

# THE PROCESS OF FORMATION OF COMMODITY-SCIENCE IN JAPAN

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## *Introduction*

In the first year of Meiji (1868), after the collapse of the Tokugawa shōgunate government the Meiji government was established. Under the new government the Education Ministry which was to take charge of education affairs was instituted in Meiji 4th year (1871) and school systems were promulgated next year, this education systems as a whole were organized concretely and the course of so-called modernization was fixed. In these circumstances of social developments, in Meiji 8th (1875) Arinori Mori instituted privately the Commercial Law Institution at Owari-cho, Tokyo, which was a beginning of school commercial education in Japan.

It has been one of my greatest interests how “Commodity-Science” which exists now as a subject of our higher education curricula could have appeared during such a period of radical historic changes as the Meiji Restoration, what process it has pursued to establish itself. On this problem I have already written the following two articles: “Some problems on Commodity-theories in Japan and their influences to the establishment of Commodity-Science—giving an emphasis on *Yamato-honzō*, *Butsurui-hinshitsu*, *Nihon-sankaimeibutsuzue*, *Nihon-sankaimeisan-zue*, etc.”<sup>[1]</sup>; and “Bussan-gaku (Commodity-Study) and Ran-gaku a review on the process of formation of Commodity-Science in Japan”.<sup>[2]</sup> Based on these two articles and supplementing new knowledge to them, I will here try to illustrate the circumstances in which Commodity-Science has been built up in Japan.

## 1. *A Genealogy of Commodity-Science Reviewing through Literature*

It is generally well known to seek for the origin of Commodity-Science in the old pharmacognosie, or in the commercial-transaction theories developed in France and Germany towards the middle of 16th century for the purpose to grasp this science as a branch of commercial sciences and to clarify its characteristics.<sup>[3]</sup> And the methods of tracing the origin are quite different, may be those of natural sciences or of social sciences, depending on the standpoints of the researchers. However, there is a common fact among them that this science has as the primary object of its studies the utility-value aspect of commodities, as far as it calls itself Commodity-Science.

Now, it is recognized that modern sciences were constructed in 17th century. In this case the science (scholastic study) has a concept of studies with such systematic methods

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as making hypotheses, experiments, and establishing theories. However, if we call it a science to strengthen simply the knowledge of an object, such a science has existed since the appearance of mankind. From the very beginning of its appearance on the earth, mankind had to produce above all its subsistence goods to exist through working upon nature, and it has made progresses through these works. The beginning of sciences lies in the process of these works. On the basis of such a view-point, I am now going to look for the origin of Commodity-Science.

To see from such a view-point, we can point out at first *Honzō-gaku* (Herbal) as one of the original sources of Commodity-Science in Japan. It must have been the most important matter especially for mankind in the primitive ages to find utilities necessary for its subsistence among natural entities such as animals, plants and minerals. *Honzō-gaku* is a kind of botany having its main purpose in the medical use of plants, and is called Herbal in Europe. Therefore, I will now pick up following several materials beginning with *Honzō*-books, and describe the outlines of them in order of ages of their publications until early Meiji era. This attempt will reveal the reason why I include the studies of these books into the category of Commodity-Science, and also it seems to me the attempt will enable us to looking back to the continued process of the appearance of thinkings on goods from natural sciences view-points and of commercial thoughts in accordance with the development of commerce.

All these books pointed out here have already been studied and introduced by many researchers from their respective view-points.<sup>[4]</sup> Here, I am going to review the books further from the stand-point of Commodity-Science, utilizing a lot of results of such other studies.

(i) *Yamato-honzō* (Japanese Herbal)

The author: Ekiken Kaibara. 16 volumes, Published in Hōei 6th year (1709). Foreign culture was introduced to Japan from the Korean peninsular and China mainland in ancient times. Early in the Edo era, towards Keichō 12th year (1607) a book titled "*Honzō-kōmoku*" (the essential points of Herbal) written by Rii Shii Chin was imported from Min (China). This book is remarkable as the one which marked the startline of a new natural history, emphasizing pharmacological descriptions and rejecting the traditional impractical systems of chiefly bibliographical studies, and which is indicated to have been widely disseminated among herbal circles in the Edo era.

