'nobody's business'.[141]

The response to this impasse was found in the following decade, and discussed in the following chapter, which centres on the *Look After Your Heart* campaign, memorably launched in 1987 by Conservative junior health minister Edwina Currie riding an exercise bike. Health education and promotion efforts were ramped up, and consideration given to who such activities were targeted at, and how. Although there was no direct linkage between *Prevention and Health* and *Look After Your Heart*, the campaign evolved from the *Look After Yourself* programme which had begun to be developed following the publication of the 'red book' in 1978.[142]

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[141] DHSS (1977b): 16.

[142] For a discussion of *Look After Yourself* and its attendant visual culture, see Hand J (2014) *Visualising Food as a Modern Medicine: Gender, the Body and Health Education in Britain, 1940-1992* (Unpublished PhD thesis, University of Warwick): 210-224.

Furthermore, *LAYH* was predicated on many of the same beliefs and epistemologies expressed in *Prevention and Health*, contending that the prevention of heart disease was dependent on the British public changing their lifestyle. Despite this continuity however, there were also many novel features of *LAYH*, not only its use of the mass-media, but its consideration of the public who it was addressing. Unlike in *Prevention and Health*, attempts were made to communicate with different publics according to their socioeconomic status, gender, and geographic location. Crucially, the public were also allowed to speak back. Advertising campaigns were tested with focus groups, monitored and evaluated carefully for reach and impact. The public were also present in much of the content too, as the material self-reflexively anticipated some of the reasons why people might be resistant to lifestyle messaging. More broadly, the voice of the public on heart disease and lifestyle was heard, particularly through the medium of television. In these ways, and others, the following chapter argues that in spite of *Prevention and Health*'s stilting efforts in the 1970s, it was the following decade when heart disease and lifestyle truly reached the British public.

Chapter Four: 'Before you break my heart': Heart disease, health promotion and the armchair nation, 1980-1994

Introduction

In late 1988, Andy Capp, a popular character who had appeared in the *Daily Mirror* newspaper's comic strip since 1957, began moonlighting in a number of other British tabloids (Figure 1). The permanently unemployed, flat-capped northerner was receiving some lifestyle advice from his doctor in a full-page advertisement published on behalf of the Health Education Authority (HEA), and in support of their health promotion campaign *Look After Your Heart (LAYH)*. In the first panel of a triptych, Andy was told that '[t]he best thing that you can do is give up smoking, drinking and fried food'. In the second, Andy broke the fourth wall to look towards the reader, his flat cap as ever pulled over his eyes, but with an air of bafflement readily apparent, before delivering the comic's punchline in the final scene: 'What's the second best?'.[1]

[1] Health Education Authority (1992) *Look After Your Heart!: Report on the First Four Years of Advertising and Publicity for the Look After Your Heart! Programme 1987-1990* (London: HEA): 111. For background on Reg Smythe's character Andy Capp, see the British Cartoon Archive: https://www.cartoons.ac.uk/cartoonist-biographies/c-d/RegSmythe_AndyCapp.html Last accessed 7 February 2018.

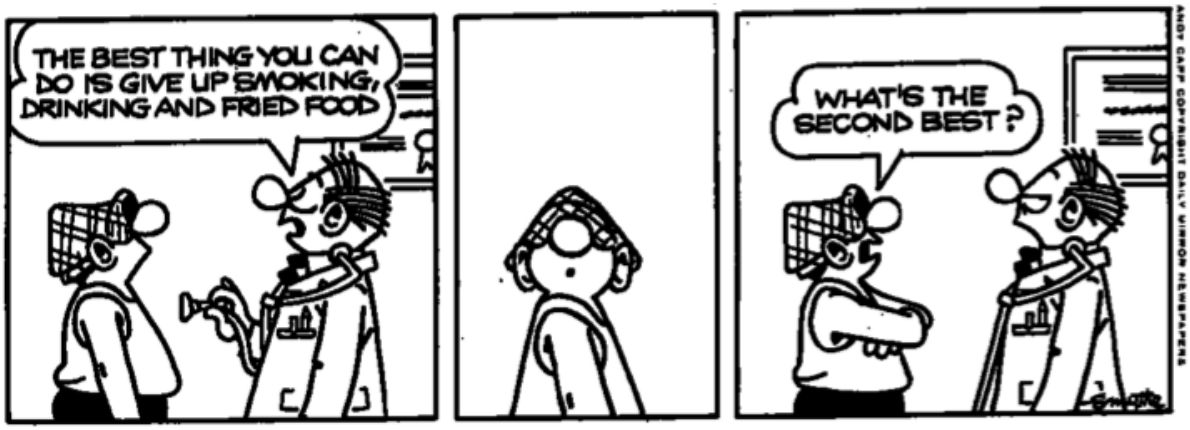

Figure 1: Andy Capp cartoon in British tabloid newspapers, 1988[2]

Andy's extramural appearances illustrated a number of different aspects of *LAYH,* the HEA's energetic 'campaign to promote healthier lifestyles', which ran from 1987 up until 1994. Firstly, it demonstrated the strong emphasis on visual methods and mass media communication throughout the campaign. Secondly, it showed *LAYH*'s particular attempts to appeal to a certain demographic of Britain's population – male, working class, middle-aged – perceived to be at once most likely to benefit from, yet most resistant to, its lifestyle messaging. Finally, the resistance of Andy to the entreaties of his physician was emblematic of the way in which the public responded to the official narratives of the campaign; or at least how they were thought to. The period was notable for the mobilisation of lay understandings of heart disease by a range of actors – the media, social scientists, campaign groups – to support their own political or epistemological perspectives.

[2] Health Education Authority (1992) *Look After Your Heart!: Report on the First Four Years of Advertising And Publicity for the Look After Your Heart! Programme 1987-1990* (London: HEA): 111.

This chapter will develop these themes, arguing that *LAYH* is the moment when Britain's biggest killer – and by extension lifestyle – truly went "public". Heart disease was widely discussed in the political sphere, on television and in newspapers, and as a common health issue that the public developed their own folk knowledge about. Heart disease therefore went public in two ways. Firstly, heart disease became an issue of growing public importance, widely discussed in the mass media and targeted by a multi-million pound health promotion campaign to raise awareness and inculcate behaviour change. In an unprecedented way, health educators spoke directly (and bluntly) to the public about heart disease and the lifestyle changes that they argued would prevent premature death. In doing so, it harnessed the apparent insights of the epidemiological evidence discussed in Chapters One and Two, regarding the importance of exercise and diet to disease prevention. But more directly, it followed on from the preventive consensus of the 1970s, explored in Chapter Three. The previous chapter contended that this discussion of the importance of prevention had been just that, a discussion, long on words and short on action. *LAYH* attempted to put these principles of prevention into practice by bombarding the public with messages about changing their behaviour. Secondly, the public themselves played a central role in these campaigns, not only in their purported involvement in this preventative activity, but also in the design of the media campaigns, the incorporation of representative voices, and also the ways in which the public spoke back to public health. *LAYH* employed a diverse arsenal of health promotion methods to target the British public, including newspaper adverts, billboards, television commercials, corporate partnerships, workplace health schemes and primary school education.

Alongside these assorted approaches, the campaign appealed to a range of emotions and motivations in its attempts to promulgate behaviour change to the population. However, what was consistent was *LAYH*'s insistence that it was the individual's behaviour that was the major issue behind Britain's continued lag behind other nations in terms of cardiovascular mortality. This rhetoric of personal responsibility echoed down from the preventive agenda of the 1970s, and was given added impetus by the political and moral climate of Thatcherism, and the individualism to which it appealed.[3] Such appeals were more nuanced than documents such as *Prevention and Health*, both in terms of their attendance to the class and, to a certain extent, gender aspects of health behaviours, but also the placing of individualism within a framework of family values. And most significantly, unlike in the previous decade, when the public had been largely absent or otherwise conceptualised as obliging receptacles for lifestyle advice, in the 1980s that public also spoke back; or, at least, appeared to. The views, attitudes and beliefs of the public were a central concern of the campaign, and the response to it.

The chapter is structured in three discrete sections. The first examines the background and circumstances to *LAYH*, drawing on the work of historians such as

[3] Lawrence J and Sutcliffe-Braithwaite F (2012) "Margaret Thatcher and the Decline of Class Politics" in Jackson B and Saunders R (eds.) *Making Thatcher's Britain* (Cambridge: Cambridge University Press): 134-135.

Jerrell B. Whitehead,[4] and political scientist Michael Mills,[5] to explore the pre-conditions for *LAYH*. Why, when Britain had such a poor record on heart disease, did it take so long to emulate health promotion campaigns in countries such as Finland? What was particular about the conditions and circumstances of the mid 1980s that meant the government was now willing to spend an initial £1.5 million on a major programme when it had previously been reticent?[6]

The second section considers the methods of *LAYH*, following recent work by Alex Mold on alcohol health education campaigns,[7] as well as Jane Hand and Patricia Holland in their respective studies of the uses of audio-visual media in health campaigns of the 1980s.[8] Britain was, as social historian Joe Moran terms it, well and truly an 'armchair nation' by this point, and *pace* Hand and Holland, I look closely at the televisual representations of *LAYH* to reveal the iconography of health promotion and its emotional appeals to effect behavioural change.[9]

Finally, I will explore the ways in which the public responded, or were seen to respond, to the various entreaties of *LAYH*. The campaign was extensively

[4] Whitehead JB (2011) *The UK Food Movement, c. 1976-96* (Unpublished PhD thesis, University of Cambridge).
[5] Mills M (1992) *The politics of dietary change* (Aldershot: Dartmouth).
[6] Sherman J (1987) "Campaign to fight heart disease 'is a waste of money'" *The Times* Wednesday 22 April 62749: 3.
[7] Mold A (2017) "'Everybody Likes a Drink. Nobody Likes a Drunk'. Alcohol, Health Education and the Public in 1970s Britain" *Social History of Medicine* 30(3): 612-636
[8] Hand J (2014) *Visualising Food as a Modern Medicine: Gender, the Body and Health Education in Britain, 1940-1992* (Unpublished PhD thesis, University of Warwick); Holland P, Chignell H and Wilson S (2013) *Broadcasting and the NHS in the Thatcherite 1980s: the challenge to public service* (Basingstoke: Palgrave Macmillan).
[9] Moran J (2013) *Armchair nation: an intimate history of Britain in front of the TV* (London: Profile Books).

evaluated, and the views of a representative sample of the British population were considered as the HEA assessed *LAYH*'s success. Furthermore, *LAYH* self-reflexively anticipated resistance to its messaging; in the cartoon strip referenced above, the explanatory text confided that '[t]here's a little bit of Andy Capp in all of us'.[10] But outside this official gathering of opinion, responses by the public were also mobilised by the media, sociologists and lobby groups to criticise the campaign. The reactions of "ordinary" Britons to *LAYH* were quoted as evidence that it was ineffectual and that health education campaigns did not consider the ways that the public understood their own health. Epidemiologists and anthropologists coined the phrase 'lay epidemiology' to describe how folk knowledge of health and disease was constructed,[11] and how the lived experiences of friends and family 'may be worth an entire volume of medical statistics and several million pounds of official advertising'.[12]

Primary sources for this chapter include the uncatalogued HEA collection at the Wellcome Library, board papers from the HEA at The National Archives (TNA), as well as audio-visual material from the campaign found on YouTube.

[10] HEA (1992): 111.
[11] Davison C, Davey Smith G and Frankel S (1991) "Lay epidemiology and the prevention paradox: the implications of coronary candidacy for health education" *Sociology of Health & Illness* 13(1): 1-18.
[12] Davison C (1989) "Eggs and the sceptical eater" *New Scientist* 1655: 48.

'A radical change of direction in the Council's work'?: heart disease and health education before *Look After Your Heart*, 1980 - 1987

On 17 March 1986, junior health minister Ray Whitney met with the chair of the HEC, Brian Bailey. While 'well satisfied with the HEC's work in general', Whitney 'put forward a number of specific concerns.' Top of his list was the importance of 'improv[ing] Britain's relatively poor record on coronary heart disease prevention' and, perhaps mindful of the health inequalities research discussed in Chapter Five, felt that '[i]n particular, the lower socio-economic groups needed to be targeted and one approach here would be to utilize the mass media'. Whitney's suggestion caused some consternation amongst HEC decision-makers; 'a shift of resources might be required. Several members commented that this would have to be discussed fully for it could mean a radical change of direction in the Council's work'.[13] Previously discussed priorities at a council retreat the year before, prompted by the CMO Donald Acheson, had been smoking, drug abuse, diet, breast and cervical cancers, primary health care, and the emergent AIDS epidemic.[14]

The impression this short note provides is of an organisation blindsided, caught on the hop by the plans of government ministers for a 'new broadly based CHD initiative, to be taken forward in collaboration with the HEC'.[15] Indeed, in spite of their recent characterisation in the *British Medical Journal* as 'unimaginative and

[13] Health Education Council Output Committee, "Meeting held on Tuesday, 18 March 1986 at 78 New Oxford Street, London WC1: Minutes" TNA FP 1/17/1.
[14] Anon "Council Retreat held at Selwyn College, Cambridge from 11-13 July 1985", TNA FP 1/17/1.
[15] Ibid.

bureaucratic',[16] it is puzzling that HEC board members should have reacted in this way, for five reasons, each of which will ultimately explain why *LAYH* was launched in 1987. Firstly, as Whitney had noted, Britain had one of the highest rates of heart disease in Western Europe, while countries with comparably high mortality such as Finland and the US had launched apparently successful health promotion campaigns to improve their situations. Secondly, civil society interest in heart disease, and in particular the risk factor of diet – from the Coronary Prevention Group and campaigning journalist Geoffrey Cannon amongst others – was arguably at its height in the early 1980s. Thirdly, a large summit conference of interested parties in heart disease prevention, sponsored by HEC, had met in Canterbury in 1983, and decided that the best way to proceed was through 'a national strategy' that would include 'mass media initiatives' and be supported by an £8m per annum war chest.[17] Fourthly, in 1985 the Welsh Office had launched *Heartbeat Wales*, a pilot heart disease prevention programme that initially appeared to provide promising results. Finally, the director of the HEC was the energetic David Player, an arrival from the Scottish Health Education Group in December 1982, and such a keen advocate of engaging the public in prevention that he had persuaded the Scotland football team to fly a no-smoking air balloon above all their matches in that year's World Cup.[18]

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[16] Anon (1982) "New thoughts for the Health Education Council" *British Medical Journal* 285(6357): 1761-2.

[17] Health Education Council (1984) *Coronary Heart Disease Prevention: Plans for Action. A Report Based on an Interdisciplinary Workshop Conference at Canterbury on 28-30 September 1983* (London: Pitman Publishing): xi-xiii.

[18] Interview between David Player and Max Blythe, Oxford, February 1988, The Royal College of Physicians and Oxford Brookes University Medical Sciences Video Archive, MSVA 032.

As *LAYH* material would make clear, and the authors of the Canterbury conference report noted, by the middle of the 1980s heart disease was having a significant impact upon the physical, economic and even emotional health of the British public. Mortality from coronary heart disease exceeded 150,000 per year, or the equivalent of a death every three or four minutes. These fatalities were particularly marked amongst men of working age, with one in 11 under the age of 65 dying from heart attacks. Inevitably, this had major implications for the British economy, from sickness absence to treatments costs for the NHS. What the Canterbury conference report described as 'the human cost' also had to be considered – 'bereavement, disability and fear'.[19] Both these economic and emotional tropes would be returned to by the newspaper advertisements and television commercials of the *LAYH* campaign. Furthermore, the UK had not enjoyed the reduction in heart disease mortality achieved in the 1970s by, amongst others, the United States, Japan and Finland.[20] The four home nations were all placed in the top six of the "league table" of age-standardised mortality for coronary heart disease in 1981, with the Republic of Ireland, New Zealand and Finland occupying the other spots.[21] The placement of the latter Nordic country in both lists indicated on the one hand how dire the situation had been in Finland, and on the other the

[19] HEC (1984): 1.
[20] Pisa Z and Uemura K (1982) "Trends of Mortality from Ischaemic Heart Disease and other Cardiovascular Diseases in 27 Countries, 1968-1977" *World Health Statistics Quarterly* 35(1): 11-47.
[21] The vagaries of international health statistics monitoring meant that England and Wales were counted as one country, while Scotland and Northern Ireland were considered separately. Office of Health Economics (1990) *Coronary Heart Disease: The Case For Action* (London: OHE): 14.

perceived success of their health promotion programmes throughout the 1970s and early 1980s. Efforts in the region with the highest intra-country rate, North Karelia, attracted particular international attention, and would be viewed by the HEC as a model for *Look After Your Heart*.[22]

Given Britain's poor record, it was unsurprising that both the biomedical community and the press should start to pay attention. Indeed, as detailed in the discussion of the preventive agenda in Chapter Three, there was already a good deal of interest throughout the late 1970s, and it was out of the disagreements amongst those working on the joint report between the British Cardiac Society (BCS) and Royal College of Physicians (RCP) report of 1976 that one of the more visible and effective campaigning groups of the 1980s was born: the Coronary Prevention Group (CPG). The CPG was formed by Keith Ball and Richard Turner, two outspoken cardiologists, the former having also been involved in the establishment of Action on Smoking and Health (ASH) earlier in the decade. The CPG, disappointed at the muted impact the joint BCS / RCP report had had, formally launched in 1979 and developed a campaigning edge similar to ASH, most particularly on dietary issues.[23] CPG argued, and would continue to argue throughout the 1980s, that a sustained focus on improving the British diet was needed from a range of different quarters, including the food and agricultural

[22] Puska P et al (1998) "Changes in Premature Deaths in Finland: Successful Long-Term Prevention of Cardiovascular Diseases" *Bulletin of the World Health Organization* 76(4): 419-425.
[23] Berridge V (2005) "Issue Network vs. Producer network: ASH, the Tobacco Products Research Trust and UK Smoking Policy" in Berridge V (ed.) *Making Health Policy: Networks in Research and Policy After 1945* (New York: Rodopi): 113.

industries. Historian Jerrell B. Whitehead has documented the formation and activities of this group comprehensively, and contends that part of their effectiveness and high profile was due to the intersection between CPG's interests (and personnel) and those of what activist and academic Tim Lang has described as the 'new food movement'.[24] This was a loose collective of groups and individuals, arguably led most volubly by journalist Geoffrey Cannon and his wife Caroline Walker. Walker, a nutritionist who was appointed honorary secretary of CPG in 1980, became so visible within the organisation that she was apparently often taken to be its director.[25] Cannon meanwhile frequently penned articles for *The Times* on diet, and was keenly interested in addressing the links between the lifestyles of the British public and the high rates of heart disease. Writing in March 1984 beneath the headline 'Lifestyle with a death knell', Cannon explained that

> 'There is general agreement among leading independent scientists that the chief underlying cause of [Western] diseases is life-style: habits any one of which is bad for health, and which in combination are liable eventually to be deadly … It follows that western diseases are more or less preventible [sic]. They may sometimes be reversible, by a programme of extremely nutritious food and graduated exercise.'[26]

[24] Whitehead JB (2011): 40-133. Lang T (1997) "Going Public: Food Campaigns during the 1980s and Early 1990s" in Smith DF (ed.) *Nutrition in Britain: Science, Scientists and Politics in the Twentieth Century* (London: Routledge): 238.
[25] Whitehead JB (2011): 97.
[26] Cannon G (1984) "Lifestyle with a Death Knell" *The Times* Friday 30 March, 61793: 11.

Cannon further expanded on the theme that same year, in collaboration with Walker, in their best-selling book *The Food Scandal*, which eviscerated the contemporary British diet and the corporate interests that they felt had undue influence over it.[27]

The flames of this activism had been fanned by the eventual publication of a much-delayed report by the National Advisory Committee on Nutrition Education (NACNE), in 1983. As Whitehead and political scientist Michael Mills both note, this was the culmination of dietary policy stretching back to 1973, and the appointment of an advisory group containing members of the Department of Health and Social Services (DHSS), the Ministry for Agriculture, Fisheries and Food (MAFF) and the British Nutritional Foundation (BNF), an industry-sponsored body.[28] This had formally coalesced into NACNE in 1979, chaired by Jerry Morris. Shortly after, in May 1980, NACNE engaged a sub-committee with representatives from HEC, DHSS, MAFF, BNF as well as the wider academic community and the food industry, to make 'an authoritative statement of the present consensus over the whole field'.[29] The report went through three drafts, each of which was unpalatable to either the DHSS or MAFF.[30] The last of these works-in-progress was leaked to Cannon, who in

[27] Cannon G and Walker C (1984) *The Food Scandal: What's Wrong with the British Diet and How to put it Right* (London: Century Publishing).
[28] Whitehead JB (2011): 68-69.
[29] National Advisory Committee on Nutrition Education (1983) *A Discussion Paper on Proposals for Nutritional Guidelines for Health Education in Britain* (London: Health Education Council): 7.
[30] Mills (1992): 134-135. See also Bufton MW and Berridge V (2000) "Post-War Nutrition Science and Policy-Making in Britain c. 1945-1994: The Case Of Diet and Heart disease" in Smith DF and Philips J (eds) *Food, Science, Policy and Regulation in the Twentieth Century: International and Comparative Perspectives* (London: Routledge): 214-215.

a 'scoop' for *The Sunday Times*, suggested that the report had been 'suppressed'.[31] These internal wrangles and subsequent controversy were enough to make the DHSS commission their own report, looking specifically at *Diet and Coronary Heart Disease*[32] under the auspices of the Committee On Medical Aspects of diet (COMA), a panel of experts, adjudged by one of Mills' informants, more 'conservative' in their outlook than the NACNE grouping (although in fact, the two groups shared members).[33] While in retrospect the differences in the two group's reports are harder to find than their similarities, historian Mark Bufton suggests that COMA's

> 'emphasis [was] on the individual making informed choices to safeguard her own health … mirror[ing] the wider societal and governmental trend to see individual lifestyle as the primary factor in health; the person not the state was responsible for overall health'.[34]

In short then, the British diet and its relation to heart disease were receiving unprecedented attention, from campaign groups, the media, and policy circles. Whitehead argues that there was a 'collision between public health nutrition and

[31] Whitehead JB (2011): 71.
[32] Department of Health and Social Security (1984) *Diet and Coronary Heart Disease* (London: Her Majesty's Stationery Office).
[33] Mills M (1992): 137.
[34] Bufton MW (2005) "British Expert Advice on Diet and Heart Disease c.1945-2000" in Berridge V (ed.) *Making Health Policy: Networks in Research and Policy After 1945* (New York: Rodopi): 137.

politics in the 1980s … food once again became a political issue, as it had been before and during the 1939-45 war'.[35]

Indeed, in a House of Commons debate in July 1984, immediately following the publication of the COMA report, MP Jonathan Aitken drew attention to many of the features of this discourse already familiar from this chapter. Britain's comparatively dire record on heart disease was contrasted with other European and global nations ('why should the British heart disease figures be six times higher than Japan's or two and a half times higher than Italy's?'), with a direct link made to the deficiencies of the British diet. Aitken name-checked *The Food Scandal*, and lamented the limited funding made available to

> 'the Coronary Prevention Group, which currently receives a derisory grant of only £3,000 a year from the Government, compared with the £750,000 given to other worthy organisations, such as the Royal Society for the Prevention of Accidents.'[36]

He concluded by arguing that '[m]uch should be done to convince the public that far too many British people are digging their graves with their teeth and needlessly increasing their risk of heart disease and heart attacks'.[37] The responding minister, John Patten, acknowledged Aitken's comments about the malign influence of the

[35] Whitehead JB (2011): 66.
[36] HC Deb 16 July 1984 vol 64 cc145-146.
[37] HC Deb 16 July 1984 vol 64 c148.

food industry, but concentrated his discussion on the public's responsibility for Britain's poor record, ultimately stating that

> '[w]e cannot escape the fact that, unless we can convince the public to change their lifestyles and to think more about the way in which they live, we shall not be successful in reducing the appalling rate of heart disease.'[38]

This 'repoliticisation' also very much played out in the mass media. Whitehead discusses the tactics of CPG in attracting media attention, most notably the two-part series for ITV's 'World in Action' in 1984,[39] while Bufton notes the appearance of COMA and NACNE members such as Geoffrey Rose, Philip James and Michael Oliver as talking heads for a number of investigative documentaries on ITV and Channel 4 between 1985 and 1987.[40]

Rose, James and Oliver had all been key figures in the influential Canterbury conference, held over two days in late September 1983. Rose had chaired the meeting, which brought together interested parties to discuss 'plans for action' for 'coronary heart disease prevention'; on its steering committee were James, Oliver, Ball and Christopher Robbins from CPG, as well as David Player, director of HEC, and his counterpart at the Health Promotion Authority for Wales, John Catford.[41]

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[38] HC Deb 16 July 1984 vol 64 c152.
[39] Whitehead JB (2011): 64.
[40] Bufton MW (2005): 136-137.
[41] HEC (1984): iii.

Whitehead describes the CPG as the driving force behind the conference, 'the greatest triumph of the Ball and Turner partnership'.[42] It was also sponsored by HEC, DHSS and BCS, with further support from the majority of the medical Royal Colleges, ASH and the British Heart Foundation. In summary, most of the major players in heart disease research, funding, policy and activism were present; journalists from *The Observer*, Channel 4 and the BBC were also in attendance.[43]

The following year the HEC published the report on the conference, a consensus position on the direction of heart disease prevention over the next decade. The report made twenty recommendations across a series of domains: the European Economic Community, the food and agricultural industries, the NHS and primary healthcare, and, most significantly for the purpose of this chapter, health education and the mass media. Whitehead comments that there was little novel in these statements, the gist of which had been floated amongst policy communities and campaign groups for a few years, but the significance of the Canterbury conference was twofold.[44] Gathering the most influential figures together, some of whom had been on less than cordial terms, and persuading them to sign up to twenty recommendations was an achievement in itself.[45] Secondly, the recommendations made were practical, substantive, and had monetary values attached to them. It provided notice that a major prevention campaign was not cheap and required

[42] Whitehead JB (2011): 81.
[43] HEC (1984): vii-x.
[44] Whitehead JB (2011): 83.
[45] See for example the disagreements between Rose and Oliver only three months prior to the Canterbury conference reported in Levi P (1983) "Be of Good Heart…" *The Times* Wednesday 15 June 61559: 13.

serious funding, although *LAYH* would never, even at its most generously funded, achieve the £8m price tag that the Canterbury conference assigned. A number of the other proposals would also prove prescient for *LAYH*: the appointment of health education officers to District Health Authorities, health education on heart disease in schools, and above all, the 'development and co-ordination of mass media initiatives.'[46]

The Canterbury conference report also mentioned the 'Welsh Heart Programme' as a model of 'joint planning' that HEC might seek to emulate.[47] This programme morphed into *Heartbeat Wales*, a key influence on *LAYH*. Launched in March 1985, it was brokered as a partnership between HEC and the Health Promotion Authority for Wales.[48] It drew on the experiences of the North Karelia project in Finland, as well as similar programmes in US cities such as Stanford, Minnesota and Pawtucket.[49] *Heartbeat Wales* had a number of features that would be carried over into *LAYH*. It engaged with the private sector, through its Heartbeat Awards, which accredited restaurants and canteens that had no-smoking areas and offered healthy menu choices, 'Make Health Your Business', a workplace fitness scheme, as well as 'food labelling and nutrition education with a major grocery retailer [Tesco]'.[50] The campaign also involved itself heavily with the mass media to get its

[46] HEC (1984): xv.
[47] Ibid.: xiii.
[48] A.R.M.D. "Welsh Heart Programme" April 1986, TNA FP 1/17/1.
[49] Nutbeam D and Catford J (1987) "The Welsh Heart Programme Evaluation Strategy: Progress, Plans And Possibilities" *Health Promotion International* 2(1): 6-8.
[50] Tudor-Smith C et al. (1998) "Effects of the Heartbeat Wales Programme over Five Years on Behavioural Risks for Cardiovascular Disease: Quasi-Experimental Comparison of Results from Wales and a Matched Reference Area" *BMJ* 316: 818–22.

messaging across, with an eight-part series on BBC Wales, 'Don't Break your Heart', as well as on commercial television for HTV ('When the Chips are Down') and S4C ('Blas Ar Fwyd' or 'Appetite').[51]

The director of the HEC, David Player, was an enthusiastic and charismatic advocate of the exploitation of the mass media for health promotion purposes. His appointment had coincided with criticism for the HEC, with the *British Medical Journal* alleging it had 'achieved little since it started in 1968'.[52] This was arguably an unfair characterisation, and perhaps more reflective of the ambivalent attitudes towards health education generally, discussed in Chapter Three, than the organisation tasked with its implementation. As Mold recently discusses in the context of the 'sensible drinking' campaign of the late 1970s, 'the debate about whether or not health education works misses a more fundamental point', that of the 'more complex negotiation between different "publics"', and who public health was really addressing.[53] Initially, Player side-stepped such considerations, favouring a much more aggressive approach to the mass media:

> 'I think in today's situation you have got to use the means of mass communication, and television of course was again the best way

[51] Catford J and Lawrance, J (1988) "Heartbeat Wales: A Health Education Campaign in Practice" *Health Libraries Review* 5: 129-131.
[52] Anon (1982): 1761.
[53] Mold A (2016) "'Everybody Likes a Drink. Nobody Likes a Drunk'. Alcohol, Health Education and the Public in 1970s Britain" *Social History of Medicine* 30(3): 635.

