Cong Cao, *China's Scientific Elite*

London, New York, RoutledgeCurzon, 2004, 256 p.

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NOTE DE L'ÉDITEUR

Translated from the French original by Michael Black

- 1 This book is a synthesis of a doctoral thesis, which offers new research into the scientific elite of the People's Republic. Taking as his subject the Academy of Sciences, an institution which was founded as early as November 1949, and which is situated at the top of the scientific hierarchy, Cong Cao examines "the characteristics of the scientists [who have been appointed members of the Academy] and the criteria and procedures by which they are assessed and promoted". Thus it is not a question here of examining Chinese scientific policy, or the major contemporary scientific achievements and discoveries, but rather of going to the heart of China's most prestigious scientific institution : who are the researchers who make up this elite ? What procedures and selection criteria control the nomination of the members of the Academy of Sciences ?
- 2 To Cong Cao, the purpose of this research is two-fold : firstly, while the Chinese political and economic elites have been the subject of much research, the scientific elite has never been studied systematically, but only through the biographies of well-known scientists or from an examination of the relations between intellectuals and the government. The subject is crucial if one considers the importance of scientific and technological research in China's programme of modernisation. From a more theoretical point of view, and from a comparative perspective, Cong Cao raises the question of the links between the universalism of science and the social and political context. The sociology of science has grown from the consideration of scientific developments in Western democratic countries. How does this apply to China ? What influence have the major historical changes which China has experienced in the last five decades had on Chinese science and on the formation of its elite ? Is it a case of historical continuity, or on the contrary, of discontinuity ?

- 3 Cong Cao has mostly relied on two kinds of sources to carry out his research. On the one hand, where the written sources are concerned, the author has assembled the available biographical information (books written about or by the scientists, newspaper articles, articles on the Internet). On the other hand, and this is the richness of his work, interviews were carried out with 79 members of the Academy of Sciences, of varying ages, disciplines and geographical localisations, elected or appointed during different periods, covering a timespan of over five decades.
- 4 Organised by theme, the book first briefly recalls the growth of modern science in China, and presents the major characteristics of the scientific policies of the People's Republic. It then introduces the Academy of Sciences and the institutional changes it has gone through. The main part of the book then reviews the various social factors likely to have an influence in the nomination of members of the Academy of Sciences : their social background (Chapter 4), and the academic influence of "mentors" on their students and on their careers (Chapter 5), as well as the achievements of scientists who are part of the elite, in particular the nature of the research programmes in which they are engaged (basic or applied research, military or civilian research, whether they are key projects or not). But beyond these "classic" factors, the author also ponders political influence on the nominations (Chapter 7, "Red or expert"). Chapter 8 then reviews in depth the most recent elections of members of the Academy, in order to establish the criteria involved in the selection process. Finally, in the last chapter of the book, the author opens a discussion on the commitment of the scientists.
- 5 The advantage of this survey is that it sheds new light on the question of relations between power and knowledge. Cong Cao has chosen to tackle this subject not from the angle of the relations between the intellectuals and the government, but rather from the formation of a knowledge community, of its norms and criteria of membership. The result is surprising : while the political campaigns against the intellectuals profoundly affected scientists and created real trauma, there was no real interruption in scientific production during this period of intense repression. The most revealing example is the nuclear research programme carried on during the Great Leap Forward, and where the most contemporary period is concerned, by examining the successive elections of new members of the Academy, the author brings out the resistance of scientific circles to any attempt at political intrusion, and the professional freedom which is held up as the dominant norm.
- 6 Through his interviews, the author also explores the question of the operation of the *danwei* (work units), of research, of social relationships (*guanxi*) and their influence on the workings of the scientific world. He shows in particular that the influence of these relationships is not exerted directly but rather in the margins of the nomination of members.
- 7 While Cong Cao does describe the changes in the organisation of the Academy of Sciences and the election procedures of its members, by showing their relative independence from the political powers, the role played by the institution and its members is not really described. Does membership of the Academy bestow anything more than scientific prestige or academic recognition ? Is it synonymous with power in the elaboration and orientation of scientific policy ? There is also an important discontinuity in the subject under study : until 1978, the social sciences were part of the Academy of Sciences, before being brought together under an autonomous institution, the Chinese Academy of Social Sciences. If the scientific elite includes only the exact

sciences, what status is to be given to the social sciences ? Since Cong Cao has excluded the specialists in social sciences from his survey, and since there are references to the fundamental distinctions which exist in China between the “exact” sciences and the social sciences, it would have been interesting to see this problem tackled in his defining of the scientific elite.