Such a compendium will be invaluable to students of institutional and national styles of research. Moreover, he has gathered together biographical information and sources unavailable elsewhere.

But it remains a reference book. Although the original conception was 'to point out, in the course of the historical development of physiology, the connexions with the contemporary general culture and intellectual trends', it rarely draws more than tenuous and vague associations. I agree with Temkin that this failure in 1953 reflected the gulf between natural-scientific and humanistic thought as a whole, but I think it fair to re-evaluate that disclaimer in 1973.

During the past 20 years, historiography in the history of science has changed. There is less interest today in the attempt to bring under one rubric a long chronology of speculation and discovery. Such a lineage of physiological progress compresses the many levels of thought and inquiry into flat, unidimensional descriptions which treat them all as data of the same sort. Thus, Rothshuh refers to Haller's 'establishment of both concepts of sensibility and irritability' and to his 'confirmation of an airless pleural space' in the same sentence and in the same language of discovery, even though the former involved complicated theological/philosophical issues and were hardly examples of straightforward empirical science (p. 130).

A good example of the historiographical change is the reworking of the tired mechanist/vitalist controversy. From the older, more science-dominated perspective, vitalism was a speculative hindrance to the growth of scientific physiology, rather than a subject worthy of historical or philosophical study. But more subtle explorations of the nuances of the various vitalisms have actually opened up genuinely historical areas. The vitalisms, far from stymying physiological progress, offered compromises between the human values expressed in philosophy and theology, and the growing authority of empirical investigation. To 'historicize' properly the history of physiology, scholars must increasingly turn to these mediating concepts. It is significant that these studies have been initiated by people outside the history of science, such as the student of French literature, A. Vartanian (eg. *Diderot and Descartes, a study of scientific naturalism in the Enlightenment*, Princeton, 1953), as much as by those better known to historians of science, such as Temkin and Goodfield.

My criticisms should not detract from the value of the book for research. What is surprising is that one would not have thought that this is where its usefulness would lie. In spite of the apparent breadth and generality of the huge time period, this is not a general book. It is crammed with detail too bewildering for the student to digest, without the anchoring to concrete and extended discussions of historical issues given by more specialized monographs. With its companion volumes, Rothshuh's book is a supplementary research tool, not an introduction to the history of physiology.

Karl Figlio

**The Birth of the Clinic. An Archaeology of Medical Perception.** By Michel Foucault. Trans. by A. M. Sheridan-Smith. London: Tavistock, 1973. Pp. xix+215. £4.20; £3.20 (paperback; 1976).

With the appearance of Foucault’s *The birth of the clinic*, a good sample of his writings is available in English. Yet it is fair to say that, although he is widely known in the English-speaking world, his work is little absorbed, and still less sympathetically treated or applied. One usually hears the remarks of
frustrated readers who explain their hostile reaction to Foucault in terms of their difficulty in deciphering his opaque language.

But the language is only part of the problem. It is Foucault's vision, for which his language must be suited, which is essentially foreign. Indeed, Foucault's own interpretation of scientific change requires that a new language be part of creative endeavour. Language is more than an attempt to communicate an idea; it is constitutive of those ideas and will, therefore, be moulded naturally to its special objects by the cultural environment and tasks of which it is a part. If his language is strange, it is because his perception is strange.

Anglo-Saxon historiography of science and medicine remains liberal and empirical, that is, it emphasizes value-free accumulation of information about a period and about the influence of men upon each other through the opportunities for effective interaction open to their ideas. It is a view consistent with our scientific ideal and, since both elements are normative in our culture, we do not even notice them.

As a result, the apparently empirical interests of past writers do not seem problematical. If a group of scientists or physicians proclaimed the advent of a new age based upon the primacy of observation and the rejection of speculative philosophy, our historical sympathies incline us to see it as a statement of enlightenment and common sense—as a clearing-away operation which allowed simple observation to reconstruct slowly a science in place of a philosophy. The event itself was not philosophical, just as our historical accounts are not. By their very freedom from philosophy, both appear to be empirical.

