sexual activity both resulted from meat-eating. In the early days of this century, a similar debate turned on human dietary standards and the relative importance of protein and as yet unidentified trace nutrients. Finally, of course, the troubled post-war episode of the world-wide protein shortage shifted the level of controversy from the laboratory into the realms of application and policy. Expensive, complex, and largely futile in terms of improved nutrition for the poorest people of the world, the impact of nutritional theory was maximized by the postwar emergence of nutrition and planning experts, international agencies and committees, and international commercial interests.

Carpenter's avowed aim is to link the past to the present, but throughout he discusses problems and questions in their contemporary context: wider themes and conclusions are considered in the final, retrospective, chapter. The issues considered here are suggestive, and deserve more extensive exploration, perhaps within a broader treatment of nutrition history. Complexity, falsifying hypotheses, over-extended generalizations, the "great man" syndrome, the contribution of women, and the conduct of controversy are recognized themes in the history of science; committees and their consequences, the responsibilities of applied scientists and the dangers of enthusiasm perhaps apply more particularly to nutrition. A side-swipe at popular "alternative" nutritionists, who pontificate from a position of complete ignorance of the elementary chemistry and physiology of digestion, together with Carpenter's final, personal assessment of human dietary needs, remind the reader that nutrition remains perhaps the only science that speaks directly and personally to the preferences and practices of the individual.

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Marcos Cueto (ed.), Missionaries of science: the Rockefeller Foundation and Latin America, Bloomington and Indianapolis, Indiana University Press, 1994, pp. xx, 171, £22.50 (0-253-31583-2).

This valuable new book explores the role of the Rockefeller Foundation in the evolution of

health and agriculture in Latin America from the 1910s to the 1960s. Five of the chapters look at public health, medicine and scientific education and research, two at agriculture. The Foundation provided assistance with campaigns against selected epidemic and endemic diseases, developed public health institutions (especially laboratories), played a part in modernizing public education in medicine and nursing, and stimulated investigations of themes of general interest that ranged from vellow fever studies to highaltitude research in Andean Peru. Contributors to the volume range from Thomas F Glick, well-known for his writings on the history of science in Latin America, to two doctoral candidates, Joseph Cotter and Steven C Williams. The editor, Marcos Cueto, contributes valuable chapters that examine the ways in which the Foundation used national surveys as the basis of policy and promoted physiological research.

Using probably the richest archives in the United States for the study of international philanthropy, the book identifies questions of collaboration and resistance encountered by Foundation employees. Revolutionary socialists in the Mexican peninsula of Yucatán during the 1920s co-operated eagerly with Foundation officials to "eradicate" foci of vellow fever infection that threatened trade and commerce as far as Cuba and New Orleans. By contrast, a Foundation presence was resisted in parts of Brazil by "conservative modernizers" on the grounds that it formed an "advance guard" for other forms of imperialist penetration. In some respects the institutional environment was ready for the Foundation. In Mexico effective co-operation with President Alvaro Obregón against yellow fever consolidated his shaky central government against local particularisms; and in Brazil Rockefeller assistance conferred on the federal health authorities a public credibility which strengthened the federal government at the expense of state authorities. But in numerous respects the institutional community was unresponsive. Outside the unique environment of São Paulo, Latin American scientists

## **Book Reviews**

resisted the Foundation ethos stressing fulltime research activity, from a fear that salaries would be eroded by high levels of inflation. Across the continent, politicians and public opinion demanded more doctors rather than the fewer and more scientifically trained doctors proposed by the Foundation. In Argentina during the late 1940s and early 1950s the Foundation gradually withdrew its support from the Nobel Prize-winning physiologist Bernardo Houssay and his associates, because the first two Peronist regimes were virulently anti-American and relentlessly hostile to "elite" science. In post-1945 Peru Rockefeller-trained researchers displayed good technique, but, showing little flexibility in their work, made a false association between original research and the possession of modern equipment. This precipitated a decline in physiological research and a shift of Foundation interest from medicine to agriculture. The book contains illuminating examples of the over-confidence of "Rockefeller doctors" in their own science. For two decades they failed to recognize what Brazilian physicians familiar with yellow fever had long suspected: that Afro-Brazilians tended to display yellow fever symptoms in milder forms than Brazilian whites.

This reviewer has one reservation about the book. Most of the authors have insufficient command of the broader socio-economic and political historiography, so that fascinating data are not always contextualized persuasively. The volume is flawed by a failure to grapple directly with the significance of the crises of the World Depression and the Second World War, which did much to undermine cherished "progressive" assumptions of a harmonious linear progress within a capitalist framework that Rockefeller officials shared with their Latin American allies. How far did these crises deflect Foundation officials from their earlier objectives? And how far did a contraction in both national and philanthropic financing of projects sap confidence in international cooperative activities?

The book suggests many fruitful lines of inquiry. Comparative study of the role of

foreign missions, amongst which the Foundation was probably unique in having an enduring institutional presence, is important. There is much more to say about interactions between the "scientific community" in the United States and its impoverished, embryonic counterparts in Latin America. The character of the French influences in medical education and practice which were routinely criticized by Foundation employees as insufficiently rooted in experimental science has received only recent attention by scholars. And the links of "scientific politics", proclaimed by positivists in Mexico, Brazil and elsewhere, with "scientific philanthropy" and "scientific racism" merit clarification. Not all innovation radiated from the United States: the sub-centres of research-the work of Houssay, the National Institute of Cardiology in Mexico City, the public health experiments and "yellow fever studies" in Brazil-all deserve more attention.

Rockefeller officials were animated by a vision of inciting other scientists to transform the scientific structures of their countries so that science served the peasants and the urban poor. Yet Latin America was barely ready for the promised transformation, and received little more than injections of science. Perhaps the long-term significance of the Foundation lay in the diffusion of incremental change: a stress on cost-effectiveness; care in reporting problems and prescribing solutions; thoroughness in experimentation; the habit of purchasing equipment in the United States; and the displacement of French models by their US rivals.

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Ibn Hajar al-'Asqalānī, Abū l-Fadl Ahmad ibn 'Alī, Badhl al-mā'ūn fī fadl al-ṭā'ūn, edited by Abū Ibrāhīm Kaylānī Muḥammad Khalīfa, Cairo, Dār al-kutub al-atharīya, 1413/1993, pp. 246, no price given.

Medieval Arabic plague treatises in manuscript have frequently been used for