> of getting messages over, per pound, whatever, to as many people as possible.'[54]

This was particularly true for heart disease, where Player felt that 'the apathy of the public towards to the adoption of healthy lifestyles' should be addressed.[55] Player was unconcerned with considering different publics. Rather than differentiating between different constituents, he favoured an all-out assault on their 'apathy' with television being the most effective weapon. Player's enthusiasm for television, while particularly animated, was of course reflective of a longer interest in public health circles for the medium's use to combat undesirable and unhealthy behaviours such as smoking, physical activity and poor diet. Virginia Berridge notes both Jerry Morris's early interest in television advertising, and his involvement in the deliberations of the Royal College of Physician's report on smoking in 1962, which argued that "'modern methods should be employed to combat modern methods'".[56]

Player also brought a far more political edge to the HEC's work, partly out of expediency in the context of the ongoing AIDS crisis and perceived interference from the DHSS in staffing matters, but also from Player's own ambitious personality. Ultimately this approach would cost Player his job and the HEC its

[54] Interview between David Player and Max Blythe, Oxford, February 1988, The Royal College of Physicians and Oxford Brookes University Medical Sciences Video Archive, MSVA 032.
[55] Anon "Council Retreat held at Selwyn College, Cambridge from 11-13 July 1985", TNA FP 1/17/1.
[56] Berridge V (2007) *Marketing Health: Smoking and the Discourse of Public Health in Britain, 1945-2000* (Oxford: Oxford University Press): 64.

autonomy as its functions were transferred to the less independent HEA in 1987, but in the short term it ensured the interest of ministers in heart disease prevention.[57]

In short then, there was a certain inevitability that a mass-media campaign on heart disease should be planned at this point, when conditions were ripe. Indeed, the House of Commons Public Accounts Committee in June 1989 expressed 'surprise … that it should have taken until the mid-eighties before England and Wales introduced specific heart disease campaigns'.[58] The HEC's apparent reticence then reveals an organisation uncertain of its own future and protective of its budgets, but it also points to the unprecedented nature of *LAYH*. In its comprehensiveness, in its direct appeals, in its emotional content, and, most of all, in its use of the mass media, it broke the mould of previous health campaigns, which had relied primarily, albeit not exclusively, on leaflets and posters. Of course, some of *LAYH*'s initial outputs were very much a case of old wine in new bottles, such as the pamphlets *Exercise: why bother?*[59] and *Stopping smoking made easier*,[60] publications produced under the aegis of *Look After Yourself!*, the 'first

[57] For more context on the circumstances surrounding the dissolution of the HEC, see Sutherland I (1987) *Health Education - Half a Policy : The Rise and Fall of the Health Education Council* (Cambridge: National Extension Trust): 234-238. Player's version of events is discussed in his interview with Max Blythe, Oxford, February 1988, The Royal College of Physicians and Oxford Brookes University Medical Science Video Archive MSVA 032. TNA FP 1/18 contains details of the transferral of staff from HEC to HEA; as Player noted, 'We had seventy-six staff in the HEC. Seventy-five of them got their jobs back in the HEA. I'll leave you to work that one out.'

[58] Committee of Public Accounts, *Twenty-Sixth Report. Coronary Heart Disease*, 21 June 1989, HC 249 1988/89: v.

[59] HEC (1986) *Exercise. Why Bother?: A Simple Guide to Getting Fitter for Adults of All Ages* (London: HEC/ Sports Council).

[60] Raw M (1992) *Stopping Smoking Made Easier* (London: HEA).

dedicated "better health" campaign', launched by the HEC in 1978.[61] Furthermore, advertising campaigns using striking visual imagery had been commissioned by the HEC from Saatchi and Saatchi in the early 1970s.[62] But *LAYH*'s approach was part of a newer, harder-hitting mass-media approach illustrated by TBWA advertising agency's 'Don't Die of Ignorance' AIDS awareness campaign, screened in early 1987 immediately prior to the launch of *LAYH*.[63] Without understating the importance of different aspects of *LAYH* such as the corporate partnerships, workplace health schemes or primary school education programmes, the way in which most of the population were addressed was via the small screen. Television was 'crucial' to the *LAYH* strategy, which declared that '[b]roadcasting will be the main medium through which the specific target groups will be reached.'[64] The majority of *LAYH*'s budget was spent on television and press advertising, with an initial £1.5 million in 1987/88, and rising to a peak of £2.4 million in 1988/89.[65] The following section will therefore concentrate on the visual imagery and emotional appeals of the LAYH campaign, analysing the four television commercials first screened between August 1987 and January 1989.

[61] Hand J (2014): 202.
[62] Berridge V, Loughlin K (2005) "Smoking and the New Health Education in Britain 1950s-1970s" *American Journal of Public Health* 95(6): 956-964.
[63] Berridge V (1996) *AIDS in the UK: The Making of Policy, 1981-1994* (Oxford: Oxford University Press).
[64] DHSS and HEA (1987) "*Look After Your Heart": A Campaign to Encourage Healthier Lifestyles in England. Campaign Strategy* (London: HEA): 21.
[65] Anon, "Look After Your Heart Advertising proof copies", n.d. probably 1992, Box 17, SAHEC, Wellcome Library, Accession number 2086.

'[I]t may not be just your heart you hurt': *Look After Your Heart*'s use of television advertising, 1987 – 1989

In considering the use of audio-visual sources by historians of health, Kelly Loughlin has noted that '[c]ompared with still images, [films and television] incorporate a greater degree of sensory complexity by combining moving images with sound to create products which reach their audiences in collective and increasingly domestic situations'.[66] Social historian Joe Moran meanwhile has explored the notion of postwar Britain as an

> 'armchair nation … [with] a sense of commonality among people who may have little else in common … this collective habit of watching TV, which has taken up so much of our waking lives, can tell us something about who we are and what matters to us.'[67]

This section embraces both of these contentions to argue that the four short television advertisements produced for the *LAYH* campaign are rich sources that reveal much about how the HEC sought to address the British public, in somewhat arch and self-reflexive ways, in their living rooms, and how this was shaped by a prevailing Thatcherite morality of self-reliance and family values. It follows on from recent scholarship by Jane Hand and Patricia Holland with colleagues that has analysed health television programming in the 1980s. Hand in particular provides

[66] Loughlin K (2000) "The History of Health and Medicine in Contemporary Britain: Reflections on the Role of Audio-Visual Sources" *Social History of Medicine* 13(1): 133.
[67] Moran J (2013): 11.

an insightful analysis of the visual imagery deployed in two documentary films about heart disease broadcast on ITV shortly before *LAYH* was launched: *Lessons from the Dead,* and *Lessons for the Living*. Hand adopts the technique of *mise-en-scène* from film studies to 'reveal the role moving images played in constructing new understandings of the interactions between health and disease that went beyond the biological.'[68] Hand is influenced by cultural historian Sander Gilman's suggestion that images provide 'simultaneous, multiple meanings', both implicit and explicit.[69] By employing similar methods, this section supports that contention, drawing out from the television commercials the complex moral and political ideologies at play in the *LAYH* campaign.

Holland meanwhile is less interested in the visual aspects of her source material, but rather places an array of television programmes about health in the 1980s, both dramatic and documentary, in the political and cultural context of that decade. Holland suggests that these television programmes demonstrated the shifting cultural conversation about the value of public services such as the health service and broadcasting, and the discourses of the New Right in destabilising them.[70] While this section is necessarily less expansive in its assertions, it shares common ground in that it argues that the televisual elements of *LAYH*'s campaign can reveal much about notions of health and the family in Thatcherite Britain.

[68] Hand J (2014): 56.
[69] Gilman S (1995) *Picturing Health and Illness: Images of Identity and Difference* (Baltimore, MD: John Hopkins University Press): 31.
[70] Holland P et al (2013): 4-10.

LAYH was formally launched on 15 April 1987 but it was not until August of the same year that its messages started appearing on the nation's television screens, with an initial series of three 30-second commercials which all informed the viewer that 'it doesn't have to be hell to be healthy'. This slogan had been crafted by the advertising agency Abbott Mead Vickers, based on focus groups 'throughout the country comprising men and women of different ages and lifestyles'. This market research identified two prevailing attitudes towards heart disease and its putative risk factors. The first group were characterised as 'cynics … [who] lacked the motivation to improve the way they lived' and for whom 'modifications to diet, an increase in physical exercise and giving up smoking were unacceptable sacrifices'. The second were 'triers' who had 'heeded the risks … but had received insufficient guidance'. The way to address these differing mentalities was to 'shock people out of their complacency'.[71] In order to do so, the agency created some 'macabre images' such as a 'pickled heart in a laboratory jar' or a 'coffin being lowered into a grave', although ultimately they were rejected so as to 'meet television advertising regulations'.[72] The HEA were also internally concerned about the 'serious tone of the advertising'.[73]

[71] At the turn of the decade a debate was emerging in public health about the effectiveness and ethics of "shock" tactics, particularly in the wake of the AIDS campaign. For example, see Sutton, S. (1992) "Shock Tactics and the Myth of the Inverted U" *British Journal of Addiction* 87(4): 517-519 and Anon (2007) "The History of Shock Tactics in UK National Health Education Campaigns, c.1950-2007" (Unpublished MSc Thesis, London School of Hygiene and Tropical Medicine).

[72] Mathers A (1987) "Take Heart by Taking Care" *The Times*, Thursday 13 August 62846: 9. The author of the article was an account planner at Abbott Mead Vickers.

[73] Memo from Abbott Mead Vickers to HEA, 20 May 1987, Box 33, SAHEC, Wellcome Library, Accession number 2086.

Nonetheless, each of the three spots – named "feet", "TVs" and "frying" according to their dominant visual motif – retained a mordant tendency. "Feet" contained the labelled toes of a corpse in a mortuary, "frying" featured a bouquet flung upon a gravestone, while "TVs" closed with an electrocardiogram monitor beeping into silence. Viewers would have however been familiar with imagery that played on fears for their own mortality. The "Don't Die of Ignorance" AIDS advert with its three-ton black granite tombstone had recently been aired,[74] while the Association of the British Pharmaceutical Industry had recently produced a blackly humorous newspaper advert, in support of *LAYH,* warning against the perils of the 'British diet' with a meat pie in the shape of coffin.[75]

The agency was canny enough however to realise that playing upon the emotions of fear might be insufficient to effect behaviour change. Each commercial tempered its morbid message with the suggestion that a premature end could be avoided with small changes in lifestyle. 'Feet' showed four pairs of recumbent feet clad in slippers, one with cigarette smoke extending over them, followed by the bare feet of the corpse mentioned above. As the camera panned right, a further three pairs of still reclining feet came into view, wearing hiking boots, running shoes and, finally, diver's flippers.[76] These last pairs twitched in apparent eager anticipation of being put to use, providing a visual cue for the voiceover's advice

[74] Jonze T (2017) "'It was a Life-and-Death Situation. Wards were Full of Young Men Dying': How We Made the Don't Die of Ignorance Aids Campaign" *The Guardian* Monday 4 September https://www.theguardian.com/culture/2017/sep/04/how-we-made-dont-die-of-ignorance-aids-campaign Last accessed 21 March 2018.
[75] ABPI (1987) "The British Diet" *The Times* Thursday 30 April, 62756: 8.
[76] HEA "Feet" https://www.youtube.com/watch?v=q2MYlWsS-Eg Last accessed 22 March 2018.

that 'to do yourself good, you don't have to do a ten-mile jog – just a little of what you fancy will keep your heart on its toes'. This sequence took the viewer on a journey; from sedentary behaviour to light physical activity, with a focus on fun and enjoyment rather than anything as threatening as competitive sport. Accompanying billboards to the campaign in October 1987 displayed an image of a sweat-banded male runner laid prostrate, clutched his thigh while in an accompanying panel a male swimmer was also flat on his back, but paddling happily.[77] This then was aimed squarely at the 'cynics' rather than the 'triers'. It preached self-reliance, but on the individual's own terms. After its initial threat of a 'crippling heart attack', the advert took a softly-softly approach to behaviour change. Initial results appeared to be promising, with the HEA reporting that over the duration of the advertisement's screening 'awareness of messages like "Take more exercise" increased from 15 per cent (wave 1) to 40 per cent (wave 2)'.[78] But the 'trier' who received 'insufficient guidance' was arguably again left wanting; "feet''s suggestion that exercise only needed to be moderate conflicted with the epidemiological evidence discussed in chapter one that 'vigorous exercise' was necessary for a preventive effect to be produced.

"TVs" also focussed on physical inactivity as a risk factor. Using a similar left-to-right panning shot, it showed four televisions screening a mixture of soap operas,

[77] HEA internal memo, 31 July 1987, Box 33, SAHEC, Wellcome Library, Accession number 2086. Health Education Authority (1987) "It doesn't have to be hell to be healthy" U.S. National Library of Medicine, image ID A025699 http://resource.nlm.nih.gov/101439231 Last accessed 22 March 2018.
[78] Anon "LAYH Advertising Strategy – Discussion Document", 1 February 1988, Box 33, SAHEC, Wellcome Library, Accession number 2086.

films and light entertainment accompanied by a voiceover warning 'if you do nothing but sit in front of the TV, you increase the risk of a crippling heart attack'.[79] The row of televisions and narration was punctuated visually and sonically by an electro-cardiogram display and accompanying long beep (indicating heart failure). A final three screens displayed images of a couple walking, a family cycling, and a lone swimmer. Visually and rhetorically, "feet" and "TVs" were almost identical, and both used the phrase 'crippling heart attack' and the immobilisation that that implied as a contrast to the physical activity depicted in their respective final frames. But where "TVs" differed was in its self-reflexive nature and engagement with the 'armchair nation'. *LAYH*'s adverts were placed in the commercial breaks between the peak-time programmes that "TVs" portrayed in its opening seconds; soaps such as *Coronation Street* and *Brookside*, alongside game-shows *Countdown* and *Blockbusters*.[80] By this point in the late 1980s, television was a ubiquitous and quotidian cultural presence in British domestic life. Ninety-seven per cent of homes owned one,[81] and according to *LAYH*'s own media monitoring, the average Briton was watching over five hours per day.[82] "TVs" meta-comment on contemporary viewing habits therefore addressed the paradox arising from the current state of affairs; television was, as Player had argued, the most effective way to reach the

[79] HEA "TVs" https://www.youtube.com/watch?v=kd_VQQ35WXk Last accessed 22 March 2018.
[80] Anon "HEA Look After Your Heart: Transmission Timings for w/c 17 Aug '87", n.d. Box 33, SAHEC, Wellcome Library, Accession number 2086.
[81] Percentage is for March 1988, derived from the Broadcasters' Audience Research Board's statistics, "Television Ownership in Private Domestic Households 1956-2018 (millions)" http://www.barb.co.uk/resources/tv-ownership/ Last accessed 22 March 2018.
[82] Anon, "John Ayling and Associates Limited for HEA. Look After Your Heart! Late December 1988 / End February 1989. Media Implementation" Box 33, SAHEC, Wellcome Library, Accession number 2086.

largest amount of people, but it was also the medium itself that was preventing the public doing what was, according to the HEA, in their best interest, namely keeping active. But again, 'TVs' was one for the 'cynics'; the 'triers' were told, arguably misleadingly, to 'build up a gentle programme of exercise'. This advice would later effectively be withdrawn as the HEA would concede that exercise's 'benefits are uncertain [and] influencing behaviour in this area is very difficult … It will not form part of the campaign in [19]90/91.'[83]

The final 'It doesn't have to be hell to be healthy' advert looked at diet, and again used the same visual framework as 'feet' and 'TVs'. Four pans, with bacon, battered fish, chips and pork chops being fried in ample quantities of fat or oil, gave way to flowers thrown on the tombstone of a 47-year-old man, presumably following another 'crippling heart attack'.[84] But again, the advert promised, eating more healthily could be achieved in small steps and on one's own terms: 'you don't have to give up your favourite grub'. The bacon was shown being grilled, the fish poached, the chips reconstituted as a baked potato, and the pork chops trimmed of their fat. This dietary message was also supported by a poster billboard, with eight images of "healthy" meal suggestions, such as pasta, pulses and vegetables.[85] This somewhat conflicted with the television advert's suggestion that it wasn't the food itself that was the problem, but the way in which it was prepared, while Abbott

[83] Health Education Authority "Advertising Objectives and Strategy for 1990/91", n.d. probably 1989, Box 26, SAHEC, Wellcome Library, Accession number 2086.
[84] HEA "Fry" https://www.youtube.com/watch?v=hjAgwqlkl4Y Last accessed 22 March 2018.
[85] Health Education Authority (1987) "It doesn't have to be hell to be healthy" U.S. National Library of Medicine, image ID A025738 http://resource.nlm.nih.gov/101439194 Last accessed 22 March 2018.

Mead Vickers had previously baulked at depicting 'a diet of lentils and lettuce'.[86] Nevertheless, and perhaps because of the campaigning activity and controversy over diet in the preceding years, "frying" was the most memorable of the adverts to the public, achieving 40 per cent prompted recall compared to "feet" and "TVs"'s respective 26 per cent and 11 per cent.[87] While not unhappy with these results, the HEA acknowledged that three advertisements with two messages had been a misstep; 'one ad on food and one on exercise would have sufficed'.[88]

Evidently the HEA felt more could be achieved, as *LAYH* switched advertising agencies for what would prove to be its final commercial. Butterfield Day Devito Hockney (BDDH) agency were appointed in September 1988 to produce a new, longer television commercial, alongside supporting newspaper advertisements (including the Andy Capp comic cited in the introduction).[89] BDDH adopted the same typology of 'cynics' and 'triers', but argued that focussing on individual risk factors was not the best strategy:

> 'Whilst it is clear that amongst the general public considerable confusion exists over issues such as "cholesterol" and "polyunsaturated vs saturated fats", the agency believes that detailed dissemination of such information in advertising is not

[86] Mathers A (1987): 9.
[87] Anon, "Look After Your Heart: Advertising campaign. Implications for future strategy", n.d. (figures are from 12 November 1987), Box 33, SAHEC, Wellcome Library, Accession number 2086.
[88] Ibid.
[89] Butterfield Day Devito Hockney "Look After Your Heart Research Proposal" August 1989, Box 34, SAHEC, Wellcome Library, Accession number 2086.

> necessarily the most effective way of bringing about behaviour change.'[90]

BDDH were also more mindful than their predecessors of *LAYH*'s aim to appeal particularly to socio-demographic groups C2DE, or working class and unemployed audiences. The agency produced briefing packs detailing mortality from heart disease by social class, and saw advertising, both in print and on screen, as providing precision to *LAYH*'s message:

> "We see advertising working in the following ways … iii) as a specifier, effectively reaching individual target audiences at any one time in the life of the overall LAYH! campaign in order to help change their behaviour and attitudes."[91]

To achieve this, newspaper adverts were placed exclusively in tabloids, and featured overtly working-class characters with whom it was hoped the audience would identify. Alongside Andy Capp, two later adverts featured manual labourers in support of 'Food for the Heart' month. One featured a bare-chested man holding a hard-hat over the left-side of his torso, with the slogan 'manual work doesn't protect your heart against fatty foods',[92] while a second showed another male

[90] Butterfield Day Devito Hockney "A Recommendation for 1989/90 LAYH! Advertising Support" 16 May 1989, Box 34, SAHEC, Wellcome Library, Accession number 2086.
[91] Butterfield Day Devito Hockney "LAYH Campaign strategy", 25 May 1989, Box 34, SAHEC, Wellcome Library, Accession number 2086.
[92] Anon, "Manual work doesn't protect your heart against fatty foods", n.d. probably early 1990, Box 26, SAHEC, Wellcome Library, Accession number 2086.

construction worker about to eat a plate of shepherd's pie. 'These meals are recommended by doctors. Even better they're recommended by Mick "The Hod" Willis', ran the headline (Figure 2).[93] This was a tacit acknowledgement that advice on food from doctors and other health authorities was unpalatable, and that people's lifestyle choices were informed by lived experience as much as health education, a theme that will be developed further in the following section.

[93] Anon, "These meals are recommended by doctors" n.d. probably early 1990, Box 26, SAHEC, Wellcome Library, Accession number 2086.

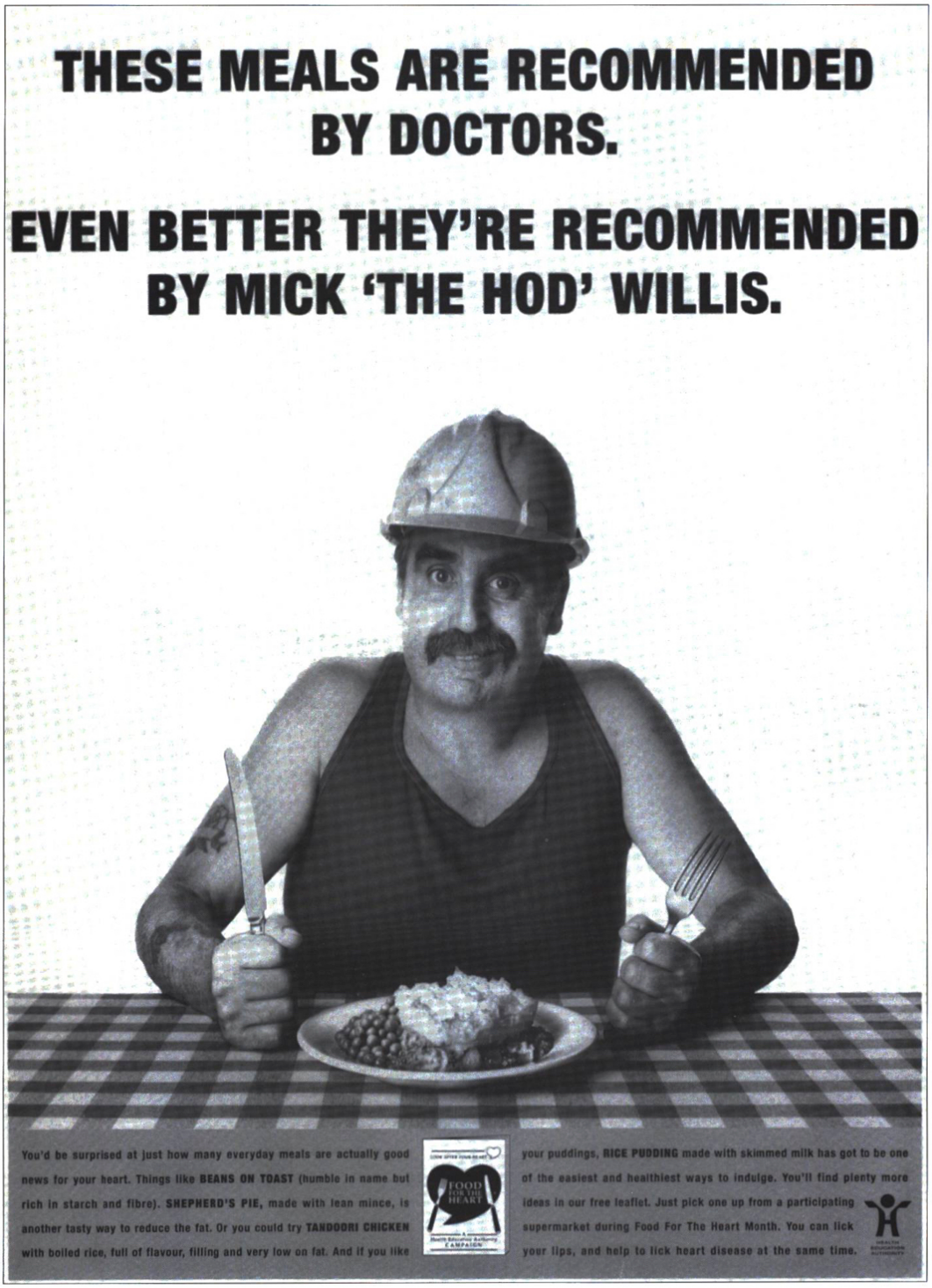

Figure 2: 'These meals are recommended by doctors. Even better they're recommended by Mick "The Hod" Willis', 1989[94]

[94] British Market Research Bureau (1993) *Evaluation of the Food for the Heart Programme 1991* (London: HEA): 114.

BDDH also diverged from the previous advertising strategy by recommending that the television campaign was regional, rather than national. Consequently the advertisement was initially only screened in what were described as 'the prime C.H.D. regions of Lancashire, Yorkshire and Tyne Tees'. The justification for this approach was that 'three northern regions represent approximately 34 per cent of the England population, but account for approximately 38 per cent of C.H.D. incidence',[95] but it may also have had a class-based motivation, with all three areas having been sites of post-industrial decline over recent years.

BDDH's television advert was a much more sensorily complex and emotional affair than the previous three adverts (Figure 3). Depicting a traditional nuclear family watching television of an evening, it focussed on the paterfamilias, who was seated on the sofa next to his wife whilst two young children played around them. The man, in early middle-age, was eating crisps, transfixed by the images, unseen, emitting from the screen. A close-up shot of the woman, knitting and less attentive to the screen, captured her glancing at her partner with an expression suggesting disappointment or even fleeting revulsion before passing into one indicating indulgence and love. A series of fast cuts then showed the man in different situations; drinking a pint of beer and eating a battered sausage in the pub, raiding the fridge for a midnight snack, failing to do up the top button of his trousers, smoking cigarettes, struggling to catch a departing bus, eating fish and chips at the

[95] John Ayling and Associates Limited, "Look After Your Heart! Late December 1988 / End February 1989. Media Implementation" Box 33, SAHEC, Wellcome Library, Accession number 2086.

staff canteen, and putting sugar in his tea. These scenes were interspersed with images of his wife's attempts at physical affection to his apparent indifference, while the narrative arc of the advert climaxed with his young daughter presenting him with her drawing of the family unit, depicting 'Dad' as grossly obese, much to the protagonist's chagrin. The soundtrack of the advert was as important as its visual content. The 1965 Motown classic "Stop! In The Name of Love" by the Supremes played over the advert's entirety, and was significant not just for its lyrical allusion to heart disease ('…before you break my heart') or its repeated entreaty to 'think it over'. The song's narrative, which is sung from the perspective of a woman whose partner is being unfaithful, provided the parabolic content of the advert. The moral implication was that by virtue of his poor diet, excessive drinking and generally poor physical shape, the man is effectively cheating on his wife, destroying the stability and happiness of family life. This message was made clear by the advert's voiceover: 'Eat too much, smoke, do too little, and it may not be just your heart you hurt'. The final frame offered hope however to those of the viewing public who might too be feeling guilty: 'make a new start, look after your heart'.[96]

[96] HEA "Stop" https://www.youtube.com/watch?v=1s2r7T6dLj0&t=393s Last accessed 22 March 2018.

Figure 3: Stills from "Stop" television advertisement, 1988[97]

The advert was initially screened over the New Year period between 1988 and 1989, which was thought good timing, and not just for the festive season's apparently favourable advertising rates: 'a very appropriate time to advertise,

[97] Health Education Authority (1992) *Look After Your Heart!: Report on the First Four Years of Advertising and Publicity for the Look After Your Heart! Programme 1987-1990* (London: HEA): 110.

following Christmas over-indulgence'.[98] Clearly, the advert was intended to trigger a complex mixture of feelings in the watching audience; guilt, so that they might examine their own behaviour; empathy with the effectively jilted woman and children; and finally, hope and the resolve to change their ways and so not subject their own loved ones to the same vicissitudes. The advert tugged at the heart-strings, suggesting an equivalence between the physical pain of a heart attack with the emotional pain such an event would cause the victim's family. If the fear of the former did not change people's ways, the advert reasoned, the latter should. Underlying these emotional appeals was a moral framework, in which the traditional family unit was the ideal, and the individual had the appropriate reserves of self-reliance to 'make a new start'. As Berridge and Loughlin have suggested, this has a longer history, arguing that in the recommendations of the Cohen committee of 1964 which was so influential on health education, there was a 'strong emphasis on individual risk avoidance [that] mingled moral and medical imperatives'.[99] Hand argues that such imperatives are literally embodied in visual sources, as ideal or less than ideal bodies – in this instance, the little girl's drawing of her overweight father – are depicted; '[v]isual representations therefore reveal not only aesthetic considerations, but also particular moral attitudes towards personal characteristics such as laziness, greed or overeating.'[100]

[98] Anon, "John Ayling and Associates Limited for HEA. Look After Your Heart! Late December 1988 / End February 1989. Media Implementation" Box 33, SAHEC, Wellcome Library, Accession number 2086.
[99] Berridge V and Loughlin K (2005): 960.
[100] Hand J (2014): 192.