It is not surprising, therefore, that a continental author who insists that empiricism in medicine is a problematical creation of a new theoretical structure, that influences of ideas are unintelligible and that there are no subjects of history, so that men are only marginally important to 'archaeological' historians, has not achieved widespread recognition in British history of science and medicine. Indeed, the neglect is mutual. In his *Marxism and epistemology: Bachelard, Canguilhem and Foucault* (London, 1975), Dominique Lecourt centres the two traditions on Popper and Bachelard:

> The French public, with the exception of a few specialists in logic rather than in epistemology or the history of the sciences, are ignorant of Popper's name, and his work has not yet been translated into our language. As for Bachelard, I do not think I am wrong in stating that the majority of English readers will learn how to spell his name when they open my book.

This neglect is especially relevant to the reading of *The birth of the clinic*, because the topic—the research and teaching programmes established in the Paris hospitals in the early nineteenth century—is familiar to historians of medicine of all schools. The components of this revolution included: an empirical, anti-theoretical research methodology based upon autopsy and pathological anatomy, practical clinical instruction at the bedside, and the siting of both research and teaching in large hospitals, where a limitless variety of morbidity was available. The fusion of the elements into one institution and idea formed 'the clinic'.

To us this process represents the emergence of a solid empiricism which we recognize by its similarity to our own ideals. It was the beginning of a movement which reached its zenith later in the nineteenth century and has carried into our own time. But Foucault sees the situation quite differently. For him, we can analyse only what we can see as other; in passing beyond the scientific ideology of the nineteenth century, we now begin to recognize it. And what we thought was unproblematical (empiricism) is, for Foucault, not
dependent upon a sloughing of philosophy, but rather upon a revolution in
the structure of knowledge. Revealing those structures makes history into
archaeology.

Foucault’s basic question is ‘How did the logic, language and structure of
knowledge—the very perception—of disease come to be identical to those of the
body, so that one could speak of a disease being so intimately rooted in the
body that it became a “pathological life”? For us, the feeling of self-evidence
makes the question an absurdity, but for Foucault:

The exact superposition of the ‘body’ of the disease and the body of the sick man is no more
than a historical, temporary datum. Their encounter is self-evident only for us, or, rather,
we are only just beginning to detach ourselves from it. The space of configuration of the disease
and the space of localization of the illness in the body have been superimposed, in medical
experience, for only a short period of time—the period that coincides with nineteenth-
century medicine and the privileges accorded to pathological anatomy.

As Foucault points out, neither practical instruction nor pathologica,
ancy were new to the medicine of this time. One need only mention Cullen
Sydenham, Bonet and Morgagni to see that; nor were large hospitals, many of
them built in the seventeenth and eighteenth centuries.

In our tradition, we see the medicine of the Paris hospitals as the result of
the doctor drawing ever nearer to his object, casting aside the intrusion of
theory and distorted perception, and finally touching, looking and listening, so
that his gaze could ‘pass to the other side’ and ‘map the disease in the secret
depths of the body’. But this interpretation, for Foucault, projects ‘onto history
an old theory of knowledge whose effects and misdeeds have long been known’.
It was not the conclusion of a continuous approach of subject to object, whose
very dichotomizing reflects this old theory of knowledge, but the result of a
‘recasting at the level of epistemic knowledge (savoir) itself’.

Behind the conversion to empiricism in Paris hospital medicine lay the
new perception of the hospital as a proper environment for disease, and the
superposition of the already established knowledge of disease (nosology) upon
a new pathological anatomy of tissues. Eighteenth century physicians had
developed elaborate systematic taxonomies of diseases, in which each type was
specified by a collection of manifest symptoms, and kinship was based upon the
extent to which these were shared or similar. Pathological anatomy, on the
other hand, involved localization and discrimination by crucial differentiating
lesions. Bichat’s tissue theory permitted a unitary view of a lesion spreading
across organ boundaries along with symptoms.

