

# Modern Keywords and the Modern History of Ideas

SHEN Guowei

## Outline

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## I. Modern Keywords

The linguist Wang Li once pointed out the following:

[From the nineteenth century on] the production of new compound words in modern Chinese was much greater than during any other period. The import of Buddhist vocabulary into China was a historically significant event in history, yet it paled in comparison to the import of vocabulary from the West...In the present age, a political essay will frequently consist more than 70 percent of the new vocabulary. In terms of vocabulary, the development of Chinese over the past fifty years has surpassed that of the several millennia prior to this period.<sup>1)</sup>

The reason for this production of new vocabulary in Chinese is the import of new modern concepts from the West, primarily scientific terms, including many abstract notions. Among the new compound words are some very important terms expressing core concepts that Chinese society can perhaps not do without. Such terms I call “keywords.” The distinction between keywords and ordinary vocabulary differs according to the field of study. In this essay I will call abstract terms intimately connected with modern features of Chinese society “modern keywords.” “Concepts are code, or the expression of thought,” as one scholar has

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1) Wang Li, *Hanyu-shi gao* (A Sketch of the History of Chinese), (Beijing: Zhonghua Shuju, 1980), p. 516. Originally published by Kexue Chubanshe, 1958.

said.<sup>2)</sup> And words are the outer expression of concepts. We cannot formulate thoughts without concepts, and we cannot express concepts without words. In discussing this issue, we frequently use another technical term: “idea.” How are ideas different from concepts? These two technical terms correspond to the Chinese terms *guannian* and *gainian*. My definition here is that an idea is a concept that has entered a community’s ideology.<sup>3)</sup> Hence, only concepts that can enter into the ideology of a linguistic community can become ideas. Let us tentatively call this process the “ideation” of a concept. One topic of the study of our modern conceptual history (or more precisely, the history of East Asian borrowing of new concepts from the West) is why modern keywords became keywords (ideas) of East Asian societies. This is not the history of certain vocabulary, yet one object of the study of the history of modern vocabulary is the facts leading to the formation of modern keywords. Sorting out the process whereby Western concepts were borrowed (and the process whereby a portion underwent ideation) is not research in the history of the development of our lexicon. And vice versa, the study of the lexical history of keywords is not research in the history of ideas. Nonetheless, modern keywords form a part of the Chinese lexical system. Hence, on the one hand, they display features such as the creation, diffusion, and taking root of translation terms for the new vocabulary, and on the other hand, as the vehicles of modern ideas, they reflect the process of East Asian acceptance of Western civilization. At the same time, we must also recognize that modern keywords may have different degrees of importance in lexical history and in the history of ideas. For example, the creation and taking root of the two words *zhexue* (philosophy) and *shuxue* (mathematics) are equally important in lexical history, but in the history of ideas, they have quite different significance.

In discussing keywords, I need to mention another technical term, “lexification.” A concept takes form with the help of language. One can express a concept by means of an explanatory or analogous phrase, a short expression, or a sentence, as well as by means of a single word. Using a compound word (be it a preexisting word or a neologism) to express a concept is called “lexification.”<sup>4)</sup> Lexification is giving a name to a concept. A basic principle of modern linguistics is that language cannot be divided into highbrow or lowbrow. Whether it is the language used by highly developed scientific and technological communities or the language used by primitive agricultural communities, language can express any concept for which there is a need. Not every concept, however, can achieve lexification.<sup>5)</sup> When a new concept is introduced from another region, whether that concept can be lexified as a single compound word

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2) Fang Weizhi, “Gainian-shi yanjiu fangfa yaozhi” (Outline of a Methodology for the History of Concepts), *Xin shixue* (Beijing) 3 (2010): 3–20.

3) A concept is the meaningful content of language. It contrasts with the form of language. The relation between form and content, that is, between signifier and signified, is the object of the study of semantics. Hence, linguists more frequently use the term “concept.”

4) It is also called “lexiconification.” Without lexification, there is no ideation.