"Stop" linked obesity with heart disease in a way that the likes of Keys and Yudkin had been hesitant to earlier in the century, as discussed in Chapter Two. Partly this reflected a greater scientific consensus on the elevated risk of heart disease associated with adiposity, but it was also reflective of HEC's previous use of obesity as a visual shorthand for a number of heart disease risk factors, such as poor diet and lack of exercise. As Hand discusses, a television documentary produced by the HEC in 1976, *A Way of Life*, had made use of this, as it depicted an overweight taxi driver. In this film, 'obesity was visually framed as one such risk factor through which a myriad of health problems could be discussed and debated.'[101] "Stop"'s handling of obesity was more succinct however; it was used as a visual marker of moral and behavioural failure, an explicitly stigmatised bodily state. The child's drawing – the work of an innocent bystander – became the advert's way of presenting this judgement.

Furthermore Holland contends that much of the medical television of the 1980s was infused with Thatcherite values, using the Prime Minister's famous interview with Woman's Own in 1987 ('no such thing as society')[102] as a lens with which to view the decade's political and cultural climate of individualism.[103] Certainly however "Stop" was shot through with the familial morals espoused by Thatcher in a clarification to the same interview, issued to the *Sunday Times*:

[101] Hand J (2014): 231
[102] Margaret Thatcher, interview with Douglas Keay, *Woman's Own,* Wednesday 23 September 1987, 29, Thatcher Archive THCR 5/2/262 https://www.margaretthatcher.org/document/106689 Last accessed 26 March 2018.
[103] Holland P et al (2013): 5-6.

> ‘All too often the ills of this country are passed off as those of society … [The Prime Minister] prefers to think in terms of the acts of individuals and families as the real sinews of society rather than of society as an abstract concept. Her approach to society reflects her fundamental belief in personal responsibility and choice.’[104]

Shirley Robin Letwin, a Conservative philosopher, who was both an advisor to Thatcher and an expositor of her ideological legacy, suggested that what defined Thatcherism was an adherence to ‘vigorous virtues’ of self-sufficiency and personal responsibility:

> ‘Thatcherism starts with a conception of the individual, moves to a conception of the family suited to foster the individual characteristics which it favours, and regards the proper society as one in which the favoured characteristics of individuals and families can flourish and be manifested.’[105]

While the individualism of Thatcherism has been a focus of both popular and academic discourse since the term’s inception, Thatcherite family values have arguably been underplayed until very recently. Political theorist Melinda Cooper has highlighted the intersection between the social conservatism of the neoliberal

[104] Thatcher, interview with Keay, 45.
[105] Robin Letwin S (1993) *The Anatomy of Thatcherism* (London: Transaction Publishers): 32.

regimes of Thatcher and especially Ronald Reagan, and the general thrust of their broader policies. Cooper persuasively argues that the ideal of the "Fordist" family unit of the heterosexual couple with two or more children was a driving force for neoliberal social policy, including health and education. In doing so, Cooper critiques existing analyses of neoliberalism such as political economist Wolfgang Streeck, and Luc Boltanski and Eve Chiapello's *New Spirit of Capitalism*, which she suggests have inaccurately portrayed the "traditional" patriarchal family structure as a bulwark against the individualism of neoliberal ideology.[106] Rather, she argues that the policies of the neo-conservative governments of the 1980s elided the family with the individual, supporting the individualism of the entrepreneurial male breadwinner within the family unit but not the popular individualism or identity politics of, for example, feminism or gay activism. Political theorist William Davies summarises this argument, writing in his review of *Family Values* that

> 'The great trick pulled off by the "New Right" from the 1970s onwards was to conflate the "individual" and the "family", shimmying back and forth between the two as political expediency demanded.'[107]

[106] Cooper M (2017) *Family Values: Between Social Conservatism and the New Social Conservatism* (Brooklyn, NY: Zone Books): 9-12. Cooper cites Streeck W (2011) "Flexible Employment, Flexible Families, and the Socialization of Reproduction" in Coulmas F and Lützeler R (eds.) *Imploding Populations in Japan and Germany: A Comparison* (Leiden: Brill): 63–96; Boltanski L and Chiapello E (2005) *The New Spirit of Capitalism* (Verso: London).
[107] Davies W (2018) "Against Responsibility" *London Review of Books* 40(21): 28.

The family therefore was idealised as the support structure for the individual, in preference to reliance on the state. According to this argument, the socially conservative principle of the patriarch taking care of, and being taken care by, the family was important to Thatcherite policy commonly assumed to be predicated on retrenchment of the welfare state. Therefore it can be argued that it was logical that a campaign seeking to prevent heart disease – the nation's biggest killer and according to Jonathan Aitken earlier in the decade, costing the NHS £350 million a year in treatment costs alone – couched its lifestyle messaging in the context of the nuclear family.[108] In "Stop", the personal responsibility of the wage-earning husband was highlighted, in the same way as the taxi-driver in *A Way of Life*. The husband's fecklessness and lack of 'vigorous virtues' was viewed as damaging to the family unit, who would ultimately bear the emotional and economic costs of his behaviour.

But while "Stop" focussed on the male breadwinner, it also alluded to the expected role of his partner in initiating lifestyle change. It was noticeable in "Stop" that the errant husband did not consume any food that was prepared by his wife. Crisps on the sofa, bar snacks at the pub, and chips at the staff canteen were the diet represented in the advert. On the one hand, this could have illustrated the message that home-cooked meals were generally considered healthier than pre-packaged, catered and snack food. But it also more subtly implied that if the husband had been eating his wife's meals exclusively, he would not be in such

[108] HC Deb 16 July 1984 vol 64 c147.

apparently poor physical shape. The man's dietary infidelity, the "bit on the side" who he prefers to his wife and her cooking, was responsible for his corporeal and, presumably, moral decay. Indeed, the planning documents for *LAYH* reveal discussions about the perceived role of women as household managers, responsible for their husband and family's diet and nutrition. Although some advertising bursts were targeted at women's press, overall it was felt that

> 'Different dietary messages will be appropriate to men and women. However neither group should be tackled in isolation. Although usually women act as gatekeepers to the family diet, they cannot make changes without the support (or at least tolerance) of their partners.'[109]

In "Stop", the protagonist tacitly gives his partner neither support or tolerance for dietary change. His wife's concerned but caring look as he snacked on the sofa reinforced the message that her authority as 'gatekeeper to the family diet' had been overridden. He has abandoned his home, save for the occasional illicit midnight snack. By purchasing and consuming his food elsewhere, he had disrupted this traditional structure, with deleterious effects for his health and the happiness of his family.

[109] Anon, "Health Education Authority: Advertising Objectives and Strategy for 1990/91" n.d. probably early 1990, Box 26, SAHEC, Wellcome Library, Accession number 2086.

In short, "Stop" suggested a confluence between the personal responsibility narrative of lifestyle public health, and the new social conservatism of Thatcherism, presenting unhealthy behaviour as being damaging to the moral fabric of the familial unit. "Stop" had taken the individualism that *Prevention and Health* had attempted to appeal to, and situated this within a moral framework of family values. BDDH felt the message had been well understood by their initial audience testing:

> 'Overall response to the TV idea was very favourable. Respondents … identified with the central characters … enjoyed the song and understood its relevance … felt the tone was more subtle and helpful than nagging or authoritarian … found the motivational message ("Do it for your family") relevant and helpful.'[110]

In evaluating the advert, the HEA also felt that the focus on the family had made "Stop" more persuasive than the individual risk factor oriented adverts produced by Abbott Mead Vickers:

> 'It has produced a strong sense of identification with the main characters and the family amongst the key target group … the ad depicts an "unhealthy" lifestyle i.e. it is holistic rather than simplistic

[110] Butterfield Day Devito Hockney "LAYH Campaign strategy", 25 May 1989, Box 34, SAHEC, Wellcome Library, Accession number 2086.

> … The ad describes a "family" unit. It illustrates and appeals to the responsibilities of one another for family health and happiness.'[111]

"Stop" represented a high watermark in *LAYH*'s public visibility, with 65 per cent of those surveyed in April 1989 spontaneously responding that they had seen, heard, or read advertising about heart disease in the last six months.[112] It continued to run on British television screens until 1992, albeit on cheaper daytime slots than the peak viewing times that it had initially enjoyed.[113] As *LAYH* saw its budget cut by 58 per cent in 1990/91, television advertising was largely jettisoned in favour of the cheaper medium of print.[114] Nonetheless, in three years *LAYH* had shifted its appeals to the 'armchair nation' from visually arresting but simplistic spots with an initial focus on individual risk factors and personal responsibility, to a highly emotional, sophisticated advertisement that framed prevention of heart disease both as familial duty and 'holistic' lifestyle change. "Stop" and the rest of *LAYH*'s activities had apparently succeeded in attracting a majority of the public's attention, but how well had it communicated its lifestyle message? How did its official narratives of risk avoidance rub up against folk knowledge of disease causation? The next section attempts to answer these questions, exploring the ways in which lay understandings of heart disease were investigated, and the rhetorical and political uses to which such knowledge was put.

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[111] Internal memo, 9 June 1989, Box 24, SAHEC, Wellcome Library, Accession number 2086.
[112] HEA (1991): 34.
[113] Anon, "John Ayling and Associates Ltd. 'Enjoy Health Eating' TV implementation. 2 December 1992" Box 17, SAHEC, Wellcome Library, Accession number 2086.
[114] Anon, "Health Education Authority: Advertising Objectives and Strategy for 1990/91" n.d. probably early 1990, Box 26, SAHEC, Wellcome Library, Accession number 2086.

‘A bugger for his fry-ups’: the public and ways of knowing about heart disease, 1988 - 1992

Discussing his work on the Radio 4 programme *The Life Scientific* in March 2016, epidemiologist George Davey-Smith reflected on his time in south Wales in the mid-1980s, ‘very soon after the miners’ strikes’, and the relationship between his own views and those of his research participants:

> ‘I guess you shouldn’t start this work with something that you wanted to see, but … I wanted people to say that heart disease was caused by Margaret Thatcher and capitalism [laughs] ultimately. And yet, and yet, what came out of the actual analysis of the data that were collected was that the major factors that people raised were constitution – which could be sort of glossed as what you were born with, genes, to an extent – and chance. Just random events. These were the things that people thought about.’[115]

This short quote reveals three important aspects of lay knowledge about heart disease in the 1980s. Firstly, that a wide range of actors – not only epidemiologists, but sociologists, advertising executives, and more broadly, the media – were interested in what “ordinary” people thought about Britain’s biggest killer. Secondly, that such an interest was inherently political, and lay knowledge was

[115] *The Life Scientific: George Davey-Smith on Health Inequalities* (2016). Broadcast 1 March 2016. [Radio programme] Radio 4 http://www.bbc.co.uk/programmes/b071t8qd Last accessed 22 March 2018.

mobilised by different actors to articulate and bolster their own ideological positions. Finally, that despite this usage, folk knowledge resisted co-option, and continued to disrupt official narratives.

The work that Davey-Smith was engaged in was part of the evaluation of *Heartbeat Wales*, and was finally published in 1991. Alongside anthropologist Charlie Davison and epidemiologist Stephen Frankel, they coined the term 'lay epidemiology' to describe the way in which their 130 interview participants constructed their beliefs about disease causation from a complex interaction between "official" medical and public health sources, the mass media, and the lived experiences of friends, families and colleagues:

> '[I]ndividuals interpret health risks through the routine observation and discussion of cases of illness and death in personal networks and in the public arena, as well as from formal and informal evidence arising from other sources, such as television and magazines.'[116]

The idea of a 'coronary candidate' was also a recurrent theme; individuals that they felt had physical or behavioural characteristics that made them more or less likely to suffer a heart attack. For example, interviewees would comment that a recent heart attack victim 'was always a bugger for his fry-ups and his cream-cakes, so he

[116] Frankel S et al (1991) "Lay Epidemiology and the Rationality of Responses to Health Education" *British Journal of General Practice* 41 (351): 428.

had to be well up for it, like', or conversely, 'Fit, skinny, young. The last person you'd expect to have a coronary!'.[117]

Of course, epidemiologists and anthropologists were not the only people to be interested in the way that the public interpreted scientific information and the way that this interacted with lived experiences to influence health beliefs. As briefly noted above, the *LAYH* campaign was to a certain extent predicated on the idea that many of the public were 'cynics' about the health education that they received. It is telling that Davey-Smith, Davison and Frankel were loosely affiliated with *Heartbeat Wales*; health education campaigns were keen to find out how and why their programmes were working or not. The newer era of market research driven health promotion campaigns ensured that ideas were audience tested, and evaluated afterwards.[118] *LAYH* was no different; Abbott Mead Vickers had run focus groups prior to creating their television advertisements, while the HEA had commissioned Communication Research to conduct a survey on 'attitudes to heart disease' which found that 'people's general awareness of the causes and prevention of coronary heart disease is good … that knowledge is not translated into action by nearly half of a representative sample of 1000 English adults'.[119] A tracking study following the television advertisements closely monitored their reception in terms of 'public perceptions about heart disease, and attitudes and

[117] Davison C et al (1991): 8.
[118] Berridge suggests that market research and evaluation was first used in public health campaigns in the 1960s, following the post-war boom in advertising in Britain. See Berridge V (2007), especially 92-93.
[119] HEA (1987) *Attitudes to Heart Disease* (London: HEA): 1.

behaviours in relation to … risk factors'.[120] *LAYH*'s publicity materials were nothing if not gently self-deprecative; the advert featuring Mick 'The Hod' Willis recognised that medical authority had poor currency so far as diet was concerned, while the explanatory text below the cartoon featuring Andy Capp confided that

> 'Being human, there is always a temptation to sit back and do nothing at all, and carry on the way you always have. Perhaps that's what Andy Capp would do. And perhaps the cheeky blighter would get away with and live to be 100. But there's a difference between Andy Capp and you. He is pen and ink. You are flesh and blood.'[121]

But if health education campaigns were attempting to incorporate the views and health beliefs of the public into their campaigns, it was those that sought to critique these campaigns that were most adept at harnessing the voices of the public. As the quote from Davey-Smith implies, these often came from an explicitly radical perspective. In a witness seminar on public health in the 1980s and 1990s, health services researcher Nick Black reminisced that

> 'there was a very exciting period in the early 1980s when public health was much more political … One *samizdat* publication, by Wendy Farrant and Jill Russell … couldn't be published, because it was an observational study by two sociologists of policy making in

[120] HEA (1992): vii.
[121] HEA (1992): 11.

> the Health Education Council on coronary heart disease prevention, where the policies were not informed by the evidence at all, actually completely counter to the evidence. They showed this with a lovely piece of qualitative research … it got circulated among the younger, more radical public health folk.'[122]

Black's use of the word '*samizdat*' [emphasis in the original] is instructive, pointing to both the apparently dissident nature of Farrant and Russell's work, and the views of the 'radical public health folk' on state-sponsored health education, allusive to the then still extant Soviet bloc. Russell had previously worked as a researcher for the CPG,[123] and *The Politics of Health Information*, published in 1986 but possibly widely circulated before that, was deeply critical of the then HEC's current approach, specifically *Beating heart disease*, a booklet that would be repurposed for use throughout the duration of *LAYH*.[124] While critical of HEC's attempts to '"sell" a "clear and simple" individualistic health education message'[125] and its alleged selective use of epidemiological evidence, its most thrusting attack was that which was informed by their interviews with 21 informants. Similarly to those interviewed in south Wales, respondents cited anecdotal and personal experiences that contradicted official narratives – '[t]here are people in their

[122] Berridge VA, Christie DA, Tansey EM (eds) (2006) *Public Health in the 1980s and 1990s: Decline and rise. Wellcome Witnesses to Twentieth Century Medicine, vol. 26* (London: Wellcome Trust Centre for the History of Medicine at UCL): 40-41.
[123] Whitehead JB (2011): 97.
[124] HEA (1990) *Beating Heart Disease* (London: HEA).
[125] Farrant W and Russell J (1986) *The Politics of Health Information: 'Beating Heart Disease' as a Case Study of Health Education Council Publications* (London: Institute of Education): 39.

nineties who smoked all their lives, and are overweight, and as fit as a fiddle'[126] – while also pointing to structural and socio-economic influences of people's lifestyles:

> '[*Beating heart disease]* should also talk about the reasons why people eat bad diets and smoke – like the government's interest in perpetuating bad health by their interest in tax from tobacco sales'.[127]

The Politics of Health Information concluded by quoting an anonymous HEC source who commented on 'the political impossibility at the current time, of the HEC being able to be intellectually more honest'.[128]

The voices of the public were also broadcast by the media. In 1987, "This Week"'s documentary on heart disease and prevention programmes, *Lessons for the Living* went into the pubs and social clubs of Sheffield to seek their views on the city's attempts to emulate the North Karelia project. Asking a young man whether he would be willing to change his lifestyle for a longer life, the presenter Jonathan Dimbleby received the taciturn reply, 'I go when I go, don't I?' The man's fatalism and indifference to the efforts of Sheffield's health education workers, combined with David Player's admission that the shortly forthcoming *LAYH* campaign was

[126] Ibid.: 49.
[127] Ibid.: 54.
[128] Ibid.: 62.

underfunded compared to the AIDS programme, was used as a brickbat to denigrate current efforts. *Lessons for the Living* closed with the warning that 'unless more is done, Britain will continue to hold the worst record in the world'.[129]

So the voices of various members of the public, usually working-class, were mobilised by epidemiologists, anthropologists, sociologists and the media to critique various elements of state policy or practice. But the HEA and advertising agencies also used these voices, both in the planning of their campaigns and as (fictional) voices in the advertisements themselves, for example Mick 'The Hod' Willis and Andy Capp. Despite these attempts to integrate lay epidemiology into both the practice and critique of health promotion however, folk knowledge about heart disease remained resistant to the lifestyle paradigm. Partly this was out of confusion about what constituted healthy living; as one middle-aged man on *Lessons for the Living* asked: 'Milk's no good for you, bread's no good for you, beer's no good for you, smoking's no good for you; what is good for us?'[130] It was also borne out of a feeling that life was brutish and short enough already; one widow told Farrant and Russell that '[m]y husband was on a 2000 calorie diet [before he died of heart disease]… salad – it takes all the pleasure out of living … better to live a shorter life'.[131] Davison, Frankel and Smith argued that the explanation for the robustness of the public's resistance lay in a 'rich field of British cultural life, that of chance':

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[129] *Lessons for the Living* (1987). Broadcast 5 March 1987. [TV programme] ITV: Fremantle Media http://www.bfi.org.uk/inview/title/12271 Last accessed 28 March 2018.
[130] Ibid.
[131] Farrant W and Russell J (1986): 51.

> ‘A strong element of the public image of heart disease (and of the sudden fatal heart attack in particular) is that it is a random killer … The candidacy system, then, has two interwoven strands. On the one hand is a set of criteria which can be used in the post-hoc explanation of illness and death, the prediction of illness and death, and the assessment of risk. On the other hand, there exists the all-important knowledge that the system is fallible … the observation that “it never seems to happen to the people you expect it to happen to” becomes integrated as a central part of the system itself.’[132]

Davison had previously expounded on this idea for an article in *New Scientist* in 1989 in which he argued that

> ‘[a]n aged and healthy friend, acquaintance or relative – an “Uncle Norman” – who has smoked heavily for years, eats a diet rich in cream cakes and chips and/or drinks ‘like a fish’ is a real or imagined part of many social networks ... A single Uncle Norman, it seems, may be worth an entire volume of medical statistics and several million pounds of official advertising.’[133]

[132] Davison C et al (1991): 14-15.
[133] Davison C (1989): 46-47.

Ultimately then, the presence of 'Uncle Normans' in popular consciousness exposed the contradictions of *LAYH*. The simplicity of advertising that threatened a 'crippling heart attack' if the individual did not change their ways, or even the relative sophistication of "Stop"'s emotional appeal to 'do it for your family' were insufficient to shift public attitudes. For critics such as Davison, Frankel and Davey-Smith, campaigns such as *LAYH* 'opted for a form of worthy dishonesty', predicated on two unspoken assumptions. Firstly, that the public would not change their behaviour 'unless they are encouraged to anticipate an individual benefit'. *LAYH* had attempted to do this by suggesting that healthy behaviours such as exercise or diet could be practiced on their own terms – 'It doesn't have to be hell to be healthy' because exercise could be moderate, and food merely needed to be cooked differently. Davison and his colleagues took exception to these sort of messages in their final assumption:

> 'Second, that the broadcasting of propaganda based on half-truth, simplification and distortion is a legitimate use of public funds, so long as the goal of the enterprise is the good of the community.'[134]

In other words, the suggestion that moderate exercise would protect the individual against heart disease was, in the minds of health educators, a worthy pursuit, even if it was at best a simplification of the evidence, and at worst, untrue. Davison and

[134] Davison C et al (1991): 14-15.

his colleagues scorned this assumption, arguing that it was effectively a waste of tax-payers' money.

Although the authors were arguing from a left-wing perspective, it appeared that the Conservative government began to take a similar view, as the advertising and publicity budget for *LAYH* began to gradually diminish from 1990 onwards. The strategy shifted to one of decentralisation, developing regional networks and appointing *LAYH* officers to Regional Health Authorities.[135] The process of this regionalisation more or less coincided with the publication of the government green paper *Health of the Nation* in June 1991, which somewhat caught the HEA unawares, as well as ushering in a new era of targets.[136] According to a report commissioned by the HEA into the regionalisation of *LAYH, Health of the Nation* was considered a 'double-edged sword' by health education officers: 'whilst it asks for preventative activity against major killers, its emphasis on outputs and targets makes operationalising it difficult' and was 'seen as conflicting with the wider health promotion goals and programmes of some agencies'.[137] Eventually, these regional *LAYH* officers would fall victim to NHS reorganisation, and the legacy of *LAYH* could be expressed in equivocal terms:

[135] HEA (1990) *Beating Heart Disease in the 1990s: A Strategy for 1990-95* (London: HEA).
[136] An internal HEA memo on 22 January 1992 recalled that 'The arrival of Health of the Nation on 4th June came as a complete surprise to the Press Office', Box 33, SAHEC, Wellcome Library, Accession number 2086.
[137] Social Science Research Unit (1994) *An Evaluation of the Regionalisation of the LAYH Initiative* (London: Institute of Education): 15.

> 'Deaths from CHD have been steadily falling in the younger age-group (35-64) since the late 1970s and whilst health education programmes may well be relevant factors, we must be content with better health statistics, rather than with firmly attributable causes.'[138]

Conclusion

This chapter began with the example of Andy Capp. Below his cartoon strip, in the explanatory text that occupied at least three-quarters of the page, the reader was told that by 'cut[ting] fat', taking a 'little exercise', and making an effort to '[s]top smoking', the reader could '[m]ake a new start'. By this stage in the late 1980s, the British public were familiar with such entreaties. Heart disease prevention, and especially the risk factor of diet, had never been of such public interest. As stated in the introduction to this chapter, heart disease and lifestyle went "public" in the 1980s in an unprecedented way. Campaign groups, professionals and journalists clamoured to discuss the issue in the national press and on television, and it has only been possible to provide a brief snapshot of this activity here. The development of a national campaign, after similar and apparently successful initiatives in other countries was therefore somewhat of an inevitability.

Despite the turbulence surrounding its gestation, in terms of the ongoing AIDS crisis and the disbandment of the HEC, when *LAYH* did launch, it was

[138] Ibid.: 103.

comprehensive in scope, and energetic in form. This chapter has concentrated specifically on the television advertisements that formed the most visible and arguably quintessential aspects of the campaign; the advertising agency BDDH described their role as providing an 'umbrella' under which the other elements of the campaign could 'cluster to give them additional credibility and borrowed impact'.[139] These advertisements combined striking visual imagery, 'sensory complexity' and highly emotional rhetoric which fused lifestyle messaging with Thatcherite moral values concerning the importance of the traditional family unit.

These adverts had been developed on the basis of surveys and focus groups, and both proponents and critics of health education utilised the voices of the public. For *LAYH*, the market research led the HEA to produce material such as the Andy Capp cartoon and similar examples of self-reflexivity, which attempted to anticipate the rejection that the messages would receive. For the epidemiologists, sociologists, and anthropologists, the interviews that they conducted led them to argue that the lifestyle message was overly individualistic, and neglected important structural and socioeconomic factors. Furthermore, the public were not merely recalcitrant, but had developed folk knowledge and health beliefs that conflicted with, and ultimately trumped official narratives. It was not just that familiarity with the messages of lifestyle public health had bred contempt amongst the British public, it was that *LAYH* fundamentally misaligned with their own 'lay epidemiology', Uncle Normans and all.

[139] Butterfield Day Devito Hockney "Campaign Strategy" 25 May 1989, Box 34, SAHEC, Wellcome Library, Accession number 2086.

But it was not only the British public who disrupted the assumptions and rhetoric of lifestyle public health. 'Expert' epidemiology also started to ask questions of this dominant public health paradigm. Although sympathetic to the 'lay epidemiology' of the public, a small group of professional epidemiologists used the risk factor methodology to provide a different perspective on heart disease and lifestyle. Chapters One and Two have explained how cohort studies became the preeminent means of researching chronic diseases such as heart disease, and consequently establishing the scientific evidence on exercise and diet that became the pillars of the lifestyle paradigm. The following and concluding chapter explores how similar methodologies were employed to reach quite different conclusions, providing a more radical critique of lifestyle and the causes of heart disease. This critique was not based on the voices of the public, but on the biometric measurements familiar to the methods of risk factor epidemiology. By asking different questions of the data, structural and environmental influences on heart disease could be highlighted.

This pair of studies, known as the Whitehall studies after the administrative district of central London where the civil servants who were the research participants were based, more by accident than design, reintroduced class and structural determinants into the discourse of late twentieth century public health. The influence of these studies, and the health inequalities research that followed the Black report's publication in 1980, was already being felt in this past chapter. The highlighting by the Conservative minister Ray Whitney of the disproportionate

burden of heart disease amongst 'the lower socio-economic groups' in 1986, could not have happened in the previous decade. Similarly, the newspaper adverts produced by *LAYH*, exclusively published in tabloid newspapers, and featuring depictions of working-class men such as Mick 'The Hod' Willis and Andy Capp, are examples of how public health started to pay more attention to socioeconomic disparities in the 1980s. This influence would grow throughout the 1980s and into the 1990s and 2000s, with the director of the second Whitehall study, Michael Marmot, leading a review of health inequalities for the final New Labour government of Gordon Brown in 2010.

This final chapter works then as an alternative narrative to be placed alongside Chapter Four, examining how the lifestyle paradigm, although firmly established, continued to be contested and disrupted, even within public health circles. The Whitehall studies, especially its second iteration, foregrounded environmental, socioeconomic, and even emotional causes of heart disease in ways that challenged the orthodoxy presented by *Look After Your Heart*. Chapter Five discusses how the Whitehall studies' directors, most notably Geoffrey Rose and Marmot, highlighted the structural causes of disease, as well as the role of stress, and in so doing, disrupted the lifestyle paradigm. But Whitehall also flew somewhat in the face of wider assumptions about class and social inequality in Britain during the 1980s and 1990s, decades in which both the individualism of Thatcherism and the Third Way of New Labour were assumed to have resulted in the death of class. This final chapter explores therefore not only the Whitehall studies' critique of lifestyle public health, but also the way in which structural inequality was discussed

in British politics and public life in the late twentieth century. Where *LAYH* highlighted the behaviour and attitudes of Andy Capp and their putative connection with heart disease, the final chapter looks at how epidemiologists became more concerned with the material conditions in which people like him lived.

