

## A SOCIAL HISTORY OF KNOWLEDGE: PROBLEMS AND PERSPECTIVES\*

Peter Burke<sup>1</sup>

Ten years ago I published a book about the social history of knowledge in Europe from Gutenberg to Diderot, in other words from the invention of printing until the publication of the French *Encyclopédie* that Diderot edited, a book in many volumes that was not only a collective presentation of what was known at the time but also an instrument in the service of the Enlightenment.<sup>2</sup>

### I

My interest in a social history of knowledge goes back to the 1960s, when I discovered the sociology of knowledge, more especially the work of the Hungarian Karl Mannheim, who was writing on the subject in the 1920s and 1930s.<sup>3</sup> However, it was only when I was invited to give a series of lectures in the Netherlands, in the 1990s, that I thought of writing a book on this theme. The lectures, given at the University of Groningen, were intended for everyone there, not only for the students and teachers of the department of history.

For this reason I adopted an explicitly interdisciplinary approach, with lectures, which later became chapters on the economics of knowledge, politics of knowledge, geography of knowledge, anthropology and sociology of knowledge, looking at Europe from the 15<sup>th</sup> to the 18<sup>th</sup> century.

After I revised the lectures and published them in book form in the year 2000, I turned to other things, at least most of the time. The problem is that after you publish a book, you are often asked to lecture on the subject of that book, even though by that you have turned to another topic, sometimes a very different topic. Requests of this kind are invitations to revisit one's past, to go back 10 or even 20 or 30 years.

In any case, the history of knowledge suddenly became a hot or fashionable topic around the year 2000, I am not sure why, probably an effect of current debates about the 'knowledge society' or 'information society' of our own time. As a result I have been asked to speak about knowledge at more conferences in more places than I can easily remember.

Thanks to these invitations and the encounters that follow with people in different parts of the globe who share my interest in the history of knowledge, I hope to produce a revised and enlarged edition of

\*O texto apresentado é uma síntese da conferência "História Social do Conhecimento", proferida no XII Seminário Internacional de Educação promovido pela Universidade Feevale - junho de 2010.

<sup>1</sup> Doutor pela Universidade de Oxford. Atualmente, é professor emérito da Universidade de Cambridge. Foi professor de História das Idéias na School of European Studies da Universidade de Essex e professor da Universidade de Princeton.

<sup>2</sup> Peter Burke, *The Social History of Knowledge from Gutenberg to Diderot*, Cambridge, Polity Press, 2000, Portuguese translation *Uma História Social do Conhecimento*, Rio, Zahar, 2003.

<sup>3</sup> Karl Mannheim, *Essays in the Sociology of Knowledge*, London, Routledge, 1952; id., *Conservatism: a Contribution to the Sociology of Knowledge* (1927) English translation London, Routledge, 1986.

my book before very long. However, I have already begun a more ambitious project.

As you know, historians usually specialize a single period in the past. For 40 years my job, at the universities of Sussex and Cambridge, was to teach the history of Europe in the 16<sup>th</sup> and 17<sup>th</sup> centuries. On retirement I felt a strange sense of freedom: freedom to study whatever I wanted, to write about whatever I wanted. I began by turning to the history of Brazil in the 20<sup>th</sup> century and writing a book, together with my wife, about Gilberto Freyre.<sup>4</sup>

When that book was finished, I began thinking again about the history of knowledge. What happened after the publication of the great French *Encyclopédie*? How did we get from the middle of the 18<sup>th</sup> century to the current state of knowledge? I didn't know of any single book that tried to answer that question. So I decided to write one myself, a 2<sup>nd</sup> volume on the history of knowledge, ranging this time from around 1750 to the year 2000 or even later.

The title of the new book will be 'A social history of knowledge from the *Encyclopédie* to Wikipedia'. I have not yet finished writing this book but what I should like to do now is to share with you a few ideas about the approach I have adopted and the problems that have arisen.

This second volume is not organized like the first one, according to approaches from different disciplines such as geography, anthropology and so on. The changes that have taken place since 1750 have been so rapid that I felt the need to say less about structures in the 2<sup>nd</sup> volume in order to say more about trends: secularization, commercialization, specialization, professionalization, democratization, mechanization and so on.