5) In natural languages, not all concepts have a corresponding word. For example, the Chinese words *xiong* (elder brother), *di* (younger brother), *jie* (elder sister), *mei* (younger sister) require multiword phrases to express these concepts.

depends on various factors. Generally, concepts that appear frequently in a community easily undergo lexification. Otherwise, the concept remains expressible only by means of an explanatory (nonlexified) phrase or short expression. New concepts from outside the community are often first expressed with a phrase or short expression, and this phrase or short expression, through repeated use, gradually congeals into a single compound word, thereby completing the process of lexification. It is worth emphasizing that the core concepts of modern society are often lexified keywords that arise through force.

The lexification of a concept makes for ease of expression, yet it also brings the danger of conceptual dissimilation, that is, the divorcing of word and reality. When we use a compound word to refer to a concept, we often overlook that concept's true intention (sense) and its subtle evolution. For example, Chinese speakers use lead pencils (*qianbi*) and banks (literally, silver traders, *yinhang*), but no one notices that the lead is missing or that banks no longer deal in silver. This is especially true of terms that have become ideas, that have been incorporated into the community's ideology. People carry out practical affairs according to ideas of what is right and proper; they do not understand reality according to thought or the strict definitions of concepts. Changes in ideas of the individual, freedom, revolution, etc., in the Chinese context have excited strong interest in academic circles.<sup>6</sup> *Geren* (individual), *ziyou* (freedom), and *geming* (revolution) became keywords unique to China not because they are translations of the English words "individual," "freedom," and "revolution," but because these technical terms have a special place in China's ideological system. This special place is a result of their configuration with other terms that make up the ideology.

## II. The Acceptance of New Concepts from the West

The history of ideas that I speak of is the history of the formation of modern ideas, that is, the history of how East Asia used Chinese characters to express new Western concepts and build modern ideological systems similar to those of the West. In China, the import of Western concepts can be divided into three periods, namely, the period from the early nineteenth century to the First Sino-Japanese War, the period from 1895 to 1915, and the period of the New Culture Movement. During these three periods, keywords were created, spread, and took root. In particular, during the first period, missionaries created new compound words and disseminated them to a limited extent. During the second period, a great quantity of Japanese translation terms entered Chinese.<sup>7</sup> And during the third period, already existing new compound words and translation terms were blended and incorporated into the Chinese lexical system. From 1897, when Robert Morrison landed in Guangzhou (Canton), the introduction of new knowledge faced the problem of creating accurate translation terms. Chinese generally has

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6) Jin Guantao and Liu Qingfeng, *Guannian-shi yanjiu: Zhongguo xiandai zhongyao zhengzhi shuyi xingcheng* (A Study in the History of Ideas: The Formation of Important Political Terms in Contemporary China), (Hong Kong: Chinese University of Hong Kong, 2008).

7) The influx of Japanese translation terms, in my view, is causally related to the failure of foreign missionaries and Chinese to create new terms.

two ways of accepting new concepts from abroad: translating and borrowing.<sup>8)</sup> “Translation is transcription” (Xu Yuanchong); that is, it uses the morphemes of the target language to express the concepts of the source language. There are two principal ways of doing this. One is to use preexisting compound words to render the source meaning idiomatically. The other is to create translation terms to convey the source meaning literally. The former method presupposes that all humans have a common semantic apparatus or at one time had such a common semantic apparatus, or common semantic background. Some scholars deny such a presupposition and assert that true translation is impossible.<sup>9)</sup> Yan Fu (1854–1921) wrote, “When it comes to translating difficult important nominal terms, I often have to consider the original meaning of a Western term, check all its derived meanings, then ponder similar terms in Chinese. I thus usually hit upon the right translation, and once I get it, I do not easily get lost.”<sup>10)</sup> What Yan Fu called “difficult important nominal terms” were keywords expressing modern core concepts. For such terms as “freedom,” “rights,” and “economy,” Yan Fu explored the meaning in detail and in depth. The biggest problems that idiomatic translation has to overcome are differences in the concepts, styles, and associations of words in two different lexical systems. These differences are often systematic.<sup>11)</sup> A source word and its translation often correspond in just

