

main subjects but also for much side information as well. For the public, however, a more careful editing of the texts, a subject index, as well as a user-oriented glossary would have been most helpful.

There is one more aspect that makes the reading of *Between Heaven and Earth* worth while. In his descriptions Frick includes himself. The reader becomes aware of Frick's Weltanschauung, his difficulties and ambitions as a missionary; his time in China; his relations with informants; the sources of his knowledge; his attitude towards peasants; and his emotions and limits of understanding. He relates numerous minor episodes and hard experiences in his daily life and in the way in which he was made part of local events, such as, for example, his involvement in legal cases (179) or the expectations people had of him as a "foreign doctor" (177). To a present-day nonmissionary ethnologist, the life and concerns of Frick in Qinghai and Gansu often seem part of a China of the far-distant past. Thus the articles may also be read as eye-witness accounts of a contemporary European missionary and ethnologist in China.

As we close *Between Heaven and Earth* the well-chosen cover photograph catches our eye again, and the wealth of information presented in the book stands against the barren landscape.

Mareile FLITSCHE  
Berlin

ZANIER, CLAUDIO. *Where the Roads Met: East and West in the Silk Production Processes (17th to 19th Century)*. Italian School of East Asian Studies Occasional Papers 5. Kyoto: Istituto Italiano di Cultura, 1994. ix + 106 pages. Illustrations, bibliography. Paper, n.p.; ISBN 4-900793-07-8.

To what extent did Chinese silk technology influence the development of European sericulture? How did Europeans try to acquire technological information from East Asia? These constitute the central themes of *Where the Roads Met*. Though brief, perhaps too brief, it provides concrete new data and ideas for rethinking the history of East-West technological transfer, especially after the seventeenth century, and promises a more detailed and systematic study in the future.

This short book contains two lectures delivered in April 1993 at the Italian School of East Asian Studies in Kyoto. In the first, entitled "Pre-modern European Silk Technology and East Asia: Who Imported What?", the author sets out to examine the Chinese contributions to the evolution of European silk reeling and silk throwing machinery, particularly the type that emerged in Piedmont in the Kingdom of Savoy after the 1670s and enabled it to maintain standards of world excellence in silk production until 1820. In the second lecture, entitled "The European Quest for East Asian Sericultural Techniques," based on detective work conducted in archives, Zanier gives a fascinating account of how Matthieu Bonafous, an Italian of French descent whose family engaged in the silk trade between Piedmont and Lyon, instigated, guided, and even molded the translation and publication of a Japanese technological treatise on sericulture entitled *Yōsan hiroku* 養蚕秘録 [Secret record of silkworm culture] during the 1840s.

Zanier argues that for supremacy Piedmontese silk manufacturers relied not simply on advanced technology per se, but also on radical changes in the organization of production factors. They integrated such diverse aspects as factory design, labor management, and economic factors (from entrepreneurship to financing) into a system that ensured uniformity in the finished product (in other words, quality control), thereby enabling them to adjust pro-

duction to shifts in market demand in an easy fashion. He considers every possibility of new technical contributions from outside (Europe as well as China), and concludes that the “basic nature” of the Piedmont system was endogenous. He devotes quite a few pages to the question of technological transfer from China to Piedmont, but remains skeptical of any major contributions from that country. Of the three technologies examined, the author regards two—the crossing of the threads and the transmission of movement by rigid axle and cog-wheels—as innovations endogenous to Piedmont, and, while he recognizes a Chinese priority for cocoon assembling, he fails to find any solid evidence for a transfer. Yet he writes in a much more positive way about the flow of technology in the opposite West-East direction during the twentieth century. In his opinion, it was a reverse flow of technology that enabled China to rise to its present-day world supremacy in silk production following the collapse of European sericulture after 1929. Viewed in the longer historical perspective, this turnabout, rather than indicating a disjunction, in effect signaled a return of China to its pre-seventeenth century domination in this field of manufacture.

The seminal work of Joseph Needham and his team of collaborators in the *Science and Civilisation in China* project proves beyond doubt that in ancient and medieval times the Chinese attained one of the highest levels of science and technology in the world, and shows, by tracing the transfer of Chinese inventions such as paper, gunpowder, and silk to Europe, that modern science and technology, which originated in Europe, included some contributions from non-European civilizations like China. This standpoint has helped to rectify the Eurocentric bias of earlier generations of European historians of science and technology; now that it has been widely accepted by scholars, we find that it raises other very important questions that demand answers before more accurate accounts of East-West technological interaction can be written. For instance, though the distant origins of a technology may be Chinese, this does not mean that Europeans may not have innovated and improved on the original invention, especially when their respective economies and societies exhibited such different characteristics. To ascertain priorities between China and Europe, and in order to obtain a clear picture of the extent of the Chinese input to European technologies, it is necessary to determine exactly what sort of technology, machine, or instrument was transmitted to Europe, through what type of agency, and when.

