work in a city but who are not employed in factories address these problems. These urban nonindustrial workers have lower scores on OM than the factory workers, but this may be due not to their lack of factory experience but to their greater ties to kinsmen and friends in the village. Perhaps these contacts insulate them from the modernizing influences that are present in their situation. At least that needs to be considered. In developing societies around the world, tradesmen, craftsmen, and artisans in the towns frequently depend for their livelihood upon trade with "country cousins."

There is also some question about the contents of the OM scale itself. As we have seen, the authors reviewed the literature on modernization and on that basis constructed items for their interview. When the interviews were in hand, they had the project's field directors and senior staff assess each question, "judging whether or not it unambiguously tapped some aspect of individual modernity as they understood the project to have defined it" (p. 86). They then worked with the 166 questions on which there was good agreement and especially with the 96 questions on which agreement was highest. These were processed to select the items that constitute the OM scales. The obvious difficulty here is that the raters, or most of them, were aware of the authors' expectation that schooling and factory experience were related to modernity. It is hard to discount the possibility that they unwittingly considered as good measures of modernity those items which they knew from examining hundreds of interviews to be answered differently by the better educated and by those with industrial jobs. The fact that such differences do occur, and that they do so in six countries, is itself of great importance, but the method of test construction does leave ambiguous the relation of scores on this instrument to theoretical representations of modernity and to "independent" variables.

There is, finally, the problem of the importance that the modernizing of their outlooks, knowledge, and skills has for the individuals themselves and for their society. On this I share the authors' feeling that the involvement of these men in more modern experiences has, on balance, been personally enhancing and not disorganizing (always remembering that the comparison may be with agricultural laborers and tenant farmers who live in dire poverty). I also share their judgment that modern organizations and societies require citizens with a modern outlook and modern skills and that evidence in this study of steady growth in such matters with each year of schooling or of industrial experience, and with exposure to the mass media, suggests how such citizens can be produced. But I also agree with the authors' conclusion that we are still at some distance from knowing what is going on and how it occurs. They have, however, greatly narrowed the places in which it seems important to look.

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Effects of a Siege

Famine and Human Development. The Dutch Hunger Winter of 1944–1945. ZENA STEIN, MERVYN SUSSER, GERHART SAENGER, and FRANCIS MAROLLA. Oxford University Press, New York, 1975. xx, 284 pp., illus. $12.95.

This review provides an excuse for adding a very minor footnote to history. In January 1945, General Eisenhower sent a polite telegram to the British military authorities requesting the reviewer's attendance at a conference in Brussels to consider nutritional measures to be taken when the Allied armies liberated western Holland. The Germans had stopped all transport, including food supplies, in early October 1944, and by the end of the year, according to intelligence reports, a state of severe famine existed, especially in the large cities. Presumably we conferred to good purpose, since recovery after the liberation in May 1945 was rapid. The only contribution I remember making, based on experience during the Bengal famine in 1943, was that it would be more important to secure ample supplies of easily assimilated food than of nutrients for intravenous administration. (I understand that large amounts of intravenous preparations were nevertheless provided, and were found more useful in the concentration camps of Germany than in Holland.)

The Dutch famine was unique, because its onset and termination could be clearly defined in time, and also because it took place in a society that habitually keeps excellent and accessible records. We know that the most dramatic effect of the famine on human reproduction was a rapid fall in the number of births to about half the previous level, probably owing to impaired fecundity (physiological capacity to reproduce); amenorrhea was widespread. In 1947, Clement Smith showed from hospital records that at the height of the famine the average weight of babies was about 10 percent below normal, and he remarked that many women gained little or no weight during pregnancy. There is, accordingly, no doubt that the famine was severe and that it affected pregnant women severely.

Years passed, and saw a growing concern about the prevalence of undernutrition and malnutrition in many countries of the world and their potentially permanent adverse effects on physical and mental development. The authors of this book, working in Columbia University and planning a study of nutrition during pregnancy in the black ghettos of New York City, realized in 1968 that it might be possible to relate the status of young adults in Holland to their experience as fetuses during the 1944–45 famine. Fortune, and the cooperative and methodical habits of the Dutch, were on their side. The famine itself had been thoroughly documented by Burger, Drummond, and Sanstead (*Malnutrition and Starvation in Western Netherlands*, General State Printing Office, The Hague, 1948). Many hospitals still retained relevant maternity records, and official demographic and mortality statistics were available. Thus it was possible to define cohorts of births by date and place and by degree of exposure to famine. The records of the Dutch military draft system made it possible to identify related groups of young adults and also provided a battery of physical and mental data for each draftee. The authors brought together the two sets of information, having shown from a sample of 2000 individuals that it was possible to match birth and military induction records for 85 percent; most of the individuals who were not matched had died or emigrated or had been exempted from military service, and only 3 percent could not be accounted for.

The effort of locating, assembling, and collating large-scale statistics of this nature requires dedication, effort, and attention to detail perhaps paralleled most closely by that of archeologists reconstructing history from buried physical relics. And this only to provide the materials; they then have to be verified, analyzed, brooded upon, tested in the light of plausible hypotheses, and finally described in intelligible prose, tabulations, and diagrams. The result seen in this book can scarcely be described as light reading, but it can be understood and enjoyed by those with minimal mathematics. The text is blessedly free from jargon.