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- 8) Borrowing involves creating loanwords. Loanwords can borrow either the pronunciation or the form. Loanwords that borrow the pronunciation are transliterations. Loanwords that borrow the form are like the borrowings of Chinese words in peripheral countries that make up the East Asian cultural sphere (Japan, Korea, Vietnam). The creation of translation terms requires time and effort. Yan Fu, an early translator, once said, “When I create a word, I hesitate for anywhere from a week to a month.” But translation terms possess a certain logicity and are easily incorporated into the vocabulary system of Chinese. In contrast, loanwords are quick and easy to create, but the creation of the new loanword is much quicker than the penetration of the concept it conveys. The East Asian cultural sphere has yet another, unique way of introducing a new concept: creating a new character to serve as a translation term. Creating new characters was especially favored by missionaries. See Shen Guowei, “Zao xinzi wei yici yu Xifang xin gainian de rongshou: Yi Riben Lanxuejia yu lai Hua chuanjiaoshi wei li” (Creating New Characters to Serve as Translation Terms and the Acceptance of New Western Concepts: The Case of Japanese Scholars of Dutch Learning and the Case of Chinese Missionaries), *Zhejiang Daxue xuebao* (Renwen shehuikexue ban) 2010, no. 1: 121–134.
- 9) My own attitude is as follows: The lexical system of a language is extremely flexible and can adjust and perfect itself. Theoretically, perhaps, there is no absolutely perfect literal translation, but with increasing exchanges of people and goods, people can always find the closest semantic equivalent. Otherwise, speakers of different languages, or even dialects, will forever live in a state of misunderstanding—contrary to fact. It is also not possible to accept completely the view that all humans have or once had a common semantic background. The structure of a semantic system and the culture in which the language is embedded are inseparably related. Speakers of different languages parse the world differently and bestow incongruent names on the myriad phenomena of the world.
- 10) Yan Fu, “Yu Liang Qichao shu” (Letter to Liang Qichao), in *Yan Fu ji* (Works of Yan Fu), vol. 3, edited by Wang Shi (Beijing: Zhonghua Shuju, 1986), p. 518. Yet for ordinary terms, Yan Fu thought that as long as he had a serviceable translation term that the reader could sufficiently understand, he could accomplish the purpose of an initial translation, and that even a better translation term would be subject to all sorts of criticism.
- 11) As Yan Fu points out, the English word “constitution,” for example, is an abstract noun derived from the verb “to constitute,” meaning to organize, to establish. The noun applies not only to states but also to animals, plants, and even social organizations. It can apply to anything having form and structure. But

one particular. It is just not possible for the entire lexical systems of two different languages to fully correspond.

There are two ways of creating new translation terms: direct (literal) translations and idiomatic translations. These two methods require considerable proficiency in both the foreign source language and Chinese. Hence, during the first period of translation, when Westerners would orally explain and Chinese scholars would take notes, few translation terms were created in this way. The missionaries advocated using preexisting compound words or ancient, obscure characters to translate Western concepts, or when these stratagems failed, creating a new character. In general, the first period of translation was not very successful either in terms of translation content or in terms of creating new translation terms.

During the second period, the First Sino-Japanese War broke out, and the tottering old empire suffered defeat at the hands of a small island country. A sense of crisis developed in which Chinese feared that their country and race were in grave danger. Prior to this, the missionaries, who had played a leading role in disseminating Western learning, retreated from the stage of Chinese politics.<sup>12</sup> Though Yan Fu assiduously labored away in solitude, he could not meet China's pressing need to acquire new Western knowledge, and as a result, many Chinese turned their attention to Japan. Students studied in Japan, and translators translated Japanese books into Chinese, with the result that Chinese acquired a large number of new translation terms from Japanese. This influx enabled modern Chinese to rapidly develop its lexical system, as well as to unify the written and spoken language of learning. Chinese not only imported new compound words; it also gave new meanings to old compound words. One result of the influence of Japanese is that during this second period, modern keywords were matched up with traditional vocabulary.

During the third period, the period of the May 4 Movement and its aftermath, the import of new compound words into Chinese of necessity led to a reorganization of its semantic system, and a large number of compound words became ideas and served as keywords. The lexical system of every language has self-adjusting mechanisms for accepting foreign concepts and reconstructing the preexisting semantic system. A linguistic community bestows upon its words peripheral connotations and ideological import, such as associations, styles, and appraisals. Words form a system; that is to say, words as the names of concepts do not exist independently. Rather, they maintain certain given relations with other words, coming together to form a semantic web. When one word appears, disappears, or changes semantically, such change affects other semantically related words in the lexical system. Semantically, words can

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"constitution" can be translated as *xianfa* only when the former applies to states. One can thus see that this term for translating "constitution" is not always accurate. (Yan Fu, "Xianfa dayi" [The General Meaning of *Xianfa* (Constitution)], *Yan Fu ji*, vol. 2, p. 239.)