By taking the case of Piedmontese silk, which apparently remained unknown to Dieter Kuhn (author of the volume on silk in the *Science and Civilisation in China* series), Zanier succeeds in creating a new vantage point from which to compare European and Chinese technology. It is by getting into the nitty-gritty of silk technology that Zanier’s work helps to establish exactly what type of transfer occurred (or, conversely, did not occur), and shows a way to gaining a more balanced, deeper understanding of East-West technological transfer. Furthermore, his use of seventeenth-century Piedmontese data to reinterpret Kuhn’s hypothetical reconstructions of self-crossing techniques in Song texts draws attention to one of the methodological problems inherent in reconstructing machinery from textual data alone: exactly what degree of interpretation should the reconstructor be allowed?

Probably, due to its nature as a record of two separate lectures, this booklet suffers from one major shortcoming: the author offers no overall conclusion to explain the significance of his findings. The reader is left wondering why, if Europeans really did not adopt much technology from the Chinese and Japanese after the seventeenth century, the French government and individuals like Pierre Poivre and Matthieu Bonafous expended so much time, money, and effort on acquiring information on silk and agriculture from these countries. This question is all the more pertinent because we know that in the eighteenth century Europeans definitely saw detailed depictions of Chinese rice cultivation, silk, tea, and porcelain production on wallpaper imported from China (see BERGER et al., 1996).

Zanier includes two interesting illustrations from a series of twenty-six executed by a Chinese artist in the early eighteenth century, and on page 94 states that a great volume of material on botany and agronomy lies languishing in the Lyon Municipal Library and other archives. With all this valuable data on hand, one cannot help feeling that what was really needed was a full-length study dealing with all such facets of East-West technological transfer, not merely a revised version of lecture notes. I hope that in the future the author will publish one, for judging from the contents of this book he has already done a lot of the groundwork.

On a final note, the text of this fine booklet has been marred by a lack of proper copy-editing. I noticed too many typos (even without trying to spot them) to enumerate here, but undoubtedly the responsibility for this lies with the publisher rather than the author.

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Christian DANIELS  
Tokyo University of Foreign  
Studies

#### PHILIPPINES

MEÑEZ, HERMINIA. *Explorations in Philippine Folklore*. Quezon City: Ateneo de Manila University Press, 1996. xiii + 159 pages. References, index. Paper US\$17.00; ISBN 97155-0211-3. (Distributed by the University of Hawaii Press)

*Explorations in Philippine Folklore* is exactly what the title says it is. This slim collection of essays encompasses a broad spectrum of the topics and methods of analysis found in the field of folklore, all centered on the diverse Philippine folk group. The thematic range is impressive: Meñez analyzes the messages inscribed by drivers on their jeepneys, delineates the parameters for including sexual innuendo in social banter, traces the historical development of the viscera-sucking witch, and more. This is a noteworthy collection, and makes very enjoyable reading.

Throughout her career as a scholar of folklore, Meñez has investigated the lore that has arisen in the Philippines. A University of Pennsylvania graduate, she has taught at UCLA and at California State University, Sonoma, but her interest in folklore stems from hearing stories as a child in Aklan during World War II (x). The essays were published or presented between 1971 and 1995, and their collection here is a valuable resource for people interested in this area of the world. They are also valuable reading for the diversity of interests that they show, and for the capable way in which Meñez has put together her work.

In "The Art and Language of Manila's Jeepney Drivers" Meñez examines the decorations that festoon the popular vehicles to decipher the identity of this subcultural group. Her second essay, "The Philippine Folk Epic and Multicultural Education," continues the emphasis on discovering identity by presenting the cultural themes and values enshrined in the epic, and by pointing out how "folklore is a major, although relatively neglected, field of study that offers excellent materials for teaching cultural pluralism" (13).

A feminist point of view is used effectively to elucidate the role of women in Filipino society, both past and present, in several essays: "Female Warriors in Philippine Oral Epics," "The Shaman and the Warrior in Isneg Society," "The Viscera-Sucker and the Politics of