McKeown’s contribution lies largely in his calling attention to the relevance of historical research to health care systems and policy today. He was an advocate for social medicine, and believed that his historical argument was—and is—relevant to current health policy because a misreading of the past has led to an emphasis in medicine today on the body as a machine whose freedom from disease depends on ‘internal intervention’ rather than on the effects of environment, broadly conceived, as the source of disease. The appropriate remedies would thus be individual rather than communal, focused on treatment rather than prevention, found in medical science rather than in social science, reductionist rather than holistic. Couching his argument for social medicine in numbers and graphs makes him a plausible critic of the medical system for economic historians, demographers, and epidemiologists for whom statistics is the language of choice. Their minor critiques of his numbers and methods make little difference to his more general argument. McKeown is an advocate for a different kind of medicine, one that pays more attention to the actual efficacy of treatments and one imbued with a more humane approach to clinical practice. But most importantly, he wants medical systems that are focused on eliminating the underlying environmental sources of disease, revealed by examining the trends and variations in disease patterns. Whether we are convinced by his methods and conclusions or not, it is hard to fault McKeown’s notion that many of our current medical problems will not be solved by clinically treating one patient at a time.

References

Commentary: The pitfalls of policy history. Writing the past to change the present

S Ryan Johansson

Dr Thomas McKeown was probably the most influential and most controversial health historian of his generation, at least in the English-speaking world. His fame was the result of a radical simplification of health history that can be summarized as follows. For most of human history mortality was high and life expectancy low (between 20 and 30 years at birth) because most people were too poor, and therefore too poorly nourished, to resist the relentless onslaughts of disease, particularly infectious disease. In 18th century Western Europe, agricultural development increased the food supply and let ordinary people buy more and better food. Better nutrition increased their resistance to infectious disease, and reduced death rates, all without the assistance of medical care. It took another century (i.e. 1870) before public health and the decline of fertility made a complementary but still minor contribution to the continuing, nutrition-driven decline of mortality. Thus, if the goal of contemporary health policy is to further reduce mortality, society should invest its resources in the reduction of malnutrition, and more broadly, the eradication of poverty, not more and more sophisticated forms of medical care.

As a rule short summaries automatically oversimplify complex interpretations. But in McKeown’s case it was the bold simplicity of his arguments that made them so accessible to experts in different fields, and, as a consequence, so controversial.

For good or ill his interpretation of history profoundly affected research in medical history, mortality history, and economic history, as well as contemporary health policy debates. How a doctor who had no historical training could achieve such influence (most historians do not affect the course
of research in one field, let alone three) is exemplified by his 1971 article: ‘Medical Issues in Historical Demography’, which first appeared in Clarke’s Modern Methods in the History of Medicine.1

In this article McKeown’s considerable rhetorical skills are on display.2 While most professional historians revel in complexity and emphasize differences between earlier and later periods, McKeown minimized them. While most historians are cautious about generalizing, he was not. By stressing historical continuity he made it easy to assume that the past can teach useful lessons to present policy makers.

McKeown belonged to a generation of physicians still influenced by the depression of the 1930s and the war which followed it. In the 1930s doctors like John Pemberton had argued that in England a large ‘section of the community’ was still too poor to buy enough food to maintain health and activity.3 During World War II mandatory rationing ensured that everybody got enough to eat. But post-war Britons got free medical care, instead of government supported food programmes. It was in this context, where some medical reformers were still worried about the return of malnutrition, that McKeown turned to history to prove that nutrition had always mattered more to health and longevity than medical care.

In this particular article McKeown provides his arguments about medical history with a demographic foundation, a strategy he had been pursuing for more than a decade.4 He describes the modern rise of population (a future book title) as:

a unique event whose interpretation is not only of the greatest historical interest, one that is also essential to an understanding of some of the most formidable contemporary problems.1

In 1971 the choice of historical demography as an entry point to health policy issues was timely. Created as a new field of research in the 1950s it was still being touted as a ‘flagship discipline of the social sciences… a symbol of the new history’.5 By capitalizing on its prestige McKeown could give his claims about medical history a quantitative foundation that they would otherwise lack.

