

that Cornish copper miners brought practical experience with them to the north shores of Lakes Huron and Superior from Michigan and that, moreover, the marketing of patented inventions through publications, exhibitions, and direct contacts with mine managers was a significant form of technical communication. Yet Newell acknowledges finding only "indirect" (p. 44) evidence that these and other mechanisms actually influenced specific mining practices in any consistent manner. While generally cautious, at the same time she suggests perhaps too central a role for the Geological Survey of Canada in educating mining companies on developments in technology. The GSC's activities in promoting technology transfer were a distinctly secondary function, and GSC publications, for example, normally carried little more than abbreviated descriptions of company mining plants.

In another respect, more analysis should also have been helpful. Some technical descriptions are ambiguous and demand prior knowledge on the part of the reader. It will not be clear, for example, why the way individual stamp mill components were designed helped make the stamp mill one of mining's most widely used mill "appliances". These components are not well described, nor — in a number of instances — are certain other aspects of milling technique. Here, and in describing other elements in mining, simple line drawings might well have clarified details not easily conveyed in words. It is critical that a reader get "inside" the technology to understand clearly why its physical and operational characteristics were appropriate or inappropriate to its task. In not always providing this insight, *Technology on the Frontier* fails in communicating entirely the logic behind individual innovations and the innovative process as a whole.

Future studies of Canadian industrial technology may go beyond questions of innovation, diffusion, and adaptation here treated primarily as *economic* processes, to analyse in greater depth the social conditions of technical change, the institutionalization of education and discovery, and the influences of technology, in turn, on Canadian social and cultural development. The development of "practical culture" (or what might also be termed "technical culture") may prove to have been more central to the nineteenth century Canadian experience than most historians have acknowledged. In the meantime, Professor Newell has provided a useful and vigorously researched account of a difficult subject which should stimulate further studies on similar topics.

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Denis G. Paz — *The Priesthoods and Apostasies of Pierce Connelly: A Study of Victorian Conversion and Anti-Catholicism*. Lewiston and Queenston: Edwin Mellen Press, 1986. Pp. xv, 422. Appendices Index.

Pierce Connelly (1804-1883) was born in Pennsylvania of Scotch-Irish stock, a birth-right Presbyterian. In his early twenties, he converted to Anglicanism and soon became a priest of the American Episcopal Church (1828). In 1834, he shocked his small congregation at Trinity Church in Natchez, Mississippi, by announcing his resignation for the purpose of studying the truth about Roman Catholicism. After six months in Rome, he and his wife Cornelia formally converted to Roman Catholicism.

Connelly seems to have been misled by the considerable attention that he received at this stage from Roman Catholic dignitaries (bishops, cardinals, scholars, and lay churchmen, notably the sixteenth Earl of Shrewsbury and his circle) into the hope of ordination without delay in Roman orders. But the Church chose to test him for a while; and so it was not until 1845, after several humiliating chapters, working as a teacher and in a bank, crossing and re-crossing the Atlantic, visiting and re-visiting Rome, that he was accepted as a Roman Catholic priest and posted to England. Meanwhile, Cornelia and Pierce, still professing their love for each other, secured a deed of separation at Rome

(April, 1844), and Cornelia entered a convent. "It is at this point," Paz notes, "when Cornelia's vocation came together, that Pierce's life began to fall apart" (p. 125).

Before long, Pierce's superiors, right up to Cardinal Wiseman, were protesting his interference in Cornelia's running of the convent of the Society of the Holy Child Jesus, of which she had become superior. Pierce insisted that he retained his rights as a husband. In February, 1849, Pierce filed before the courts for "restitution of conjugal rights."

The original action (which Pierce won) and the appeal before the Judicial Committee of the Privy Council (which Pierce lost) continued through 1850 and 1851. One is struck by the calmness and the character shown by the JCPC in deciding against Pierce, given that this was precisely the hour when British anti-Catholicism was running at its highest pitch, aroused by Rome's creation of a territorial hierarchy for Britain and the subsequent debate and passage of the Ecclesiastical Titles Bill. Defeated in the courts, Pierce turned to win public opinion, presenting himself as an expert witness on the political ambitions of the Roman Catholic Church, its seditious fidelity to the Pope, its corruption, with special material on the ever-popular subject of sex in convents. (His Petition of Pierce Connelly, Clerk, [May 8, 1851] Printed by Order of the House of Commons, for the Use of Members only, appears in entirety as an appendix.) After another miserable period, this time in a newspaper, Pierce was restored to active Anglican orders around 1868, and ended as an Episcopal chaplain to the American community in Florence, Italy, from about 1870 until his death there in 1883.

Twentieth-century students of nineteenth-century religion need from time to time to run around the ends of the ever-growing stockade of theoretical-sociological academic literature which purports to illuminate but essentially obscures the vital drama of personal religion. This fascinating biography, brilliantly narrated by Professor Paz, is just what is needed. Its primary interest for historians arises where it touches on the legal and public place of religion in Britain (and in a lesser way in the United States) in the mid-nineteenth century, when this theme was a major one in political and religious spheres. The author points us to these historical issues, but sensibly gives his best energies to telling the story in terms of Pierce's and Cornelia's search for religious truth. A believer himself, Paz inclines to the conviction that Pierce went wrong because he "loved the Church rather more than he loved God" (p. 224) — that is, he could never bring himself to admit to what an extent his quest for the priesthood with the right measure of authority to it was a search for the fullest exercise of his own will to rule. In the tract, "Reasons for Abjuring Allegiance to the See of Rome," addressed to Lord Shrewsbury (included as an appendix), Pierce declared: "Hierarchical subordination, whether in State or Church, in a kingdom or in a family, I still consider the only basis for a community to be built upon; the tranquillity of order, the only tranquillity that deserves the name... I became a Roman Catholic, wholly and solely on the ground of there being amongst men a living, infallible interpreter of the mind of God, with divine jurisdiction and with authority to enforce submission to it" (p. 321-3). So it is the mystery of authority — authority in religious truth generally, authority in the Church of Jesus Christ, authority in the state, authority in the family — that is central to this story, as told by Professor Paz. Applications of this story to nineteenth-century research easily suggest themselves: the study of the Anglican Establishment, the internal history of the Anglican and the Roman Churches, the legal-constitutional situation of religion (comparing and contrasting the situations in Britain and the United States), ecclesiastical and civil law, the legal and moral standing of marriage, and so on. But the reader will have to do his own applying. The abundant bibliography of archival resources as well as published and unpublished secondary materials will point scholars in the right direction.

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