Chapter Five: Different class?: Heart disease and health inequalities in the Whitehall studies, 1967 to c.2000

Introduction

In 1996, *The Great Leveller*, a documentary screened on Channel 4, opened with Richard Campbell, a 43-year-old fire safety inspector at the Home Office, describing his recent and sudden heart attack.[1] 'Until then, like most of us', the narrator intoned, 'he thought that his health depended mainly on diet, exercise and smoking'. Setting up the rest of the programme, which would explore epidemiological research conducted on civil servants such as Campbell, the narrator rhetorically asked 'But is that true?' before replying: 'Some scientists now think it isn't'. Campbell's health scare was contrasted with the happy old age of another Richard, Sir Richard Way, at 83, a former permanent secretary in the Ministry of Aviation, and apparently, 'as fit as a fiddle'. Their lifestyles were compared – neither smoked, both exercised moderately, and had equally 'hearty appetites' – before concluding that the major difference between the two men – and by extension the clue to their divergent health states – was their relative positions in the Whitehall hierarchy.

This televisual conceit was manufactured to explain the Whitehall studies which had similarly explored the health and habits of civil servants, albeit at a population

[1] *The Great Leveller* (1996). Broadcast 15 September 1996. [TV programme] Channel 4: Equinox https://www.youtube.com/watch?v=WmEt2WuMZ7E Last accessed 13 November 2017.

rather than an individual level. The two Whitehall studies of civil servants count amongst the most influential epidemiological research in post-war public health, both in Britain and globally. At the time of writing, the key papers from each had been referenced by other peer-reviewed papers 1,033 times and 1,973 times respectively.[2] The first Whitehall study, started in 1968, involved a simple, one-off screening examination of 18,043 men from all grades of the civil service working in central London, before remote follow-up via death certification and NHS records. The second Whitehall study, initiated in 1985, was a comparatively more sophisticated and involved enterprise, regularly surveilling 6,895 men and 3,413 women aged between 35 and 55 years working in the London offices of 20 Whitehall departments. Both studies found that there was a significant gradient to morbidity and mortality from heart disease between all levels of the civil service hierarchy. This difference – which in the first study meant that the lowliest employees suffered three times the rate of heart disease for those at the top – was only partially explained by known risk factors, such as diet, exercise and smoking.[3]

The Great Leveller was interesting for its presentation of prevailing attitudes towards heart disease and its causes, and Whitehall's role in challenging these. In this telling, lifestyle explanations were by this point dominant and widely accepted; 'most of us' thought that diet, exercise or smoking were the most important

[2] https://scholar.google.co.uk/scholar?um=1&ie=UTF-8&lr&cites=3593691914631654797 Last accessed 10 November 2017 https://plu.mx/plum/a/?doi=10.1016/0140-6736(91)93068-K&theme=plum-jbs-theme&hideUsage=true Last accessed 10 November 2017.

[3] Marmot M and Brunner E (2005) "Cohort Profile: The Whitehall II Study" *International Journal of Epidemiology* 34: 251-256.

influences on health. It then cast doubt upon the 'truth' of these assumptions, using evidence from the Whitehall studies and complementary studies by researchers such as economic historian Richard Wilkinson, American neuroscientist Robert Sapolsky and Hungarian epidemiologist Mária Kopp. The Whitehall research was presented as disruptive to the hegemonic lifestyle narrative of public health, attempting to replace it with structural and materialist explanations of disease causation or what would become known as the 'social determinants' of health.[4]

This chapter explores this argument, examining how the Whitehall researchers critiqued lifestyle and provided alternate narratives. The first section examines Whitehall I's mobilisation of 'class' and its relation to heart disease, using cultural theorist Raymond Williams' definition of the term. It argues that Whitehall elevated class from use merely as a control variable to a key determinant of health in late-twentieth century Britain. The second looks at how Whitehall II attempted to refine this relationship, contributing to the burgeoning field of health inequalities research during the 1980s, introducing a new model of 'stress', and unsettling the dominant narrative of 'lifestyle' in postwar British public health. The third section looks at the rhetorical use of Whitehall by two of the studies' directors, Geoffrey Rose and Michael Marmot. Rose attempted to redefine public health's approach to its public(s), while Marmot used Whitehall to communicate to the public his critique of societal inequalities. This final section looks at how these

[4] Wilkinson RG and Marmot MG (eds.) (2003) *Social Determinants of Health: The Solid Facts. Second Edition* (Copenhagen: World Health Organization).

ideas were, and were not, in conversation with wider discourses around class in late-twentieth century Britain.

This chapter uses the Whitehall I papers recently deposited to the LSHTM archives, alongside private papers provided by members of the current Whitehall II study group at University College London (UCL).

Whitehall I: developing a class-based analysis of heart disease, 1968 - 1984

In 1978, the first Whitehall study group published a paper in the *British Medical Journal* (*BMJ*) that examined the 'changing social-class distribution of heart disease'[5]. They noted that although 'usually considered a disease of affluence … contrary to popular opinion, CHD [coronary heart disease] is not more common among the more affluent classes'[6]. Indeed, their analyses showed that 'since 1951 the risk of heart disease has increased progressively for men and women in classes IV and V [i.e. the working class] relative to those in classes I and II [i.e. the upper classes]'[7]. What might explain these differences? The authors largely rejected socioeconomic deprivation as a cause, noting that in the 1930s it had been the upper-classes that had suffered from heart disease disproportionately. They looked instead at the diet and smoking habits of the lower classes, hoping that these recently identified "lifestyle" causes of heart disease might explain the discrepancy.

[5] Marmot MG et al (1978a) "Changing Social-Class Distribution of Heart Disease" *British Medical Journal* 2(6145): 1109–1112.
[6] Ibid.: 1109.
[7] Ibid.: 1111.

Although smoking was indeed more common amongst the working classes, this "risk factor" could not 'completely explain the social-class distribution of heart disease'[8]. Could it be that class itself – the hierarchies that underpin a society – might at least partly explain 'the worsening mortality'[9] of the working class?

In the same decade, the Marxist theorist Raymond Williams wrote extensively on 'class' in *Keywords*, his "vocabulary of culture and society", tracing the brief history of the term, and what it meant in the present day.[10] As a prominent public intellectual who was influential in contemporary discussions about cultural phenomena, particularly for those on the left, his definition provides a useful lens with which to view the Whitehall research both contextually and theoretically. For Williams, three 'variable meanings of class' were used 'in a whole range of contemporary discussion and controversy … usually without clear distinction'. Class could mean either a 'group' (i.e. a socio-economic category), a 'rank' (indicating relative social position) or lastly 'formation', to describe organisation along social, political or cultural boundaries[11].

All three meanings were mobilised in the epidemiologists' paper; the material conditions of the working class ("group") had been considered and then disregarded as a cause of worsening mortality; their relative position ("rank") in the social hierarchy had been used to try and throw light on the aetiology of heart

[8] Ibid.: 1112.
[9] Ibid.
[10] Williams R (2014) [1973] *Keywords: A Vocabulary of Culture and Society* (London: 4th Estate).
[11] Williams R (2014): 66.

disease; and finally, their social and cultural preferences ("formation") – for cigarettes, for certain types of food – had been instrumentalised to explain disparities in health across Britain.

This section uses Williams' definition to investigate how these same researchers' cohort studies of British civil servants – which would become known as the Whitehall studies – elided "group", "rank" and "formation" to think about health and class throughout the latter part of the twentieth century. In doing so, these researchers also disrupted the dominant narrative of individuals' "lifestyle" – smoking, drinking, exercise and diet – as an explanation for heart disease and chronic diseases more broadly. But if the Whitehall studies are difficult to conceive of without consideration of their (at least partial) rejection of the prevailing orthodoxies of risk factor epidemiology, this chapter also argues that they must also be placed in the context of the 'rediscovery of poverty' in the 1960s and 1970s by social reformers. Finally, the chapter notes the political impact of the studies in helping to coin the neologism of "health inequalities".

The first Whitehall study was conceived of as a cohort study, consciously modelled on the hugely influential study conducted in Framingham, Massachusetts. Indeed, Marmot and Eric Brunner, two key individuals in Whitehall II, ruefully suggested that it was a 'British Framingham … "British" in that it was done on the cheap'.[12] As discussed in the Introduction and Chapter One, Framingham had established the

[12] Marmot MG and Brunner E (2005): 251.

concept of the "risk factor", a term that described 'a pattern of behaviour or physical characteristic of a group of individuals that increases the probability of the future occurrence of one or more diseases in that group relative to comparable groups without or with different levels of the behaviour or characteristic'.[13] However, the ambitions of the proposed survey of civil servants had developed beyond the mere establishment of risk factors for chronic disease, and on to how such conditions might be prevented.

Brokered as a collaboration between a team at the London School of Hygiene and Tropical Medicine (LSHTM) led by Donald Reid and Geoffrey Rose, together with Harry Keen, a diabetologist at Guy's Hospital, it hoped to recruit up to 20,000 male civil servants aged over 40 years, all working in the administrative district of Whitehall, central London.[14] Civil servants were seemingly chosen for two reasons. Firstly, they offered a stable, fairly homogenous population with which epidemiologists could work, allowing them to do follow-up studies on particular issue, opportunities of which the Whitehall reserachers availed themselves, with regards to smoking, diet and physical activitity.[15] Secondly, and perhaps reflecting the 'gentlemanly' nature of post-war (social) science, the deal to conduct the Whitehall study was sealed with a meeting between Reid and his friend Daniel Thomson, the Chief Medical Advisor to the civil service, at the Athenaeum Club, a

[13] Rothstein WG (2003) *Public Health and the Risk Factor: A History of An Uneven Medical Revolution* (Rochester, NY: Rochester University Press): 3.
[14] Anon "Health Survey In The Civil Service: Cardio-Respiratory Studies In Government Employees – Outline Plan" August 1968, GB 0809 Whitehall 01/01, LSHTM Archives.
[15] Marmot MG (2004) *Status Syndrome: How Your Social Standing Directly Affects Your Health And Life Expectancy* (London: Bloomsbury): 278.

private members' club yet to admit women.[16] Thomson, as discussed below, had already conducted surveys of occupational health amongst the civil service, and would continue to offer strategic assistance throughout the first study.

At outset, the first Whitehall study was primarily 'concerned with diabetes and certain heart and lung conditions'[17] and what might be done about them, reflecting the growing interest in preventive health explored in Chapter Three of this thesis. As it informed the participants, 'it is now possible for doctors to detect certain states of ill-health at a very early stage before complications develop and when they are likely to improve with simple preventative measures'.[18] Using a number of biometric measurements taken at first registration, and following the men's health over an initial five years through their sickness absence and notifications of mortality, it hoped to identify men that were at particular high risk of disease. These research subjects would then be funnelled into different arms of the study, focussing on smoking cessation, obesity and controlling diabetes.[19]

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[16] Marmot MG (2015) *The Health Gap: The Challenge of an Unequal World* (London: Bloomsbury): 13. Mike Savage has contended that social science in the post-war period was part of a broader resurgence in 'gentlemanly expertise'. The adjective 'gentlemanly' alludes to Peter J. Cain and A. G. Hopkins' famous discussion of 'gentlemanly capitalism', as well as denoting the masculine and socially privileged nature of many of its protagonists. See Savage M (2010) *Identities and Social Change in Britain Since 1940: The Politics of Method* (Oxford: Oxford University Press): 93-112. Cain PJ and Hopkins AG (1987) "Gentlemanly Capitalism and British Expansion Overseas II: New Imperialism, 1850-1945" *Economic History Review* 40(1): 1-26.

[17] Anon. "Health survey in the civil service" n.d. (probably March 1968), GB 0809 Whitehall 01/01, LSHTM Archives.

[18] DD Reid, H Keen, G Rose "Health survey in the civil service" proforma letter to participants, n.d. (probably March 1968) GB 0809 Whitehall 01/01, LSHTM Archives.

[19] Anon. "Flow Chart I: General Plan", 6 October 1966 GB 0809 Whitehall 01/01, LSHTM Archives.

Class and hierarchy were absent from these planning documents, but significantly the 18,403 men that were recruited to the study came from all ranks of the civil service; from the lowliest 'Messengers' to the most elite 'Administrators'. For Marmot and Brunner, this was apparently merely a 'matter of good housekeeping',[20] following the epidemiological conventions of the day:

> '"social class" was not an object of study but a control variable: a potential confounder that you got rid of in order to arrive at the "correct" conclusion about the association between risk factor and disease'.[21]

This 'housekeeping' did however differentiate the Whitehall study from other contemporaneous studies of civil servants, such as the one conducted by LSHTM colleague Jerry Morris on physical exercise, discussed in Chapter One, which only included middle-ranking 'executive' grade government employees. Nonetheless, the study was firmly in the mould of existing cohort studies, and the first few papers published from it throughout the mid 1970s concentrated on diabetes and smoking, with little comment made about any disparities between grades.[22]

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[20] Interview between Michael Marmot and Harry Kreisler, 18 March 2002, "Conversations with History" http://globetrotter.berkeley.edu/people2/Marmot/marmot-con3.html Last accessed 25 September 2017

[21] Marmot MG and Brunner E (2005): 251.

[22] Reid DD et al (1974) "Cardiorespiratory Disease and Diabetes among Middle-Aged Male Civil Servants" *The Lancet* 303(7856): 469–473; DD Reid et al (1976) "Smoking and Other Risk Factors for Coronary Heart-Disease in British Civil Servants" *The Lancet* 308(7993): 979-984; Rose G et al (1977) "Myocardial Ischaemia, Risk Factors and Death from Coronary Heart-Disease" *The Lancet* 309(8003): 105-9.

By the late 1970s however, something had shifted, signalled by the publication of the *BMJ* paper mentioned above, on the social class distribution of heart disease. This was followed shortly after by a paper on inequalities specifically within the Whitehall cohort.[23] There are several different explanations for this change in direction, which also help to illuminate the Whitehall study's use of class. The first is the arrival of Marmot in 1976, a British epidemiologist who had grown up in Australia, and having completed a PhD at Berkeley, returned to his mother country to work on Whitehall. Study directors Reid and Rose asked Marmot, given his interest in 'social and psychosocial things' from his doctoral research on heart disease in Japanese migrants to the US, to look at 'what grade men were in the civil service, where they were in the hierarchy'.[24] Marmot had been deeply influenced by the work of his supervisor, Len Syme, a medical sociologist who had 'had his thinking shaped by the insights of [Émile] Durkheim' and published on the apparent relationship between social class and a range of otherwise unconnected diseases. In an explication of Williams' definition of class, Syme's work suggested that both the lower social classes habits ("formation"), and their relative position in society ("rank") might be responsible for this apparent 'susceptibility' to disease.[25]

The second explanation is the data itself, which when examined by rank of employment, showed a gradient across a number of different measurements:

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[23] Marmot MG et al (1978b) "Employment Grade and Coronary Heart Disease in British Civil Servants" *Journal of Epidemiology and Community Health* 32: 244–249.
[24] Interview between Michael Marmot and Harry Kreisler, 18 March 2002.
[25] Marmot M (2005) "Historical Perspective: The Social Determinants of Disease – Some Blossoms" *Epidemiologic Perspectives & Innovations* 2: 4;. Marmot cited the following paper as being particularly important to his subsequent work: Syme SL, Berkman LF (1976) "Social Class, Susceptibility, and Sickness." *American Journal of Epidemiology* 104: 1–8.

> 'Men in the lower employment grades were shorter, heavier for their height, had higher blood pressure, higher plasma glucose, smoked more, and reported less leisure-time physical activity than men in the higher grades'[26]

Here then, research subjects are viewed as Williams' "formation"; what identified these men with a certain class or grade is their physical attributes and their social habits. But most significantly for the Whitehall researchers, '[m]en in the lowest grade (messengers) had 3.6 times the CHD mortality of men in the highest employment grade (administrators)', a trend that was proportionately observed across all grades.[27] Was it the aspects that made up their "formation" as a grade or social class, or was it their rank, or place in the hierarchy that contributed to this disparity? The results had confounded the Marmot's expectations and prevailing popular views; it was not those in the most high pressured, elite roles that had the worst rates of heart disease, but amongst those in comparatively lowly, unskilled work.

These prevalent views had been reflected earlier in the century by Morris and the Social Medicine Research Unit (SMRU), in their suggestion that '[t]he belief is also widespread that coronary disease is related to stress and strain' and the heart

[26] Marmot M et al (1978b): 244.
[27] Ibid.

disease might 'show some relation to occupation'.[28] As American feminist Barbara Ehrenreich has noted, ideas about stress and its putative link to heart disease were also highly gendered. For Ehrenreich, the immediate post-war epidemic of coronary heart disease became, for Western nations in the second half of the twentieth century, 'emblematic of men's vulnerability in the face of bureaucratic capitalist society'. Furthermore, there was a class – and psychological – aspect to this apparent vulnerability; Ehrenreich states that 'articles directed at the public invariably portrayed the man at risk as a successful upper-level white-collar worker and a responsible family man'.[29] Such ideas were encapsulated in the popularisation of the so-called Type A hypothesis, first coined by San Francisco cardiologists Meyer Friedman and Ray Rosenman in 1959.[30] Although these initial findings from Whitehall contradicted this hypothesis, the Whitehall researchers would continue to consciously investigate Type A into the second study in the 1980s.

Staying with the first study however, this pattern of disparities between grades should perhaps not have been as unexpected for the study directors as it was for Marmot. Previous research for the civil service conducted by Thomson, who had been of invaluable assistance to Reid and Rose in initiating Whitehall, had also demonstrated health disparities between employment grades. In *The Sickness*

[28] Anon "Coronary Disease" n.d., TNA FD1/287.
[29] Ehrenreich B (1983) *The Hearts of Men : American Dreams and the Flight from Commitment* (New York: Anchor Press/ Doubleday): 71.
[30] Aronowitz RA (1998) "The Rise and Fall of the Type A Hypothesis" in Aronowitz RA *Making Sense of Illness: Science, Society and Disease* (Cambridge: Cambridge University Press): 146.

Absence Report published in 1970, historian Debbie Palmer notes that '[l]ower-grade civil servants experienced the highest incidence of illness in all eight of the disease categories studied.'[31] Palmer suggests that Thomson's interpretation of this data was less than sympathetic to those in the lower grades, arguing that those in elite positions had physical and psychological attributes that made them less susceptible to illness; this superiority was a reflection of 'hereditary, environmental and intellectual factors'.[32] As Palmer argues however, this eugenically derived focus on individual resilience rather than socioeconomic or psychosocial explanations contrasted sharply with Marmot's later work. Ironically however, they may well share a view of class consistent with Williams' idea of "rank", albeit from very different perspectives. For Thomson, rank mattered, as an expression of intrinsic physical and mental qualities rewarded by appropriate places in the hierarchy. For Marmot, class was also about rank, but from the position that it was the hierarchy itself that had material impacts on the health of those on the lower rungs. Thomson died in 1976, with Reid also passing away a year later; it would not be too unfair to suggest that in their absence the comparatively radical critique of Rose and Marmot had greater room for expression.

But the Whitehall researchers were not alone in thinking about the disparities in health outlined in their paper on social class and heart disease. As Charles Webster has observed, a British tradition of observing health inequalities between social

[31] Palmer D (2015) "Cultural Change, Stress and Civil Servants' Occupational Health, c. 1967 to 1985" in Jackson M (ed.) *Stress in Post-War Britain* (London: Routledge): 101.
[32] Quoted in Ibid.: 103.

groups goes at least as far back as Edwin Chadwick or Friedrich Engels.[33] Nevertheless, 'although inequalities in health have represented a continuing and serious social problem, active investigation tend to have been very a periodic phenomenon, stimulated by perceptions of social crisis … [for example in] the 1970s'.[34] Work by sociologists and health professionals such as Ann Cartwright[35] and Julian Tudor Hart[36] would probably have been familiar to the Whitehall researchers. Inequalities in health were considered a hot enough topic for the Eugenics Society to organise a symposium on the topic in 1975 at which the Scottish Chief Medical Officer John Brotherston wondered in his keynote whether inequalities were 'inevitable'.[37] Mel Bartley and David Blane have suggested that this speech gives important insight into the key features of the health inequalities debate (such as it was) in the 1970s. They argue that Brotherston, as he 'examined five mechanisms contributing to inequalities in health', only considered one that 'involved possible causal pathways … the dominant questions were … measurement artefact … and reverse causation (selection of healthy people into advantaged social classes)'.[38]

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[33] Webster C (2002) "Investigating Inequalities in Health before Black" *Contemporary British History* 16(3): 81.
[34] Ibid.: 82.
[35] Cartwright A and O'Brien M (1974) "Social Class Variations in Health Care and in the Nature of General Practitioner Consultations" *The Sociological Review* 22(1): 77-98.
[36] Tudor Hart J (1971) "The Inverse Care Law" *The Lancet* 297(7696): 405-412.
[37] Brotherston J (1976) "Inequality: Is It Inevitable?" in Carter CO and Peel J (eds.) *Equalities and Inequalities in Health : Proceedings of the Twelfth Annual Symposium of the Eugenics Society, London, 1975* (London: Academic Press): 73-104.
[38] Bartley M and Blane D (2016) "Reflections on the Legacy of Health Inequalities Research" in Smith KE, Bambra C and Hill SE (eds) *Health Inequalities: Critical Perspectives* (Oxford: Oxford University Press): 24.

These were critiques that the Whitehall researchers would have to grapple with, both in defending their interpretation of the first study, and in designing the second. Additionally, it should be noted that the main areas of concern at this point centred on disparities in health service access and provision, an issue pithily encapsulated in Tudor Hart's inverse care law. This held that the poorer the area, in which there were the greater healthcare needs, were also the more poorly served.[39] Consequently what was relatively novel about the Whitehall researchers' contribution lay predominantly in their attention to class as a determinant of disease itself, rather than how or whether it was adequately treated. Still, there can be no doubt that this class-based analysis was part of a wider trend.

This wider trend was illustrated in January 1979, with the publication of an article in *The Lancet* written by Jerry Morris that pointed out that in terms of mortality 'the professions do well, unskilled workers and their families particularly badly'; in short, 'social inequalities [remained] undiminished'.[40] This was a curtain-raiser for a report on inequalities in health that Morris was writing alongside the former Chief Medical Officer Sir Douglas Black, professor of sociology at University of Essex Peter Townsend and Cyril Smith, secretary of the Social Science Research Council. The Black report, as it would become known after its chair, was published in August 1980 by the newly incumbent Conservative government in controversial circumstances.[41] Historians and public health campaigners have viewed this as a

[39] Tudor Hart (1971).
[40] Morris JN (1979) "Social Inequalities Undiminished" *The Lancet* 313(8107): 87-90.
[41] Berridge V (2002, ed.) "The Black Report and *The Health Divide*" *Contemporary British History* 16(3): 131-172.

pivotal moment in bringing the new concept of 'health inequalities' (i.e. disparities in health outcomes between social classes, ethnicities and genders) to public attention. The Whitehall data was not cited by the Black report, but both projects' had shared influences. The Black report had been initiated by a Labour government, goaded by an open letter to then health minister David Ennals and published in *New Society*.[42] The letter, drafted by Richard Wilkinson, pointed out that '[a]lmost all the major causes of death … are two or three times more common among unskilled manual workers and their families (social class V) than among senior professional and managerial families (social class I)'.[43] Wilkinson believed that diet might play a large part in these differences, and his letter had been based on research he had conducted while studying for a MSc at Nottingham University, and subsequently published as part of an essay competition run by the food manufacturers Van Den Berghs Ltd.[44] This had itself received a good deal of press interest, and the Whitehall researchers' *BMJ* paper was in part a response to this, subjecting the hypothesis to closer scrutiny and concluding that in their view, diet did not play such a significant role in explaining higher mortality, at least from heart disease, amongst the working class.[45] Wilkinson's analysis was essentially suggestive of Williams' "formation" class categorisation, in which the shared habits of the lower classes – most particularly in their fondness for what he viewed as a poor diet – defined them against the upper classes. The Whitehall researchers on

[42] Berridge V (2002) "The Origin of the Black Report: A Conversation with Richard Wilkinson" *Contemporary British History* 16(3): 120-122.
[43] Wilkinson RG (1976) "Dear David Ennals" *New Society* Thursday 16 December 1976 : 567.
[44] Wilkinson RG (1977) *Getting the Most out of Food, 12th Series* (Sussex: Van den Berghs and Jurgens): 41.
[45] Marmot MG et al (1978a): 1112.

the other hand, whilst partially accepting Wilkinson's analysis, insisted that their data illustrated the primacy of "rank" or place in the hierarchy as being the strongest explanation for differences in mortality and morbidity.

These links with the Black Report also illustrate the intellectual heritage, albeit largely unacknowledged, of the Whitehall researchers. Marmot has written of 'extensive discussions with Jerry Morris which influenced me greatly',[46] but it is arguably the work of another Black report author, Peter Townsend, to whom the Whitehall researchers were most indebted. Townsend contributed significantly to the 'rediscovery of poverty' in the 1960s and 1970s, both from theoretical and campaigning perspectives with his *The Poor and the Poorest* (co-written with prominent economist Brian Abel-Smith) and founding of the Child Poverty Action Group.[47] Townsend pioneered an understanding of "relative poverty", distinct from "absolute poverty", that Whitehall's insights – that social inequalities, rather than poverty per se, contributed to ill health – could not exist without. Substantative direct links between the Whitehall researchers and the poverty lobby of the 1960s and 1970s are difficult to trace, although Harry Keen was married to Marxist sociologist Ralph Miliband's sister, Nan. Nonetheless, Marmot's approving quote of

[46] Marmot M (2001) "From Black to Acheson: Two Decades of Concern with Inequalities in Health. A Celebration of the 90th Birthday of Professor Jerry Morris" *International Journal of Epidemiology* 30(5): 1165.

[47] Lowe R (1995) "The Rediscovery of Poverty and the Creation of the Child Poverty Action Group, 1962-68" *Contemporary Record* 9(3): 602-611. For more detail on Brian Abel-Smith and his wide-ranging career and impact on post-war social policy, see Sheard S (2014) *The Passionate Economist: How Brian Abel-Smith Shaped Global Health and Social Welfare* (Bristol: Policy Press).

Morris – that 'poverty and inequality … overlap but are by no means the same' – betrays the debt.[48]

Clearly the Whitehall researchers were now starting to view class in their analysis almost entirely in terms of "rank" or relative position, rather than as one defined by shared cultural habits or in socioeconomic terms. A 1981 paper by Rose and Marmot rejected absolute poverty as having anything to do with heart disease ('[e]xperience in Third World countries shows that where poverty is prevalent, coronary heart disease is rare'), as well as many of the lifestyle risk factors, concluding that 'a man's employment status was a stronger predictor of his risk of dying from coronary heart disease than any of the more familiar risk factors'.[49] Only a third of the disparities in deaths from heart disease between grades could be explained by known risk factors such as cholesterol, obesity, smoking or sedentary lifestyles.[50] This realisation, that the Whitehall researchers were dealing not with the effects of material deprivation on health, but something else, led Marmot and his colleagues to start to investigate what he described as 'psychosocial factors', and by extension, stress.

[48] Morris JN (1979): 88, quoted in Marmot M (2001): 1167.
[49] Rose G and Marmot MG (1981) "Social Class and Coronary Heart Disease" *British Heart Journal* 45(1): 17.
[50] Marmot M and Elliott P (eds) (2005) *Coronary Heart Disease Epidemiology: From Aetiology to Public Health. Second Edition* (Oxford: Oxford University Press): 6.

Whitehall II: refining the critique and establishing the field, 1985 - c.2000

The second Whitehall study was subsequently set up to investigate, in more depth and greater refinement, the critique that the first had advanced; that class and hierarchy were of critical importance to health. But beyond confirming this hypothesis, there were also many questions still to be answered. As Rose put it, these investigations

> 'would have to be very wide … The responsible factors may be genetic, connected with early environment, medical selection into or out of employment, current physical or psycho-social influences, or a combination of these factors. The mechanisms by which the prime factors operate might range from effects of diet (affecting perhaps thrombosis and/or blood pressure), to psycho-social stress operating through the neuro-endochrine [sic] mechanisms, perhaps on blood pressure'.[51]

Whitehall II did not seamlessly succeed Whitehall I however. Marmot moved the short distance from LSHTM to UCL in 1984, and the initiation of the new cohort study was preceded and informed firstly by 'health check' screening of 53,500 civil servants between 1975 and 1978 known as the London Survey, and secondly by a study of a random sample of those participants from the Department of

[51] GA Rose to AB Harrington, 16 June 1978, private collection.

