Colonial Science: An Introduction

George Basalla

Those who speak about ‘colonial science’ start with George Basalla’s paper in 1967 (‘The Spread of Western Science,’ Science, 1967 vol. 156, pp. 611–22). Being a Harvard graduate student at the same time, I was heavily consulted at the time of his writing. I provided him with the Japanese steps of modernization in the early Meiji experience. Also I read galley proofs for him. Hence, I am partly responsible for his argument of colonial science. Thus, I set up a symposium on colonial science for the better understanding of it during the 22nd International Congress of History of Science, held in Beijing, China, on 28 July 2005.

George had no background in this issue and hence his paper is superficial. So, I did not take his paper so seriously and in the meantime I had forgotten about his paper. During the 1970s I heard nothing about it at all. Some time in the 1980s when I attended an international symposium, I was astonished to find that everybody talked about Basalla’s model, very very critically. Poor George, who had never worked on the same topic of colonial science since then, was a target of academic ridicule.

The major criticism was addressed to George’s developmentalism, without recourse to the political and economical differences of colonial areas. There are conspicuous differences between colonial sciences of the same race, same language (first category) and difference races, different languages (second category), as exemplified between the Australian and Indian cases. Nevertheless, George followed, more or less, the Japanese case as a developmental model, but Japanese science is never colonial. In order to modernize their own science, they hired and fired foreign scientists and advisers for their own need with their own money. I mentioned the ‘independence’ of Japanese science; it means that science was translated into the Japanese language so that they founded scientific societies and journals and their own criteria of assessment. It had nothing to do with colonial science.

MY DEFINITION

Instead of George’s developmental model, I would like to propose a functional definition of colonial science as the following: my definition of colonial science is that subjectively, or internally speaking, it is a science conducted by scientists who envisaged achieving whatever they could not accomplish at home but only in...
a colonial setting. Objectively, or externally speaking, it is primarily addressed to the home scientific community, without primary concern about the influence on colonial community. The above-stated definition has been so far applied nicely to the Western colonial science which sought flora, fauna and natural resources in geographical frontiers, exemplified by the activity of the Royal Asiatic Society in the nineteenth century. Such state-of-the-art colonial science can be applied to Australian cases, as reported by Rod Home in our symposium. It was mainly the science of settler or temporary visitors. Thus, they were interested in the centre-periphery problem, and not of colonial control and power problems.

SUPPLY-SIDE VS. DEMAND-SIDE
From the modernization point of view, Japanese historians of science worked hard on the mechanism of modernization from the demand-side point-of-view. There was not so much work done from the European supply-side. In this regard, I appreciate Lewis Pyenson’s approach from the supply or Imperialistic side. After all, we have to recognize that the supply-side has the initiative in the historical context. Encouraged by the possibility of colonial science from the supply-side, I would like to treat the Japanese case at this symposium from the supply and Imperialistic point of view to nearby Asian countries and areas since the early twentieth century.

INDIAN CASE AND JOSEPH NEEDHAM
The Indian case is the typical and the most interesting of the second category of colonial science where the power relationship between ruler and ruled constitutes more complex problems than the first category.

The Indian experience reminds me of Joseph Needham who was invited in 1950 by Indian historians of science with their idea to start a ‘Science and Civilization’ in India modelled after Needham’s *Science and Civilisation in China*. Needham, usually sympathetic to those ruled and depressed, however, commented that while most of the Indians were too preoccupied with nationalism, saying that British colonists disfigured Indian chronology, while Indian civilization must be much older than the colonists claimed it to be. I presume that only when those who fought against British colonialism for gaining independence may not be able to stand objectively, while only the next generation who had no direct suffering from Imperialists could start evaluating the scientific legacy of colonialism. Zaheer Baber must belong to such a generation, different from the generation who had been colonized.

REVISIONIST APPROACH: MODERNIZATION VS. COLONIALISM
Whether Baber would consider himself a revisionist is a moot point; however, it is clear that the revisionist approach to colonial science has been much discussed of late. Even in my generation, things began to appear. During the post-war period right after the end of the Second World War, Marxist historiography of wartime science was dominant. According to it, nothing of wartime scientific effort