Trends such as these have not only been rapid but also profound, affecting our everyday relation to knowledge. For this reason the new book will begin with four chapters on activities that might at first sight seem to be timeless. In the first place, gathering knowledge (an odd metaphor that suggests that knowledge grows on trees, but a convenient one). Secondly, the process of analysing

the knowledge that has been collected. Thirdly, disseminating knowledge more widely. In the fourth place, employing knowledge for various purposes, economic, political and so on.

What I try to show in the book is that these four processes or activities have changed in important respects over the last 250 years, thanks in particular to changes in technology but for other reasons as well.

Another three chapters are concerned with what I like to call the three dimensions of the history of knowledge, as of history in general: chronology, geography and sociology.

1. Chronology. When did the main changes happen? When, for instance, did the globalization of knowledge begin? Or the rise of the so-called knowledge economy' or 'knowledge society'? Was it 20 years ago? Was it 50 years ago? Or was it a hundred years ago or more? The changes that have taken place in the last generation, the last 20 or 30 years, have certainly been important, but like a historian, especially a historian who used to work on a more remote period, I try to view these changes in the perspective of developments over the long term, especially the last century or two.

2. Turning to geography, where did the main changes happen? Where were the centres and the peripheries of knowledge in different periods? Since the late 18<sup>th</sup> century, it has been possible to observe the rise and fall of a number of intellectual as well as political hegemonies: first the French, then the German, the English and finally the North American.

3. Turning now to sociology: What kinds of people, individuals and groups, and what kinds of institution made the changes or experienced the changes?

It is time to say something about the problems that have arisen, problems of the kind that necessarily arise in the course of writing a book of this kind. Let me begin from the fact that two of the three main words in the title of the book are problematic: 'social' and 'knowledge' itself.

## II

'Social' is or was a fashionable adjective, used in the titles of many books. In the case of the history of knowledge there are recent books on the social history of naturalists, the 'social history of cartography', the social history of archaeology, the

<sup>4</sup> Peter Burke and Maria Lúcia G. Pallares-Burke, *Social Theory in the Tropics: Gilberto Freyre*, Oxford, Peter Lang, 2008, Portuguese trans. *Repensando os trópicos: Gilberto Freyre*, S. Paulo, UNESP, 2009.

social history of anthropology and the social history of medicine.

What is the point of that adjective? In my view, a social history of knowledge in a given period is not the same thing as a general intellectual history of the period. It is a contribution to that history with particular emphases, both negative and positive.

To begin with a negative point. A social history of knowledge, in my view, should deliberately avoid what might be called the heroic interpretation of the history of knowledge as the history of great discoverers or thinkers. Famous individuals such as Voltaire or Darwin certainly made a contribution, but so did many other people, lesser figures who do not always receive the credit they deserve.

A leading sociologist of science, the North American Robert Merton, has pointed out that the achievements of minor figures are often attributed by posterity to better-known major figures such as Newton or Einstein. Merton called this tendency 'the Matthew effect', thinking of the passage from the Gospel of St Matthew in which it says 'to him who hath shall be given'.<sup>5</sup> A psychologist would say that memory is always selective and that we tend to attach information to names that we already know. A sociologist might add that memory is socially selective, that we attach information to the names of people like us.

For this reason a feminist historian of science has argued that we should speak of the 'Matilda Effect' because the forgotten scientists or other scholars are often women.<sup>6</sup> For example, the credit for the famous discovery of the structure of DNA has gone to Francis Crick and James Watson rather than to Rosalind Franklin, who also made an important contribution to the collective discovery. Ironically enough, the idea of the Matthew Effect is a case of the Matilda Effect, since Merton did not give much credit to his research assistant, Harriet Zuckerman, whom he subsequently married!

In any case, many advances in knowledge have been the result of the work not of isolated individuals but of small groups, whether they were face-to-face groups such as research teams working

in laboratories or a network of individuals who kept in touch by means of visits, letters, telephone or more recently by e-mail. Collaboration has an important place in the history of knowledge. We should not forget competition between groups, which has often stimulated discovery. Crick and Watson saw themselves as taking part in a race with competitors such as Linus Pauling.<sup>7</sup>

Let me now turn to the positive aspects of the social approach to knowledge, two aspects in particular.