The nosologies were natural histories of disease, not just in terms of their
taxonomical principles, but also in their botanical analogies. A disease had a
nature and a life cycle, which could only be distorted and rendered dangerous
by an unnatural environment or by medical intervention. Physicians stressed
a natural (family) environment, non-interventionist (expectant) therapy and
the accurate naming of a disease from its manifest symptoms. This free (un-
distorted) space of medical ideas and care found a structural analogue in a
similar free economic environment. Foucault devotes an entire chapter to the
theory of public aid which argued for the distribution of wealth to families, in
order to obliterate poverty and disease without freezing capital in unnatural
loci, such as hospitals.

Presuppositions in the emergence of nineteenth century, hospital-based
medicine included the change in the structure of knowledge which would see
the hospital as a natural environment, interventionist therapy, the specification
of an anatomical lesion consistent with the type and stage (i.e., the natural
history) of the disease, and a politico-social environment to support a conversion to what would previously have been considered an artificial medical and public aid policy. The result was a pure, but not naive, empiricism; a new open field of observation aided by a cancellation of the unnatural, individual morbid varieties by the statistics of large numbers.

Foucault characterizes this ‘epistemic’ change in medical knowledge by the altered relationship between life, disease and death. In the eighteenth century, death was an absolute which stopped short both disease and life, each with its own natural history, and which had specific characteristics to mark its approach. Towards the end of the century, death stood above life and disease as an analyser, in that it arrested disease and exposed a moment in the natural history of disease to the gaze of the dissecting anatomist. Finally, with Bichat, death lost its absolute character by spreading back into the life of an organism in the form of many instances of lesser and localized deaths. In less extreme cases, these deaths were pathological alterations of living functions. Disease became degeneration—a degeneration whose rate alone differentiated between a normal life cycle, disease, and unnatural premature death. Death lost its position as the absolute analyser which named an illness and suggested the correspondence between a nosological species and a lesion; it became the foundation of disease.

Similarly, disease was seen as a ‘pathological life’, a nature inseparably intertwined with living tissues and processes. No longer a foreign entity threatening normal life and identified by the collection of its symptoms, disease became an historical mode of life which the new pathological anatomy of tissues (Bichat, Pinel, Corvisart) could visualize, from the moment of its insertion until its death with that of the organism, as the rooting, growth and spreading of lesions. The ‘space’ of disease, including its essentially historical character, had become identical with that of the body.

The change from the static nosology of the eighteenth century to the historical pathological anatomy of the nineteenth, and from the almost mechanical impact of disease and death upon a living organism to the inward maturation of a degenerative mode of life, are clearly a prefiguring of the transition from the taxonomic to the organic-historical ‘episteme’, which Foucault formalized in his later work, *The order of things* (Paris, 1966; London, 1970). In that book, Foucault also generalized his treatment to show the congruity in theories of political economy, of the nature of life, and of language.

I should like to make a final point on the style, not just of his writing, but of his thinking, which makes Foucault difficult for us. The style is most lucid in the language which helped to create it. Although the translator has taken on a hard job and has provided a useful service, there are passages whose opacity is far greater in the English than in the French version. I say this not to detract from the translation but to encourage a more tolerant response to Foucault, and to suggest that the translation occasionally reinforces the dichotomy between the two conceptual universes. In this general sense of style, it is possible to compare Foucault’s mode of historical knowledge with one close to our own. Erwin Ackerknecht’s *Medicine at the Paris Hospital 1794–1848* (Baltimore, 1967) treats the same topic, but in an ‘Anglo-Saxon’ way. We have, therefore, a rare opportunity to compare and to judge. My own judgment is that it is very difficult to bring an articulate criticism from within one mode to bear upon any specific feature of the other, but that it would be parochial to insulate ourselves further with self-satisfaction.

Karl Figlio