but, as Kupferschmidt rightly argues here, it was already overturned by French investigations in the Near East in the decade after the publication of Hirst's study. It is now clear that there are three primary means for the spread of plague: (1) transmission by sylvatic rodent populations, which in man results in sporadic endemic plague; (2) major outbreaks in rat populations, which cause pandemic plague in man through transmission by infected rat fleas; and (3) direct infection of one human victim by another, either by droplet infection through the air (as in pneumonic plague) or by human insect parasites, in particular human fleas (bubonic plague). All three of these means are potentially of equal importance, and their relative role depends on prevailing local conditions. For historians this paradigm makes far better sense of the historical record: none of the medieval European or Islamic plague treatises written in the wake of the Black Death in the mid-fourteenth century mentions the vast mortality among rats that would be required by Hirst's doctrine, and in the gaps between the major pandemics there are sporadic reports of local outbreaks or individual cases that are difficult to orient within a rigid schema of ratbased infection.

Perhaps most striking of all is the difference in the overarching attitude toward the endeavour of epidemiology that is so clearly evident in this book, as opposed to its illustrious predecessors. At the hands of Hirst and Pollitzer, writing in the context of a medical science that was discovering miracle drugs and magic bullets, the story of the modern study of plague is largely told-if not emotionally so-in terms of military metaphor, as the account of the victor over the vanquished. For them, plague is a disease subdued and defeated, conquered by modern science. For Kupferschmidt, taking up the same topic in the era of AIDS and other developments calling into question the agenda and efficacy of modern science, plague remains a smouldering threat whose former terrors can once again burst forth against mankind at any time. There is much to ponder here on the influence that cultural context brings to bear on

the course and conclusions of scientific thought.

If there is any particular weakness to this book, this would be its discussions, albeit brief ones, of plague prior to the late nineteenth century. For these matters it relies on such long-outdated works as Georg Sticker's Abhandlungen (1908–10) and takes no meaningful account of recent historical research on the first two plague pandemics, those associated with the so-called Plague of Justinian in the sixth century and the Black Death in the fourteenth.

But this is a book about the plague and the effort to control and eradicate it since 1894, and in this area it is a very well researched and argued study. One can easily see why it gained the author the Sigerist Prize for 1993, and it is certainly a work that all medical historians and other researchers working on the plague should take seriously into account.

## Lawrence I Conrad, Wellcome Institute

Charles F Clark, AIDS and the arrows of pestilence, Golden, Colorado, Fulcrum Publishing, 1994, pp. xvii, 171, illus., \$23.95 (1-55591-146-3).

Charles F Clark, the author of this book, was a psychiatrist working in NATO Headquarters in Belgium when he first became interested in AIDS. It became apparent to him that each NATO country reacted to the syndrome in a way which was conditioned by its own history and culture.

Clark began to use an historical approach as part of teaching about HIV/AIDS. This book is the result. The early chapters are an historical synthesis, strongly influenced by William McNeill's *Plagues and peoples*, in which Clark examines the impact of epidemic disease on various societies through migration and other means. The recent history of AIDS in the United States is then used to point a number of political morals, among them, the need for radical reform of the U.S. health care system; the legalization of heroin; and the need for

effective prevention campaigns. This is the "lesson of history" used to argue for a liberal policy approach.

The book is not a work of original scholarship. Clark is bringing together a body of historical and current writing about AIDS and epidemic disease, much of which is familiar. Despite his historical analysis of widely different cultures, his focus in the present is almost entirely on the United States and the impact of AIDS in that particular culture. Even within the U.S., he takes no account of more recent disease formulations. such as the "chronic disease" model, which has been widely discussed. AIDS, whether rightly or wrongly, is no longer seen within the epidemic model; it would have been helpful to have some consideration of those more recent changes. Outside the U.S., too, AIDS has been a much less powerful force for the reform of health care systems. In the U.K., for example, AIDS funding has been the victim of recent health service changes rather than a driving force for change.

The book is therefore of limited relevance to a non-American audience, although it is well produced and illustrated by thirteen full colour plates, ranging from a 1350 representation of Saint Sebastian to the AIDS quilt in the 1990s.

**Virginia Berridge,** London School of Hygiene and Tropical Medicine

Kurt Danziger, Constructing the subject: historical origins of psychological research, Cambridge Studies in the History of Psychology, Cambridge University Press, 1994 (hardback edition first published 1990), £12.95, \$16.95 (paperback 0-521-46785-3).

It is with great pleasure that we can welcome the publication in paperback of Kurt Danziger's Constructing the subject. Even now, Danziger's work remains a lively, engaging and completely au courant investigation into the nature and development of psychology as a scientific endeavour. Not a disciplinary history per se, Constructing the

subject is rather an exploration of the ways in which the subject in psychology has been historically constructed and reconstructed, approached through a series of key episodes and figures. Particularly attentive to the intellectual history of psychology in Germany and America, and deft in its deployment of the most recent analytical developments within science studies, Danziger's work illuminates an issue of profound concern to all those interested in the human and medical sciences: what are the consequences of transforming human beings into objects of scientific inquiry?

Danziger's analysis explores this question from two angles. First, following recent trends in history and sociology of science, Danziger argues that in any scientific investigation, choice of experimental method employed, research object investigated, and result obtained are all intimately linked. Thus the nature of the object at the centre of scientific inquiry will depend, at least in part, on the style of investigation adopted, and viceversa. In terms of psychology, Danziger identifies three types of experimental investigation as dominant: a Wundtian style of expert-performed experimental introspection, a French style of clinical-experimental investigation of individual subjects, and a Galtonian style of large-scale statistical analysis. Each, Danziger claims, was organized around a particular set of research questions, used distinctive methods of data production and analysis, and created a specific type of experimental subject.

Second, Danziger insists that this generic interrelation of the elements constituting the experimental endeavour becomes more complicated when human beings are transformed into research subjects, because of their responsiveness to the social settings in which they are placed and the behavioural expectations they bring to those situations. Thus, according to Danziger, analysis of the experiment as a distinct social realm is, within psychology, particularly important. Changes in environment, in personnel, or in definition of social role can all radically alter how a human subject will respond under any given circumstance. In addition Danziger points out that there exists no prima facie assurance that knowledge produced within