In the first place, following early sociologists of knowledge such as Karl Mannheim as well as more recent ones, the book I am writing emphasizes the fact that knowledge is situated. In other words, that knowledge is gathered, analysed, communicated and used in particular social or cultural environments.

For example, a recent or at any rate a recently-named approach to the history of science is described by the scholars who practice it as the 'urban history of science', viewing cities as centres of the storage of knowledge about the natural world, as centres of calculation, and as nodes or staging-posts in international flows of information.<sup>8</sup> This approach can obviously be extended to knowledge in general.

What is discovered may be presented as a universal truth, it may even be a universal truth. All the same, the discovery itself always happens in a particular place, at a particular time and within a particular social group, and is affected and may even be distorted by these circumstances. The passage from the local to the general cannot be taken for granted, it requires analysis.<sup>9</sup>

The effects of the social situation may weigh more heavily on discoveries in the humanities than in the case of the natural sciences. All the same, no one can escape being situated. The situation influences what a give individual or group is interested in, what people are looking for, what they consider a good explanation, and so on.

<sup>5</sup> Robert K. Merton (1968) 'The Matthew Effect in Science', *Science* 159 (1968), 56-63.

<sup>6</sup> Margaret W. Rossiter, 'The Matthew/Matilda Effect in Science', *Social Studies of Science* 23 (1993), 325-41.

<sup>7</sup> James D. Watson, *The Double Helix: a personal account of the discovery of the structure of DNA*, London, Weidenfeld and Nicolson, 1968.

<sup>8</sup> Antonella Romano and Stéphane Van Damme (eds.) *Sciences et villes-mondes, 16e-18e siècles*, special issue, *Revue d'Histoire Moderne et Contemporaine* 55 (2008).

<sup>9</sup> Jan Golinski, *Making Natural Knowledge* (1998), 2nd edn Cambridge, Cambridge University Press, 2005.

Scholars are often imagined as sitting in ivory towers (including laboratories), remote from the world. They certainly need ‘a space of their own’, free from the immediate pressures of everyday life, in which to observe or to think. All the same, this remoteness is relative and incomplete. Scholars take the world, including its politics, into the tower with them. Conversely their results emerge from the tower into the open and are used by other people to change the world.

The second positive point that I should like to make about a social history of knowledge, distinguishing it from other histories of knowledge, is that it focuses on institutions such as universities, archives, libraries, laboratories, observatories, hospitals, think tanks and so on.

When I began writing this second volume, I was worried about not being able to understand scientific theories such as relativity or quantum physics. I still don’t understand these theories but I have become less anxious. The point is that the focus of a social history is not on theories of this kind so much as on the places in which theorists worked, like the Institute for Advanced Study at Princeton in the case of Einstein. For a social historian, it is necessary to discover how and why these institutions were founded, how they were funded, how they are distributed over the globe and whether the administrators try to guide the research.

Institutions are also important in the history of knowledge as centres of intellectual practices such as taking notes, making maps, conversing or debating about research. These practices may seem to be timeless. In fact, as I suggested earlier, they vary according to periods, places, kinds of research and not least according to the kinds of institution in which research takes place.

### III

Let me turn to the 2nd problem raised by the title of my book, the most fundamental problem, what is knowledge? Knowledge and information are often distinguished. We are warned, for instance, that we may become ‘information giants’ but that we also risk becoming ‘knowledge dwarfs’. Again, ‘We are drowning in information but starved of knowledge’.

Information, like ‘data’ is often viewed as raw material. Let me continue the metaphor and

describe the processing of raw information as a kind of cooking that transforms it into knowledge. ‘Cooking’ in this sense includes a number of different processes such as testing (replicating experiments, checking sources), analysis, calculation, comparison and systematization. Cooking also includes the process of transforming tacit or implicit knowledge into explicit knowledge, or local knowledge into generalizations with a wider, perhaps universal validity.