Education.[52] The latter acted as a *de facto* pilot for Whitehall II, reflective of both the increased sophistication of the methodology and the more detailed surveillance that the participants would have to agree to, a persistent tension for the civil service 'staff side'.[53]

In contrast to Whitehall II, research subjects would not be screened once and followed up remotely. Rather, the researchers 'planned regular contacts with the cohort to track changes in social and economic circumstances, psychological states, health behaviours, and biological pathways'; in short, they 'wanted a study that was not done on the cheap'.[54] While the first had been funded predominantly from a grant by the Tobacco Research Council (a body set up by the main tobacco manufacturers in the UK), the second was facilitated by a patchwork of small grants from the British Heart Foundation, Medical Research Council and the Economic and Social Research Council, among others. Partly this was because the TRC no longer existed, following its dissolution in 1978, but also perhaps a recognition that a situation in which the tobacco industry had been effectively funding a project that included a smoking cessation trial as one arm of the study probably constituted a conflict of interest for all parties concerned. This also reflected wider changes of attitude within public health circles to industry funding.[55]

[52] A Semmence, "Location of data: London Screening Survey" 7 March 1980, private collection.
[53] D Thomson, "Note to all doctors", 21 April 1975, private collection.
[54] Marmot MG and Brunner E (2006): 251.
[55] Berridge V (1997) "Why have Attitudes to Industry Funding of Research Changed?" *Addiction* 92(8): 965-968.

In practical terms, this meant that the Whitehall researchers spent a good deal of time writing grant applications to support the study, in which some of the aims and ambitions of the project were revealed. One of the earliest, written by Rose in 1979 to the British Heart Foundation, demonstrated how the investigators viewed their work, and also who they felt were their allies in the endeavour. Noting the social class differences in heart disease mortality across the Britain, Rose suggested that continuing to examine members of the Whitehall bureaucracy might provide some answers:

> 'The reason why the relation between social class and disease shows up very clearly [in Whitehall] is perhaps that this is an unusually hierarchical and orderly society, an individual's occupational level accurately identifies his exposure to those causal influences which are related to social class.'[56]

As noted in the previous section, the Whitehall researchers were not alone in looking at social class and health in the late 1970s into the early 1980s, and the Black report had catalysed a cottage industry of research. Much of this work was conducted by an alliance of sociologists and epidemiologists, and Whitehall II must be placed firmly in this context for both structural and intellectual reasons. Firstly, it is unlikely that Whitehall would have attracted grants from its diverse funding sources if there were not a research community exploring similar themes and

[56] GA Rose, "Social class and coronary heart disease: investigation of some possible underlying factors", n.d. (accompanying letter dated 30 January 1979), private collection.

widespread interest in the issue. Secondly, this network of researchers responded to and developed each others' ideas. Writing in *The Lancet* in 1986, Alex Scott-Samuel, a public health doctor in Liverpool, provided a concise summary of the depth and breadth of health inequalities research that the Black report had sparked. He noted 'the number of "local Black reports" by both statutory and community agencies' that had been produced, as well as placing the Whitehall research alongside recent work by sociologists and social policy researchers such as Mildred Blaxter, Julian Le Grand and David Blane.[57] Blaxter's research primarily concerned health service use and the intergenerational effects of poverty and inequality,[58] while Le Grand wrote extensively on structural and fiscal explanations for inequality.[59] Both offered correctives to suggestions that disparities in health were either a product of people's lifestyles, or merely a matter of statistical artefact.

Blane meanwhile had focused on the Black report as a means to address some of the main criticisms that had been levelled at health inequalities research, including

[57] Scott-Samuel A (1986) "Social Inequalities in Health: Back on the Agenda" *The Lancet* 327(8489): 1084–1085.
[58] Blaxter M (1983) "Health Services as a Defence Against the Consequences of Poverty in Industrialised Societies" *Social Science and Medicine* 17: 1139-48; Blaxter M and Paterson E (1982) *Mothers and Daughters: A Three-Generational Study of Health Attitudes And Behaviour* (London: Heinemann Educational Books).
[59] For example, Le Grand J (1978) "The Distribution of Public Expenditure: The Case of Health Care" *Economica* 45(178): 125-142; Muurinen J-M And Le Grand J (1985) "The Economic Analysis of Inequalities in Health" *Social Science and Medicine* 20 (10): 1029-1035; Le Grand J and Rabin M (1986) "Trends in British Health Inequality, 1931-83" in Culyer AJ, Jonsson B, (eds.) *Public and Private Health Services : Complementarities and Conflicts* (Oxford: Blackwell): 112-127; Le Grand, J (1986) "Inequalities in Health and Health Care: A Research Agenda" in Wilkinson R (ed.) *Class and Health : Research and Longitudinal Data* (London: Tavistock): 115-124.

Whitehall. His analysis identified four main explanations for the disparities that Black had identified; artefact, selection, cultural or behavioural, and materialist.[60]

The artefactual critique referred to the argument that the way in which the five social classes had been defined by the Registrar General since 1913 might be too crude to accurately describe the complexities of class and its relation to occupation. Furthermore, such criticisms made the point that 'the workforce in semi and unskilled manual jobs is shrinking as such work is increasingly mechanised and automated … newer [younger] recruits to the workforce must move into skilled or white-collar jobs'[61]. The consequence of this, particularly for causes of mortality such as coronary heart disease, is that disparities would be exaggerated because older people would be overrepresented in lower social classes. While this explanation could be relatively easily eliminated by adjusting for age in statistical models, Blane also cited Whitehall I as being instrumental in rejecting this explanation, as the clearer hierarchical divisions present in an otherwise 'homogenous industry' than in society at large meant that rank in itself was plainly a factor. Indeed, when planning Whitehall II, researchers thought carefully about the way in which different jobs in the civil service were to be grouped in the hierarchy. While Marmot had thought about retaining the same simple grade categories as Whitehall I for comparability purposes, ultimately a more complex grading system was adopted.[62]

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[60] Blane D (1985) "An Assessment of the Black Report's Explanations of Health Inequalities" *Sociology of Health and Illness* 7(3): 423-445.
[61] Blane (1985): 424.
[62] M Marmot to AM Semmence, 22 March 1983, private collection. See Ferrie JE et al (2002) "Change in Health Inequalities among British Civil Servants: The Whitehall II study"

The narrative of selection echoed the explanation that the Chief Medical Advisor to the civil service Daniel Thomson had provided for the disparities between grades in the civil service; that healthier people were likely to move up the social classes. Critics suggested that health inequalities research had been too static in its analysis, failing to take into consideration the longitudinal effects of social mobility.[63] Blane conceded that this might well be a 'real phenomenon … [but] data suggest that it is small, and that even this is limited to certain age groups and parts of the social structure.'[64] The Whitehall researchers were also alive to this issue; Marmot had lamented privately that 'when examining the relationship of grade to mortality in the original Whitehall Study, we had no information on job histories.'[65] Whitehall II attempted to address this by maintaining regular contact with the civil servants, and asking questions about their employment history to provide a more rounded picture of the way in which they might move up or down hierarchies.

Ultimately Blane was insistent that '[o]nly materialist explanations can simultaneously account for both … the improvement in general health and the maintenance of class differences in health'[66] observed in post-war Britain.

Journal of Epidemiology and Community Health 56: 922–926 for an explanation of the job grading methodology.

[63] This critique stretched back to the 1950s and the sociologist Raymond Illsley's work on infant mortality; lllsley R (1955) "Social Class Selection and Class Differences in Relation to Stillbirths and Infant Deaths" *BMJ* 2(4955): 1520. Examples from the 1980s include Stern J (1983) "Social Mobility and the Interpretation of Social Class Mortality Differentials" *Journal of Social Policy* 12: 27-49.

[64] Blane D (1985): 431.

[65] M Marmot to AM Semmence, 7 August 1980, private collection.

[66] Blane D (1985): 424

Importantly, he argued that lifestyle explanations could also be subsumed into this analysis, again citing papers from the first Whitehall study to bolster his arguments. Individuals did not make choices unconstructed by their socioeconomic circumstances; 'behaviour cannot be separated from its context'.[67]

This close reading of Blane's assessment of the Black report provides a snapshot of several of the key issues in heath inequalities research as the Whitehall researchers initiated the second study between 1985 and 1988. Firstly, the evidently contested nature of health inequalities research, and the theoretical challenges directed at it, prefigure the controversy that would engulf *The Health Divide*, published in 1987 and widely viewed as the follow-up to the Black report.[68] Secondly, it also provides an example of the way in which the Whitehall findings were beginning to be mobilised for political and advocacy purposes. Finally, by comparing it to some of the planning documents of Whitehall II it shows how the researchers were in turn part of a wider conversation, in attempting to anticipate criticisms of their work to which they and the wider health inequalities community had been subjected. Similarly, John Fox, a statistician whose work contributed to the Black report, recalled that

> 'I think that there was more research done in the 1980s on health inequalities than at any other time … [there] was a background for

[67] Ibid.: 434.
[68] Berridge V (2002) "The Black Report and The Health Divide" *Contemporary British History* 16(3): 131-172.

lots of people supporting each other, strong networks building up, which didn't exist before that time.'[69]

Blane's recollections elsewhere of his experiences in the early 1980s also reveal the tight professional and educational links between many of these researchers. He identified the postgraduate courses in Social Medicine at LSHTM and Medical Sociology at Bedford College, run by George Brown and Margot Jefferys, as training grounds for those interested in health inequalities in the early 80s.[70]

The work of this pair, and particularly Brown, was important to another significant strand of the Whitehall II research, as the researchers investigated stress as the mechanism by which inequalities in health manifested. As Rose explained, 'psychosocial stress needs to be considered seriously in relation to social class difference in CHD with which we are concerned'.[71] The team therefore sought to collaborate with Jeffreys and Brown.[72] Brown already had a great deal of experience working on, as historian Rhodri Hayward discusses, 'connecting stress to a particular event and particular form of temporality', in relation to schizophrenia patients at the Maudsley Hospital, south London.[73] Rose noted that the Whitehall researchers had been 'particularly impressed by [Brown's] work in

[69] Berridge V (2002): 168.
[70] Blane D (2005) "Health Inequalities: From Science to Policy" in Oliver A (ed.) *Personal Histories in Health Research* (London: Nuffield Trust): 16.
[71] GA Rose, "Social class and coronary heart disease: investigation of some possible underlying factors", n.d. (accompanying letter dated 30 January 1979), private collection.
[72] Ibid.
[73] Hayward R (2014) "Sadness in Camberwell: Imagining Stress and Constructing History in Post War Britain" in Cantor D and Ramsden E (ed.), *Stress, Shock, and Adaptation in the Twentieth Century* (Rochester, NY: University of Rochester Press): 320-321.

this field … His "life-events" technique is based on a combined assessment of stressful but objectively describable events (job change, bereavement, divorce etc.) and personal factors predicting vulnerability to these events'.[74]

Historian Mark Jackson has argued that 'stress is a hybrid phenomenon, the product of both biological and cultural forces rendered visible by the technology and language of biomedical science' throughout the twentieth century, while Fay Bound Alberti traces the cultural history of the heart as the seat of emotions from antiquity to the present day.[75] Despite the apparent displacement of the heart by the brain as the body's emotional centre in the nineteenth century, the link between an emotional state – stress – and the physical effects on the heart was still present in the mid-twentieth century, most notably in the Type A hypothesis discussed earlier. Indeed, arguably Type A arrested what Alberti terms 'the decline of the emotional heart'.[76] Robert A. Aronowitz and Elianne Riska have written extensively on 'the rise and fall of the type A man',[77] albeit primarily from an American angle, and Aronowitz suggests that 'excessive competitiveness and time urgency was embraced by mainstream medicine in the 1960s and 1970s but ultimately failed to enter the canon of widely accepted risk factors'.[78] In a British

[74] GA Rose, "Social class and coronary heart disease: investigation of some possible underlying factors", n.d. (accompanying letter dated 30 January 1979), private collection.
[75] Jackson M (2013) *The Age of Stress: Science and the Search for Stability* (Oxford: Oxford University Press): 16. Alberti FB (2010) *Matters of the Heart: History, Medicine, and Emotion* (Oxford: Oxford University Press).
[76] Alberti FB (2010)*:* 141.
[77] Riska E (2000) "The Rise and Fall of Type A Man" *Social Science & Medicine* 51(11): 1665–1674.
[78] Aronowitz RA (1998): 145.

context, and as the second Whitehall study was being planned however, the concept still held sway, with Rose noting that

> 'The rise in CHD was associated with mass changes towards a higher time pressure and competitiveness of life style … it has been shown that the so-called "Type A" behaviour pattern predicts an increased risk of CHD, independently of other major risk factors.'[79]

To investigate the Type A hypothesis, and more importantly, look at how stress was related to inequality, '[m]ore sensitive techniques of measurement need[ed] to be developed to measure "stress" related to work, travel, housing, finance, marital support, etc'. [80]

These early plans of the Whitehall researchers reveal both the wider state of current research on stress in the late 1970s and early 1980s, and hints towards the study's own reconceptualising of stress. Firstly, there was an acceptance that stress was in some way connected to the rise of heart disease in Western countries, that this epidemic was in some way connected to modern life, and that some individuals might be particularly vulnerable. However as Aronowitz suggests, this was still very much contested. Indeed, later in the 1980s, *Look After Your Heart* declined to foreground stress in their campaign, noting that 'the effect of stress on

[79] GA Rose, "Social class and coronary heart disease: investigation of some possible underlying factors", n.d. (accompanying letter dated 30 January 1979), private collection.
[80] Ibid.

the heart has not been clearly established.'[81] Nonetheless, the Whitehall researchers took at face-value the evidential basis for the Type A hypothesis, but also acknowledged that their own findings (from the first Whitehall study) somewhat contradicted the model of individual executive stress as a cause of heart disease. In seeking to answer this paradox, they sought out connections with other emerging models of stress, somewhat outside epidemiology, and concerned with a potentially more temporally and social dynamic model than one that saw stress merely in terms of an individual's emotional response.

However, the proposed partnership with Brown and Jefferys ultimately never materialised, for reasons unknown. Rose confided some of the epistemological differences that might have led to such an eventuality in a letter to a civil service colleague:

> '[I]t is not all that easy for epidemiologists and sociologists to collaborate, since they tend to see life in different terms. So far, however, both parties remain of the opinion that the other side (however limited their views) does have something distinctive and potentially important to contribute … we emphasised to George Brown that the interview instrument on which he and Eileen Lusted

[81] Department of Health and Social Services and Health Education Authority (1987) "*Look After Your Heart": A Campaign to Encourage Healthier Lifestyles in England. Campaign Strategy* (London: HEA): 6.

are working would be of ultimate epidemiological value only in so far as in time it can become simple and standardised.'[82]

Clearly, the compatibility between each discipline was being stretched to near breaking point as epidemiology's primary concern with standardisation and measurement sat awkwardly with the sociologists' desire for a less quantitative approach. The Whitehall researchers had considered using 'existing instruments that have already been validated (e.g. … the Framingham and Bortner questionnaires, for "Type A/B" behaviour classification)',[83] but had found these somewhat unsatisfactory for a British context.[84] They therefore remained committed to a social model of stress, with Marmot in particularly having been influenced by his brief secondment to work with Swedish researcher Töres Theorell at the Karolinska Institute in Stockholm on studies that linked job dissatisfaction with coronary heart disease.[85] Marmot has suggested that the three months he spent there in 1984, shortly before the launch of Whitehall II, was highly influential on his thinking in its finding 'that a stressful working environment was not just one

[82] GA Rose to AM Semmence, 8 May 1979, private collection.
[83] GA Rose, "Social class and coronary heart disease: investigation of some possible underlying factors", n.d. (accompanying letter dated 30 January 1979), private collection.
[84] See Heller RF (1979) "Type A Behaviour and Coronary Heart Disease" *British Medical Journal* 2(6186): 368 found in Whitehall II private collection written by colleague of Rose's as well as Johnston DW, Cook D G and Shaper AG (1987) "Type A Behaviour and Ischaemic Heart Disease in Middle Aged British Men" *BMJ* 295(6590): 86–89.
[85] Anon 'Note of meeting, Tilbury House, Monday 19 June 1978' private collection; Marmot M (2004) "2004 Balzan Prize for Epidemiology Acceptance Speech" 18 November 2004, Rome, Accademia Nazionale dei Lincei http://www.balzan.org/upload/EstrattoMARMOT.pdf Last accessed 14 March 2019.

that was busy, but one characterised by a combination of high demands and low control'.[86]

The first major paper from Whitehall II, published in 1991, reported similar results to the first Whitehall study, with those at the bottom faring worse than those at the top; 'in the 20 years separating the two studies there has been no diminution in social class difference in morbidity'.[87] Marmot and his colleagues argued that this could at least partially be explained by different working experiences across grades. Stress was a function of hierarchy, but not in the way that had previously been popularly assumed. Those in lower grades, who sat through days of 'monotonous work characterised by low control and low satisfaction' suffered worse outcomes than those in the higher grades, and furthermore 'were likely to have reported two or more of eight potentially stressful life events in the previous year'.[88] In building this model, it combined two different ideas about stress. It could be both acute, as in Brown's hypothesis of life events, but also chronic, where either the life event might be a trigger for an unfolding temporal process, or, as the Whitehall studied principally argued, stress was the result of the daily grind. The key feature was that both chronic and acute stress was more likely for those in lower grades. Stress was intimately linked to inequality.

[86] Marmot M (2004) "2004 Balzan Prize for Epidemiology Acceptance Speech" 18 November 2004, Rome, Accademia Nazionale dei Lincei.
[87] Marmot M et al (1991) "Health Inequalities among British Civil Servants: the Whitehall II Study" *The Lancet* 337(8754): 1387.
[88] Marmot M et al (1991): 1391.

This categorically upended the Type A hypothesis, and indeed the authors commented that

> '[d]espite their lower rate of heart disease, more of the participants in higher status jobs had type A behaviour… There is no hint from these data that differences in type A behaviour could account for grade differences in disease. It is worth noting that hostility, which has been associated with heart disease, was more prevalent in those with lower job status.'[89]

Where did this new model of stress leave the gender assumptions that had for so long linked Type A behaviours, stress and heart disease? The first Whitehall study had excluded women, despite the substantial role they played in the civil service throughout the immediate post-war era.[90] By the mid-1980s, critiques of heart disease research as being exclusively conducted on a male study population were being voiced in both the medical and popular press. Whitehall II would correct this oversight somewhat by including 3,143 female civil servants in its study, and Marmot himself responded to a mildly upbraiding comment from Anne Dillon, the director of pressure group the Coronary Prevention Group, in *The Times* by noting that

[89] Marmot M et al (1991): 1391-1392.
[90] Devanny J and Haddon C (2015) *Women and Whitehall: Gender and the Civil Service since 1979* (London: Institute of Government): 8-10.

> 'women have been relatively understudied, probably because the disease is universally more prevalent among men. But there are risk factors unique to women, such as the association between oral contraceptives and heart disease … and the effects of the menopause. These are areas that do require a good deal more scientific investigation.'[91]

But it was not these putative risk factors that were capturing public and scientific attention, so much as the increasing feminisation of the workforce, and what impact this might be having in terms of diseases previously thought to be the burden of the male breadwinner. As a 1980 editorial in *The Lancet* put it, '[f]or some time it has been fashionable to speculate that as women go out to work and take on traditionally male jobs they will also acquire male diseases, especially coronary heart disease'. However, it urged caution in such theorising, not least because 'the extent to which women are taking over traditionally male jobs is slight … the type of work they do – domestic work or caring for children or the sick for example – often mirrors that already done in the home'.[92]

Nonetheless, elsewhere such fashionable speculation ran unchecked. Cary Cooper, author of the 1988 bestseller *Living with Stress*, and to this day an authority on stress at work, suggested that 'Women used to be more prone to neuroses when they are frustrated by being at home. Now that they are going out work, and

[91] Prentice T (1986) "Hazards of a Woman's Heart" *The Times* Monday 14 April 62430: 15.
[92] Anon (1980) "Women, Work and Coronary Heart Disease" *The Lancet* 316(8185): 76-77.

raising a family, their mental health problems are decreasing but they are starting to get 'male' diseases like heart disease'. He cited the recent death of Greek heiress Christina Onassis from a heart attack at the age of 37 as evidence of this shift: 'Looking at what we know of [her] lifestyle, a typical fast-moving Type A personality, businesswoman and mother, I wasn't surprised by the manner of her death'.[93] Cooper was playing with a number of popular tropes; firstly, resurrecting an older model of females stress with the idea of the housewife with suburban neurosis from its roots in the interwar years,[94] but also adapting that to newer models of stress by implying that the type of women who got to the top adopted male or Type A behaviours, and might consequently expect male diseases. Finally, he also suggested that the career woman who tried to have it all could expect an increased risk of heart attack as reward for her double burden. The latter theme was a common topic for the women's pages of British conservative family newspapers in the 1990s, with the *Daily Express* reporting on a cohort study on stress in Edinburgh with the possibly misleading interpretation that '[s]cientists have discovered that [women] are much less likely to suffer a heart attack if they stay at home and do what they are told'.[95]

[93] McKee V (1988) "The Way to a Woman's Heart Attack" *The Times*, Thursday 24 November 63247: 15.
[94] See Haggett A (2007) "Housewives, Neuroses, and the Domestic Environment in Britain 1945-70" and Hayward R "Desperate Housewives and Model Amoebae: The Invention of Suburban Neurosis in Inter-War Britain" in Jackson M (ed.) *Health and the Modern Home* (New York: Routledge): 84-110, 42-62.
[95] Gallagher I (1997) "Stay at Home and You'll Live Longer" *Daily Express* Friday 22 August : 9.

The Whitehall researchers attempted to mediate between these worlds of work and home in their discussion of gender differences in heart disease. In exploring the female experience of heart disease, Whitehall II posited that work seemed to mean different things to women than men, and this could manifest itself in differential rates of disease: 'the association between psychosocial working conditions (and control at work in particular) and coronary heart disease (CHD) is not as strong for women compared to men'. But if 'control' at work was less important, the Whitehall II researchers reported that '[t]he results indicate that low control at home predicts CHD among women but not among men … Psychosocial domestic conditions may have a greater effect on the health of women'.[96] In other words, while the Whitehall researchers rejected the type A hypothesis, they nonetheless subscribed to ideas that there were gender differences in the way that the emotional spheres of employment and domesticity were both traversed and experienced. As historians Claire Langhamer and Jill Kirby have explored in their work on the expectations of emotional labour by women at work in the long 1950s and housewives' experience of stress in the 1960s respectively,[97] the Whitehall researchers could find little differentiation between women's experiences of work and home in late twentieth-century Britain than at any other point in the post-war era. While remaining disarmingly vague in its discussion of the lived experience of everyday life, Whitehall II implied that men

[96] Chandola T et al (2004) "The Effect Of Control at Home on CHD Events in the Whitehall II Study: Gender Differences in Psychosocial Domestic Pathways to Social Inequalities in CHD" *Social Science and Medicine* 58 (8): 1501-9.
[97] Langhamer C (2016) "Feelings, Women and Work in the Long 1950s" *Women's History Review* 26(1): 77-92; Kirby J (2014) *Troubled by Life: The Experience of Stress in Twentieth-century Britain* (Unpublished PhD thesis, University of Sussex): 122-138.

desired and needed control at work in a way that women did not, while in the domestic sphere the reverse was true. The type A hypothesis may have been dead, but gendered interpretations of heart disease were and remain alive and well.

Whitehall II then both widened the scope of the original Whitehall study, decisively moving from a study of civil servants' lifestyle to a new study that considered the psychosocial effects of their place in the workplace hierarchy, as well as in the domestic sphere. In this way it encapsulated some of the concerns of sociologist Mildred Blaxter, discussed in the Introduction. Where Whitehall I concerned lifestyle as a defined set of practices, the second Whitehall study was more interested in lived experience, lifestyle as the mode and practice of living. As well as widening its scope, more or less as Rose had anticipated, Whitehall II had also refined its methods to address the key issues that faced the health inequalities field in 1980 and into the 1990s. As their work started to be used in political discourse, the Whitehall researchers ensured that the second study provided a sophistication and depth of analysis that could not be present in the first study. But although it exhbitied methodological sophistication, it was perhaps less attuned to wider discourses around social class and inequality in 1980s Britain, as the following section will go on to discuss.

The researchers also began to triangulate their findings with some more unusual sources, outside the close network of health inequalities researchers that had hitherto been their peers. In *The Great Leveller* documentary, Eric Brunner, a biochemist working on Whitehall II, claimed credit for identifying the links between

the hierarchical differences observed among civil servants and those investigated by neurobiologist Robert Sapolsky in his studies of baboons and their own social orders. Although this comparison would inevitably elicit mischievous comment in the press,[98] the connection would prove to be a highly fruitful one, providing much of the supporting evidence to Marmot's popular science book *Status Syndrome*, first published in 2004.[99]

"Sick Individuals and Sick Populations" and *Status Syndrome:* theory and rhetoric in Whitehall

But before Marmot brought the findings of Whitehall to a wider public however, Rose had written his own influential book based on the studies. *Strategy of Preventive Medicine*, published in 1992, while obviously intended for a more specialist (predominantly medical) audience, also did much to adjust public health's focus on lifestyle.[100] This grew out of a prominent journal article entitled "Sick Individuals and Sick Populations"[101] from 1985 which had rethought public health strategies of prevention from focusing on high-risk groups to whole population

[98] For example, *The Times* City Diary column reported that '*Esquire* magazine reveals the findings of a study of two sets of free-ranging primates which suggests while life may be lonely at the top, the lower down life's greasy pole you are, the more likely you are to suffer illness and premature death. The research "subjects" were 10,000 civil servants, who fell under the watchful eye of Professor Michael Marmot, of University College London, and a number of Kenyan olive baboons who frolic on the Serengeti plains in East Africa. Their behaviour was monitored by Professor Robert Sapolsky of Stanford University. Civil servants and baboons were chosen because both life in hierarchical structures, both are bothered about status, and in both groups those at the top live longer.' The article was accompanied by a cartoon of pinstripe-suited civil servants swinging in trees. Anon (1994) "Bare Your Teeth at the Boss" *The Times* Tuesday 15 November 65112: 27

[99] Marmot MG (2004).

[100] Rose GA (1992) *The Strategy of Preventive Medicine* (Oxford: Oxford University Press).

[101] Rose G (1985) "Sick Individuals and Sick Populations" *International Journal of Epidemiology* 14: 32-38.

approaches. This final section explores the rhetorical and political uses of the Whitehall data through *Status Syndrome*'s appeal to the public and policymakers, and Rose's theoretical interventions on how public health viewed its populations.

By the time Rose penned "Sick Individuals and Sick Populations" he was a vastly experienced and well-respected figure in epidemiological circles internationally. Alongside the first Whitehall study, he had made significant contributions to a WHO European Collaborative Trial of multifactorial prevention of coronary heart disease,[102] helped to initiate the multinational INTERSALT study investigating blood pressure and its determinants,[103] as well as writing the WHO standard textbook on *Cardiovascular Survey Methods* with American epidemiologist Henry Blackburn.[104]

"Sick Individuals and Sick Populations" was a key intervention at a time when questions were being asked about the role of prevention, health education and health promotion. While in the 1970s, as detailed in Chapter Three, there was widespread consensus on the principle of prevention, by the middle of the 1980s this had splintered. As Chapter Four discusses, there was growing disillusionment with the effectiveness of health education, and whether individuals could be persuaded to change their behaviour. Rose clarified many of the conceptual issues, using examples from his own research. Firstly, he outlined how epidemiologists

[102] Kornitzer M and Rose GA (1985) "WHO European Collaborative Trial of Multifactorial Prevention of Coronary Heart disease" *Preventive Medicine* 14(3): 272-278.
[103] Rose G and Stamler J (1989) "The INTERSALT Study: Background, Methods and Main Results. INTERSALT Co-operative Research Group" *Journal of Human Hypertension* 3(5): 283-8.
[104] Rose G and Blackburn H (1968) "Cardiovascular Survey Methods" *World Health Organization Technical Report Series No. 56* (Geneva: World Health Organization): 1-188.

were able to find out which individuals were at high risk of disease, by examining their differential exposures to a particular risk factor. But if that risk factor were common – for example, if everybody smoked twenty cigarettes a day – then it would be very difficult to work out what that risk factor or behaviour was, because everyone's exposure would be the same, and incidence of disease would only vary based on individual genetic susceptibility. The epidemiologist would instead have to turn to comparing different populations – for example, British civil servants and Kenyan nomads – who have entirely different rates of disease (in this instance high blood pressure) and work out what exposure was common in one group but not in the other.[105]

While on its own this might seem the type of insight that might appear in an epidemiology textbook, Rose argued that this had much wider implications about societal disease prevention. His view was that up until this point, public health policy had been too fixated on the identification of 'high-risk' groups. While this approach had its merits (and he pointed to the relative success of the smoking cessation randomised controlled trial in Whitehall I), and could potentially be very motivational for the individuals concerned, Rose identified some problems, which he argued were particularly salient for a 'mass disease' like coronary heart disease. Firstly, that any screening programme would inevitably miss 'borderline' cases who might have also benefited from whatever intervention was available. Secondly, and more significantly

[105] Rose GA (1985): 427-429.

