

**Understanding Knowledge as a Commons.** Charlotte Hess and Elinor Ostrom (eds). The MIT Press, Cambridge, MA, USA. 2007. 367 pp. Price: US \$36.00.

The idea of the commons, such as the village greens in England, although well known for a long time, acquired added significance with the advent of environmental concerns in the later part of the last century. It was around 1995 that the idea of the information or knowledge commons emerged, largely thanks to the fast-growing Internet, and people started thinking of transferring lessons learned from the environmental movement to the knowledge commons ecosystem. Are the characteristics of intellectual commons the same as natural resources commons such as forests, grazing land, fisheries and the atmosphere? Although both kinds of commons share some features such as congestion, free-riding, conflict, overuse and pollution, there is a big difference: natural resources are in the zero sum domain: if you share something, your stock dwindles. But knowledge wants to be shared and when shared it grows! And yet knowledge can be enclosed (thanks to emerging technologies), commodified, patented, polluted and degraded and the knowledge commons could be unsustainable. The two kinds of commons, however, require strong collective action, self-governing mechanisms and a high degree of social capital on the part of the stakeholders.

This book is the result of a closed-door meeting of a small group of specially chosen scholars, supported by the Andrew Mellon Foundation. Its purpose is to serve as a comprehensive 'introduction to a new way of looking at knowledge as a shared resource, a complex ecosystem that is a *commons* – a resource shared by a group of people that is subject to social dilemma'. The focus is on exploring the puzzles and issues that all forms of knowledge share, particularly in the digital age.

The book is divided into three parts: Studying the knowledge commons, Protecting the knowledge commons and Building new knowledge commons. It begins with a preface explaining the origin of the book, followed by an introduction by the editors, providing an excellent overview. David Bollier reflects on the evolution of the meaning of the commons and helps readers develop new

cognitive maps that enable them to visualize the knowledge commons in a new light. He talks about the need for evolving rules and norms necessary to guarantee general access to the knowledge that empowers humans, while ensuring recognition and support for those who create knowledge in its various forms. Elinor Ostrom and Charlotte Hess present the Institutional Analysis and Development (IAD) framework, originally developed for analysing urban public goods such as policing and education and common-pool resources such as groundwater basins and grazing systems, and examine how IAD could be applied to understand both the public-good and common-pool aspects of the knowledge commons.

Part II addresses safeguarding the commons from the threat of enclosures. Nancy Kranich reviews the role of research libraries in both protecting knowledge and making it available to citizens. She talks about the serials crisis and attributes it to scholarly societies turning the publishing of their journals over to private firms. Amendments to copyright laws and increased government secrecy also contribute to the enclosure of knowledge. She points out that open access efforts try to regain scientific and intellectual assets. James Boyle (an active member of iCommons and a champion of protecting the intellectual public domain) brings together two seemingly disparate thoughts. Greater access to cultural and scientific materials by individuals and groups outside the academy, according to Boyle, might have a remarkable impact on science and scholarship. He also feels that prolonging copyright protection, often, does not benefit the creator or the process of creating, but benefits intermediaries like the publishers, who did not make the original investment in creating. Knowledge is the domain of the public and as much of it as possible needs to be freely available. Donald Waters focuses on preservation. The average life of web pages is only a few months! He lists the key features that are needed to achieve the preservation of electronic knowledge in regard to legal protection, business models and incentives to achieve this.

Part III, illustrating the role of collective action, the free exchange of ideas and collaboration in the interest of common good, begins with a powerful argument for adopting open access (OA) by Peter Suber, whose blog 'Open Access News' is widely regarded as a definitive

source chronicling developments in the field. He lays out the steps needed to understand and to participate in the OA movement. He lists the obstacles to OA and tells one how to overcome them. This chapter is a must read for all researchers and research policy makers. Shuha Ghosh emphasizes the need for understanding intellectual property (IP) rights in building the knowledge commons. If IP is viewed as a means (and not an end), it can be used as a tool in constructing the information commons. IP can at once be constrictive, facilitative and irrelevant. He proposes imitation, exchange and governance as the three guiding principles that can be used to inform IP policy and to effectively design the commons. Peter Levine demonstrates how a knowledge commons can be used effectively to stimulate students and citizens to engage in research of public value. He distinguishes libertarian commons (open to all) from associational commons (open to members), and opines that associational commons will be an important part of the democratic use of the knowledge commons in the future. From his experience with such a commons in the Prince George county, Levine views associational commons as a means of generating important contemporary knowledge about local communities. This would be of use to the fast-growing telecentre movement. Charles Schweik provides an excellent account of the history of the Free and Open Source Software (FOSS) movement and shows how the collaborative principles around the FOSS development projects could be applied to develop new knowledge commons in science. Wendy Pradt Lougee looks at how libraries have evolved from being separate communities within universities into collaborators and potentially catalysts within interest-based (research) communities.