Out of 1892 kinds of animals, plants and minerals described in this *Honzō-kōmoku*, excluding those which did not exist in Japan, or which were uncertain, *Yamato-honzō* selected remaining 772 kinds, and in addition included Japanese special products and European goods introduced from the Netherlands and Portugal. Thus, total 1362 kinds of animals, plants and minerals were picked up by *Yamato-honzō* which was completed with the descriptions of their names, origins, forms, utilities, etc., including necessary illustrations.

In making this book the author, Ekiken Kaibara thought that already many books on moral and history previously had been published, and there had appeared then a need for a book written about goods. By recognizing the roles of all things in the universe, we can find the moral of the vast heaven and earth, such, was his thinking and philosophy in writing this book. The descriptions of the book were not made in Chinese characters but in simple

Japanese ones, which represents the author's consideration that Honzō-gaku (Herbal) had a close relation to the daily life of common people, so it had to be as easy to read as adequately understood by them.

(ii) *Bankin-sugihai-bukuro* (on overall commercial transactions)

The author: Yarai Miyake. Published around Kyōho 17th year (1732). 6 volumes. Mankind has created many things in relation to foods, clothings and shelters, and if we trace the origins of production of them, we will come back to China, Europe, Japan itself, or other various places. Still more differences there are among their production conditions, and we can not always find all of their actual situations completely.

Therefore, in this book the author tried to discuss in detail the merits and demerits of various commodities with the intention of promoting business activities. Thus, it is a guide book of commerce. In it he gave comments on commodities closely relating to daily life at that time in a wide range of their production places, characteristics, production methods, methods of appraisal, trade-marks, units of transactions, etc., including illustrations.

It is indicated that by this time of the Edo era many guidebooks of commodity-transactions similar to this were published as the commercial activities were expanded. If we seek for the origin of Commodity-Science in commercial transaction theories, this book can be regarded just as one of its prototypes.

(iii) *Butsurui-hinshitsu* (qualities of goods)

The author: Gennai Hiraga. 6 volumes. Published in Hōreki 13th year (1763).

This book is a commentary on goods, making a model of the book on botany written by Dodonaeus, a botanist of Flandre in the Renaissance era. The author selected out of 2,000 kinds of goods collected at the five previous commodity-exhibitions those which were identified in their real substance and also those which were uncommon, and compiled materials on them, described their categories, bibliography, qualities, production methods, etc.

The commodity-exhibitions above mentioned had its origin in the fact that the 8th Shōgun Yoshimune Tokugawa (in office 1716~1745) encouraged the development of production of native products, and they were held for the purpose of comparative studies of displayed goods produced everywhere in Japan. In the beginning, the exhibitions were a kind of meetings of people interested in the same subject, but afterwards they were opened to the general public and finally had become enlightenment activities as well as research meetings.

The author completed this book on the stand-point of Bussan-gaku (Commodity-Study), namely for the purpose of encouraging commodity production and developing the whole country, with the interest of a researcher to study products relating to medicine and pharmacology and to identify their categories, methods of cultivation, utilities, manners of use, etc.

(iv) *Nihon-sankaimibutsu-zue* (illustrations of Japanese special products)

The author: Tessai Hirase with painting by Mitsunobu Hasegawa. 5 volumes. Published in Kansei 9th year (1797)—but the manuscript of the book had already been completed

43 years before that.

The book describes in the beginning the methods of exploitation and metallurgy of gold, silver, copper, iron, lead and other mineral products, and then set forth the gathering, production, sorts, qualities, etc. of agricultural, marine and other products. About a half of the pages of the book is occupied by illustrations expressing the subjects. Thus, it is an enlightenment picture-book to give business instructions to common people.