12) Paul A. Cohen in *The Cambridge History of China*, vol. 10, *Late Ch'ing 1800–1911*, part 1, edited by John K. Fairbank (Cambridge: Cambridge University Press). Among the causes that Cohen lists, the first one is that the missionaries themselves gradually distanced themselves from political issues. See also Douglas R. Reynolds, ed. *China, 1895–1912: State-Sponsored Reforms and China's Late-Qing Revolution* (Armonk, N.Y.: M. E. Sharpe, 1995).

be said to exhibit the ripple effect. This is especially true of keywords situated at the center of a semantic field. For this reason, we cannot confine our considerations to a single word, but must also consider other concepts in the same semantic field. For example, in discussing the idea of *minzhu* (democracy), we must also consider *minquan* (civil rights), *minzhi* (self-government), *minzheng* (civil administration), *gonghe* (republicanism), *lixian* (constitutionalism), *demokelaxi* (democracy). Likewise, the idea of *jingji* (the economy) is connected in Chinese with *jingshi* (managing the economy), *jixue* (economics), *fuqiang* (prosperous and strong, said of a nation), *shengji* (livelihood). And the idea of *kexue* (science) is tied up with *gewu zhizhi* (abbreviated as *gezhi*, categorizing things to acquire knowledge), *qiongli* (investigating principles), *bowu* (natural science), *shengchanli* (productivity). Only in such specific semantic fields can we accurately observe the origin, diffusion, and taking root of keywords.

Hence, study of the history of ideas, taking as its starting point the investigation of keywords, must rest on a foundation of research in lexical history. The tasks of such research are to investigate the development of terms rendering Western concepts, including the following particulars:

- The origins of the term. Who first used the term? When? How was the term created?
- The completeness of the term. How transparent is the meaning of the term as a construction of its components?
- Its connection with other, preexisting terms. Does it build on other terms or conflict with them? How is it tied to other terms?
- Its transmission and dissemination. How did the creator's usage become the common social knowledge of all users?
- Changes in usage. After the new term entered the lexical system of the language, did it undergo changes in meaning or usage?

The first appearance of a term might be in a translation or in a dictionary (such as a bilingual dictionary or a technical dictionary). In the former, there is a context, while the latter presents correspondences with foreign terms. Usage dictionaries, like *Xin erya* (1903), presented both.<sup>13)</sup> Studies of modern lexical history frequently end with the new compound words and translation terms entered in large-scale language dictionaries, but this often is the beginning for research in the history of ideas, which focuses on the descriptive content of technical dictionaries and encyclopedic dictionaries and the development of such content.

Through the compound word we can understand the word creator, the motivation, and the first literary appearance of a new translation term. And the creation of a new compound word out of preexisting word components gives rise to the issue of motivation. By "motivation" I mean the reason for calling the thing thus, that is, the reasoning uniting signifier and signified.<sup>14)</sup> The motivation reflects the understanding, the thinking, of the word creator (often a

13) The long entries seen in the technical dictionary *Xin erya* and Liang Qichao's planned dictionary *Xin shiming* (New Explanations of Terms) are common works introducing concepts. Shen Guowei, *Xin erya, fu jieti suoyin* (*Xin erya*, with an Index of Explanations), (Shanghai: Shanghai Cishu Chubanshe, 2011).

14) Since Ferdinand de Saussure, a basic principle of linguistics has been that for simple words other than onomatopoeic words, the relation between signifier and signified is arbitrary. In contrast, for compound

pioneer, an enlightener) in adopting a new foreign concept. Research in the history of ideas seeks to interpret the process whereby a concept became an idea by analyzing the motivation for that concept. In contrast, while lexical research regards the motivation of a compound word as important, whether the motivation of a compound word is logical does not determine whether a compound word survives. For example, Yan Fu, in *Tianyan lun* (his translation of Thomas Huxley's *Evolution and Ethics*), translated "evolution" as *tianyan* and "ethical progress" as *jinhua*. Even though the sense, the motivation, of *tianyan* was quite logical, it was later replaced by the Japanese translation of "evolution": *jinhua*.<sup>15)</sup>