> 'it is palliative and temporary, not radical. It does not seek to alter the underlying causes of the disease but to identify individuals who are particularly susceptible to those causes … it does not deal with the root of the problem, but seeks to protect those who are vulnerable to it; and they will always be around.'[106]

Rose insisted that this problem was particularly acute for heart disease. Because it was so common in Britain and other post-industrial countries, it was difficult for screening to discriminate between low and high-risk individuals. Rose personalised this dilemma:

> 'I have long congratulated myself on my low levels of coronary risk factors … [t]he painful truth is that for such an individual in a Western population the commonest cause of death – by far – is coronary heart disease! Everyone, in fact, is a high-risk individual for this uniquely mass disease.'[107]

The implications of this could be read in two ways. On the one hand, it could be argued that prevention was 'everybody's business', as the government green paper had suggested a decade earlier.[108] However, Rose was sceptical about highlighting

[106] Rose GA (1985): 430.
[107] Ibid.
[108] DHSS (1976) *Prevention and Health: Everybody's Business* (London: HMSO).

individual responsibility for disease prevention, arguing that '[e]ating, smoking, exercise and all our other life-style characteristics are constrained by social norms'.[109] Public health should therefore be concentrating on shifting social norms, or better still, 'remov[ing] the underlying causes that make the disease common'.[110] Nonetheless, Rose acknowledged that 'the population strategy of prevention has also some weighty drawbacks', the most problematic of which was the 'prevention paradox'. This he summarised as a 'preventative measure which brings much benefit to the population offers little to each participating individual', a predicament that he claimed had been 'the history of public health – of immunization, the wearing of seat belts and now the attempt to change various life-style characteristics'.[111] For such an incisive paper, "Sick Individuals and Sick Populations" ended on something of a downbeat and equivocal note: '[r]ealistically many diseases will long continue to call for both approaches … nevertheless the priority of concern should always be the discovery and control of the causes of incidence.'[112]

Nonetheless, this was Rose's 'big idea';[113] an unsparing appraisal of the contradictions of lifestyle public health and its focus on the individual. It used insights from Whitehall to reason that trying to change people's behaviour without changing the circumstances in which they practice that behaviour was at best only

[109] Rose GA (1985): 431.
[110] Ibid.
[111] Ibid.: 432.
[112] Ibid.
[113] Hofman A and Vandenbroucke JP (1992) "Geoffrey Rose's Big Idea" *BMJ* 305(6868): 1519–1520.

ever going to be partially successful. In *the Strategy of Preventive Medicine* he expanded this critique to get to the heart of how he thought public health should view itself:

> 'in order to grasp the principles of public health one must understand that society is not merely a group of individuals but is also a collectivity … Society is important in public health because it profoundly effects the lives and thus the health of individuals.'

Over the next two decades Rose's idea would be endlessly debated, critiqued and celebrated in epidemiological and medical journals.[114] What he had succeeded in prompting was a fundamental questioning of the tenets of the prevailing paradigm of lifestyle public health. Using his experience from the first Whitehall study he had argued that focussing on the individual's susceptibility to a risk factor was only half the story; public health had also to consider the risk factor itself. Furthermore, the way in which society promulgated norms, and indeed organised itself had health effects for individuals. For Rose, public health was inherently political. Writing in 1990, he underlined the most important lesson that Whitehall had taught him:

[114] For example, Charlton BG (1995) "A Critique of Geoffrey Rose's 'Population Strategy' for Preventive Medicine" *Journal of the Royal Society of Medicine* 88(11): 607-10; Faergeman O (2005) "Commentary: Geoffrey Rose's Thinking about Coronary Artery Disease" *International Journal of Epidemiology* 34(2): 246-7; Doyle YG et al (2006) "Sick Individuals and Sick Populations: 20 Years Later" *Journal of Epidemiology and Community Health* 60: 396-398.

> 'In research in the civil service my colleagues and I found that mortality among workers of the lowest skill grades was more than three times greater than that among the top brass. This illustrates Britain's scandalous social class inequalities in health … Here lies perhaps the greatest of today's public health challenges. Its causes are economic and social, and so its remedies must also be economic and social. Medicine, health, and politics cannot be kept apart, and they should not be kept apart.'[115]

Marmot would take this latter point and use it as the basis for *Status Syndrome.* Like Rose when he had published *The Strategy of Preventive Medicine*, Marmot was already well-established by the time he wrote his *magnum opus*. However, the publisher of Marmot's book (Bloomsbury versus Rose's academic Oxford University Press) indicates his enhanced status as something approaching a biomedical celebrity with his knighthood,[116] appearance on *Desert Island Discs*,[117] and numerous international speaking engagements.

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[115] Rose GA (1990) "Reflections on the Changing Times" *BMJ* 301(6754): 687

[116] While the acceptance of one of the highest ranks in the British honours system in 2000 by a researcher who has spent most of his career critiquing the deleterious effects of hierarchies might seem antithetical, Marmot did not necessarily see it in such terms. When questioned on the subject, Marmot replied that despite feeling 'uncomfortable' about it, he had been congratulated on the award by Jerry Morris who assured him that 'we, he was taking collective ownership of this, which of course I was absolutely delighted with - this feeling of embarrassment, which hadn't gone away, was certainly eased by having that endorsement from Jerry'. *The Life Scientific: Sir Michael Marmot* (2011). Broadcast 1 November 2011. [Radio programme] BBC Radio 4. http://www.bbc.co.uk/programmes/b016ld4q Last accessed 1 December 2017.

[117] *Desert Island Discs: Sir Michael Marmot* (2014). Broadcast 11 June 2014. [Radio programme] BBC Radio 4. http://www.bbc.co.uk/programmes/b048j630 Last accessed 1 December 2017.

The reputation of the Whitehall studies also continued to rise throughout the 1990s. In 1991 Whitehall II had reported that their 'findings show[ed] that socioeconomic differences in health status have persisted over the 20 years separating the two Whitehall studies.'[118] From the early 1990s onwards, the Whitehall studies began to become a byword for health inequalities in public discourse, particularly by politicians wishing to succinctly draw attention to the epidemiological evidence.[119] Marmot cannily used the evidence in the publication of the Acheson report on health inequalities in 1998,[120] and would lead his own review of the issue in 2010.[121]

Marmot's book had ambitions far beyond that of Rose's; where *The Strategy of Preventive Medicine* was intended to redefine public health's relationship with its public, *Status Syndrome* wanted to challenge society's relationship with public health. As a popular science book, it was an attempt to influence the public sphere, and advocate to politicians and policymakers the scientific imperative of a fairer, more equal society. To make these arguments, Marmot corralled an impressive array of evidence, but the Whitehall study was ever present. In the introduction, Marmot set out his argument:

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[118] Marmot M et al (1991): 1387–1393.
[119] The Whitehall studies were first mentioned in the House of Commons on 20 July 1990 by Simon Coombs MP in a debate on "Good Health" (HC Deb 20 July 1990 vol 176 cc1315-51) and were mentioned on a further four separate occasions up until 2000.
[120] Acheson D (1998) *Independent Inquiry into Inequalities in Health* (London: The Stationery Office).
[121] Marmot M et al (2010) *Fair Society, Healthy Lives. The Marmot Review* (London: University College London).

> 'I began my research on civil servants in 1976 with the Whitehall studies… Britain was and is a stratified society, and no part of it is more exquisitely stratified than the British civil service. When I published our finding … the first reaction was civil servants, who cares! But what was true in Whitehall was true in Britain as a whole. The barely concealed reaction from other countries was: Ah! The British! What else can you expect from class-ridden Britain?'[122]

Marmot argued that inequalities in health had been found across Western nations, even those that thought they were relatively egalitarian, such as Sweden. As he noted elsewhere, 'Whitehall, far from representing an atypical postimperial backwater, [was] typical of the developed world'.[123]

Marmot went on to explain what he viewed as the mechanisms for this in laymen's terms, drawing on Sapolsky's animal studies, as well as the less esoteric fields of neuroscience and experimental psychology to justify his argument.[124] He also took care to elucidate for a general audience the arguments that had raged in the health inequalities research community in the 1980s; the hypothesis that healthier people were 'selected' into higher classes, as well as 'the usual suspects: bad habits, lack of access to medical care, unlucky genes'.[125]

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[122] Marmot MG (2004): 3.
[123] Marmot MG (2006) "Status Syndrome: A Challenge to Medicine" *Journal of the American Medical Association* 295(11): 1304.
[124] Marmot MG (2004): 6.
[125] Ibid.: 7.

Marmot's critique of these 'bad habits' or 'lifestyle' laid out his personal view of the way in which the debate had shifted throughout the period in which he had been researching. He reported that 'the general view' in 1978, had been that 'major diseases such as heart disease could be attributed to freely chosen lifestyle'.[126] He reeled off 'the evidence', accumulated by epidemiological studies over the last half a century and by this point firmly embedded into public consciousness:

> 'It is certainly true, as any reader of this book knows, that high-fat diet and high-plasma cholesterol are bad for heart disease. Smoking is a killer, in a variety of ways. Little exercise and too much food leads to obesity, diabetes and heart disease … Whitehall confirmed all of these findings and, further, showed that the lower the employment grade, position in the hierarchy, the more adverse these health behaviors were.'[127]

Marmot rejected lifestyle as being sufficient explanation for health inequalities, again drawing on Whitehall, pointing out that lifestyle risk factors only accounted for a third of the disparity between grades. Their contribution to differentials in ill-health was 'modest'.[128] Marmot acknowledged however that apparently unhealthy

[126] Ibid.: 43.
[127] Ibid.
[128] Ibid.: 45.

behaviours were more common lower down the social classes. His explanation of this phenomenon was similar to his assessment of health inequalities in general; it was all a matter of 'control'. This linked back to the Whitehall researchers' theory of stress, discussed in the previous section. Stress, brought about by a lack of control over one's day to day existence, was the mechanism by which inequality manifested disease. He argued that people in the lower grades of the civil service, and by extension in lower social classes had their needs for 'control and participation' less well met than those in the upper classes; not only did this have effects on people's health behaviours, but also disease itself.[129]

In Marmot's view, lifestyle public health failed to address the core issues of an unequal society. Whitehall presented a microcosm of this society, and demonstrated that what were by now accepted risk factors such as diet, exercise and smoking, did not provide a convincing enough explanation for disparities in health. The Whitehall studies, despite originating as conventional risk factor studies, had in fact complicated and disrupted the lifestyle paradigm.

But Marmot's rhetoric of 'class-ridden Britain' also points to a paradox in the Whitehall studies, health inequalities, and this moment in modern British history more widely. As historian Florence Sutcliffe-Braithwaite has noted in her recent monograph, the 1980s into the 1990s marked a period of widening income inequality in Britain, but simultaneously a decline in the currency of "class" as an

[129] Ibid.: 241.

appropriate analytical discourse.[130] While Sutcliffe-Braithwaite suggests that 'the late 1970s and early 1980s did see something of a spike in cultural interest in "class"',[131] this interest was arguably that of the eulogist, as sociologist Gordon Marshall, amongst others, noted in 1988:

> 'obituaries … have been published for social class and social class analysis. The most important of these in the British context are those of restructuring capital and labour; the growing complexity and consequent opacity of class processes; emergence of instrumental collectivism as the epitome of increasingly sectional distributional struggles; privatization of individuals and families; and fatalistic acceptance of structural inequality allied to an inability to conceive of any alternative.'[132]

By the mid-1990s, historian Patrick Joyce was writing that 'class is seen by some to be unequal to the task of explaining our present reality.'[133] Such dissatisfaction was palpable across the British political spectrum, as the electoral dominance of the Conservative party gave way to a New Labour regime that was, famously, 'intensely relaxed about people getting filthy rich'.[134] To what extent were Marmot, the

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[130] Sutcliffe-Braithwaite F (2018) *Class, Politics, and the Decline of Deference in England, 1968-2000* (Oxford: Oxford University Press).
[131] Sutcliffe-Braithwaite F (2017) "Discourses of 'Class' in Britain in 'New Times'" *Contemporary British History* 31(2): 300.
[132] Marshall G et al (1988) *Social Class in Modern Britain* (London: Hutchinson): 3.
[133] Joyce P (ed.) (1995) *Class* (Oxford: Oxford University Press): 3.
[134] Rawnsley A (2001) *Servants of the People: The Inside Story of New Labour* (London: Penguin): 213.

Whitehall researchers, and the health inequalities field in conversation with these significant cultural and political shifts?

Inevitably, the spectre of Margaret Thatcher's premiership hangs over this period. Historian David Cannadine has argued that

> 'like Disraeli and Churchill before her, she saw society as a ladder, with "differentials at every level," and she was deeply opposed to any government intervention intended to undermine it, or lay it flat, or break it, or remove it.'[135]

Furthermore, for Cannadine, Thatcher was also 'determined to drive the language of class – and the idea of class conflict – off the agenda of public discussion, and this was something she very successfully accomplished.'[136] Of course, such determination was not without opposition, and the health inequalities research of the 1980s can be placed among this resistance. Thatcher contended in 1988 that

> 'In the world in which we now live, divisions into class are outmoded and meaningless. We are all working people who basically want the same things. We all share the desire for higher standards of living, of health, of education, of leisure.'[137]

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[135] Cannadine D (1999) *The Rise and Fall of Class in Britain* (New York: Columbia University Press): 177-178.
[136] Ibid.: 179.
[137] Margaret Thatcher, speech to Conservative Central Council, Saturday 17 March 1988, https://www.margaretthatcher.org/document/107200 Last accessed 18 March 2019.

The response to this sort of rhetoric from health inequalities researchers was that while all might share the 'desire' for 'higher standards … of health', this was less achievable for those lower down the socioeconomic scale, and that furthermore the policies of Thatcher in exacerbating income inequality was making these standards ever less attainable. As mentioned in the previous chapter, George Davey-Smith, the epidemiologist who would later join the second Whitehall study, stated in 2016 that his work in the valleys of south Wales 'very soon after the miners' strikes' was motivated by a desire for 'people to say that heart disease was caused by Margaret Thatcher and capitalism ultimately.'[138]

But in terms of the left – of which the Whitehall researchers might well be included – ideas about class were also being reconfigured, arguably independently of Thatcherism. Sutcliffe-Braithwaite notes how the influential contributors to *Marxism Today* wrote of 'New Times', providing 'a compelling vision of the decline of "class"'. She quotes the sociologist John Urry, writing that, at that moment in 1988:

> '[s]ocial life, culture and politics are no longer organised in terms of social class ... because current inequalities of income, wealth and power do not produce homogenous social classes which share

[138] *The Life Scientific: George Davey-Smith on Health Inequalities* (2016). Broadcast 1 March 2016. [Radio programme] Radio 4 http://www.bbc.co.uk/programmes/b071t8qd Last accessed 22 March 2018.

> common experiences ... [and] because a much wider variety of other social groups are able to organise'.[139]

Indeed, shifting ideas about class were not just being expressed by the political and chattering classes; Mike Savage has used a Mass Observation directive from 1990 to argue that for the participants, class was 'presented as a matter of agency, rather than as something handed down, something which anchors an individual's biography in a larger frame' expressed in anecdotes about 'not knowing how to use a napkin, being a housewife, rising to a middle class job'.[140]

The Whitehall researchers were also concerned with agency, acknowledging that civil servants might move up – and down – the hierarchy. As discussed earlier, Whitehall II had attempted to more closely track their employment history to provide a more rounded picture of the way hierarchical mobility worked. But Marmot was also insistent that an individual's social mobility had a limited effect on health outcomes, citing work by David Blane and Mel Bartley and arguing that 'while it was true that people who rise up the social scale are healthier than those they have left behind … these upwardly mobile people are *less* healthy than others in the class of their destination.'[141]

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[139] Sutcliffe-Braithwaite F (2016): 294. Sutcliffe-Braithwaite cites Urry, J (1990) "The End of Organised Capitalism" in Hall S and Jacques M (eds.) *New Times: The Changing Face of Politics in the 1990s* (London: Lawrence & Wishart): 94–102.

[140] Savage M (2007) "Changing Social Class Identities in Post-War Britain: Perspectives from Mass- Observation" *Sociological Research Online* 12(3): 5.9.

[141] Marmot M (2004): 60. Emphasis in original. Marmot cites Bartley M and Plewis I (1997) "Does Health-Selective Mobility Account for Socioeconomic Differences in Health? Evidence from England and Wales, 1971 to 1991" *Journal of Health and Social Behavior* 38(4): 376-386 and Blane D et al (1999) "Does Social Mobility Affect the Size of the

More broadly however, the political mood music of Major's aspiration towards a 'classless society … in which people can rise to whatever level … from wherever they started',[142] suggested that if "class" had not completely declined in the previous decade, then the conversation had become about, in many people's minds, equality of opportunity, rather than inequality of resources. Class was more social than socioeconomic; about 'formation' rather than 'group' or 'rank', to return to Williams' typology. An extension of this framing of class and inequality is provided by Lynsey Hanley in *Respectable*, her memoir of personal social mobility from working to middle class in the early 1990s, which argues powerfully that class in Britain was and remains as much experiential as materialist.[143] Whitehall was to a certain extent attuned to this discourse, most particularly in its treatment of stress as the biological pathway by which the health effects of inequality and hierarchy were manifested; '[i]t is the rank that drives the body's processes'.[144]

Despite this occasional synchroneity however between Whitehall's findings and wider political and social discourses, it was perhaps more accidental than the result of a deliberate intervention. Marmot would later report, somewhat disingenuously, a conversation with a Canadian academic, Fraser Mustard, in 1986, that

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Socioeconomic Mortality Differential?: Evidence from the Office for National Statistics Longitudinal Study" *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 162: 59-70.

[142] Quoted in Turner A (2013) *A Classless Society : Britain in the 1990s* (London: Aurum Press): 4.

[143] Hanley L (2016) *Respectable: The Experience of Class* (London: Allen Lane).

[144] Marmot M (2004): 119-120.

> '"[t]here are no policy implications [to the Whitehall research] … Mrs Thatcher has declared that there is no such thing as society [sic] … and the Department of Health [sic] has ruled that health inequalities are not a matter for discussion … I am doing pure science."'[145]

Despite the tongue-in-cheek tone, what this recollected discussion does reveal is Marmot's disengagement with wider political discourse and the belief that his own research should to a certain extent stand apart from political or policy considerations. In a rhetorical move beloved of biomedical researchers, Marmot made the claim for his research to be too important and too evidence-based to be caught up in the supposedly ideological and partisan world of politics.[146] But Marmot's claims of practicing 'pure science' were of course at odds with both the translation of his research into a popular book aimed at policymakers, politicians and the broader electorate, and the insider status which resulted in his later invitation to conduct a review of health inequalities in 2008 by then Secretary of State for Health Alan Johnson.[147] Cloistered in the worlds of public health and epidemiology, but eager to make a societal critique, Marmot was consequently

[145] Marmot M (2015): 115. Marmot's periodisation is slightly inaccurate, but the sense holds. Thatcher's quote was from a 1987 interview, briefly discussed in Chapter Four, while the Department of Health was not extant until 1988.
[146] See Parkhurst J (2017) *The Politics of Evidence: From Evidence-based Policy to the Good Governance of Evidence* (Abingdon: Routledge) for an astute discussion of this tendency in a contemporary context.
[147] University College London "Sir Michael Marmot to lead major health review" 17 November 2008 https://www.ucl.ac.uk/news/2008/nov/sir-michael-marmot-lead-major-health-review Last accessed 18 March 2019.

more interested in transmitting his message than directly receiving signals from any wider cultural discourse about class and inequality.

Nonetheless, and despite Marmot's protestations that interest in health inequalities continued to be a 'minority interest', an 'inequality industry' has emerged globally, in the wake of the 2008 financial crisis, from a bestselling economic history by Thomas Piketty to American poet Frederick Seidel's latest collection entitled *Widening Income Inequality*.[148] In *Respectable*, Hanley approvingly quotes Richard Hoggart's contention that '[e]ach decade, we shiftily declare we have buried class; each decade the coffin stays empty.'[149] In recent years books from Richard Wilkinson and Kate Pickett[150] and social geographer Danny Dorling[151] amongst others have helped to highlight the issue to British politicians and policymakers. Ahead of the 2010 election, Conservative leader of the opposition David Cameron promised to 'banish health inequalities to the history books', arguing they were one of the 'most unjust, unfair and frankly shocking things about life in Britain today'.[152] In thirty years, health inequalities had moved from an issue that Patrick Jenkin, the Conservative health minister when

[148] Abrahamian AA (2018) "The Rise of the Inequality Industry" *The Nation* 13 September 2018 https://www.thenation.com/article/the-inequality-industry/ Last accessed 20 September 2018.
[149] Hansley L (2016): xiv. The quote is drawn from Hoggart's introduction to a 1989 reissue of George Orwell's *The Road to Wigan Pier* (London: Penguin).
[150] Wilkinson R and Pickett K (2009) *The Spirit Level: Why More Equal Societies Almost Always Do Better* (London: Allen Lane).
[151] Dorling D (2010) *Injustice: Why Social Inequality Persists* (Bristol: Policy Press); Dorling D (2018) *Peak Inequality: Britain's Ticking Time Bomb* (Bristol: Policy Press).
[152] Bowcott, O (2010) "Cameron is Trying to Set Out a Clear Ideological Path on the NHS" *The Guardian* 5 January 2010 https://www.theguardian.com/society/joepublic/2010/jan/05/conservative-nhs-draft-manifesto Last accessed 2 December 2017.

the Black report was published, treated at best with 'considerable caution',[153] to one that Cameron believed could be used to help convince the electorate to vote for his party.

Conclusion

Of course the influence of Whitehall, and the success of health inequalities in reframing public health in late twentieth century Britain should not be overstated. As the conclusion of this thesis will discuss, lifestyle remained a dominant narrative in public health policy and practice, as well as wider cultural understandings of the cause of ill-health, well into the twenty-first century. But what this exploration of Whitehall has argued is that the studies provided at least the possibility of an alternative narrative for public health. Although the studies' analysis was born out of the same methods and epistemologies as the risk-factor epidemiology that provided the basis of lifestyle public health, it came to quite different conclusions. It demonstrated that another way of approaching heart disease was possible, that exhortations to the public to change their behaviour were not necessarily the inevitable result of epidemiological research. Whitehall redefined the type of critique that epidemiology could make. It disrupted the dominant paradigm of lifestyle public health, but could not completely overthrow it. The narrative of the preceding four chapters – the emergence of lifestyle from scientific research into the public sphere via policy and health promotion – still holds, but looking at

[153] Jenkin P (2002) "Dispelling the Myths of the Black Report: A Memoir" *Contemporary British History* 16(3): 125.

Whitehall and the development of the health inequalities field complicates and nuances this history.

Similarly, the second Whitehall study's investigation of stress as the mechanism for observed differences in heart disease was a further disrupting influence on the lifestyle paradigm. In contrast to official campaigns such as *LAYH* which underplayed stress as a cause of heart disease, Whitehall II seriously investigated stress, using it to explain health inequalities. Stress was understood by the Whitehall researchers to be a potentially harmful emotional state, mediated by the 'control' that an individual felt in his or her occupation, as well as at home. But Whitehall II attempted to disrupt popular understandings of stress as a primarily male, elite, individualised 'executive condition', and posited that it was instead the result of inequalities and the emotional management of the work environment. It highlighted the structural and environmental causes of stress, rather than the individual's response to it. Corroborating its results with evidence from experimental psychology and neuroscience, Marmot in particular argued that stress was not the unfortunate side-effect of personal ambition but rather a relational response to hierarchical status. By positing stress as a result of inequality as the means by which heart disease materialised, it offered a plausible alternative to lifestyle causes.

Chapter One argued that the Social Medicine Research Unit's "invention of exercise" could only ever be the result of a partial engagement with the issues facing contemporary society, predicated as the research was on the use of middle-

aged men of certain class, ethnic and socioeconomic backgrounds as their subjects. Similar criticisms could be made of the Whitehall studies, although as noted earlier they had a slightly more diverse body of participants, in terms of employment grade and gender. Marmot was insistent that 'what was true in Whitehall was true in Britain as a whole', but it is intriguing that Whitehall's critique of hierarchy should emerge in the same decade as sociologists were declaring the 'death of class'.[154] Commentators on the left and right had questioned the role of class in British society throughout the 1980s, and although Whitehall II had carefully navigated the criticisms made of the health inequalities field, its interpretation was somewhat apart from this wider societal conversation. While Whitehall had provided a sophisticated analysis of the causes of heart disease, and disrupted the lifestyle paradigm, for all Marmot's efforts, it had limited engagement with wider discussions about class and inequality in late twentieth century Britain.

Indeed, perhaps this points to why Whitehall did not entirely overthrow the lifestyle paradigm. For all its faults and failings, lifestyle public health spoke to the everyday, to dietary practices and physical movement in an individualised society. Critiques of the structural determinants of health were abstracted from the lived experiences of the public, and somewhat adrift from wider political thought. As the previous chapter has discussed, lifestyle public health and its edicts of personal responsibility coincided more neatly with the neoliberal principles of individualism, and family values. Furthermore, the political acceptability of health education and

[154] Pakulski J and Waters M (1996) *The Death of Class* (London: Sage).

promotion, despite its flaws, has continued to be higher than the radical structural changes that would be needed to address income and health inequality. As this chapter has discussed, inequality is a complex issue with myriad socioeconomic, political and psychological aspects. Ultimately it has proven easier for public health to simply ask people to change their behaviour.

Conclusion: 'questions of individual lifestyle'?

Introduction

In the summer of 2006, as part of a series of major speeches on 'Our Nation's Future', then UK Prime Minister Tony Blair discussed 'what we call "public health" but which is really about "healthy living"'. Blair asserted that today's 'public health problems are not, strictly speaking, public health questions at all' but rather 'questions of individual lifestyle'. These problems – Blair mentioned 'circulatory and cardiovascular conditions' alongside 'obesity, smoking, alcohol abuse, diabetes, sexually transmitted disease' – were 'not epidemics in the epidemiological sense' but 'the result of millions of individual decisions, at millions of points in time'. Addressing these challenges, according to Blair, would mean 'changes in Government, business and people, but that is the way the modern state should work'.[1]

While this discourse was clearly grounded in the New Labour project of reimagining the role of the state in the 21st century, it was also part of the longer narrative that this thesis has explored. Lifestyle, and those 'millions of individual decisions', was presented as the fundamental question in terms of disease prevention. The primacy of this view in the British political imagination was reaffirmed by Conservative health minister Andrew Lansley's statement in 2011 that because

[1] Tony Blair "Speech on Healthy Living" 26 July 2006 http://webarchive.nationalarchives.gov.uk/+/http://www.number10.gov.uk/Page9921 Last accessed 2 January 2019.

'[w]e are now all too familiar with the impact of modern lifestyles on the health and wellbeing of the population', public health was 'everyone's business'.[2] Or more recently, current (at time of writing) health secretary Matt Hancock's plea for 'people [to] take greater responsibility for managing their own health' by 'choosing to look after themselves better, staying active and stopping smoking'.[3] While these examples demonstrate the persistence of lifestyle in public discourse, Blair's speech also points to the larger themes of this thesis, and the identification of a paradigm shift in British public health. Blair distinguished the post-war period from the 19th and early 20th centuries by arguing that Britain was 'now in a new era, the time of conditions of affluence, of degenerative and man-made disease'. As this thesis has made clear, in 2006 this could hardly be considered a new phenomenon, but rhetoric that had been forthcoming since at least the 1950s, when heart disease emerged as an object of scientific and public concern. The first two chapters of this thesis have dealt with how the scientific and biomedical community responded to this apparently new era, and these chapters have argued that the focus on lifestyle and the individual materialised from this research. But as Blair contended, it followed that these 'individual actions lead to collective costs'. This tension between the individual and their role as a citizen vis-à-vis the state has been explored in Chapter Three. The extent to which 'the increasing strain unhealthy living will put on the NHS' has been a hardy perennial of public discourse

[2] Department of Health (2011) *The Public Health Responsibility Deal* (London: Central Office of Information): 2

[3] Public Health England (2018) "Matt Hancock: My Vision for Prevention" https://publichealthmatters.blog.gov.uk/2018/11/05/matt-hancock-my-vision-for-prevention/ Last accessed 2 January 2019

since at least the 1970s, and Blair's speech predictably noted that '[h]eart disease alone costs the UK nearly £8 billion per annum'. But to address these public health (and public finance) problems and improve lifestyles, Blair argued, required collaboration between individuals, private companies, and the voluntary sector, with the government's role one of midwifery. 'The enabling state', as he repeatedly described it, worked beyond the binary opposition between ''Big" state' and '"Big Business"', couching such an approach in terms of New Labour's Third Way. Of course, as this thesis has shown, this type of partnership between the state and other actors was already a feature of health campaigns in the late 1980s, and was mooted as early as the late 1970s. Chapter Five has suggested that the health inequalities of the 1980s and 1990s offered an alternative, potentially disruptive narrative to the lifestyle paradigm, and Blair found space in his speech to pay it lip service. While suggesting in his introduction that the harnessing of healthy living had potential for 'reducing inequality in our society', Blair's comments on the topic were limited to noting that '[s]moking may account for half of the social class health inequality'. This assertion underplayed the structural causes of disease, but also demonstrated that the radical potential of health inequalities research to unseat the lifestyle paradigm remained unrealised.