In this book the author emphasizes the power of money, referring to such examples as money can make a foul fiend cry, relations of both sexes more intimate, and also can give a powerful "samurai" a comfort. Further, the author describes in relation to early-European style bellows, which were an innovation at that time introduced into copper metallurgy, that those who could get profits by means of bellows were solely their owners, and workers could get nothing but to eat like bees collecting honey from flower to flower. Thus, he expressed sharply in several parts of the book his point of view about the difficulties of labour and the production relations at that time. That is interesting in view of the history of thoughts on the formation of capitalism in Japan.

(v) *Kōsei-shinpen* (a new book on welfare)

The translators: Teiyū Baba, Shigekata Ōtsuki and others. The translation took about 30 years from Bunka 8th year (1811). 70 volumes. The original is the following book which itself was translated from French to Dutch: *Huishoudelijk Wordenboek door M. Noel Chomel. Tweede Drukgebeel verbeterd, en meer als belste verme erdert door J.A. de Chalmot Te Leyden bij Joh, le Mair, en te Leewarden by H.A. de Chalmot. 1768.*

The translation began in Bunka 8th (1811) when the shōgunate government established the "Foreign Literature Translation Office" in accordance with the order of the 11th Shōgun, Ienari Tokugawa. It was the very beginning of official translations of foreign literature by the shōgunate government, giving up the long continued national isolation policy, and also it means a great development in communication of thoughts with Europe.

As the title of the original shows, the content of this book is that of a family encyclopedia, therefore there are many such descriptions relating to Herbal and Commodity-Study as treatments of various diseases, methods of breeding of livestock, those of garden buildings, and other comments on animals, plants and minerals.

It is a matter for regret that the book was not published by reasons of the government side and therefore could not be used to the enlightenment of the general public. However, it is known that a fairly large number of copies of the same original book were imported and utilized by some leading people.

(vi) *Oshie gusa* (a guidebook)

Edited by Hakubutsukan. Published during Meiji 5th (1872) to 7th year (1874).

In order to accomplish inventions and improvements of goods and to develop commerce and industry, it is necessary to have knowledge of raw materials and methods of production about daily use goods. So, this is an enlightenment book published by the government for the purpose of giving such knowledge to the young generation. It has coloured woodenboard pictures, total 30 pieces concerning rice production, sugar production, silkworm culture, tea production, oil production, production of starch, honey and wax, etc.

The descriptions of commodities refer to production places, categories, methods of production, qualities, prices and so on. The forms of descriptions are completely the same as those of modern Commodity-Science.

## 2. *Contacts between Bussan-gaku (Commodity-Study) and Western-learning*

When did the term “Bussan-gaku” (Commodity-Study) appear in Japan? According to studies by Japanese language researchers, it is indicated that the term “Bussan-kai” (commodity exhibition) and “Bussan-ka” (commodity researcher), etc. had been used earlier, but the term “Bussan-gaku” appeared for the first time in a book published in Tenpō 4th year (1833).<sup>[6]</sup> As I discussed in the first chapter, the 8th Shōgun, Yoshimune Tokugawa encouraged and promoted commerce and industry, thus the production activities in agricultural and fishery villages were being developed and trades increased, which gave rise necessarily to further needs of various knowledge on products.

Investigations of products of various parts of Japan were conducted by herbalists. They investigated such products in order to gather medical herbs and made examinations of good and bad qualities of them. In addition, such activities were also included in herbalists’ job as the investigations of whether the medicines introduced from China were produced too in Japan or not, the appraisal of the genuineness of commercial goods, and so on. Thus, herbalists were required to have high abilities to make appraisals of goods, therefore they were familiar with various natural products. For these reasons they were sometimes called “Bussan-ka” (commodity researchers).