Wang Li once wrote that translation terms coming from Japanese were of two types: translation terms that Chinese would never translate thus and translation terms that Chinese too might come up with.<sup>16)</sup> This is because, though the Japanese use Chinese characters to make compound words, Japanese translators' understanding of Chinese characters and Chinese traditional literature is not equal to that of Chinese. After all, Chinese is not their native language. In the eyes of Chinese literati, many translation terms borrowed from the Japanese do not seem properly motivated as Chinese. For example, many Chinese readers and translators, including Yan Fu and Liang Qichao, were opposed to translating "economy" as *jingji* because the meaning of *keizai* in Japanese is quite different from the meaning of *jingji* in the Chinese classics, even though the characters are the same.

### III. The Usefulness of Chinese Linguistic Databases

With the spread and increase in performance of computers, linguists are increasingly constructing and using linguistic databases. Because of a distinctive feature of Chinese, namely, that it does not separate words as in Western languages, Chinese databases of literature throughout the ages often end up being databases that do not separate or mark compound words in any way. Such Chinese databases have limited usefulness for linguistic research.<sup>17)</sup> Nonetheless, they have some use in that one can easily discover whether a given character string (not a given compound word) exists within a given body of literature. Hence, the scope of the literature included and errors in the data are the key to constructing a linguistic database useful for research in the history of ideas. The Database of Modern Chinese Literature developed by Uchida Keiichi has images corresponding to digital texts to insure the accuracy of search results, and this enabled the research team Jin Guantao and Liu Qingfeng, of the Chinese University of Hong Kong, to bring together a linguistic database and research in the

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words, the relation is inevitably logically motivated.

- 15) At the turn of the twentieth century, when China borrowed many translation terms from Japanese, the lexical system of Japanese was nearly completely modernized. That is to say, what China acquired was the Japanese semantic system after it had undergone adjustment. Even though these translation terms could be found in Japanese, in Chinese they were not original semantic creations.
- 16) Wang Li, *Hanyu-shi gao* (Sketch of a History of Chinese), pp. 329–331.
- 17) Such databases can only provide example sentences containing strings of given characters. Searches for single-character components produce results that are so extensive as to be not very useful.

history of ideas and produce rich research results. The database created by these two researchers, the Specialized Database of the History of Modern Chinese Thought (1830–1930), contains 120 megabytes covering the literature of more than a century. This database exhaustively includes source literature in the history of ideas selected by experts in the field. Researchers using this database can find the earliest occurrence of a keyword in the literature (which can be confirmed in a database of classical literature), and then can trace its subsequent historical development. Jin Guantao and Liu Qingfeng summarize their methodology as follows: First they develop a hypothesis concerning a term in the history of ideas, and then they give evidence for this hypothesis by pointing to usage of the term. Or in the opposite direction, they look at changes in the use of a term to understand a particular historical occurrence.<sup>18)</sup> In contrast to previous research, they seek to sketch the development of modern thought by examining keywords. In their own words, they “use the method of data mining to ferret out all the keywords used to express an idea, and then by means of a statistical analysis of the importance of the core keywords, reveal the origin and development of the idea.<sup>19)</sup> We need to be careful: the frequency of occurrence of a compound word in a text (or group of texts) does not necessarily reflect the status of the compound word in the lexical system, since the character of the text, the topic, and the author’s tendencies all have a bearing on frequency of occurrence. In recent years great strides have been made in the digitalization of the literature of the past. Available for use today are databases of even such large publications as the newspaper *Shenbao*. Researchers can use their search results to describe in detail the diachronic or synchronic use of relevant terms, as permitted by the database.