In his second and third paragraphs McKeown starts to explain why it is so important to understand the origins of the modern rise in population that began in late 18th century England (p. 57). But right away he identifies a barrier to doing so—data for the eighteenth century are not available1—and are unlikely to become available. Because of this supposed empirical impasse the only way out of an historical dead end (which McKeown himself had assumed into existence) was through more sophisticated reasoning—not more empirical research.

McKeown subsequently argued that since good demographic data finally became available for England after 1838 (i.e. after the beginning of civil registration) mid-Victorian statistics can be extrapolated back into the earlier period. He stated that 19th century data show that ‘specific measures of preventing or treating disease in the individual made no significant contribution to the reduction of the death rate during the nineteenth century’1 leaving the reader to conclude that the same was true in the earlier period.

This reasoning is problematic in several respects. For one it neglects marked differences between disease environments in the two centuries.

By 1838 England was rapidly industrializing and urbanizing. Its disease environment was dominated by a slew of density-sensitive, epidemic, infectious diseases, mostly air borne or water borne. These diseases were more amenable to public health measures than (then) private medical care. In contrast 18th century England was still predominantly rural and agrarian. Although smallpox was an infectious, epidemic disease, there were other prevalent diseases that were treatable by dietary advice or newly available drugs. Land scurvy was still a problem, but doctors could advise their patients to eat citrus fruits without exposing them to the risk of dysentery, which was greatly feared. Malaria was also prevalent in certain areas of England, but it could be controlled or cured with Peruvian bark now known to contain quinine.6

‘Consumption’ was a leading cause of death in both centuries, but in the 18th century dying from ‘consumption’ meant that pronounced wasting occurred prior to an individual’s death, despite the availability of food. Eighteenth century doctors were already aware that gradual wasting away was a symptom that could involve a number of more specific diseases like diabetes and certain cancers. Thus medical reformers had begun urging lay people who assigned causes of death in individual cases to substitute ‘phthisis’ for ‘consumption’ when a wasting death also involved violent coughing. But change was slow. Even in the 1850s consumption deaths were still being reported, especially in rural areas. But once civil registration began, when family members informed local registrars that a relative had died of consumption, such deaths were reported in national vital statistics as ‘phthisis’ deaths.

McKeown assigns great importance to the statistical fact that deaths attributed to ‘tuberculosis’ declined by half from 1838 to 1900.1 He concludes (citing McKeown and Record, 1962)7 that the decline of tuberculosis was clearly caused by a rising standard of living, most specifically an improved diet.1

But ‘tuberculosis’ was not a disease diagnosed or reported as a cause of death much before the late 19th century. Consequently, all that we can be certain of is that nomenclature changed during the 19th century, and it changed in such a way as to ensure a downward trend, given that one, very large disease category (‘consumption’) was gradually reduced to several smaller ones, including ‘phthisis’. As physicians themselves assumed responsibility for assigning causes of death (which they did increasingly from the mid-19th century) medical reformers began urging those who reported ‘phthisis’ deaths to distinguish carefully between true ‘phthisis’ and ‘bronchitis’. Subsequently for more than a decade as phthisis deaths declined, bronchitis deaths rose proportionately.

By 1900 ‘tuberculosis’ had replaced ‘phthisis’, but greater diagnostic precision from 1838 to 1900 was bound to cause a decline of ‘tuberculosis’, when ‘tuberculosis’ is misleadingly substituted for ‘consumption’ and ‘phthisis’ during this period.

To be sure, Meckown raised the diagnostic problem; but he did so only to dismiss it without due consideration. Nevertheless, the decline of ‘tuberculosis’ cannot be accepted as a real trend much before 1890. Nor can it be confidently attributed to improved nutrition, given the post germ theory awareness of the need to segregate active cases from the rest of the population, and the rise of sanitoria.

