Scientia Canadensis
Canadian Journal of the History of Science, Technology and Medicine
Revue canadienne d'histoire des sciences, des techniques et de la médecine

Towards Kingston 25: Some Desiderata For The Field

Richard Jarrell

Volume 16, Number 2 (43), 1992

URI: https://id.erudit.org/iderudit/800350ar
DOI: https://doi.org/10.7202/800350ar

See table of contents

Publisher(s)

CSTHA/AHSTC

ISSN

0829-2507 (print)
1918-7750 (digital)

Explore this journal

Cite this document

Jarrell, R. (1992). Towards Kingston 25: Some Desiderata For The Field. *Scientia Canadensis*, *16*(2), 123–127. https://doi.org/10.7202/800350ar

Towards Kingston 25: Some Desiderata For The Field

RICHARD JARRELL

ME PRESIDENT, members of the Executive, fellow historians and friends, I am very much touched and pleased by the honour you have bestowed upon me. You could have bought me off cheaply with a framed certificate, but I daresay, in these days of Social Contract – Rae's, not Rousseau's – a lifetime membership is timely and welcome. What is perhaps the most pleasant is that I know that our Association, our journal and our conferences are in good hands. It was necessary to step out of the roles I played earlier: I was tired and needed to renew my scholarly activities. I was also naturally apprehensive about letting my "babies" go out into the world on their own. Like a real child, our field has matured and I need no longer delude myself that it needs my guiding hand. I am pleased that my colleagues feel that I have made a contribution to the growth of the field and am content now to contribute in other ways.

Years ago it struck me that our association, like other organisations, ought to have at its meetings a presidential speech – be it self-congratulatory or exhortatory. We never managed to schedule one, so it is ironic that when I finally managed to sneak away from association responsibilities, I was tapped to deliver the first one! I will be mercifully brief.

I want, first, to say a little about the past, but only a little as we may have the opportunity for self-examination next spring at the Learned Societies meeting. Our association is now thirteen years old, our journal seventeen, no mean feat given our numbers and the diversity and uncertainty in the historical profession in Canada. During that time, the quantity and quality of historical writing on Canadian science and technology have grown demonstrably. Our members have broken through to the mainstream historical press and the knowledge we have shared is now beginning to impress itself upon the wider fraternity.

In this association, we have fostered and supported the work of students. At the outset, we believed that they should be members and participants on an equal footing with the rest of us and that confidence has been many times repaid. It is a source of personal satisfaction to see the extent to which women have become a significant factor in the CSTHA and our conferences. Our francophone colleagues continue to play an important role in the society. There is also, for want of a better term, the amateur wing. They play virtually no role in the more established societies, but in the CSTHA, they have always had a place. I would not like to see them disappear, because we are so few; it is an impossible task for a few of us so-called professional historians to cover all the topics that demand study.

This brings me to the desiderata of our field. My "wish list" will not be the same as anyone else's in the Association, but I suppose twenty years' experience in studying Canadian science does give me some little seniority in these matters.

We have come a long way in the last two decades, but we have a long way to go and we are, so far, very few. Let me enumerate some important topics that I believe we should investigate. You won't be surprised to note their familiarity; they are clearly my own pet interests.

1. First, there is the distinction that can be drawn between "academic" science and "practical science," i.e., the science practised in (for example) the industrial setting. There seems to be a bias on the part of historians of science – largely of my generation – that causes us to focus upon pure science, the science in the universities. The reason for this, I surmise, is because the historians themselves were renegades from science degree programmes, and they study the form of science they know best. But how much of science is pure, academic science? The evidence suggests very little. In other words, we tend to study perhaps 10-15% of what really constitutes scientific practice in the country. Applied science, the science of everyday work, is ignored. Is the science of Clerk-Maxwell more important than the science required to produce better ketchup? An interesting question. In terms of the long-term effects of science, one might choose the former, but for its effects upon the Canadian economy, the latter might be more important.
2. If there is a science that has had an overwhelming practical importance for Canadian development in our own century, it

would be chemistry. But how much do we know about the evolution of chemistry in Canada? We do have the pioneering works of Bob Nicholls and his colleagues but, as the majority of scientists working in this country during this century have surely been chemists, why do we study them so little?

