but to a lesser extent for those around them" are "dramatically underlined." Religious prejudice — Northern Ireland's residual crisis — could be exacerbated because of demands imposed by the traditions associated with marriage, one case in 1994 necessitating the absence of the bride's father at her wedding to a Catholic man because the father was a member of the Orange Order.

Ballard herself seems unwilling to make such a conclusion categorically, as evidenced by her unsuccessful navigation through an issue she herself raises, namely the degree to which marital status confers social status and advantages to the participants or is ultimately detrimental to one's social situation. On one page she observes that "marriage enhanced the status of individuals, both male and female," that "Mrs was sometimes used by friends addressing unmarried women, as a mark of respect," and that "amongst the poorest classes, the married enjoyed greater credibility and were more likely to be regarded...as 'deserving' than were the single." However, on the very same page Ballard asserts that among the Irish poor, "marriage was unlikely to enhance one's status in the eyes of one's peers;" "...in certain circumstances refusing to marry a partner actually extended a women's rights;" and "men too perceived that they stood to gain from not being married." So was marriage desirable or not? The reader is left to try to gather the various threads and create his or her own thesis. Perhaps a strategy of presenting both sides in an organized and systemized fashion might have facilitated the interpretation of data.

Tacitly, Ballard seems drawn to a negative conclusion herself, especially if her last words in the book are meant — as is often the case — to resonate impressionistically. She writes: "the infinite variability of experience of marriage is reflected in folktale and oral tradition, which help to highlight ambivalences and suggest the enormous range of possible responses." She then ends with two stories. One tells of the tombstone of a first wife that is a lesson to the second, because it is inscribed "Be thou also ready." The other relates the conversation of a young woman pretending to be trying to find a job at a hiring fair. The prospective employer's list of requirements, unreasonably substantial, precipitates her response: "Howl [hold] yer tongue, man, it's a wife you're lookin' for."

Stimulating from both a material and popular culture perspective, both books have revealing tales to tell. In an era when the very definition of marriage is under scrutiny, when divorce and single parenthood are commonplace and partners in same-sex relationships are deemed, in some countries, to have as much right as heterosexual ones for spousal benefits, the problematization of this once-considered sacred institution is all the more timely and necessary.

NOTES

1. Thomas H. Raddall, "The Wedding Gift," in *The Wedding Gift and Other Stories* (Toronto: McClelland and Stewart, 1947).

Robert Fox, ed., *Technological Change: Methods and Themes in the History of Technology*

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Fox, Robert, ed. *Technological Change: Methods and Themes in the History of Technology*. Amsterdam: Harwood Academic Publishers, 1998. 271 pp. Paper, £12.99, ISBN: 90-5702-337-7.

This book is a collection of papers from a conference on the history of technology held at Oxford University in 1993. The purpose of the conference was to take stock of the major historiographical methods, theories and themes pursued in the history of technology at the time. This is the second edition of the book, which was originally published in 1996. What is the value of a collection of essays on "current" historiography published some six years after the fact? How have the essays held up?

To start with the good news, the book contains two very nice theoretical papers by Trevor Pinch and Donald Mackenzie. Pinch offers a restatement of main features of the social construction of technology (SCOT) as well as a defence against various attacks made on the SCOT position since its arrival in

the 1980s. Mackenzie attempts to show how the principles of "strong programme" in the sociology of scientific knowledge apply to technology. Regardless of whether one agrees with Pinch or Mackenzie, the two articles offer clear and convenient statements of their respective approaches. For those interested in understanding or teaching the historiographical debate, the footnotes include almost all the relevant books and articles.

Continuing with the good news, the book also contains two articles on technology in the Middle Ages, both of which focus on the work of Lynn White. Many of those interested in material history will have encountered White's famous and influential arguments about medieval technology and social change (eg., the stirrup leads to feudalism; the technological momentum of the West begins in the Middle Ages; Christianity leads to our current ecological crisis). Bert Hall offers an excellent retrospective on White's work in the form of a nicely sympathetic intellectual biography. Richard Holt takes a rather more hostile approach, using the results of more current research to argue that almost all of White's views on medieval technology are mistaken. At times unfair, Holt's article is valuable as a corrective, precisely because so many historians never read anything else about medieval technology except Lynn White.

One other paper deserves special notice. This is Christine MacLeod's article on the development of the concept of invention in the nineteenth century. In a fascinating study she traces two quite different explanations of invention — both the heroic genius account and the sociologically deterministic account — to the same dispute over the patent system in Victorian Britain. The article is interesting for two reasons. On the one hand, both accounts of invention have had an important influence on the development of historical thinking about technology in the twentieth century. On the other, and partly because of the earlier debate, "invention" is widely regarded as a fundamental and unproblematic concept in the history of technology, rooted in technological reality. By showing how differing concepts of invention were themselves "invented," MacLeod provides at least a starting place for the reconsideration of a category with a problematic history of its own.

The bad news about this book is that the section on historiographical models is not nearly as interesting as it could be. This is because the section contains three papers that—however much they reflect trends of 1993—belong to a category of historiography that might best be called "it's got a new hat." Antoine Picon wants to tell us about "technological thought" and "collective mental frames" that underpin "fundamentally different kinds of reality." What we get is a tale of the emergence of a technological "rationality" in the nineteenth century, predicated on an analytical approach and "science," for which we are to be thankful to French engineers, trained to use the calculus at the Ecole Polytechnique. That's the same old technology-as-applied-science-which-we-owe-to-the-French story we've heard for at least one hundred years. John Pickstone wants to draw on the work of Michel Foucault to tell us about "practical knowledges" and "knowledge practices" and a shift from European "savants" interested in natural history classifications, to professionally trained engineers and scientists educated in analysis (chemical analysis this time, rather than the calculus). The result is same old story of scientific elites trained at places like the École Polytechnique, armed with a new "rationality" again, who developed new sciences and transformed the world. Finally Jole Mokyr wants us to consider technological development in evolutionary terms; that is, "as another application of a Darwinian logic that transcends the world of living beings." Inventions become mutations, recombinations and hybrids. Information becomes genotype, artifacts phenotype. Range of products represent diversity. Some of these products are then "selected." Everything gets a new hat. Alas, it almost always turns out that evolutionary metaphor in technology turns out to be Lamarckian rather than Darwinian. Thus the evolutionary metaphor usually succeeds only in providing an analogy with a position that is known to be false.

The other sections of this book contain studies on the economic history of the Industrial Revolution, as well as comparative studies of technology transfer involving France, Russia and Japan. The only paper on a North American topic is Thomas Hughes' extension of his well-known "systems" theory to explain the role of interdisciplinary advisory committees first in the Manhattan and then in the SAGE air-defence projects. Thus the historical essays in the book will be of interest only to European historians for the most part.