The history of smallpox was particularly problematic to McKeown’s nutrition-centred theory of mortality decline.
Initially he acknowledged that it was the only infection on
which ‘medical measures’ had had an ‘applicable effect’ (p. 66).
This is quite an admission, since smallpox had been a leading
cause of death in the 18th century. Contemporaries thought it
was responsible for 10–15% of all deaths. All McKeown noted is
that by 1838 it was a minor cause of death, accounting for ‘only
about a twentieth of the total reduction of mortality between
1838 and 1900’. Given his earlier assumption that the 19th
century could be read back into the 18th century, the implication
was that smallpox was not that important in the earlier century.

But conventional medical history had long assumed that the
conversion of smallpox from a major to a minor cause of death
between circa 1780 and 1838 was due to 18th century
inoculation campaigns followed by Jennerian vaccination
campaigns in the early 19th century. First McKeown dismissed
the importance of inoculation by arguing that even in the 18th
century the successful control of one disease could hardly
account for the entire decline in 18th century mortality.
Subsequently, he denigrated the value of inoculation as a
medical measure, thereby implying that it could not possibly
have been effective—period. The reader was left to suppose that
in reality medicine could not claim credit for the control of even
one killer disease.

As a demographic historian I find the sweeping claims
McKeown made about future research most startling. Having
asserted at the beginning of his article that further research on
the 18th century would not turn up anything new in the way
of demographic data (a very unlikely eventuality given the
newness of historical demography) he acknowledged at the end
of the article that, even as he wrote, demographic research on
elite mortality was continuing.

Given McKeown’s insistence on the supreme importance of
nutrition, elite mortality history was particularly problematic. If
nutrition alone drove mortality history, it should have been the
case that Europe’s already well-fed elites ought to have had a
mortality advantage over the mass of ordinary and presumably
malnourished, people, even before the 18th century decline of
mortality began. But genealogical data for wealthy families
indicated that the average aristocrat did not live any longer than
the average peasant, whose births and deaths were recorded in
parish registers as baptisms and burials. When McKeown alluded
to the problem of mortality equality between privileged
and poor, he suggested that aristocrats must have been more
prone to violent death than ordinary people. But the published
research already available had demonstrated that a superfluity
of violent deaths was not the explanation.  

Since McKeown raised so many issues in one short article, it
is not fair to expect him to have given each one the detailed
attention it deserved. But between 1976 to 1988 McKeown
elaborated on his earlier claims in several major books,
including the Modern Rise of Population (1976) and The Origins
of Human Disease (1988). In a book entitled The Role of Medicine
(1979) he argued very explicitly that investing resources in
surgery and drugs was a waste of time and money. In every
book his critics were mentioned and dismissed as obviously
wrong. Although he reviewed more and more empirical
evidence, he was so selective that no truly troublesome facts
were ever admitted for the reader’s explicit consideration.

The debates over how and in what ways McKeown
misinterpreted mortality, medical, or economic history have
continued. In the 1970s and 1980s, when his increasing popularity
began to attract the attention of professional demographers and
demographic historians, they rejected his nutrition-centred theory
of mortality decline on the grounds that it did not fit with
continuing research on pre-industrial populations.  

Threatened with dismissal by professional historical
demographers, McKeown’s ideas were rescued by a prominent
economic historian. Professor Robert Fogel adopted McKeown’s
arguments as the intellectual foundation for his own project on
mortality history, the largest ever funded. This was a logical
move in that the implications of McKeown’s arguments were that
economic historians were best qualified to explain the modern
decline of mortality, since it was little more than a side-effect of
decreasing prices and/or rising incomes on the availability of food.

Some modern development economists also supported
McKeown because they were committed to undermining the
value of government funded public health reforms as part of
their drive to enthrones free markets as the all purpose solution to
economic development. Within the medical community,
McKeown’s ideas received support from those physicians
(particularly in America) who opposed the necessity of providing
free (i.e. socialized) medical care. After all, if medical care did
not matter to health and longevity, then government had no
obligation to provide it to those who could not afford it.