One of the main tendencies in the development of knowledge in the last 250 years, so I believe, is what the Germans call *Verwissenschaftlichung*, sometimes translated into English as ‘scientification’. Actually I prefer the term ‘academization’ to describe the double process of the appropriation and systematization of local or indigenous or popular or craft knowledge, especially in universities from the later 18<sup>th</sup> century onwards.

Academic chemistry, for instance, developed out of the practices of apothecaries, academic geology out of the practices of miners, and academic biology out of the practices of farmers, breeding plants and animals. Botany developed out of the practical knowledge of gardeners and herbalists and the famous classification system of Linnaeus was indebted to popular taxonomies. Again, professional doctors appropriated remedies from the practice of their rivals, the unorthodox, alternative or irregular healers.

It was a similar story in the humanities. Academic economics drew on the practical knowledge of merchants, academic anthropology on the knowledge of missionaries and colonial officials, and academic demography and statistics on the practical knowledge of actuaries. I am not denying that the academics added value to what they appropriated. Systematization is useful. The point I want to make is that founders of new academic disciplines do not start from zero.

I have been speaking about ‘knowledge’ in the singular but I must confess that I remain uncomfortable with this idea. It is more illuminating to think of knowledges as we have come to think of cultures, in the plural. Explicit and implicit knowledges, for instance: practical and theoretical, pure and applied, local and general, knowing how and knowing that.

My own study centres on academic knowledges in the West, but it will not examine

these knowledges in isolation. On the contrary, I shall discuss some non-academic knowledges, those of the secret services for instance, as well as the encounter between western and indigenous knowledges in the Ottoman Empire, China, Japan and elsewhere. This focus on the academic world in the West does not imply the belief that these are the only important knowledges, only my fear that this enterprise of synthesis is already ambitious enough.

#### IV

The first three chapters of the book, concerned as they are with the processes of gathering, analysing and disseminating knowledge, record a great collective achievement, sometimes described as a 'knowledge explosion'. Much more is known by human beings today than was known in the time of Diderot – about different cultures, about the world of nature, about the universe. The collective enterprise of analysis has also produced impressive results such as the theory of relativity or the structure of DNA. Knowledge has been disseminated more and more rapidly and more and more widely than ever before, to different parts of the world and to different social groups.

I have no wish to deny any of these achievements but the purpose of the book is not to celebrate them. My aim is to write history, especially what might be called 'polyphonic' history, in other words a history that allows different voices to be heard and presents the past from different points of view. To write history in this way means asking, among other questions, whether major achievements have costs as well as benefits.

A triumphalist history of knowledge or indeed of anything else misses these costs. A polyphonic history, on the other hand, will find a place not only for knowledge but also for its opposite, the history of ignorance. Ignorance is a topic that was itself ignored by scholars until just a few years ago. It has recently become an object of interest, especially to sociologists and historians of science. In English, this new topic has been christened 'agnotology' while in German it is known more simply as *Nicht-Wissen*.<sup>10</sup>

So what are the costs that have accompanied the benefits of the recent knowledge explosion? In the first place, there are the costs of specialization. We should be ambivalent about specialization. On the one hand, it is obviously useful, offering as it does the advantages of the division of labour. The more knowledge is gathered, the more we need specialists or experts in different kinds of knowledge or knowledges.

On the other hand, specialization is dangerous because it narrows the mind. As a result of specialization, humanity knows more today, collectively, than ever before. Individually, on the other hand, we are in danger of knowing less and especially of understanding less, failing to see the big picture and the connections between different knowledges.

A polyphonic history of knowledge must also include what has been lost as well as what has been gained over the centuries. Think for example of the destruction of libraries or archives (such as the records of slavery in Brazil destroyed in 1890 by order of the minister Ruy Barbosa). Think of the destruction of indigenous knowledges or local knowledges over the centuries in the course of colonization, especially colonization from Europe – the knowledge of medicinal herbs, for instance.