Considering the above situations, there is also such opinion that the independent existence of such a science as “Bussan-gaku” (Commodity-Study) is doubtful, rather it may have been only an extended application of Herbal. Either way, towards the end of the Tokugawa administration there were instituted in the Foreign Material Translation Office a “Bussan” (commodities) course as a part of its curricula and “Bussan Professors” as teachers in charge of the course. Actually the persons appointed to Bussan Professors were herbalists.

In this chapter I am going to discuss some of the relations between such Bussan-gaku and Western-learning.

As the opportunities in which Japan had contacts for the first time with Western culture, we can refer to such occasions in our history as the arrival after drifting of a Portugal commercial ship at the Tanega-shima island in 1543, the introduction of guns at that time, the visit to Kagoshima of missionary Francisco Javier of the Society of Jesus in 1549, the beginning of trade with the Netherlands in 1609 as well. After those incidents the Netherlands accomplished the monopoly of Japanese foreign trade, and accordingly Dutch had continued to occupy a leading position as a foreign language representing the medium to absorb foreign culture for about 200 years until the opening of the country in 1858.

However, it is also said that despite those circumstances there had remained for a long time the influences of learning by means of Portugal, and especially in the formation of scientific spirits the role of imported Christian Chinese literature (Western books in Chinese language) were more remarkable than that of Dutch.<sup>[6]</sup>

Now, in the book *Yamato-honzō* we can find descriptions of goods introduced from the Netherlands and Portugal. And in *Butsurui-hinshitsu* a lot of knowledge gained from

Dutch pictorial books on animals and plants are included which represent the peculiarity of the combination of Chinese and Western learning. In a similar way the introduction of Western information into herbal books or commodity books continued to increase gradually. Putting an end to pick up such examples, I will now point out the fact that the visit to Japan of Siebold has given a great influence on the formation of Commodity-Science in Japan.

Siebold who was born in Wurzburg in Germany visited Japan in 1823 and in Nagasaki he instructed Japanese students. Then these young people instructed by him prepared articles in Dutch on various subjects, among them there are interesting ones from the viewpoint of Commodity-Science, of which I will refer as follows only to the names of authors and their subjects:<sup>(7)</sup>

Kenkai Oka; An article on whales caught in Kishū—about the uses and utilities of each part of a whale. (Verhandelng over de Walvishen gevangen in de Japansche Zee /; bij Kii-sju: / vertaaid O. Kenkai).

Chōei Takano; On cultivation of tea plants and production methods of tea in Japan. (Aankweeking van den Theeheester en Bereiding van den Thee op Japan door Takano Tsjo-je).

Seikai Tozuka (legend); On production methods of salt. (Van de bereiding van net Zeezout).

Descriptions of these articles have no difference from those of modern Commodity-Science. In short we can say that the substance of modern Commodity-Science has already been built up at that time with the introduction of thinking in the Western-learning style.