Indian librarians will do well to note that it is important to move from being mere keepers of archives and stewards of information goods, to active participants in the research process and in the production of scholarly information. In the final chapter, economists James Cox and J. Todd Swarhout describe EconPort, an OA open-source digital library in experimental microeconomics that they, as teaching faculty, built independent of the library – a good example of the blurring of the boundaries and stakeholders in the knowledge commons. They had to move

from one university to another as they could not get continued financial support at the university where they started the project – a good illustration of the practical problems knowledge commons faces!

On the whole this book provides an excellent introduction to the theory and practice of knowledge commons. It provides comprehensive overview of topics of great contemporary interest such as OA, long-term preservation and IP. The writing is uniformly lucid. The book deserves to be read widely, especially by academics and librarians.

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**Glimpses of the Agricultural Heritage of India.** Y. L. Nene (ed.). Asian Agri-History Foundation, 47, ICRISAT Colony I, Brig Sayeed Road, Secundrabad 500 009. 2007. 902 pp. Price: Rs 500.

The present volume is an excellent and comprehensive compilation of papers relating to the agricultural heritage of India. The editor, Y. L. Nene who is a plant pathologist by training, has rich and varied experience, having served at the G.B. Pant Agricultural University before he moved on to ICRISAT, Hyderabad. In 1994, he established the Asian Agri-History Foundation (AAHF) to 'facilitate dissemination of information on the agricultural heritage of South and South East Asia'. Nene states in the preface that in spite of a rich and varied agricultural heritage, the history of Indian agriculture and its achievements has not been understood or built upon as much as that of the other major civilizations. He feels that a major constraint to positive action for building on traditional agricultural knowledge is the lack of availability of resource material for prospective teachers. He has offered this current compilation of articles as a contribution that may orient teachers and students to undertake research to validate and improve tradi-

tional technologies for the benefit of the poor farmers.

The book is a compilation of articles that have been published in the quarterly journal *Asian Agri-History*, and presented in workshops and conferences held by the AAHF. There are a total of 84 articles that have been compiled broadly under six different sections. The material that is offered is vast and stupendous. The articles draw upon source material from Sanskrit, various Indian languages such as Tamil, Kannada and Hindi, classical texts in Persian and of course, a wide variety of archival and contemporary sources in English. There are also a large number of specific articles regarding concepts relating to agriculture in the ancient Indian literature, including the *Vedas*, *Puranas*, Sangam texts or texts such as Kautilya's *Arthashastra* and a large number of texts specifically devoted to traditional agriculture. The subjects dealt with in each of these chapters are rich and varied. The section on animal management includes articles on cattle, camel, yak, elephant and fish. Under farm management, a large number of topics of contemporary interest, including pest control, crop growth, and weather forecasting are touched upon, besides articles on individual species such as cotton, mango, rice, sesame and tea. The authors also constitute an interesting mix of scientists from agricultural universities, scholars of Sanskrit and various other Indian languages, NGOs and individual farmers who are carrying out a variety of experiments, to name just a few.

It is refreshing to see that the articles in general have taken a healthy approach. While there is indeed due place and credit given to some remarkable achievements of ancient India, the narration is generally not in the style of broadcasting the 'glory that was India in ancient times', but the focus by and large is towards the contemporary relevance and application of this knowledge. Prescriptions and approaches talked about in the classical texts of *Vrkshayurveda* (traditional Indian plant science) are brought vividly alive when we see articles reporting trials about testing out the approach of *Vrkshayur-*

*veda* to make organic tea in plantations of today. The editor, with his rich experience as a modern agricultural scientist, has opened up fascinating areas for research and investigation of contemporary importance. His paper regarding 'Modern concepts and practices evident in Kautilya's *Arthashastra*' (c. 300 BC) is a classic that deserves detailed study and investigation.

By and large, the organization and presentation of material is excellent, barring a few minor irritants and lapses. The contents have been organized into six major sections – along two different lines, namely chronological (ancient period, medieval period) and partly thematic (animal management, farm management, etc.). The author has also provided an appendix which is a chronology of some selected events and persons bearing relationship to Asian agricultural history. While the author states in the preface that it is based on considerable reading of old and new literature, it raises several questions – perhaps this needs to be looked at in much greater detail.

Overall the compilation is a splendid achievement that brings together in a single publication, a vast range of topics over a large timescale in this area. There is much in this compilation that is of great interest to not only the scholars and scientists, but also the practising farmers. In conclusion, it will be interesting to cite a fascinating passage from the article 'Plants and human history', which is a reproduction of a talk given by Maheswari in 1965: 'In fact even in the modern world plant power means as much or more than water power, sea power, atomic energy and so on. For obtaining plants men have gone forth in this world to distant lands, set out on long voyages and discovered and conquered new lands'.

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