This explication of Blair's speech, and the similar, more recent policy pronouncements by successive health secretaries, is not merely a way of saying that the lifestyle paradigm continued beyond the point at which this thesis ends in the 1990s. Rather, it is an opportunity to reflect – albeit from the vantage point of high politics – on the broad changes to public health during the post-war period,

and how they have been shaped by wider shifts in British society. Blair presented his ideas as novel solutions to emergent problems, when in fact, as this thesis has demonstrated, both the challenges he identified and the answers he offered were rooted in developments over the last half a century. The case studies included in this thesis complicate, contradict, and nuance the broad-brush narrative that Blair presented. The conclusion of this thesis uses this discussion of Blair's speech to frame three questions that tie together the key themes of this thesis. Firstly, what does this thesis add to histories of health in modern Britain, and how do its insights contribute to understandings of the larger themes briefly discussed in the introduction, such as citizenship, neoliberalism or class? Secondly, what happened to the lifestyle paradigm and heart disease between the end of this thesis' timeframe to the present day? Finally, in which areas could this research be extended?

'Individual actions lead to collective costs': lifestyle and its relation to citizenship, class and neoliberalism

In summary, this thesis presents new research on the development of the lifestyle paradigm in public health, viewed through the lens of heart disease, the biggest killer in post-war Britain. It traces lifestyle's roots from the residues of the interwar social medicine movement and the emergence of risk-factor epidemiology as the predominant way of explaining the causes of the apparently new epidemic of heart disease afflicting Western nations. It makes this argument by exploring two case studies. One of how physical inactivity was identified as a risk factor, and how exercise was reinvented as a preventive health activity, consciously practiced to

compensate for a sedentary working life. The second explores how dietary sucrose, a putative risk factor for heart disease was unsuccessfully researched, focussing as it did on nutritional approaches rather than epidemiological. The thesis then turns to how the lifestyle paradigm, and the research discussed in the first two chapters, was translated into the political and policy spheres. This occurred through the consensus for prevention that developed, which viewed lifestyle public health as a means of halting the rise of non-communicable diseases such as heart disease, and the concomitant burden that they placed on the welfare state. Lifestyle was conceived as a set of practices that the individual citizen was encouraged to perform as a quid pro quo for the continuance of a health service free at the point of delivery. This conception of lifestyle as a personal responsibility continued into the following decade, as a major campaign on heart disease tried to persuade the public to exercise more, eat healthily, and stop smoking. In doing so, *Look After Your Heart* appealed to Thatcherite values of self-reliance, individualism and family values, suggesting a confluence between lifestyle public health, neoliberalism and social conservatism. As the final chapter discusses however, an explicitly class-based analysis of public health emerged concurrently. Health inequalities and the Whitehall research disrupted the lifestyle paradigm, highlighting the structural determinants of health and suggesting an alternative narrative for public health in Britain.

But beyond this core narrative, what has been this thesis' contribution to the field, and how have its individual chapters, and its argument as a whole, been in conversation with broader debates in the historiography of post-war Britain, such

as those concerning the role of science in post war Britain, the welfare state and citizenship, class, and neoliberalism?

Starting with the first of these, the first two chapters have addressed the role of science in post war Britain, how it was translated and communicated to the public, and the means by which different modes and epistemologies of science – risk factor epidemiology and nutrition – were, and were not, able to claim credibility for their research. Chapters One and Two used the case studies of the Social Medicine Research Unit and renowned yet controversial nutritionist John Yudkin to explore how biomedical science (broadly defined), responded to the post-war challenge of addressing an epidemic that was primarily killing men of working age: heart disease. These chapters introduce the roots of the lifestyle paradigm in the risk-factor epidemiology of post-war medical research and in doing so, provide a British counterpoint to the otherwise largely American historiography, such as Weisz's *Chronic Disease*, and Rothstein's *Public Health and the Risk Factor*.[4] This research provided statistical correlations between activities of everyday life, such as physical activity, dietary elements, or smoking, and incidence of heart disease. Chapter One looks closely at how the assumptions of risk-factor epidemiology were applied to physical activity, and how the particular conditions of post-war Britain shaped this research. The researchers' assumptions about the cultural, technological and

[4] Weisz G (2014) *Chronic Disease in the Twentieth Century : A History* (Baltimore, MD: Johns Hopkins University Press); Rothstein WG (2013) *Public Health and the Risk Factor : a History of an Uneven Medical Revolution* (Rochester, NY: University of Rochester Press)

industrial change that Britain was undergoing were essential both to shaping the research findings and its wider implications for British society.

But this story is complicated by the implications of Chapter Two, which studies how researchers who did not cleave to the risk-factor model, who instead used the tools of nutritional research, were unable to successfully make their case. While grounded in the social and cultural changes of post-war Britain and attuned to the rhetoric of the 'affluent society', unlike the SMRU, Yudkin however was unable to make his evidence stick. This was despite his popular and successful diet and slimming books, and policy network connections with the governmental advisory body Committee on Medical Aspects of Food and Nutrition Policy (COMA). This chapter also used the theoretical interventions of Bruno Latour to examine Yudkin's failure. Latour's work has previously been mobilised, by Karin Garrety, to explain Keys' evident "success", citing his apparent ability to build networks with his peers.[5] Yudkin was unable to do the same, and Latour's suggestions for 'follow[ing] … the scientist through society' by paying close attention to their citations, allies and resources not only reveals the reasons for Yudkin's failure, but also a broader picture of post-war British nutritional and biomedical research.[6]

The extent to which epidemiology was in competition and conflict with other disciplines, such as nutrition, to explain the distribution and causes of disease is

[5] Garrety K (1997) "Social Worlds, Actor-Networks and Controversy: The Case of Cholesterol, Dietary Fat and Heart Disease" *Social Studies of Science* 27(5): 727-773.
[6] Latour B (1987) *Science in Action: How to Follow Scientists and Engineers through Society* (Boston, MA: Harvard University Press).

revealed in Yudkin's story. All of his potential allies – Cleave and Trowell, as well as their associates such as Burkitt – were outside of the mainstream of epidemiology, indicating the stranglehold that biomedical sciences had on disease causation theories, and by extension, lifestyle public health. Yudkin's inability even to find common cause with these men, despite the twin appeal of shared beliefs and outsider status, perhaps suggests nothing more than the intransigence and stubbornness of men set in their ways. But it also underlines that a willingness to collaborate and compromise were also essential elements in post-war scientific endeavours.

The scientific evidence produced by the SMRU on physical activity passed uncontroversially into accepted wisdom, while the evidence on diet, and particularly sugar, was bitterly disputed, and indeed continues to arouse strong feelings to this day. This debate illustrated the importance of how evidence was constructed, and also how it was communicated. It demonstrated the primacy of cohort studies as a tool for risk-factor epidemiology over other sources of evidence, such as those employed by Yudkin, including ecological, small-scale human and animal studies. Keys was able to brush aside Yudkin's criticism, pointing to the poor quality and weak clout of his scientific research, confident that Keys' own methods were supported by the wider biomedical community. This case study therefore contributes to wider histories of epidemiology and biomedical science in the twentieth century, expanding on those such as Rothstein's and Weisz's, which have concentrated (understandably) on the "successes" of the risk-factor approach.

By looking at the other side and examining the "losers", it provides a more rounded picture of, in this particular case, why heart disease research and lifestyle took the particular direction it did, but it also has much wider implications. Guarding against 'Whiggish selectivity', to use Guy Ortolano's phrase, in such a way helps disrupt a sense that certain events, research findings or theories were inevitable.[7] Unrealised ideas, unfounded theories, and flawed arguments are all important avenues to explore in studying the recent past, especially those that concern the fields of science and medicine, in which the dominant narratives are ones of apparent progress. Admittedly, it has perhaps been easier to research a high-profile failure, especially when their reputation has been recently resurrected in some quarters, but nonetheless this case study of Yudkin points other historians towards potentially fertile ground.

Finally, Latour's axiom to essentially follow the money trail of scientific research is particularly apposite in Yudkin's case. Doing so has helped to illustrate a couple of important aspects of post-war public health and medical research. Firstly, that the Medical Research Council (MRC) and similar funding bodies were not particularly interested in investing in nutritional research, meaning that researchers such as Yudkin had little option but to explore funding from other quarters. The food industry were naturally happy to reach such an accommodation with researchers, but this economy of post-war research also had an impact on the type of research

[7] Ortolano G (2011) "Planning the Urban Future in 1960s Britain" *The Historical Journal* 54(2): 506-507.

that could be conducted. Without the block grants afforded to MRC units such as the SMRU, researchers such as Yudkin would find it difficult to organise the type of large-scale cohort studies that the likes of Keys and Morris ran. Secondly, the chapter traces the shifting attitudes towards such industry funding within public health and biomedical circles. The first sign of this shift is evident in Keys using Yudkin's funding record as a slur against his research credibility. A further indication is in Yudkin's own writing, in which he goes into detail, for a public audience, about the malign influence of the sugar industry on the dissemination of his own research. By the mid-1980s, this opposition to industry funding was almost an automatic reflex in public health circles. Yudkin's credibility, and Keys' status as villain for today's anti-sugar campaigners is to a large extent predicated on the former's reputation as being a martyr to industry skulduggery and the latter's apparent sugar industry links. This chapter disrupts that narrative, and has therefore contributed, alongside the very recent work of David Merritt Johns and Gerald M. Oppenheimer, to understandings of the different attitudes towards research funding in the 1960s and 1970s.[8]

The interaction between popular ideas and scientific research emblematised by Yudkin is to a certain extent continued with Chapter Five's discussion of stress. This provides a different perspective on the existing historiography on stress in late twentieth century Britain, demonstrating how Whitehall developed a new model of stress that rejected dominant cultural narratives of Type A personalities, and

[8] Johns DM and Oppenheimer GM (2018) "Was there ever really a 'Sugar Conspiracy'?" *Science* 359(6377): 747-750

understood stress instead as a relational, chronic condition that was connected to structural hierarchies. Whitehall, and Marmot in particular, attempted to move public understandings of stress as a primarily male, executive condition, towards one that viewed it as a function of an unequal and unfair society. Stress was an issue of social justice.

Chapters Three and Four meanwhile concern how the implications of the epidemiological and nutritional research of the 1950s and 1960s was carried into the following decades, and into the public, political and policy spheres. This research provided the foundation for the preventive consensus of the 1970s, and the messages of the health promotion campaigns of the 1980s. This evidence was integral to the rhetoric of prevention, the construction of the 'risk-avoiding individual' and the belief that the chronic disease burden on the NHS could be relieved. It formed the basis of the behaviour change advocated to the British public in the 1980s. But this scientific knowledge was, inevitably, contested and reformulated by its entrance into the public sphere. Private companies laid claim to it as evidence for the efficacy of their products (particularly dietary), voluntary groups used it to campaign for greater government action, while the public reinterpreted it in the light of their own lived experiences and folk knowledge to construct 'lay epidemiology'. Finally, politicians and policymakers used this scientific knowledge, and its implications about individual's behaviour, to support their ideas about citizenship and its relationship to the welfare state.

It is to these key features of postwar Britain that the conclusion will now turn. The third chapter in particular is concerned with how citizenship was conceived by the preventive consensus of the 1970s, and how this related to debates about the welfare state ongoing in that decade. The current historiography of the British welfare state suggests the 1970s as a pivotal decade, with the decline of the 'classic' model identified by Rodney Lowe, connected to a broader political shift from social democracy to neoliberalism, and the financial crisis which preoccupied successive governments and policymakers. In the arena of health, a preventive consensus was developed from a wide range of actors, from politicians and policymakers to health professionals and private companies. The conception of prevention that materialised was one that highlighted the actions of the individual; to live healthily and prevent disease was to exercise, eat less fatty food, and to stop smoking. The rationale for this that was presented to the public was as follows. Firstly, the rising tide of chronic disease, most particularly heart disease and cancers. These conditions were, it was argued, to a certain extent self-inflicted, or at least man-made, in a way that communicable, infectious diseases were not. Poor diet, physical inactivity and smoking were by now sufficiently established as risk-factors that politicians and policymakers felt confident asserting that these were the causes of the heart disease epidemic. Secondly, that this rising tide was threatening to overwhelm the NHS, especially given its parlous fiscal state. The solution was therefore for the public to play their part by not, in the words of the then health minister David Owen, 'consciously abusing its own health'.[9] The

[9] Owen D (1976) *In Sickness and In Health: The Politics of Medicine* (London: Quartet Books): 114-115.

public's participation in disease prevention was therefore presented as a citizenly duty, lifestyle changes that should be taken by responsible individuals to contribute to the continuing existence of the NHS free at the point of delivery.

This was a shift from the conception of lifestyle and its relationship to lifestyle explored in Chapter One. The cohort study of civil servants that refined the original physical activity hypothesis (following on from the London Transport Workers study), advanced, and provided scientific evidence for, a model of exercise that was individualistic, vigorous, and consciously practiced in leisure time. As such, it was distinct from the physical culture of the late Victorian and Edwardian period that had focussed on strength, physique and arguably aesthetic considerations, embodied in the celebrity of figures such as Eugen Sandow. It was also deliberately divergent from the interwar model of exercise, discussed by Ina Zweiniger-Bargielowska, which favoured communal regimens led by voluntary action groups, often framed in terms of nationalist pride and citizenly duty.[10] Exercise was reinvented in post-war Britain by the SMRU as a self-consciously modern practice in response to a modern epidemic. It was individualistic, both in practical and ideological terms. Exercise was undertaken alone, with running and swimming amongst the activities highlighted as most beneficial. Exercise was for the good of the individual's health, to protect themselves against the effects of both the psychological stress of modern life as well as its physical languor. Of course, this also had societal implications, in that the research was centred on the workhorses

[10] Zweiniger-Bargielowska I (2010) *Managing the Body: Beauty, Health, and Fitness in Britain, 1880-1939* (Oxford: Oxford University Press).

of the post-war economy, the middle-aged male. Such consequences were however not fully articulated until the 1970s period covered by Chapter Three, in which both the economic cost of heart disease to the welfare state and (to a lesser extent) the private sector, was noted, and exercise became a citizenly duty alongside an individual responsibility.

Chapter Three's discussion of the consensus on prevention that emerged during the 1970s therefore contributes to historical understandings of citizenship and individualism during that decade. As the chapter notes, Matthew Grant has written recently on the historicisation of citizenship in post-war Britain.[11] In particular, this chapter extends his ideas about 'active citizenship' into the realms of health. 'Active citizenship', in contrast with 'legal' and 'formal' conceptions of citizenship, foregrounds the unofficial, implicit and non-legally binding expectations of "good" citizens. In terms of health, and for advocates of the prevention consensus, a good citizen was therefore one who took care of themselves by complying with the principles of a healthy lifestyle. In this way, they would not place an undue and ultimately unnecessary burden on the NHS, or indeed the wider economy. A healthy diet, vigorous exercise and not smoking were all citizenly activities, reminiscent of the way in which such behaviours (with the obvious exception of smoking) had been framed in interwar Britain. The difference in the 1970s was that such active citizenship was no longer conceived of in explicitly nationalistic terms,

[11] Grant M (2016) "Historicising Citizenship in Post-War Britain" *The Historical Journal* 59(4): 1187-1206.

but rather economic imperatives, and as part of the social contract for the continuance of the welfare state.

The tension with this active citizenship was the values to which the prevention consensus appealed. Prevention was presented in a highly individualised fashion, with, for example, any structural and environmental causes of disease either downplayed or expunged completely from the government's discussion document *Prevention and Health*.[12] Members of the public, the good citizens who would heed the encouragements to change their lifestyles, were imagined as peculiarly class-less individuals with reserves of self-sufficiency and qualities of both public-spiritedness and personal responsibility. This fine balance between the individual and the collective would anticipate some of the contradictions of the 1980s health promotion campaign discussed in Chapter Four, but it also points towards some of the concerns of Thatcherism, or at least the issues that that ideological construct was supposed to have exploited. The idea of 'popular individualism', discussed by a new wave of historians in part to explain the rise of Margaret Thatcher and her electoral appeal, is important to this thesis in helping to contextualise and unpick the rhetoric of the preventive consensus.[13] *Prevention and Health* was framed around what would become two key aspects of Thatcherite policy; personal responsibility by the individual, and diminished reliance on the welfare state.

[12] Department of Health and Social Security (DHSS) (1976) *Prevention and Health: Everybody's Business: A Reassessment of Public and Personal Health* (London: HMSO)
[13] Robinson E et al (2017) "Telling Stories about Post-war Britain: Popular Individualism and the 'Crisis' of the 1970s" *Twentieth Century British History* 28(2): 268-304

These ideas are explored more fully in the following chapter, which looks at how lifestyle messages were communicated to the public, and the way in which demand for a nationwide campaign for heart disease were in part predicated on the cost to the welfare state, and Britain's poor mortality rate compared to other developed countries. Continuing the policy of the previous decade, *Look After Your Heart* foregrounded personal responsibility for diet, exercise and smoking, but did so in comparatively more sophisticated ways. *Look After Your Heart* was an energetic and generously funded programme, which followed the lead of the previous Welsh campaign *Heartbeat Wales* in using a wide variety of methods to inform the public and attempt to inculcate behaviour change. In particular, the television spots and to a lesser extent the newspaper and billboard adverts were the most visible, and well-funded aspect of the campaign, but also vital sources for exploring the ideas about citizenship and the welfare state that were in circulation during the 1980s.

Paying attention to visual cultures, and particularly television, is critical for both historians of health, and historians of modern Britain. Firstly, for historians of health, the way that bodies are represented and the visual language that is used can often reveal far more about the aesthetic, moral, emotional and political positions and assumptions of actors than the written sources conventionally used by historians.[14] Nonetheless, the systematic use of visual material continues to be the exception rather than the rule in health histories, certainly in a British context. Partly this may be for reasons of access; despite the best efforts of the Wellcome

[14] Loughlin K (2000) "The History of Health and Medicine in Contemporary Britain: Reflections on the Role of Audio-Visual Sources" *Social History of Medicine* 13(1): 131-146.

Collection, and to a lesser extent the British Film Institute, it is not possible to view the type of material that has been used in this chapter through official channels. Indeed, it is only through the community of self-described public information film (PIF) enthusiasts on YouTube that such adverts are accessible.[15] If nothing else, this chapter is a plea for these types of material to be archived and catalogued more systematically by the relevant British institutions, perhaps following the exemplary and exhaustive model of the French Institute national de l'audiovisuel (Ina).[16]

Furthermore Chapter Four also illustrates the value to historians of paying particular attention to televisual sources from the period in which, to use Joe Moran's phrase, the 'armchair nation' is formed, between approximately 1960 and 2010.[17] Indeed, in the half a decade that have passed since the publication of Moran's book, this armchair nation, in today's atomised era of BBC iPlayer, Netflix streaming, and catch-up television viewed at the audience's leisure, is already past and gone. With the exception of major sporting events, one can no longer say that the country (or at least a substantial proportion of its population) sits down as one, to watch the same programme at the same time, as one could during the era of the armchair nation. Audience figures of up to a third of the British population, or the

[15] This vibrant virtual community can easily be uncovered by searching YouTube for PIFs. Users upload digitised versions of their own VHS-recorded private archives of government educational films and TV spots for satirical or humourous effect. While inadvertently enormously useful for historians (and indeed the comments below the films are often fascinating insights into the public cultural memory of these films), the PIFs are of course presented without context of dates, authorship or between which programmes they were screened.

[16] Institute National de l'Audiovisuel (National Institute of the Audio-visual) https://institut.ina.fr/ Last accessed 17 January 2018.

[17] Moran J (2013) *Armchair Nation: An Intimate History of Britain in front of the TV* (London: Profile Books).

event television of the 1980s or 1990s, such as the cliff-hanger episode of a popular soap opera, were cultural phenomena limited to this period. Therefore the adverts that are shown in between television programmes, such as those that were produced on behalf of *LAYH*, spoke to a public in a context that had not been possible before, and very soon, will no longer be so again. In other words, television is a particularly important, and temporally contingent, source for the historian of post-war Britain.

This conclusion now turns to the thesis' discussion of class. This is principally the topic of the final chapter, and how the Whitehall studies' treatment of inequality and class disrupted the lifestyle paradigm. But despite this re-emergence of inequality as an key analytical lens for public health during the 1980s, class is a topic that runs through the thesis. The first chapter for example engages with the previous historiography on the SMRU, and in particular Dorothy Porter's assertion that Morris and by extension the SMRU largely abandoned structural explanations for chronic disease, favouring an individualistic, behavioural model of disease causation.[18] This chapter argues that in fact Morris was highly attuned to the structural changes in British society at the time. The SMRU's first instinct had been to investigate how different occupations suffered differential rates of heart diseases. This intention had been stymied by, firstly, the unwillingness of manual professions to participate in the research, and secondly, the unexpected finding that two groups in the same profession had significantly different rates of heart

[18] Porter, D (2002) "From Social Structure to Social Behaviour in Britain after the Second World War" *Contemporary British History* 16(3): 58-80.

disease. As the physical activity hypothesis was further developed, the SMRU continued to argue that it was the structural shifts in the British economy and the subsequent falls in workplace exertion that contributed to the heart disease epidemic. Nonetheless, this point also needs to be balanced with the observation that the SMRU's solution to these labour market shifts was indeed conceived almost entirely on an individualistic basis. The worker's sedentary working day had to be compensated for by private exercise, out of hours.

The absence of class from Chapters Two and Three is perhaps also instructive, bolstering the latter chapter's argument that the preventive consensus imagining of the British public was as a somewhat classless entity, free to change their behaviour regardless of structural or environmental factors. By the 1980s, this had undoubtedly changed, with *Look After Your Heart* self-consciously attuned to the class differentials in heart disease, and the scepticism of their audience towards health promotion messages. These approaches were epitomised by the tabloid newspaper adverts which included the fictional working-class voices of Andy Capp and Mick "The Hod" Willis. More broadly, the views of the working-class were broadcast on television documentaries, and included in ethnographic studies that sought to understand why the British public were resistant to lifestyle messaging, and how they constructed their own folk knowledge of disease causation.

On the one hand, this chapter offers rare evidence of the response of the public to a public health campaign. It details how their views were considered at all stages, from the focus groups during the planning stages, to the surveys of viewer

responses to the television adverts, and even in the campaign materials themselves, which self-reflexively considered the potential reactions of the audience. But on the other hand, it suggests that many occasions on which the unfiltered voice of the working-class public was supposedly presented, it was often not much more than a rhetorical device to bolster the position of whoever was quoting that voice. This chapter therefore historicises concepts such as 'lay epidemiology' which have sought to explain how members of the public interpret health risks and construct their own narratives about disease causation. It also illustrates the problems for the historian of accessing the "authentic" voices of the public, and the challenges of health histories 'from below'.[19]

Indeed, it is intriguing that 'lay epidemiology' emerged at the same moment that both Roy Porter was thinking through how historians of health better represent the 'patient's view', and a supposedly more patient-centred health service. But as Flurin Condrau notes, in his own historicisation of Porter reminds us, it is important 'to define arenas of "patients" and to understand that the sum of these arenas may not reveal the real patient.'[20] Substitute 'public' for 'patients' in that sentence, and these are some of the issues that this chapter has explored. While the public and their views were represented on television and in quotes in sociological and epidemiological studies, these publics and their beliefs were always refracted through the concerns of whoever controlled the relevant platform. So while the

[19] Porter R (1985) 'The Patient's View: Doing Medical History from below' *Theory and Society* 14(2): 175-198

[20] Condrau F (2007) "The Patient's View Meets the Clinical Gaze" *Social History of Medicine* 20(3): 525–540.

public in the 1980s, and particularly the working class, did seem to be resistant to the entreaties of lifestyle public health, expressing both a fatalism about heart disease and a scepticism that diet, exercise, or smoking would make any difference, this impression has to be tempered with the acknowledgement that such resistance was politically convenient to a number of different actors. In other words, such resistance was surely present in previous decades, and to previous campaigns, but was highlighted and emerged as an element of public discourse at this particular juncture. Rarely was the "authentic" voice of the working class heard, even if such a thing could be said to truly exist. Rather, such representations were used to bolster existing arguments, or articulate a counternarrative ultimately shaped by more powerful actors.

Chapter Five looks at how one of these counternarratives was mobilised by the researchers of the Whitehall studies. Health inequalities research argued that the causes of Britain's biggest killer were as much – if not more – the product of societal inequity as individual behaviours. The first Whitehall study, started in 1968 but reporting its findings in the late 1970s, found that mortality from heart disease was three times higher for those in the lowest grade of the civil service than those in the highest. This finding aligned with similar research emerging after the publication of the Black Report in 1980 to form a powerful, class-based critique of the existing assumptions about public health. The second Whitehall study extended and refined that analysis, but also provided the platform and evidence base for the directors of the two studies, Geoffrey Rose and Michael Marmot, to launch separate but complementary commentaries on public health and wider society.

Rose focussed his gaze on the immediate theoretical problems of lifestyle public health, wrestling with the problems of what constituted a population, at which groups health promotion initiatives should be targeted, and whether the focus should be on changing the individual's behaviour, or the environment in which that behaviour was practiced. Marmot's analysis was much grander in scope, stretching beyond the narrower scope of twentieth century public health, and into the broadest dynamics of human and even, via his connection to Robert Sapolsky's studies of the hierarchies of Kenyan olive baboons, non-human nature. At the core of this argument was the contention that societal inequality had inherently negative health effects, and to paraphrase Marmot, what was true of Whitehall was true of the world. The mechanisms for this were explained using a neuroscientific framework and a model that highlighted the role of "control". This flipped the assumptions of lifestyle public health on its head. Where lifestyle public health assumed that its publics had control over their lives, and sufficient agency to change their behaviours accordingly, the Whitehall studies instead argued that the further you were down societal hierarchies, the less control you had. Therefore in this model, those at the bottom not only had less control over their lives, they also suffered the psychological effects – or stress – of this low status and low control, something that the Whitehall researchers argued was responsible for the differential rates of disease observed in societies. In building this model, Marmot

was arguing for a fairer, more equal society, a message that he would take to politicians and policymakers not only in Britain but across the world.[21]

The (re-)emergence of health inequalities research in the 1980s offered an alternative to the hegemonic understandings of public health that had focussed on individual behaviours since the 1950s. Chapter Five argues that the roots of this research was in the poverty lobby in the 1960s and its understandings of relative poverty. It also highlights the networks that this research materialised from, a relatively close-knit group of epidemiologists and sociologists who despite apparent epistemological differences, had enough common ground to support each other's research. This chapter has provided a richer understanding of health inequalities research in the 1980s beyond the current historiography and memory of public health activists which has focussed on the flashpoints of the Black Report in 1980 and Margaret Whitehead's *Health Divide* in 1987.[22]

But the chapter also points to the intersection between this health inequalities research and the political and cultural climate in which it was conducted. Throughout the 1980s and 1990s ideas about class were debated on both the left and the right of the political spectrum, with many thinkers questioning its relevance to contemporary life. Somewhat disengaged from this discourse, the

[21] Marmot M et al (2010) *Fair Society Healthy Lives (The Marmot Review)* (London: University College London); Marmot M and Institute of Health Equity (2013) *Review of Social Determinants and the Health Divide in the WHO European Region: Final Report* (Copenhagen: World Health Organization).
[22] Berridge V (2002) "The Black Report and *The Health Divide*" *Contemporary British History* 16(3): 131-172.