#### IV. Western Learning from the East and Japanese Knowledge

No one denies that our modern keywords arose in the context of our borrowing new concepts from the West, or that translations and dictionaries were the main routes by which such concepts entered and became fixed compound words in the language. With new terms (in contrast to maxims, aphorisms, and poetry), creation is only half the process; new translation terms (even those created by such literary masters as Yan Fu) also have to be adopted by a linguistic community. The content and form of a new term are established by usage, not by how rationally they are constructed. Literati of the time thought that some modern Guangdong translation terms such as *yinhang* (bank), *baoxian* (insurance), *peishen* (jury service), *yangqi* (oxygen), and *qingqi* (hydrogen) were intolerably vulgar and held up Yan Fu’s *tianyan* (evolution) and *jixue* (economics) as models of apt creations. Yet it does not matter whether translation terms are apt or off the mark as compound words, since the relation between form and content is arbitrary. At the same time, because they are translations, they have to be faithful to

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18) Jin Guantao and Liu Qingfeng, *Guannian-shi yanjiu* (Studies in the History of Ideas), (Beijing: Falu Chubanshe, 2009), p. 253.

19) However, is extracting the core keywords from all the keywords, as well as deciding on a criterion for the selection, an issue in the history of ideas or an issue in lexical history? Jin and Liu seem to take the former view, while I contend that this is a matter for sociolinguistics.



the source text; that is, they have to correspond in form. Note that here I talk of correspondence in form, not of correspondence in semantic value or the like. Hence, the presupposition here is that the source word can be analyzed. As for semantic values, the lexical system of any language has mechanisms for adjusting to new semantic meanings, accepting foreign concepts, and reconstructing the original semantic system. All that is needed is time. In the first period and early in the second period, native translation terms slowly become accepted and naturalized. But at the turn of the twentieth century, Japanese translation terms flooded into Chinese and interrupted the natural evolution of Chinese. The Chinese construction of a modern system of knowledge—including everything from the various branches of science at the beginning of the century to socialism and communism in the 1920s and to the theories of literature, art, and drama—was intimately connected with Japanese knowledge. Thus, Western learning and Marxism-Leninism came from the East. In studying the formation of Chinese ideas from 1895 to 1915, one cannot avoid Japanese knowledge. By making maximal use of Japanese research materials, including the relevant historical literature and research results, we can gain a more complete perspective. This is especially important in analyzing and comparing commonalities and differences in the course of modernization in the countries of East Asia. For we are concerned not just with lexical history, with the creation or borrowing of a translation term, but with the description of the whole of modern East Asian history. Douglas R. Reynolds's view of developments—that East (China) meets East (Japan)—and my study of the flow of modern knowledge both seek objectively to assess Japanese knowledge.<sup>20</sup>

## V. Some Remarks on the Keyword *Kexue*

In the East Asian cultural sphere, Chinese characters were for an extended period the external form (the purveyors) of concepts. After the dawn of the modern age, Chinese characters, and the new compound words and translation terms that they formed, offered the only way to formulate and express new Western concepts. Hence, the problem of absorption in essence becomes, How did the East use Chinese characters to absorb new Western concepts? Sino-Japanese cultural exchange and linguistic contact especially from the nineteenth century enabled Chinese, in absorbing and adopting Western concepts into the language, to cross over the language barrier. This is an age that we create and reap the benefits of together.<sup>21</sup> We should examine keywords in the context of the East Asian cultural sphere. From this perspective, let us reexamine below the keyword *kexue* (science), a term greatly influenced by Japanese (or Japanese sources) as it spread and took root in the Chinese language.

*Tetsugaku jii* (Dictionary of Philosophy), published in Japan in 1881, clearly gives *kagaku* (*kexue* in Chinese) as the translation of “science.” From then on, *kagaku* was gradually accepted

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20) Shen Guowei, “Shidai de zhuanxing yu Riben tujing” (The New Age and the Japan Connection), in *Zhongguo jindai sixiangshi de zhuanxing shidai* (The New Age in the History of Modern Chinese Thought), by Wang Fansen et al. (Taipei: Lianjing, 2007), pp. 241–270.

