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YESTERDAY AND TODAY: RESTATEMENT OF A MAIN THEME

IN 1900, the United States was the richest country in the world (Cole and Deane 1965: Table IV). Its population was also highly literate and exceptionally well-fed. On the scale of per capita income, literacy, and food consumption, it would rank in the top quarter of countries were it somehow transplanted to the present. Yet 18 percent of its children were dying before age 5, a figure that would rank in the bottom quarter of contemporary countries.

Why couldn't the United States translate its economic and social advantages into better levels of child survival? Our explanation is that infectious disease processes, those principally responsible for the foreshortening of life, were still poorly understood by public officials, by most physicians, and by individual parents; that few effective technologies based upon the new understandings had been developed; that those technologies which were developed had been slow to diffuse; and that the assumption of public responsibility for such private matters as child death was still incomplete and often ineffective.

The high level of mortality that existed amidst the relatively affluent American population casts further doubt on explanations of twentieth-century mortality decline that emphasize improvements in material resources. Thomas McKeown (e.g., 1976) has been the most influential spokesman for such a position. By process-of-elimination reasoning and without any direct evidence for his well-known claims, McKeown argues that improvements in diet were responsible for most of the British mortality improvements between 1848 and 1972. Such an explanation appears highly implausible in the United States, where food was abundant and relatively inexpensive by the turn of the century. Since American mortality has closely paralleled British mortality from the late nineteenth century to the present, our results also cast doubt on the British explanation, which in addition suffers from internal inconsistencies and evidentiary shortcomings (e.g., Szreter 1988).

We believe that McKeown is correct that the mortality decline since

the middle of the nineteenth century owes little to specific drugs and medicines. In fact, McKinlay and McKinlay (1977) have replicated McKeown's demonstrations in the United States during the twentieth century. But the new understanding of infectious disease processes led to many other forms of innovation besides medicines. Public-health officials had new and vastly improved criteria to use in cleaning up water and milk supplies, and a much stronger rationale for their work. And individual parents had access to many new, or newly justified, methods for reducing death risks in the home: boiling milk and sterilizing bottles, methods first introduced in the 1890s; washing hands before preparing meals; protecting food from flies and other sources of contamination; isolating sick family members; and so on. They also had access to physicians who were better equipped to deal with the hazards of the birth process and to render sensible advice on health maintenance. Parenthood became more arduous than when the principal sources of disease were seen to lay outside the home; but the new procedures undoubtedly contributed to twentieth-century advances in survival.

Further evidence that lack of know-how rather than lack of resources was principally responsible for foreshortening life in the United States in the 1890s is the pattern of social-class differences in child mortality. Those classes which we expect to have had superior mortality because of better awareness of good hygienic practices and closer connection to networks of professional expertise simply did not enjoy a substantial mortality advantage in the late nineteenth century. Professionals did not have child mortality levels that were very different from those of other groups, and literate classes enjoyed less of an advantage than they do today. Particularly telling is the mortality of offspring of doctors, which was only 6 percent below the national average. Undoubtedly, the relative affluence of the American population and the relatively small inequalities in income helped to protect the poorest groups from some of the most damaging incursions of poverty, which were much more evident in England. But the upper classes appear to have added little in the way of behavioral advantages to their intrinsic material advantages. It is noteworthy that, by 1925, teachers and physicians had relative levels of child mortality that were 64 percent and 66 percent of the national average, respectively compared to their values of 100 percent and 94 percent in 1895 (Ewbank and Preston 1989).

In place of a sharp differentiation now commonly associated with behavioral differences among classes were important variations in mortality according to factors over which individuals had little or no control. The single most important variable in predicting child mo-

rality levels, whether in the presence or in the absence of other variables, was race. Race was a caste-like status in 1900, and the degraded social and economic circumstances of blacks, who had virtually no chance of entering the mainstream of American life, is undoubtedly reflected in their exceptionally high mortality. The importance of economic circumstances is also reflected in the role played by husband's unemployment and level of state income in explaining variation in child mortality levels, as shown in Chapter 4.

To clarify: we are not arguing that economic factors are unimportant in establishing levels of mortality in 1900 or today. We presented evidence of their importance in Chapter 4, and Woodbury's (1925) study of urban infant mortality two decades later makes even clearer the critical role of father's income. But we *are* arguing that the growth of income during the twentieth century could not have been the principal factor causing mortality to *decline*. Developing countries, and social classes within countries, that have today achieved income levels no better than those in the United States in 1900 have child mortality levels only a quarter of that in the United States at that time. Even if the special economic and social afflictions of the black population in 1900 could be eliminated so that blacks achieved the same mortality level as whites, the black child mortality level would still have been higher than India's in the 1980s, and more than twice that of China.

After race, the variable whose absence would be most costly to our ability to explain variation in child mortality levels is size of place. Larger cities had higher child mortality in the late nineteenth century, despite having administrative structures that facilitated the introduction of public-health measures. People furthest from the reach of the modern state—and furthest from one another—enjoyed the best health conditions. The excess child mortality of city residents, now averted in poor and rich countries alike, is simply another indication of the extent to which people remained in the grip of natural forces. Our evidence on mortality trends in Chapter 3 suggests that this grip was beginning to weaken in cities. But a satisfactory escape would await the technical and social triumphs of the twentieth century.