Whitehall researchers believed that the stratification that they observed among civil servants was replicated in wider society through the class system. They argued that class was a powerful force in society, its effects literally embodied by incidence of disease. This chapter therefore complicates understandings of class in the 1980s. Where historians have assumed a narrative of declining importance of class, particularly in politics, this examination of the Whitehall studies and the health inequalities field demonstrates that in some quarters, class continued to be a vital category of analysis. Indeed, this understanding of class would gain considerable purchase within political circles in the 1990s, and anticipate the emergence of the so-called 'inequality industry' since the global recession of 2008.[23]

Finally, the conclusion turns to the thesis' contribution to histories of neoliberalism. It contends that the lifestyle paradigm developed alongside the influence of neoliberal thought in British politics. This is particularly evident in Chapters Three and Four, and their examination of the ways that the lifestyle paradigm entered political discourse and the policymaking process, and the communication of these lifestyle messages to the British public. But it also suggests that the lifestyle paradigm developed of the conditions out of the 1950s and 1960s, and its structural and cultural changes amid widespread ideas about the 'affluent society' and the pace of modern life. The ideas about individual responses to the health effects of de-industrialisation articulated by the SMRU pre-figured the arrival of

[23] Abrahamian AA (2018) "The Rise of the Inequality Industry" *The Nation* 13 September 2018 https://www.thenation.com/article/the-inequality-industry/ Last accessed 24 January 2019.

neoliberal ideologies in mainstream British political thought in the mid 1970s. In short, the thesis argues that although there was a confluence between New Right ideologies of personal responsibility and the principles of lifestyle public health, neoliberalism did not "cause" lifestyle public health.

Nonetheless, Chapters Three and Four investigate this confluence. As discussed above, the preventive consensus of the 1970s was predicated on a delicate tension between collective notions of citizenship and individualistic ideas of personal responsibility, fuelled by the economic crisis of the decade, the NHS reorganisation of 1974 and the emergence of the 'risk-avoiding individual'. Consequently, this chapter contributes to understanding of the politics and policy of the NHS in the 1970s, and its interaction with wider economic and social upheaval. The 1970s has been viewed by some historians as the decade in which social democracy and the post-war consensus in Britain gave way to new regimes of neoliberalism and the retrenchment of the welfare state by the Thatcherite government. Certainly Chapter Three highlights a distinctive trend in the politics and policy of health towards individualised conceptions of disease, and a heightened emphasis on personal responsibility. While, as the chapter discusses in more detail, the preventive consensus was ultimately unsuccessful in persuading the public of its vision, it did set the direction of travel for the next decade's health policy.

Chapter Four uses Melinda Cooper's recent work to argue that the messages of *Look After Your Heart* suggest a confluence between lifestyle public health and the social conservatism of Thatcherism. In particular, the television advert "Stop!"

portrayed a middle-aged man effectively deserting his wife and young children for the temptations of pints, midnight snacks and smoking, *Look After Your Heart* none-too-subtly implied that a healthy lifestyle was as much a part of happy domesticity as marital fidelity. Arguably this campaign then illustrated the type of alliance between social conservatism and free market economics suggested by Cooper.[24] The social conservatism of the advert was evident in its portrayal of the nuclear family ideal disrupted by the patriarch's bad behaviour. Its neoliberalism meanwhile was implicit both in the economic rationale that those that practised healthy lifestyles would be less reliant on the welfare state, and the inference that those whose conditions were 'self-inflicted … "should not be considered on a par with other, unavoidable, health needs"'.[25]

Having considered the way in which this thesis discusses and contributes to historical understandings of the role of science, citizenship and the welfare state, class, and neoliberalism in post-war Britain, this conclusion now moves on to what has happened to the lifestyle paradigm since the close of the thesis in the 1990s.

'Millions of individual actions': the lifestyle paradigm from the 1990s to the 2010s

Part of the rationale for ending this thesis in the 1990s was not only the change in health policy signalled by *The Health of the Nation* 1991 green paper, but also the

[24] Cooper M (2017) *Family Values: Between Neoliberalism and the New Social Conservatism* (New York: Zone Books)
[25] Ibid., 188. Cooper quotes Wikler D (2004) "Personal and Social Responsibility for Health" in Anand S et al (eds.) *Public Health, Ethics, and Equity* (Oxford: Oxford University Press): 109.

increasing ubiquity of lifestyle as a construct beyond the public health sphere. The discussion of Blair's major speech in 2006 illustrates that the lifestyle paradigm captured the imagination of the political classes, but it has also had a broader cultural and social impact. As just one example, in his recent synthetic history of modern Britain, James Vernon discusses the rise in 'modes of self-realisation' in the late twentieth century, from collective endeavours such as Weightwatchers groups, to 'the self-help manuals that proliferated from the 1980s'. Of course, these self-improvement efforts were not limited to health. Vernon includes such examples as 'how to … be a good parent … succeed at work … be good in bed' alongside those familiar from this thesis: 'quit smoking … lose weight, exercise properly'. For Vernon, these demonstrate a society in which 'Britons were increasingly compelled … in the words of a Radiohead song from 1997, "to live fitter, happier, and more productive lives"'.[26] In other words, from the 1990s onwards, lifestyle became embedded in the day-to-day lives of the British public. According to a Deloitte report in 2018, 9.7 million of the UK population were gym members, while the year-on-year increase in consumption of skimmed milks since their introduction in the mid-1980s, in preference to whole milk, is a clear indication that the British public were paying attention to messaging about fats, if only with respect to their grocery shopping.[27] Improving diet, exercising regularly, and smoking less were still connected to the notions of 'healthy living' described by Blair or the 'ways of living'

[26] Vernon J (2017) *Modern Britain, 1750 to the Present* (Cambridge: Cambridge University Press): 507-508.
[27] Deloitte (2018) *EuropeActive European Health & Fitness Market Report 2018*: 11. https://www2.deloitte.com/content/dam/Deloitte/de/Documents/consumer-business/European%20Health%20and%20Fitness%20Report_2018_extract.pdf Last accessed 21 March 2019. Foster R and Lunn J (2007) "40th Anniversary Briefing Paper: Food availability and our changing diet" *Nutrition Bulletin* 32: 213.

discussed by Morris in Chapter One, but they had also become parts of wider practices of 'self-realisation'.

Such practices were and are inevitably exploited by commercial interests. Lifestyle became something that could be bought into. Sociologist Nike Ayo, albeit in a North American context, has argued that

> 'From the Jane Fonda workout videos of the 1980s and 1990s, to the prominence of the Lululemon athletic apparel of this period, the health, wellness and fitness industries have managed to inculcate an obsessive preoccupation with health.'[28]

Historian Jane Hand meanwhile has commented on the adoption of health promotion strategies by the food industry to market their products. She discusses specifically the example of Unilever's advertising of Flora margarine and the launch of diffusion lines such as Flora Proactiv, a 'cholesterol lowering spread containing plant sterols' in 2000 for health-conscious consumers. Hand suggests that in 'commercialising the techniques for disciplining the body through food (conforming to epidemiologically determined health behaviours), Unilever utilised the same rhetoric of individual responsibility for health and disease prevention that the government promoted'.[29] Arguably these were strategies emulated by many other

[28] Ayo N (2012) "Understanding Health Promotion in a Neoliberal Climate and the Making of Health Conscious Citizens" *Critical Public Health* 22(1): 100.
[29] Hand J (2017) "Marketing Health Education: Advertising Margarine and Visualising Health in Britain from 1964–c.2000" *Contemporary British History* 31(4): 493-494.

food manufacturers. For example, a typical British breakfast table might host boxes of Quaker's Porridge Oats or Nestlé's Shredded Wheat, both promising to contribute to a healthy diet and lifestyle.[30] Such health claims have become ubiquitous, although can occasionally go too far, as Nestlé found to their expense with the latter cereal, when they were fined £750,000 in 2000 'for making a medical claim about its product in breach of food labelling regulations'.[31]

As lifestyle became a more integral part of everyday life, as well as a selling point for corporations, its connection to heart disease also became untethered. The reasons for this were twofold. Firstly, its gradual assimilation into mainstream culture, and particularly by younger, more affluent groups (as indicated by Ayo's comments), meant that lifestyle was no longer limited to the entreating of health promotion campaigns to middle-aged men. Lifestyle changes were no longer viewed solely as the means of preventing that group's premature mortality, but as a generally beneficial and even fashionable moral attitude. Secondly, and as discussed briefly at the close of Chapter Four, mortality from heart disease has been declining since the 1970s.[32] The reasons for this are multiple, complex, and perhaps more suited to the skillset of an epidemiologist than a historian to

[30] Quaker Oats, "The Importance of Managing your Cholesterol" https://www.quakeroats.com/oats-do-more/the-importance-of-managing-your-cholesterol Last accessed 7 January 2019; Nestlé Cereals "Shredded Wheat | Brand" https://www.nestle-cereals.com/uk/en/products-promotions/brands/shredded-wheat-brand Last accessed 7 January 2019.
[31] Benjamin A (2000) "How Health Claims over Shredded Wheat went too far" *The Guardian* Wednesday 15 November https://www.theguardian.com/society/2000/nov/15/guardiansocietysupplement9 Last accessed 7 January 2019.
[32] Scarborough P et al (2011) *Trends in Coronary Heart Disease 1961-2011* (London: British Heart Foundation).

disentangle.[33] But one major reason, at least for some commentators, has been the development and subsequent population-wide use of statins, an umbrella term for drugs that reduce cholesterol. Cholesterol synthesis inhibitors had been in development from at least the 1960s onwards, as a result of studies such as Framingham and Ancel Keys' Seven Countries Study that implicated high blood cholesterol levels with increased incidence of heart disease. The progress of these pharmacological answers to the heart disease question was stalled however with a succession of clinical and animal trials that revealed them either to be ineffective or unsafe. In the 1980s however a safe and effective drug – lovastatin – was eventually developed by Merck, and was licensed for commercial use in 1987.[34] By 2008 there were 52 million annual prescriptions of statins in the UK, with a cost of £800m a year in England.[35] While the widespread prescribing of statins remains controversial, what is evident is that their use has meant that the role of lifestyle change in heart disease prevention has been de-emphasised.[36] Statins have been viewed as either an adjunct to changes in diet, exercise and smoking, or all but replaced lifestyle advice.[37]

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[33] Bhatnagar P et al (2016) "Trends in the Epidemiology of Cardiovascular Disease in the UK" *Heart* 102: 1945-1952. However, Rothstein has attempted to explain the secular decline in heart disease, albeit from an American perspective. Rothstein WG (2013): 343-358.

[34] Endo A (2010) "A Historical Perspective on the Discovery Of Statins" *Proceedings of the Japan Academy. Series B, Physical and biological sciences* 86(5): 484-93; Stossel TP (2008) "The Discovery of Statins" *Cell* 134(6): 903-905; Hajar R (2011) "Statins: Past and Present" *Heart Views* 12(3): 121-127; Jie Jack Li (2009) *Triumph of the Heart: The Story of Statins* (Oxford: Oxford University Press).

[35] Trusler D (2011) "Statin Prescriptions in UK now Total a Million each Week" *BMJ* 2011; 343: d4350.

[36] Boseley S (2014) "Statins for All: Do the Benefits Outweigh the Risks?" *The Guardian* Friday 21 March https://www.theguardian.com/society/2014/mar/21/-sp-statins-for-all-do-the-benefits-outweigh-the-risks Last accessed 8 January 2019.

[37] NHS, "Statins" https://www.nhs.uk/conditions/statins/ Last accessed 8 January 2019.

Finally, the focus of – and rationale for – the lifestyle paradigm has shifted from heart disease to obesity over the last three decades. The causes of this shift are several. Firstly, and most obviously, obesity and overweight, particularly for children, have increased during this time period.[38] Obesity has become a topic of intense political and national debate, with Blair's assertion that 'weight is a combination of calories in and calories out' the common, if contested, wisdom on its causes.[39] The scientific orthodoxy has been to argue, in the words of Andrew Prentice, a professor of nutrition at LSHTM and witness to the Health Committee's report on obesity in 2004, that:

> 'We have never seen anything like this, where we have the coming together of the technological, electronic, television revolution and the highly available, high energy-dense and very cheap foods … where physical activity comes in is that you rapidly get into a vicious cycle of inactivity, sloth and weight gain'.[40]

In other words, recent discourse on obesity has, like heart disease earlier in the twentieth century, highlighted the apparently historically exceptional nature of

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[38] Baker C (2018) *Briefing Paper Number 3336: Obesity Statistics* (London: House of Commons Library); Stamatakis E et al (2005) "Overweight and Obesity Trends from 1974 to 2003 In English Children: What is the Role of Socioeconomic Factors?" *Archives of Disease in Childhood* 90: 999-1004.

[39] Tony Blair "Speech on Healthy Living" (26 July 2006) http://webarchive.nationalarchives.gov.uk/+/http://www.number10.gov.uk/Page9921 Last accessed 2 January 2019

[40] House of Commons Health Committee (2004) *Obesity. Third Report of Session 2003–04. Volume I: Report, together with Formal Minutes* (London: HMSO): 23.

structural changes in terms of reduction of physical activity in everyday life and food production, while also ultimately laying the responsibility in terms of the individual's lifestyle response. The moral aspects of this framing, with allusions to the seven deadly sins, are illustrated by the title of a paper published by Prentice and Susan Jebb in 1995, asking the rhetorical question: 'Obesity in Britain: gluttony or sloth?'[41] Furthermore, obesity and overweight has been increasingly linked with a number of chronic diseases, from cancers and diabetes to cerebrovascular and cardiovascular diseases.[42] This development was hinted at in Chapter Four by the brief clip at the end of the "Stop" advertisement for *Look After Your Heart*. The child's drawing of her overweight father was a pictorial representation of his risk of a heart attack. Obesity therefore works as both a catch-all and visual shorthand for the risks of an individual's unhealthy lifestyle of 'gluttony' (poor diet) and 'sloth' (physical inactivity).

But if diet and exercise continue to be viewed as a problem by public health because of their apparently intrinsic link to the obesity crisis, smoking has arguably declined as a focus, with, a consistent fall in smoking amongst all social groups. This has been especially marked since the introduction of the public smoking bans in 2006 and 2007 for Scotland, and Northern Ireland, England and Wales

[41] Prentice AM and Jebb SA (2005) "Obesity in Britain: Gluttony or Sloth?" *BMJ* 311(7002): 437-9.

[42] Bhaskaran K et al (2014) "Body-Mass Index and Risk of 22 Specific Cancers: A Population-Based Cohort Study of 5.24 million UK adults" *The Lancet* 384: 755–765; Kahn SE et al (2006) "Mechanisms Linking Obesity to Insulin Resistance and Type 2 Diabetes" *Nature* 444(7121): 840-846; Winter Y et al (2008) "Contribution of Obesity and Abdominal Fat Mass to Risk of Stroke and Transient Ischemic Attacks" *Stroke* 39: 3145-3151; Hubert HB et al (1983) "Obesity as an Independent Risk Factor for Cardiovascular Disease: A 26-year Follow-up of Participants in the Framingham Heart Study" *Circulation* 67(5): 968-977.

respectively.[43] Although this decline has by no means diminished public health efforts on tobacco control and quitting – over 15 per cent of the UK population remain smokers – it has perhaps shifted the emphasis within the lifestyle paradigm towards diet and exercise. Improvements meanwhile in these areas have not been so clear-cut.[44]

In short, since the close of this thesis' time period, the lifestyle paradigm has persisted, but has taken on new aspects. Its association with heart disease has been somewhat weakened by cultural and technological factors. Lifestyle has been adopted by mainstream culture, and increasingly exploited by commercial interests, while the widespread prescribing of statins has diminished the appeal of lifestyle advice as a preventive measure for heart disease. Finally, the increased biomedical, cultural and political emphasis on obesity has shifted the rationale for lifestyle from prevention of heart disease to weight loss.

'Healthy living'?: further avenues of inquiry

In a thesis that is temporally broad and touches on many different aspects of health and society in post-war Britain, there are inevitably areas of research that have emerged that have had to be left unexplored. This might be either because

[43] Office for National Statistics, "Adult Smoking Habits in the UK: 2017" https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/adultsmokinghabitsingreatbritain/2017#data-on-smokers-who-have-quit-and-smokers-who-intend-to-quit-great-britain-1974-to-2017 Last accessed 9 January 2019.

[44] Townsend N et al (2012) *Coronary Heart Disease Statistics 2012 Edition* (London: British Heart Foundation), 124-134; Stamatakis E (2007) "Temporal Trends in Physical activity in England: The Health Survey for England 1991 to 2004" *Preventive Medicine* 45(6): 416-423.

the area of research did not fit in to the overall narrative of the overall thesis, or it would have taken the thesis in another direction entirely. This final section briefly outlines these areas, and suggests some ideas for future research. One direction (exercise) would have concentrated on too narrow an area of lifestyle. Two other potential avenues look at areas of heart disease research that were touched on by this thesis (statins and water quality), but were ultimately not significant enough in explaining the development of the lifestyle paradigm. The final alternate directions suggest looking at heart disease and the lifestyle paradigm through the analytical lens of its gender and race assumptions. While not intended to be exhaustive, this last section of the thesis looks at these five areas – exercise, statins, water quality, gender and race – and imagines which directions, and in response to what questions, this research might explore.

The most obvious future direction of this research is a history of exercise in post-war Britain. As this thesis has demonstrated, exercise during this period not only was distinct from its interwar expression, it also went through considerable change from the 1970s to the present day. The growing popularity of jogging, the sprout of municipal and then high-street gyms, the presence of cycle lanes on roads, and even the contemporary chic of “athleisure” wear, are all indications of the place that exercise has held, and continues to hold, in modern British life. While this thesis has detailed where the biomedical and scientific impetus might have come from, clearly there is a great deal of scope to investigate the cultural and social stimuli for some of these changes. To date, histories of exercise and physical activity in post-war Britain have largely concentrated on elite sports, rather than its

practice by "ordinary" citizens.[45] Further work could for example, follow the popularisation of the gym, which while a topic of interest for ethnographers, sociologists and journalists, has yet to find its historians.[46] Or similarly, the widespread participation in running, both as a solitary activity but also as a communal activity in the form of charity and park runs, could be fertile ground. The Health Education Council's promotion of 'fun runs' in the 1980s could be an initial starting point for the investigation of this phenomenon.

While the chapter on sugar, and John Yudkin, prompts the obvious questions of diet and its relation to heart diease, or further research into the arguments about cholesterol, it also suggests possible histories of "failed" risk factors. By investigating the unsuccessful as well as the lauded, greater insight into how scientific knowledge is constructed, and the preoccupations of the society in which this research was conducted, can be gained. As one example, the first chapter briefly mentions that the Social Medicine Research Unit considered investigating the potential link between heart disease and the softness and hardness of water. This putative relationship was provided as the rationale for the MRC's funding of the British Regional Heart Study (BRHS), a cohort study led by Gerry Shaper which

[45] Heggie V (2010) "A Century of Cardiomythology: Exercise and the Heart c.1880–1980" *Social History of Medicine* 23(2): 280–298.

[46] Sassatelli R (2010) *Fitness Culture: Gyms and the Commercialisation of Discipline and Fun* (Basingstoke: Palgrave Macmillan); Chaline E (2015) *The Temple of Perfection: A History of the Gym* (London: Reaktion Books); Andrews GJ et al. (2005) "Towards a Geography of Fitness: An Ethnographic Case Study of the Gym in British Bodybuilding Culture" *Social Science & Medicine* 60(4): 877-891; Ellisson J (2018) "The Dumb-Bell Economy: Inside the Booming Business of Exercise" *Financial Times* 9 February 2018 https://www.ft.com/content/f34eaa04-0a9d-11e8-839d-41ca06376bf2 Last accessed 25 January 2019.

followed middle-aged men in 24 towns and cities across the country from the late 1970s onwards.[47] Upon further investigation, it was established that no significant statistical correlation existed between water quality and heart disease, and the BRHS became a cohort study providing further evidence of the conventional heart disease risk factors of smoking, diet and physical inactivity.[48] This apparent failure however raises intriguing questions. Why did the researchers think that this was a fruitful possibility for research, and what persuaded the MRC to invest in it? What can this tell us about epidemiologists and other medical researchers' attitudes towards environmental determinants of disease rather than behavioural?

Although these stories of failure are important to investigate, some apparent success stories of biomedicine are also ripe for appraisal by historians of health. For example the development of statins, flagged in this conclusion as a novel technology that loosened the link between lifestyle and heart disease, has yet to be investigated by historians. Historical accounts of statins to date have been written by the participants, with all the attendant narratives of scientific progress that might be expected. But statins in the public eye and in the press have also recently undergone a reputational shift, as certain outspoken elements of the medical community have criticised the National Institute for Health and Care Excellence

[47] Interview between Gerry Shaper and Henry Blackburn, 31 May 2002, unpublished. Transcripts are available on request from http://www.epi.umn.edu/cvdepi/people/oral-histories/ Pocock, SJ et al. (1980) "British Regional Heart Study: Geographic Variations in Cardiovascular Mortality, and the Role of Water Quality" *BMJ* 280(6226): 1243-1249. The BRHS continues until the present day: https://www.ucl.ac.uk/iehc/research/primary-care-and-population-health/research/brhs Last accessed 25 January 2019.

[48] Lennon LT et al (2015) "Cohort Profile Update: The British Regional Heart Study 1978–2014: 35 Years Follow-Up of Cardiovascular Disease and Ageing" *International Journal of Epidemiology* 44(3): 826–826g.

(NICE)'s guidance that 'could put 12 million UK adults on statins'.[49] This controversy sparked a spat between the editors of the UK's two leading medical journals, *The Lancet* and the *BMJ*, which posed questions about the nature of evidence and the role of medication in disease prevention.[50] Some historical perspective on the history of the development and implementation of statins in Britain might be welcome.

Alongside these empirical leads, there is also scope for a more theoretical look at the subject matter. For example, a history of heart disease in post-war Britain using gender as the primary lens of analysis would be a highly interesting direction of future research. Such an approach is suggested by American feminist Barbara Ehrenreich's *Hearts of Men*, which places research on stress and heart disease in the context of shifting cultures of masculinity in post-war America, positioning it alongside cultural developments such as the Beat poets and Playboy magazine.[51] Aspects of Ehrenreich's analysis apply to post-war Britain, most notably the conception of heart disease as a male condition, and as such the economic imperative to investigate it as its main victims were the breadwinners, the workhorses of the workforce. This meant that the not inconsiderable numbers of women dying from heart attacks were excluded from medical research and more

[49] Hawkes N (2017) "NICE Guidelines could put 12 million UK adults on Statins" *BMJ* 2017; 358: j3674.
[50] Godlee F (2017) "Lessons from the Controversy over Statins" *The Lancet* 389(10074): 1100-1101.
[51] Ehrenreich B (1983) *The Hearts of Men: American Dreams and the Flight from Commitment* (Garden City, NY: Anchor Press/Doubleday).

broadly, occluded from public discourse on the issue until at least the 1980s.[52] Indeed, arguably it was only the potential risk factors associated with "female" reproductive concerns such as the contraceptive pill, pregnancy and the menopause that brought the issue to biomedical attention.[53] The implicit and oftentimes explicit subject of heart disease health promotion campaigns was male, while all the biomedical research described in this thesis, with the exception of the second Whitehall study, was conducted entirely with male participants. If this thesis contends that the lifestyle paradigm emerges from the epidemiological research of the 1950s and 1960s, what implications does this exclusive focus on men's heart disease have? Further research studying what heart disease tells us about post-war conceptions of masculinity, and what implications the focus on men had for female sufferers of this "male" disease, could open interesting insights into the gendering of lifestyle, disease and public health in post-war Britain.

Finally, considerations of race and ethnicity have been somewhat absent from this thesis. This is partially reflective of the way in which heart disease was conceived by researchers; as mentioned above, it was constructed as a male disease, but one could also argue that it was also conceived of as a white disease. Assumptions about the ethnic composition of the British public by biomedical researchers and

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[52] Emslie C and Hunt K (2009) "Men, Masculinities and Heart Disease: A Systematic Review of the Qualitative Literature" *Current Sociology* 57(2): 155-191; Emslie C et al (2001) "Invisible Women? The Importance of Gender in Lay Beliefs about Heart Problems" *Sociology of Health and Illness* 23(2): 203-33.

[53] Thorne S et al (2006) "Risks of Contraception and Pregnancy in Heart Disease" *Heart (British Cardiac Society)* 92(10): 1520-1525; Roach REJ et al (2015) "Combined Oral Contraceptives: The Risk of Myocardial Infarction and Ischemic Stroke" *Cochrane Database of Systematic Reviews* 2015, Issue 8. Art. No.: CD011054. DOI: 10.1002/14651858.CD011054.pub2.

the broader British polity meant that it was not until the 1970s and 1980s that public health began to take heart disease as a condition that might afflict people of colour seriously.[54] As Martin Moore has commented, and as was alluded to in Chapter Two's discussion of Trowell and Cleave's research careers, where biomedical researchers did consider race it was often the post-colonial peoples of Commonwealth countries who 'provided an "other" for the British population' in the post-war years.[55] British biomedical researchers, such as Gerry Shaper, compared and contrasted the ethnic, cultural and environmental differences of such populations in order to gain insight into the aetiology and risk factors for chronic conditions such as hypertension, diabetes and heart disease. Interest in heart disease amongst people of colour was therefore limited to what foreign bodies could tell white British researchers about white British populations. By the 1970s and 1980s however, according to Moore, 'doctors could no longer ignore the presence of black and Asian populations in British chronic disease clinics, and clinicians organised prevalence surveys and research programmes with the aim of determining resource implications for the NHS'.[56] This led to the recognition that heart disease was more common amongst first generation migrants from south Asian countries than the general population, and by the 1990s health education materials specifically tailored to ethnic minorities were being developed.[57] These

[54] See Waters C (1997) "'Dark Strangers' in Our Midst: Discourses of Race and Nation in Britain, 1947-1963" *Journal of British Studies* 36(2): 207–38 for a discussion of British attitudes to people of colour in the immediate post-war period.
[55] Moore MD (2016) "Harnessing the Power of Difference: Colonialism and British Chronic Disease Research, 1940–1975" *Social History of Medicine* 29(2): 402.
[56] Ibid.: 403.
[57] Bhopal RS and LJ Donaldson (1988) "Health Education for Ethnic Minorities — Current Provision and Future Directions" *Health Education Journal* 47(4): 137–40; Balarajan R (1996) "Ethnicity and Variations in Mortality from Coronary Heart Disease" *Health Trends*

differences in prevalence were to a certain extent accounted for by researchers with reference to cultural differences in diet and exercise. At the time of writing, the British Heart Foundation continues to produce a cookbook specifically for south Asian populations.[58] Consequently, looking at heart disease, and the implications for the lifestyle paradigm, from the perspective of the south Asian populations in the UK could be a fruitful future direction of study.

Concluding remarks

This conclusion has taken Tony Blair's speech in 2006, and the assumptions it revealed about the past and present of public health in Britain, and read them back through the lens of the historical research in this thesis. By the time of Blair's speech, 21st century public health was indeed about 'questions of lifestyle' and '"healthy living"', but the contemporary shifts that he described taking place had in fact been occurring over a much longer period. This thesis has explored these changes, using heart disease, the biggest killer in Britain in the second half of the twentieth century, to explain the rise and eventual dominance of the lifestyle paradigm. In doing so, it has illustrated how this paradigm imagined, responded to, and was influenced by, the British public and wider society. Broadly, it has seen how the conception of 'ways of living' emerged from the scientific and political climate of the 1950s and 1960s, with its apparent consensus on the welfare state and the importance of socially relevant scientific endeavours. The thesis has shown

28: 45–51; McKeigue P and Sevak L (1994) *Coronary Heart Disease in South Asian Communities. A Manual for Health Promotion* (London: Health Education Authority).
[58] British Heart Foundation (2013) *Taste of South Asia* (London: British Heart Foundation).

how the decline of the classic welfare state in the 1970s and the rise in popular individualism influenced preventive health policy, which used the epidemiological evidence of the 1950s and 1960s to argue for an individualised approach. This continued into the 1980s, when public and political concern about heart disease and the British diet, led the government to respond with a multi-million pound health promotion campaign. *Look After Your Heart* highlighted personal responsibility and family values to persuade the public to change their behaviour, suggestions that echoed the Thatcherite tenets of self-reliance and social conservatism. But this thesis has also argued that the lifestyle paradigm was never as hegemonic as some sociologists have argued. In particular, the 1980s saw resistance to lifestyle both from within public health and the public themselves. The health inequalities field highlighted that structural and socioeconomic causes of disease were at least as, if not more, important than behavioural ones. The public developed their own folk knowledge about the causes of heart disease, illustrating the gap between scientific evidence and lived experience. While the lifestyle paradigm was hugely important in shaping public health in post-war Britain, for large sections of the British public, the appeal to change their behaviour to avoid a 'crippling heart attack' was met with the type of fatalistic reply of the young man in Chapter Four; 'I go when I go, don't I?'

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