What was the outcome? We tend to prefer "positive" results, and philosophers say that a negative cannot be proved: so it might have been gratifying if the major hypothesis—"that prenatal nutrition affects brain development, which in turn affects

mental competence" (p. 3)—had been supported by the evidence. Yet the essentially negative conclusion reached is important and much more reassuring: "Prenatal brain cell depletion in fetuses exposed to the famine during the third trimester probably occurred. . . . If it occurred . . . the organic impairment did not become manifest in dysfunction" among adult survivors, whatever their social class (p. 236). Nor were there any discernible effects of exposure to famine on physique. The fact seems to be that, provided conception is possible, evolution has provided remarkably effective protection for the human fetus against nutritional adversity: hence, no doubt, the explosive increase of population even in countries where nutritional adversity is the common lot. But that is not the whole story. The fetus of a severely malnourished mother may be permanently damaged by other adverse factors, such as infection, and the growing child may be exposed to all manner of hostile environmental agents and deficits. Infant (but not perinatal) mortality in Holland was considerably raised, probably by the interaction of famine with other factors. We cannot safely infer, from the Dutch experience, that physiological safeguards are equally effective where deprivation is the rule and not merely an interlude in a normally well-endowed social existence.

The authors describe all this, and more, in detail. If I have any complaint, it is that they may not have resisted sufficiently the temptation to wring the last ounce of juice from the subjects of the House of Orange. Yet readers professionally concerned with the matters at issue will find much to think about in theoretical analyses which others may prefer to skip and in biological conclusions some of which I, for one, consider arguable. The main story is so interesting and important that I hope this book will be widely read. It is beautifully produced.

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Schooling in America

The One Best System. A History of American Urban Education. DAVID B. TYACK. Harvard University Press, Cambridge, Mass., 1974. xii, 354 pp., illus. $15.

This book will be the "one best book" to recommend to those who would understand the evolution of the conventional "politics" of public schools in the United States, especially the power arrangements of present-day city school systems. The centralization of educational decision-making and the holding of power over schools by administrators have become such familiar features that, as Tyack writes, "many Americans [after 1920] would . . . forget the bitter contests of power and the conflict of values that . . . attended their origins" (p. 147).

In this work the nay-sayers are given their due. Their ranks include the unnamed residents of countless rural communities and urban ethnic neighborhoods who struggled against an ever more relentless campaign to unify, consolidate, and sanitize the schools; elected school superintendents like San Francisco's Alfred Roncovieri who helped delay until 1920 the implementation of a closed system of school governance on the corporate model to be run by business and professional elites, in favor of continuing "direct government by the people"; the German citizens of Cincinnati and St. Louis who resisted the assimilationist intentions of common schools in the 19th century by getting German used and taught in the public schools; the Jewish woman who, at a mass meeting during the rioting of thousands of parents and children in October 1917 against introducing into New York City the "Gary (Indiana) plan" of "platoon schools," shouted, "We want our kinder to learn mit der book, der paper und der pensil [*sic*] und not mit der sewing and der shop" (pp. 250–251); the voteless leaders of early teacher unions, the "Lady Labor Sluggers," who battled in the arenas of Chicago and New York politics and in the National Education Association on behalf of equal-pay-for-equal-work legislation, higher salaries, and teacher tenure protection, abolition of secret teacher-rating systems, and teacher councils to share in the formulation of educational policy.

By examining the contexts in which bureaucratic organization emerged and was elaborated—in the search for the "one best system" in whose existence most school leaders believed—Tyack would have us understand how the victimizing of the urban poor and cultural minorities by the educational system is made systematic and systemic. His personal concerns are frankly with the social injustice that is often reinforced by the processes of modern-day schooling and with the denial of power over educational policy to the nonprofessional and nonelite constituencies that have the most to lose if schools are racist, class-biased, and culturally insensitive. It is not altogether clear to this reader how much Tyack actually sees the former (injustice through education) as a consequence of the latter (the loss of meaningful community control over schools).

Be that as it may, Tyack gives a quite detailed account of the "organizational revolution" that he believes to have dominated American educational history over the past century and more. In the 19th century, the results were city school systems whose ideal components included highly formalized codes of teacher and pupil behavior, curricular invariability, rigid rules and standards, and military-style control of large, graded classrooms. In *his* commitment to efficient uniformity, Superintendent Frank Rigler of Portland, Oregon, met with his teachers every Saturday and proceeded, page by page, through the textbooks, specifying what questions to ask and what answers to allow. Through various coalitions formed with individuals active in chambers of commerce, municipal and civil-service reform organizations, the Association of Collegiate Alumnae, and philanthropic and civic organizations, and with the support of influential legislators and university presidents, schoolmen saw enacted a number of "reforms"—done largely in the name of insulating the schools from "ethnic politics," graft, and bossism—which centralized educational power in small, city-wide school boards.

As the 20th century unfolded a new generation of schoolmen took the place of Rigler and his kind, although they conserved the political alliances forged by their predecessors; this group Tyack labels "administrative progressives." In the interests of accommodation to new social and economic realities, especially to the pervasive authority of science, they sought a complex and differentiated organization, able to select and prepare youngsters to function in an increasingly complex and differentiated society. Considering that he views science as a key element in the intellectual and social change, called "modernization," that inspired educators to react and to rethink school purposes, Tyack gives few pages to the direct impact of science upon schools and defines the issue rather narrowly. Despite the energy and resources expended after 1900 in creating a multifaceted "science of education," he concentrates upon the rhetoric of efficiency-through-science, the school survey movement, and the testing movement with