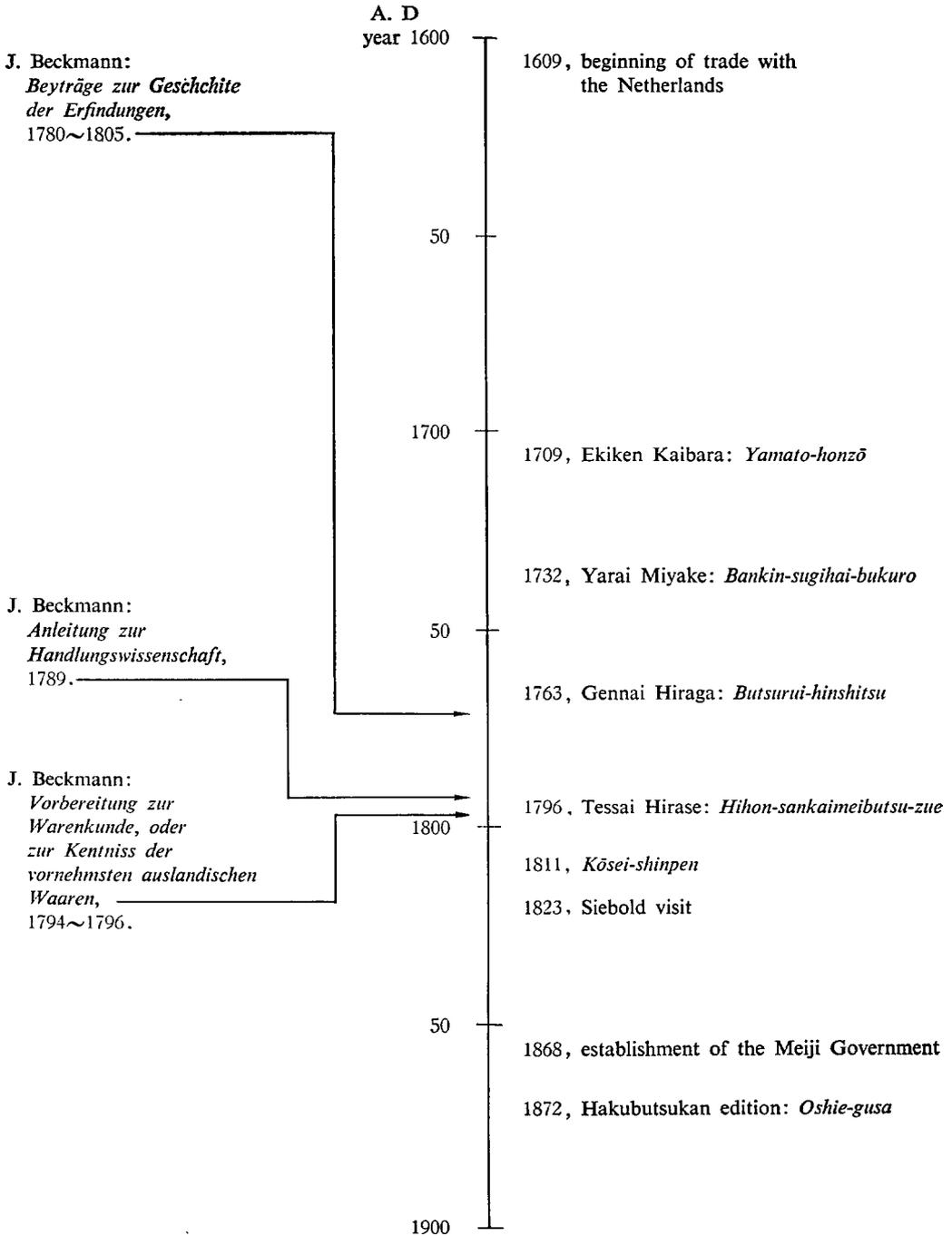
Now, I am going to summarise above discussions in a contrast with the Commodity-Science related books written by Johan Beckmann whom people call the founder of Commodity-Science, in a chronicle style at page 36, with which one can easily understand the process of formation of Commodity-Science in Japan.

### 3. *The Appearance of the Terms “shōhin” (commodity) and “Shōhin-gaku” (Commodity-Science)*

Since the opening of the country in Ansei 5th year (1858) by the Tokugawa government, the foreign language used in the Foreign Material Translation Office was changed to English from Dutch. This Office was succeeded to the Meiji government and although its name was altered, it has become the most important center of Japanese education and culture.

