

촉진하는 과정을 되풀이하였다. 이와 같이 독과점적 산업조직형태가 기술진보에 기여하는 과정은 일찌기 Schumpeter에 의해 갈파되었는데, 당시 철강산업에 있어 산업조직이 기술혁신을 촉진하는 메커니즘은 다방면으로 논의되었다. 첫째, 대량생산의 결과 제품의 표준화를 가능케 하여 부품의 교환이 용이하게 되었고 기술정보의 전파를 신속히 할 수 있었다. 둘째, 제련공정에서 압연까지를 결합한 종합공장에서는 금속을 가열된 상태로 유지할 수 있어 연료효율이 높아졌다. 셋째, 시장수요나 요소가격의 일시적 변화에 구애되지 않고 장기적 안목으로 설비투자를 계획하기 위해서는 시장 지배의 전망이 있어야 하며 독점자본만이 이와 같은 조건을 갖추고 있었다. 마지막으로 미국은 철강노동組의 취약점을 이용, 기업이 임금통제할 수 있었던 반면 영국은 노동조합이 강력하여 과학적 관리 등을 도입하는 데 장애요인으로 작용하였다. 관점에 따라 강조하는 면이 달라지겠으나 後發工業國(영국이 아님을 지칭)에서의 공장 및 기업의 대규모화 현상은 Gershenkron에 의해 간결하게 유형화되었으며 이는 당시 기술진보와 산업조직 간의 유기적 관계를 일반화한 것이라 할 수 있다.

이제 이 글을 요약하여 보자. 19세기 후반의 철강기술의 혁신 및 전파는 기술사적인 측면에서 볼 때 지역에 따른 광물과 연료의 화학적 구성, 철강제품 수요의 증가율과 그 구성, 그리고 철강산업 종사자들의 이해관계 등과 밀접한 관련을 가졌다. 기술선택에 따른 생산비의 차이와 그 결과로 나타난 국제경쟁의 향방은 각 공정에서의 기술수준보다 이들을 포괄하는 산업조직의 형태에서 결정되었다고 하겠다. 기술진보와 산업조직은 시기에 따라 독특한 상호작용을 하는 유기적 관계에 있으며 독점자본주의 형성기의 철강공업에서는 기술선택→산업조직→기술진보의 연쇄반응이 독과점적 산업조직을 갖는 경제에 이로운 쪽으로 작용하였다. 이후 독점자본의 귀추는 또한 대량생산기술과의 해후에서 결정되었던 것이다.

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Some Problems in the Study of the Science - Religion Relationship in Traditional China

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In the West, both science and religion were important elements in society, and it is natural that the two should have interacted in various ways. Moreover, the objects of the Western science and religion, Nature and God, were inherently linked to each other in that the former was believed to have been created by the latter. Thus we see many instance in the Western history in which science and religion came to touch each other, generating significant influences in the development of each of them. But in China, neither science nor religion was very important in any period. Nor was there, in their ideas of science and religion, such an obvious link between the two. Study of the "science-religion" relationship in this situation has often tended to look for tenuous, or even imaginary, links and influences between the two elements that themselves were not important in their own context. For example, the role of Taoism for the Chinese scientific development has received an attention far beyond what it really deserves. The influence upon science of the "absence" of certain religious

elements, also, has been among the more frequently discussed topics. These, of course, led to much interesting explanation of various particular ways Chinese scientific knowledge developed, or failed to develop. But they raise problems as well.

The present paper discusses mainly these problems. But it also raises other problems that come up when the "science - religion" relationship is studied in the context of traditional China. It indicates, among other things, that not only is the "science - religion" relationship culture - dependent but also is what we mean by "science - religion relationship."

The Central Institute of Industry, Korea, 1946 - 1961

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The Central Institute of Industry, Korea has a history of over one hundred years. It can be traced back to Chŏnhwan'guk, a combination of the Bureau of Mint and Government Printing Office which was established by the government of Chosŏn in 1883 and lasted until 1904. Two years later the government started Technical School.

After the annexation of Korea to Japan in 1910, the Japanese Colonial Government created the Central Research Laboratory in 1912 and put Technical School under its control. After World War II the Laboratory survived, but its name underwent a change three times.

The Central Institute of Industry covers 15 years starting with the U.S. military rule, through the establishment of Korean government in the south in 1948, the Korean War from 1950 to 1953, and the overthrow of Rhee Syngman regime in 1960 and ending with the

military coup in 1961. It is the most important and glorious period in its long history.

Korea was liberated from the Japanese colonial rule in 1945. It had had an affluent heritage of traditional science which ended with the fall of Chosŏn Dynasty. However, the Korean science had to start almost out of nothing after the vacuum of 35 years. The Japanese extremely discouraged the Koreans to be trained in science and technology. As a result, there were about one thousand engineers who were educated at a junior college level and less than one hundred scientists with university degrees when the Japanese left Korea. In physics, for example, there were only three Ph. D. holders, two from the United States, one from Japan and ten with bachelor's.

The Central Research Laboratory was one of very few assets Korea inherited from the Japanese colonialists. It was taken over by Ahn Tong Hyuk who had been the only high ranking Korean engineer in the Laboratory before the liberation. He was a graduate of Keijo Technical College which was closely associated with the Laboratory and later of Applied Chemistry Department, Kyushyu Imperial University in Japan.

When it was reshuffled and started anew as the Central Institute of Industry in 1946, Ahn could recruit 146 staffs of which 41 were engineers and 44 were technicians. The Institute consisted of 4 sections, namely, Applied Chemistry, Dyeing and Weaving, Ceramics, Analysis and Brewing, and later Mechanical Engineering and Food Industry were added. It did not confine itself to carrying out the industrial tests and research as the predecessor did. It aimed at establishing the foundation of science and technology and at developing industry. Ahn, Director of the Institute, if not materialized, contemplated a huge plan to