Chinese Industrial Espionage: Technology Acquisition and Military Modernization WILLIAM C. HANNAS, JAMES MULVENON and ANNA B. PUGLISI London and New York: Routledge, 2013 xvii + 296 pp. £25.99 ISBN 978-0-415-82142-1 doi:10.1017/S030574101400085X

This book, written by two China hands in the US government and one China specialist in a US defence think tank, argues that the only way that China could have developed as rapidly and dramatically as it has is through its availing itself of massive amounts of foreign technology. Despite the title, espionage is not all that prominent a part of the story. "Our [developed country] obsession with [intellectual property] piracy distracts us from the real threat from China, namely its ability to latch onto high technology created abroad, and apply it to real products – without compensating the owners... China could not [have achieved what it has] without cheap and unrestricted access to other countries' technology... While traditional espionage plays a role, it is relatively minor" (p. 2). And again, despite the title, military modernization does not figure very prominently here either.

The authors say that nearly all of China's industrial development and military modernization over the last 30-plus years has been the result of foreign technology acquisition. They argue that mimicry plays the paramount role in its science and technology development. They detail China's immense efforts to compile and make available to researchers and enterprises in China openly available materials; how foreign firms set up research and development facilities in China (which they conclude may not pass that much technology to China); how China has created huge numbers of technology transfer organizations; how it is has utilized US-based (and usually ethnically based) organizations to transfer technology to China; how Chinese graduate students in the US might be "conduits for economic and technological espionage" (p. 136); and how "overseas Chinese scholars pioneering parks" are the final step to ensure that technology flows to China. They then consider formal espionage, both the conventional kind and cyber espionage. The authors often go into immense detail about the opensource network, detailing technology transfer organizations and the pioneering parks.

The book is written presumably for intelligence and military professionals, as well as for scholars of Chinese development, politics and foreign policy. The work draws on extensive Chinese sources and Western scholarship and newspapers. Because of their professional roles, the authors probably know more than they can say. But they have to rely on publicly available material to justify positions they take. Thus we are told that Chinese students and scientists returning to China are sometimes debriefed by Chinese government agencies (p. 157). But the source they cite for this was published in 1994. There are many other cases in the work where the documentation is a decade or older, leaving one to wonder whether the practices described then still continue.

The basic premise of the authors is that technology transfer to China is detrimental to US national interests. They at times come close to saying that China cannot innovate ("a culture hostile to innovation," p. 163); they argue, based on selective psychological research, that essentially Chinese (and "Eastern" subjects) are much less capable of higher-level creative thought (p. 239), and further cite one genetic study that states that East Asians are less able to take risks and promote individual norms of self-expression (p. 240). One of the authors has a previous work arguing that Asian orthography curbs creativity. Thus, China cannot really create new technology, and China is not innovative. Therefore it has to acquire it, legally or illegally. After an extensive (but still not complete, the authors assure us) discussion of Chinese American technology groups in Silicon Valley, the authors note "We wish to state our belief that these groups do not set out deliberately to subvert the United States. Our claim is that helping China become a competitive power through 'transferred' technology entails for these advocacy groups no contradiction..." (p. 130). Here and elsewhere, Chinese-Americans and Chinese citizens in the US are tarred with a very broad brush, and are seen as threats to US science and technology. Innuendo often attaches to one-sided fact: "an astonishing 81 percent of the Science Academy members had studied abroad, *as had 21 of the 23 people* awarded for their work" (p. 170, emphasis in the original) on China's nuclear, space and satellite programmes. The authors fail to note that the 21 who studied abroad did so, overwhelmingly, prior to 1949, and none studied in the US after 1979.

The authors argue that Chinese firms in the US "focus to a greater or lesser degree on acquiring technology to transfer 'back' to China. We do not claim that most or even many of them operate illegally. Our argument is that the legality of their operations is irrelevant, as China has ways ... to work the middle ground" (p. 231). Thus, even though most actions are legal, the authors still see them as bad, and urge the US to reduce the number of Chinese students in the US among many other measures.

I could go on, in what is often a highly distasteful work. The authors start with the view that information and technology has to be controlled. This reviewer, as educator, starts with the premise that ideas are inherently going to be shared, and in almost all cases should be shared. This book then gives a good sense of a certain kind of mind-set, and some of the assumptions that might lie behind US counter-intelligence ideas. But it denigrates Chinese ability to innovate and create in light of new incentive structures since reforms, implies that all Chinese abroad, whether citizens of a foreign country or not, are more loyal to Beijing than they are to their country of domicile, and that implicitly, it is within the power of the US to stop technology from flowing out of the US to China. As such, I cannot positively recommend this work.

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Technology Transfer between the US, China and Taiwan: Moving Knowledge Edited by DOUGLAS B. FULLER and MURRAY A. RUBINSTEIN London and New York: Routledge, 2013 x + 181 pp. £85.00; \$145.00 ISBN 978-0-415-64220-0 doi:10.1017/S0305741014000861

This edited volume is a welcome contribution to the study of globalization in trilateral US–China–Taiwan relations. Contributors to the seven-chapter book explore a variety of knowledge transfers as globalizing forces, encompassing the invention and production of goods and managerial know-how. They argue that the two main drivers of the knowledge transfers under discussion are returnees in Taiwan and China and government interventions in acquiring technologies from multinational corporations, including those headquartered in the US. Hence the book offers a welcoming corrective contribution to the body of scholarly work that views US actions regarding these relationships in hegemonic terms.

The introductory chapter by the two editors neatly places the book's theme in the context of general academic debates on economic developments among