Following the promulgation of school systems in Meiji 5th year (1872), the Meiji government enacted next year in addition the regulation on colleges. According to the regulation the regular course of a commercial college had 5 subjects, and it is known that among these subjects there was “Shōgyō-buppin-benshiki” (knowledge on commercial goods) which corresponds to modern Commodity-Science.<sup>(8)</sup> Thus, the old terms “Bussan” (commodities) and “Bussan-gaku” (Commodity-Study) can be regarded as having disappeared at first from the official scene, confronting the radical political changes, although there was yet such example as the book titled “the Manual of Commerce, containing a concise account of the source, mode of production or manufacture of the Principal Articles of Commerce” (1871) written by S.H. Browne, which was used in the Tokyo Commercial Law

A CHRONOLOGICAL TABLE OF BOOKS RELATED TO COMMODITY-SCIENCE IN JAPAN



Institute established in Meiji 8th year (1875), was translated as “Bussan-shi” (Commodity-book).<sup>[9]</sup>

The concept of a term changes in accordance with the development of a society and sometimes loses its function. In this sense it can be said that new terms reflect the situation of a time. Now, when did the terms “shōhin” (commodity) or “Shōhin-gaku” (Commodity-Science) which are prevailing today appear?

Professor Tsukahara already suggested that the term “shōhin” would have been created after the Meiji era.<sup>[10]</sup> And Professor Kazamaki made a declaration of his opinion at the 28th annual meeting of Japan Society for Commodity Science that the term “shōhin” was created by a Japanese person at a certain time extending over from the last days of the Tokugawa Government to the opening years of the Meiji era. Frankly speaking, it might be reckless to try to decide definitely time divisions of social processes. However, as these terms have very much to do with us, I dare now to report the results of my investigations.

The old term which corresponds to “shōhin” (commodity) in present Japan was usually “shina” or “shina-mono”. And the Chinese letters “商” (shō) and “品” (hin) which appear very often in old books were read and used more frequently as “akinai” and “shina” than used with the pronunciations of “shō” and “hin”. This fact could be proved by the following examples.

Dutch words	Japanese words
Goede waare	ヨキ商ヒ荷物
Product	産物
Koopmanschap	商物 (akinaimono)
Koophandel	買賣 (akinai)
Verkoopen	商 (akinau)
Koopman	買人 (akindo)
Kompagnie	商館 (shōkwan)

There are old Dutch-Japanese dictionaries, “Rango-yakusen” published in Bunka 7th year (1810) and “Orandazii” published in Ansei 2 year (1855) which are famous in the history of Japanese culture,<sup>[11,12]</sup> and from which we can select following several vocabularies closely relating to “shōhin” (commodity). “Kana” letters are attached to Japanese words to show the reading of them:

An English-Japanese dictionary early in the Meiji era, “Eiwa-jii” written by Shōkichi Shibata and Takashi Koyasu is also a famous one. Its first edition was published in Meiji 6th (1873) and the second edition in Meiji 15th year (1882). The Japanese words corresponding to English “commodity” in both editions are picked up as follows:

first edition	second edition
利益 (rieki)	利益
便益 (beneki)	便益
貨物 (kamotsu)	貨 (ka), 貨物
商物 (akinaimono)	商品 (shōhin)

In the first edition we can find the Japanese word “商物” (akinaimono) which was also in the above “Rango-Yakusen”, but the word disappeared in the second edition and the new word “商品” (shōhin) appeared instead. This fact reflects the existence of other books utilized as the base of the dictionary and also social changes between the two editions.<sup>[13]</sup>

Next, I will show some examples of the term “shōhin” (commodity) and “Shōhin-gaku” (Commodity-Science) which I have found in old documents:

(i) The official gazette, Meiji, No. 2, Meiji 1st year (1867): This issue includes a comment on the situation of each allied power with the title of “a Review on the Strength of Allied Powers”, and in the comment the term “shōhin” is used.

(ii) The official gazette reporting on foreign newspapers, the Kaigai-shinbun edited by Daigaku-nanko (the University South School), Meiji 3rd year (1870): In this also appears the term “shōhin” in an abstract from an article of “Japan Herald Newspaper” issued on Aug. 18th, 1870 in Yokohama.

(iii) “Dōjo-sen” (little girls), published by the Education Ministry, Meiji 9th year (1876), the original of which is “*gearus, Aun, Book*” written by Mrs. El Farentein, London 1873, translated by Van Kastel (a Dutch). There is the term “shōhin” also in this book.