Although many demographers and economists have critiqued
and rejected McKeown’s conclusions about mortality history,
they remain popular, and must still be described as ‘influential’
in health policy research.

Despite his shortcomings as a medical/mortality historian,
McKeown’s humanitarian concerns about the damaging effects
of poverty on health (with or without calorie insufficiency)
remain relevant to the present health policy.

Today, even in the richest countries, it is generally true that
the poorest people live shorter and less healthy lives than the
privileged. Free medical care cannot solve the problem of
mortality inequality without considerable backup from
economic reforms, the aim of which is to reduce the harmful
effects of being born and raised under biologically, economically,
and sociologically stressful circumstances.

But does medical or mortality history need to be distorted to
make a case for social justice in the present? Must the genuine
achievements of the great doctors and public health reformers
of centuries past be dismissed or devalued to achieve health
equality in the future?

Because I firmly believe that the answer to these questions is
no, examining Thomas McKeown as a health historian
continues to seem like a constructive activity. In the long run
bad history does not make for good policy, but then in the long
run we are all dead. In the meanwhile the relationship between
medicine and mortality remains very much an open question,
past and present.

References

1 McKeown T. Medical issues in historical demography. In: Clarke E
515–20.)

2 Johansson SR. Food for thought: rhetorical and reality in modern
The work of Thomas McKeown, in one form or another, has for several decades featured on countless student reading lists and in virtually all Anglophone accounts of population change and the epidemiological transition. It has additionally provoked or exacerbated a range of fierce debates on the role of medicine, links between nutrition and health, the costs and benefits of industrial capitalism, associations between economic development and population growth, and the influence of bias on research and interpretation of research findings.1,2

All this started with an article published in Population Studies in 1955 (with RG Brown) in which McKeown entered a debate on the causes of population growth during the 18th century.3 In the chapter considered here—Medical issues in historical demography—McKeown4 rehearsed and elaborated the arguments developed in this initial paper and a series of subsequent ones; arguments subsequently dubbed ‘the McKeown thesis’. So what in this work has provoked such fierce debate?

‘Medical issues in historical demography’ is largely concerned with the 18th century which McKeown identified as a pivotal period during which mortality decline in Britain ushered in an unprecedented period of increasing population growth—the ‘modern rise of population’.5 That such a rise occurred is beyond dispute. In 1750 the population of England stood at around 5.9 million, by 1801 it had reached 8.7 million, and in 1851 stood at 16.7 million. McKeown was aware of arguments that the initial rise in population in this period was driven by rising fertility, rather than reduced mortality, but dismissed it on the grounds that higher fertility would have meant higher mortality of infants due to more births to high-risk high parity mothers and so could not have accounted for such a high rate of growth. (It should be acknowledged that he did rather half-heartedly hedge his bets by arguing that even if the rise of population had been influenced by fertility, the question of what caused fertility patterns to change would remain.) McKeown attributed this population increase to mortality decline and identified the cause of this decline as the ‘modern rise of population’.6

The prevailing orthodoxy at the time was that the answer lay in medical advances including the rise of the hospital movement in the 18th century, smallpox inoculation and vaccination, and later advances in scientific medicine and the public health movement. McKeown pointed out that mortality rates for most serious infectious diseases, such as tuberculosis, plummeted long before there were any effective individual preventive or therapeutic medical measures and argued that such measures had little effect on mortality before around 1835. He suggested that the hospital movement if anything had a negative effect, at least in the 18th and early 19th centuries, as risks of infection were so high. Additionally he concluded that public health measures, particularly sewage disposal, supply of clean water, and milk pasteurization, were important only from around 1870. This left the question of what caused declining mortality before this? McKeown’s answer was improved living standards. In his earliest papers he used this term in a fairly general sense and referred to a range of improvements in socio-economic conditions; later he came to emphasize in particular improvements in nutrition consequent on the success of the Agricultural Revolution in increasing food supplies. This, he argued, increased host resistance to airborne infectious diseases, especially tuberculosis.