Think too of the extinction of languages. Today, about six thousand languages are spoken in different parts of the world. A survey made in 1999 estimated that 96% of these languages were spoken by only 4% of the population, that 'nearly five hundred languages have less than a hundred speakers'. As a result it is likely that three thousand languages will become extinct by the year 2100, a reduction of 50% in the course of a century.<sup>11</sup>

Think too of the process of hiding knowledge, withdrawing it from circulation by classifying it as secret, inaccessible to anyone who does not work for the FBI or MI5 or the NKVD. Take the case of the 'naukograds' in Soviet Russia. These 'knowledge cities' - so-called because scientific research was carried out there - were not marked on published

<sup>10</sup> Stefan Böschen and Peter Wehling (eds.) *Wissenschaft zwischen Folgenverantwortung und Nichtwissen. Aktuelle Perspektiven der Wissenschaftsforschung*, Wiesbaden, Westdeutscher Verlag, 2004; Robert N.

Proctor and Londa Schiebinger (eds.) *Agnotology: the making and unmaking of ignorance*, Stanford, Stanford University Press, 2008.

<sup>11</sup> David Crystal, *LANGUAGE DEATH*, Cambridge, Cambridge University Press, 2002.

maps. Their existence was officially denied, as well as the knowledge produced there.<sup>12</sup>

Another method of hiding knowledge is to disseminate false knowledge, an old practice which has recently acquired a new name, 'disinformation'. In the USSR, for instance, some maps deliberately showed towns in the wrong places as a defence against foreign spying.

Another way of losing knowledge is to discard it, to throw it away. Ever since the invention of printing, libraries have been growing at an alarming rate – alarming, that is, from a librarian's point of view. Finding space for what librarians call 'accessions' becomes more and more difficult all the time. Some librarians choose to 'de-accession' books, a euphemism for throwing them away. Others simply banish what they regard as the less useful books to remote parts of the library, to storage rooms in cellars or elsewhere. A study of the books that a major library has rejected in this way over the centuries might reveal a good deal about intellectual history. It would be a kind of archaeology, digging below the surface.

Equally revealing, and somewhat easier to carry out, would be a similar investigation of the history of encyclopaedias. As knowledge has increased, encyclopaedias have become larger and larger. All the same, a comparison of successive editions of the same encyclopaedia, such as the French Larousse, the German Brockhaus or the *Encyclopaedia Britannica*, shows that editors and contributors discard a great deal of old material in the process of bringing the book up to date. For this reason, for certain purposes scholars often prefer the 11<sup>th</sup> edition of the *Britannica* (published in 1911) to all the later versions.

There are obviously practical reasons for some of the omissions, the need to save paper or space. However, in the world of knowledge on line, the world of Google and Wikipedia this problem is much less acute. Even so, 'Someone recently proposed a Wikimorgue ... We could call it the Deletopedia'.<sup>13</sup>

We are entitled to suspect that there is a

philosophy underlying the discarding of knowledge. This philosophy is a more or less naïf belief in progress, as if the latest ideas are always the best. In any case, a thorough study of what is thrown out or thrown away in each edition of a given encyclopaedia would surely tell us something about changing values, especially because these works of reference shape our ideas as well as expressing them. They are not only our servants but also our masters.

It has often been observed that historians are generally prejudiced in favour of winners. In order to understand the past we surely need to pay attention to the losers as well, to reconstruct what a Mexican historian has called the 'vision of the vanquished'. Trotsky once described the losers as consigned to 'the dustbin of history'. It is well-known that successive editions of the *Soviet Encyclopaedia* removed references to people, ideas and things that had come to be officially regarded as politically incorrect, including of course Trotsky himself after his break with Stalin.

For cultural historians, to ignore the ideas of the losers is, in the traditional English phrase, to throw out the baby with the bath-water. Losers, including disciplines that are now regarded as 'pseudosciences', from astrology to 'parapsychology', will have their place in the polyphonic history that I am trying to write.

<sup>12</sup> Georgii Lappo and Pavel Polian, 'Naoukograds, les villes interdites', in Christian Jacob (ed., 2007) *Les lieux de savoir*, Paris, Albin Michel, 1226-49.

<sup>13</sup> Nicholson Baker, 'The Charms of Wikipedia', *New York Review of Books*, 20 March 2008.