(iv) “Education Journal”, published by the Education Ministry, No. 24, Meiji 10th year (1877): In the journal is carried an article abstracted from a German book on Education and translated by Hanichi Muraoka, titled “discussions on commercial schools”. In the article we can also find the terms “shōhin” and “Shōhin-gaku”. To my deep regret, there is no reference to the name of the original book, but it is interesting that the German Commodity-Science was well known at that time among Japanese leading education circles.

According to the above examples, the term “shōhin” has appeared, as far as I see, as a translated word, and its use has become more frequent after 10th year of Meiji.

### *Conclusion*

Inquiring into the origin of Commodity-Science in Japan, I have investigated several old books, and through arranging these books in order of ages I could have seen the process how Commodity-Science was built up in Japan. That is, in the beginning there was Herbal as the interest in utility values, and then the formation of Bussan-gaku (Commodity-Study) followed with the development of commerce. This Bussan-gaku, like Japanese mathematics and Chinese medicine, was not adopted in the new education system after Meiji. However, Bussan-gaku did not cease to exist, and in my opinion it has survived changing its name later as “Shōhin-gaku” (Commodity-Science).

Discussing in such a way as above, I do not intend to emphasize excessively as if there were an excellent tradition and sprouts of Commodity-Science in Japan. But I think that Commodity-Science of each country exists with its inherent tradition and sprouts, because the object of this science is principally the utility value side of subsistence commodities. It seems to me that the study on utility values continues, although the name of the science sometimes changes.

### *REFERENCES*

- [ 1 ] Hiroshi Asaoka: Hitotsubashi University, *Shizenkagaku-kenkyū* 16, 1974.
- [ 2 ] Hiroshi Asaoka: *Shōhin-kenkyū* (Study on Commodities) No. 99, 1974.
- [ 3 ] Torizō Kōsaka: *Shōhingu-joron*, 1953, (Waseda University Syuppanbu).

- [ 4 ] Tadashi Inoue: *Nihon-shisō-taikei*, 34, 1970, (Iwanami-shoten). Tōru Haga: *Nihon no Meicho*, 22, (Chūōkōron-sha), Tokuji Chiba: *Nihon-sankai-meibutsu-meisan-zue*, 1977, (Shakai-shisō-sha), Mitsukuni Yoshida: *Bankin-sugihai-bukuro*, 1973, (Yasaka-shobō), Tsutomu Sugimoto: *Butsurui-hinshitsu*, 1972, (Yasaka-shobō), Masuzō Ueno: *Nihon-hakubutsugaku-shi*, 1973, (Heibon-sha), Kōsei-shinpen-kankokai: *Kōsei-shinpen*, 1937.
- [ 5 ] Yuuo Shimada: *Kōza, Kokugo-shi*, 3, 1971, (Taishūkan-shoten)
- [ 6 ] Arimichi Ebisawa: *Nanban-gakutō no kenkyū*, 1958, (Sōbun-sha).
- [ 7 ] Tatsukichi Irisawa: *Siebold Sensei Bunken Syūei*, 1936.
- [ 8 ] Hiroshi Tsukahara: *Shōhin-kenkyū*, No. 16, 1954.
- [ 9 ] Shigeru Mitani: *Riron-shōhingaku-joron*, 1963, (Kōbun-sha).
- [ 10 ] Hiroshi Tsukahara: *Shōhin-kenkyū*, No. 15, 1954.
- [ 11 ] Akira Matsumura, Hiroshi Suzuki: *Rango-yakusen*, 1968, (Rinsen-shoten).
- [ 12 ] Tsutomu Sugimoto: *Orandajii*, 1974, (Waseda University Syuppanbu).
- [ 13 ] Daisuke Nagashima: *Ranwa Eiwa Jiten Hattatsu-shi*, 1970, (Kōdan-sha).