

J. Rodney Millard — *The Master Spirit of the Age: Canadian Engineers and the Politics of Professionalism, 1887-1922*. Toronto: University of Toronto Press, 1988. Pp. 229.

The length of this book (only 146 pages of text) is quite limited; so is the author's stated aim. He does not propose to make a comprehensive analysis of Canadian engineering in these years, nor to explain how it changed society. Rather, he shows how, through collective action, Canadian engineers sought greater status and economic security. Almost every aspect of the work contributes to our understanding of this theme.

The author illustrates engineers' powerlessness in both corporate and governmental employ. We observe especially the frustration of municipal engineers, faced with politically-motivated interference and even dismissal by ward politicians. Yet, engineers were more and more scientifically trained and certified by universities: by 1900, engineering had evolved from an empirical art, whose practitioners learned through apprenticeship, to a scientific profession. Having described how their training became more rigorously scientific, however, the author dismisses their claim to greater professionalism as merely a "pragmatic political device" used to obtain restrictive licensing laws (11). If he believes that those new, compulsory, science courses and those recently built university labs did not widen the competency gap between engineering graduates and others practising the profession, the author should explain why.

One of the most valuable contributions of this book is its explanation of how engineers' self-image conflicted with their status. They had made modern industrial society, and were best qualified to run it, yet most of them were employees, and many of the younger ones earned little more than tradesmen. The bulk of the text describes the changing strategies of their main organization, the Canadian Society of Civil Engineers (CSCE) and of its successor (from 1918), the Engineering Institute of Canada (EIC), to overcome these frustrations. The CSCE (founded in 1887) quickly adopted high qualifications for Full Membership, yet when hiring, most companies did not insist on the candidate's holding that distinction. The CSCE Council, devoted to *laissez faire* for most of the period, would not interfere when local politicians fired a municipal engineer or unfairly attacked his work, nor would it press for restrictions on American engineers who travelled North in search of contracts. During World War I, it tried to raise engineers' prestige by publicizing their (genuinely) great contributions to the war effort, and it tried to assure more post-war jobs by encouraging more research and development. In 1916, it backed the creation of the Honourary Advisory Council for Scientific and Industrial Research (which became the National Research Council). These campaigns did raise the profile of mechanical, electrical and chemical engineers, but not of civil engineers, who still constituted a (bare) majority of CSCE members.

Such activity also created precious few jobs in the short run, and virtually none for civic engineers, who had been fired wholesale during the war, as railway construction declined and municipalities slashed budgets. As the war ended, universities were graduating more engineers than the economy could absorb, and hundreds would soon return from the front. Some of the younger men tried to unionize, and Millard exposes the EIC executives' sabotage of such efforts, effected in order to save the EIC's prestige as a learned society, to avoid reducing the status of engineers to that of tradesmen and to help senior engineers — like those who ran the EIC — keep down the cost of hiring junior men. The leadership did feel obliged to appear to act to raise salaries undermined by war-time inflation and proceeded, in slow motion, to draw up a national salary

schedule. By the time the schedule appeared, in 1920, deflation had begun, but the executive had established the precedent that the EIC must do more than raise the standards and prestige of engineering: it must also improve members' lot. As under-employment grew, the EIC brass, in 1918, bowed to the demand of most members and launched a campaign in each province for close corporation status, with stiff penalties for uncertified practitioners. That campaign succeeded as early as 1920 in Quebec, only in 1937 in Ontario, and as late as 1955 in P.E.I. and Alberta. "Thus", concludes the author sourly, "by rationalizing their self-interest in terms of serving the public interest, licensing could achieve the same results as unionization, in a 'dignified' way, without loss of professional prestige. It would effectively confer monopoly powers on a private group, as a public service." (133)

Millard seems ambivalent in assessing the EIC's ultimate strategy. He documents at length the rapid post-war increase in the over-supply of engineers and how desperate job-hunger helps explain the membership's massive support of the campaign for close corporation status. Certainly, my own research into engineers' joining the town planning movement at this time confirms the central role of that desperation. Yet, he also views engineers as idealistic technocrats-in-waiting, keen for power in order to serve, not just to collect big pay-cheques. Now, it is entirely possible for self-interest and idealism to dovetail in a person's mind, but Professor Millard seems only fitfully willing to accept this frailty in our species. Repeatedly (10, 145), he accuses engineers of "posing" as altruists, yet in the next breath, denies any cynicism on their part.

Unhappily, this internal contradiction is not unique. The typical engineer is described (12, 86) as an inarticulate loner, yet the "Conclusion" (145-146) speaks confidently of "their" elitist and anti-democratic tendencies. On page 113, most engineers are conventionally middle-class, but by page 146, they see themselves as above "conventional morality".

The author does not stumble often, however. Well researched and clearly written, with many of the end-notes elaborating usefully on the text, this book explains well Canadian engineers' frustration at economic insecurity and lowly status, and what they did about it.

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Harold Perkin — *The Rise of Professional Society. England Since 1880*. London and New York: Routledge, 1989. Pp. xvi, 604.

This is the sequel to Harold Perkin's first grand synthetic history, *The Origins of Modern English Society, 1780-1880*, which appeared twenty years ago. *The Rise of Professional Society* takes up where the earlier book left off, and offers, within a strongly stated interpretive framework, a general (but not comprehensive) social history of England in the last hundred years. This task is ambitiously, one might even say heroically, executed. Without any doubt, this is an important book that every historian of modern England will want to read and every serious academic library should possess.