3. If chemistry has been neglected, what can we say about biology? The obvious highlights have been studied: Banting and Best, medical work, botany and entomology in the 19th century. But what about all the practical biological sciences of this century? We now have a few fine studies of ecology and biological institutions, but we need far more on forestry, fisheries, wildlife, conservation and the relationship between biology and the creation of provincial and national parks. How much of Canadian biological sciences have been devoted to agricultural pursuits? Those with a background in biology have a very wide field of endeavour before them.

4. Other sciences beckon us as well. What do we know about meteorology and climatology in this century? About agricultural science in general? We have begun to explore physics and astronomy, but our knowledge of the earth sciences – arguably one of Canada's strong suits in this century – has large lacunae.

5. On the institutional level, we have gaps in the 19th century, and uncharted terrain in the 20th. We need to know much more about science education at all levels as well as technical instruction. Our major scientific institutions have received some scrutiny, but require finer-grained studies. The National Research Council, Agriculture Canada, the Department of Mines and Technical Surveys (and the Geological Survey), Oceans and Fisheries are just some of the federal scientific departments that offer tremendous scope for future researchers. And what do we know about provincial scientific departments?

6. The institutional focus leads us to a broader perspective, that of the relationship of science and the state. This can be studied on several levels. An analysis of the relationship between science and the state immediately calls out for comparative studies: my own intuition suggests that the American experience has much to tell us about the Canadian. Fortunately, historians in our neighbouring nation have recently made large inroads into the study of science in their context, which offers us a golden opportunity to discover the extent to which American ideas

and institutional models have influenced Canada. We are now in a position to evaluate the degree to which Canadian science and technology are uniquely Canadian, or perhaps not unique at all.

7. At the interface of science and technology, our greatest challenge is to understand how science has played a role in Canadian industrial research and development. The few studies we possess already suggest rich possibilities, and we must pursue these. Just what is the relationship between foreign vs homegrown R & D in a largely branch-plant economy? What is the significance of innovation in Canadian industry? Or are we dealing mostly with technological transfer?

8. In the history of technology, a myriad questions await us. Let me enumerate only a few. Even the casual student of the role of the state in technology will be struck by the central role of public works departments on all three levels of government in this country. Yet the study of public buildings, roads, bridges, lighting, sewer and water systems, electrical and gas systems, airports and garbage collection is virtually *terra incognita* for us. Until early in this century, agriculture was our most important industry, but our ignorance of agricultural technology is profound.

9. From the more social history perspective, subjects such as the impact of railways, automobiles and aviation on society in general require insightful analysis.

One could generate a much longer list; indeed, the list I have offered you, which admittedly reflects my personal interests, could easily keep us occupied for another two decades. If there is a single point I could make, however, it is that the 20th century now lies at the heart of our endeavours. I don't doubt that those of us still fascinated by the 19th century will, eventually, provide a rough-and-ready picture of that period, but the new students of our field will increasingly be attracted to the story of science and technology of recent times. Those who have explored 20th-century themes will recognize that there is a substantial difference in research techniques involved: there is much more material and, for more recent periods, much of it is restricted or difficult to access. This means that we have to train students in a different way.

It is also the case that the technical demands on the historian are greater than ever. There is a very real danger that the training of historians (or lack thereof) will give us a very skewed picture of the

past. In the 1950s and 1960s, when historians of science and technology tended to be lapsed scientists and engineers, the history they wrote was heavily weighted towards the internal development of scientific or technological ideas to the detriment of a more balanced picture which included political, social and economic aspects. We now have the opposite problem, attracting students with virtually no scientific or engineering training, who have difficulty in understanding the technical issues involved in historical problems. What we could be left with is a form of social history almost devoid of content. However, there have always been fashions in history, and I am sanguine that we will continue to read exciting history produced by our younger colleagues.

I want to thank you again for your indulgence and I hope to see many of you at our fiftieth anniversary in 2030.