trials, as I have long felt them to be a rationing device beloved of regulators who need reassurance.) On another note, I felt that many of the contributors may not have appreciated the impact that mescaline and LSD induced states had had on the psychiatric "psyche" leading to the "shift in the paradigm" facilitating the discovery of psychotropic drugs.

The wide spread of the nationalities of the members of the Collegium is impressive, and their accounts show how universal are science and clinical practice. Many of those whose names come up in the book are well-known researchers and authors, and their personal histories brought to life for me the intense excitement of the time when we started to use modern drugs.

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Adele E Clarke, Disciplining reproduction: modernity, American life sciences, and "the problems of sex", Berkeley and London, University of California Press, 1998, pp. xvii, 421, £35.00, \$45.00 (0-520-20720-3)

From the mid-nineteenth century, sexuality and reproduction have become biomedical subjects. In her long-awaited, comprehensive monograph on the emergence and evolution of scientific approaches to human reproduction in America from the early twentieth century to the 1960s, Adele Clarke analyses important sections of this history.

Central to Clarke's analysis is the argument that the loosely defined group of reproductive sciences have always had to struggle with low and marginal status in the scientific hierarchy—a position that Clarke, not very satisfactorily, denotes in shorthand as "illegitimacy"—and their pervasive influence has been obscured by their apparent marginality within the scientific world. "My focus", says Clarke, "is on how certain scientists in specific locales came to

envision a set of problems of reproductive research, how they organized themselves to work on those problems, and how they interacted among themselves and with their audiences, sponsors, and consumers to sustain this research and develop it into a recognized discipline" (p. 27). The so-called reproductive sciences, she shows, were constituted during a formative period in American life sciences by the amalgamation of forces stemming from the worlds of biology, medicine, and agriculture, greatly aided by the contemporaneous expansion of American universities and research institutions. These forces, in turn, existed in an often creative state of tension with the rather different worlds of birth control activists and eugenicists.

Initially, scientists interested in reproduction steered clear of socially sensitive issues such as birth control, focusing exclusively on basic physiological research. The elucidation of the menstrual cycles of laboratory animals, for instance, was considered a truly scientific subject while the development of a simple contraceptive device was not. Similarly, the study of human sexual behaviour and its supposed aberrations was also left strictly alone. In all this, the emerging science of the endocrine secretions provided the paradigm, which was influenced significantly by the well-established embryological orientation of American biology. Although, as Clarke documents, the reputation of endocrinology itself was rather dubious in the earlier years of this century because of its associations with matters such as biological rejuvenation, it was still a dazzling new science and eminently suited to provide a scientific foundation for reproductive biology. The establishment of the reproductive sciences in America was not, however, an exclusively intellectual matter: as Clarke shows, the reproductive sciences, despite their apparent marginality, were remarkably successful in attracting generous funding from sources such as the Rockefeller Foundation and from the

pharmaceutical industry. Part of the reason why foundations supported reproductive research, Clarke suggests, was because they felt it was the ultimate way to achieve biological control over populations, an aim dear to their hearts at this time. Even more striking was the gradual rapprochement between the reproductive scientists and the once-suspect world of birth control activists, which led to reproductive scientists becoming "integral parts of family planning, population control and infertility research worlds, where they remain today" (p. 28).

This exhaustively researched, thoroughly documented and well-organized study of a crucial but virtually unexplored area of American science should become essential reading for historians of the life sciences. Like any worthwhile work of scholarship, it does not simply tell an interesting story and offer analytical insights but raises interesting research questions for future work. Why, for instance, did American reproductive scientists eschew questions of human sexual orientation and behaviour while continental European biologists did not feel too many qualms about addressing them? Clarke is to be thanked for compelling us to think about such issues and her admirable study will provide a point of departure for those wishing to explore other dimensions of this complex and fascinating subject.

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Milton Lewis, The thorns on the rose: the history of sexually transmitted diseases in Australia in international perspective, Canberra, Australian Government Publishing Service, 1998, pp. xxii, 574, Austral. \$69.95 (0-644-36085-2).

The thorns on the rose is a wide-ranging study which aims to locate the Australian experience of sexually transmitted diseases

(STDs) within both an historical and a comparative perspective. Throughout the book, Lewis is concerned to establish the links between European and Australian discourses surrounding STDs, and the early chapters are devoted to contextualizing the development of epidemiology and control policies in nineteenth-century Australia, with particular emphasis on the ideology and outcome of contagious disease legislation and the efforts of Western societies to regulate prostitution. There follows an exhaustive survey, at both the federal and state levels, of the impact of new chemotherapies and diagnostic techniques on treatment regimes and public health policies in the early 1900s, along with an assessment of the role of other factors such as the social purity movement, eugenics, and the exigencies of war.

Lewis's treatment of inter-war developments adheres to a similar format with a review of Australian initiatives juxtaposed to a survey of developments in Western Europe and the USA and international co-operation on issues of social hygiene. Particular attention is paid to the impulses and constraints shaping health education programmes and to the ongoing debate over the relative merits of compulsory and voluntary control strategies. Two further chapters are devoted to the impact of penicillin and the "permissive society" on the treatment and control of classic venereal diseases as well as of the second and third generation of STDs during the period 1945-80. Shifts in the incidence and epidemiology of STDs are related to the vicissitudes in the status and resourcing of venereology as a speciality, to the application of less coercive methods of STD controls such as contact tracing, and to broader societal shifts in sexual mores.

A much-needed and highly illuminating chapter is devoted to the impact of STDs on Aboriginal society in Australia from the nineteenth century to the present day. Lewis addresses wide-ranging issues relating to the incidence and epidemiology of STDs among