21) Shen Guowei, *Zhong-Ri jindai cihui jiaoliu yanjiu* (Studies in Borrowings of Modern Vocabulary between China and Japan), (Beijing: Zhonghua Shuju, 2010).

in Japanese society and became the standard translation of “science.” Sometime after 1887 *kagaku* became a popular term in Japan.<sup>22)</sup> Yet according to Japanese dictionaries, *kagaku* at this time primarily meant the natural sciences. For example, *Nihon dai jisho* (Great Dictionary of Japan, 1893) has “*Kagaku*, another name for science (*rigaku*).” *Teikoku dai jiten* (Great Dictionary of the Empire, 1896) has “The things of nature follow principles. All of the disciplines that study these principles are called sciences. Science contrasts with philosophy. Science is the study of the physical realm; philosophy is the study of the abstract realm.” And *Nihon shin jirin* (New Dictionary of Japan, 1897) has “Science contrasts with philosophy.” The dictionaries thus reflect the tendency of Japanese society in those days to view science in opposition to philosophy. As Tsuji Tetsuo points out on the relation between modern Japanese philosophy and science, when Japan first began to absorb modern science, scholars did not realize that critiques of scientific approaches and theoretical cognitive frameworks are an essential part of science. Hence, their grasp of science was superficial, but the introduction of modern Western philosophy advanced Japanese understanding of the nature of science.<sup>23)</sup>

In China, *kexue* (science) in 1899 appeared sporadically in the literature about Japanese knowledge. After the turn of the twentieth century, however, use of the term surged so much that people had no time to absorb it. One person who pondered the term was Yan Fu. For Yan Fu, “science” (*xue*) and “art” (*technē*, *shu*) were two opposing concepts. The goal of science is the pursuit of natural laws (Yan Fu’s term). That of art is “to establish practice so that one may know how to proceed.” Hence, art tended toward the practical. For art to rise to the level of science, the observation of phenomena must be systematized. About science, Yan Fu thought as follows: Science in premodern times was divided into the study of form and material force and the study of the Way and virtue (i.e., into the physical and abstract sciences). Logic, as a branch of philosophy, was a physical science, but after the advent of the modern era, the principles of physical science (measurement, comprehensive study, experiment) were also applied in the abstract sciences. Hence, the study of form, of material force, of the Way, and of virtue all became sciences. In particular, logic, the study of reasoning (investigation, induction, deduction), became the study of all the sciences. Yan Fu pointed out that traditional Chinese sciences “had no methods of observation,” nor did investigators “verify their findings,”<sup>24)</sup> that “hence, the people were not knowledgeable, and the nation, as a result, was poor and weak,”<sup>25)</sup> and that thus the nation urgently needed to pursue the sciences of physics, chemistry, zoology, botany, astronomy, geology, physiology, psychology, etc. These physical sciences, based on induction, would profit the people and increase their knowledge. Such new and systematic science would change the old society; it was also China’s only way to survive. These were Yan

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22) Hida Yoshifumi, *Meiji Umare no Nihongo* (Japanese New Words Born in the Meiji Period), (Kyoto: Tankōsha, 2002), pp. 206–210.

23) Tsuji Tetsuo, *Nihon no kagaku shisō* (Japanese Scientific Thought), (Tokyo: Chūō Kōron Sha, 1973), pp. 179–180.

24) Wang Shi, ed. *Yan Fu ji*, p. 281.

25) Wang Shi, ed. *Yan Fu ji*, p. 285.

Fu's reasons for promoting science, especially logic and the physical sciences.<sup>26)</sup>

At the level of translation terms, Yan Fu, in *Tianyan lun*, translated "science" primarily as *gezhi*. Beginning with *Yuan fu* (his translation of Adam Smith's *Wealth of Nations*), he started translating the term as *kexue*, literally meaning a field of study, and this was the common understanding of the term in China at the time. Yet in contrast to his compatriots, Yan Fu noted why *kexue* has the meaning it does. We can thus say that behind Yan Fu's decision to switch to *kexue* were deep considerations related to the history of ideas, though he left no word as to what those considerations were. What needs pointing out is that Yan Fu, throughout his career, used *xue* (science, learning) to designate the total sum of human efforts at systematic knowledge and scholarship. For example, when Yan Fu served as compiler-in-chief in the Office of Examining and Approving Terms in the Qing Ministry of Education, he oversaw the approval of nearly 30,000 technical terms. As the standard translation for "science" (the term approved by the Ministry of Education), this office selected *xue*. *Kexue*, the runner-up term, was retained, but was only for general use for society at large.<sup>27)</sup>

The example of *kexue* raises two questions. First, is it possible to compare the modern history of ideas of China and Japan? As I have repeatedly emphasized, the penetration of Western science in the East required the East to absorb new concepts. Hence, in the study of keywords, whether it is in lexical history or in the history of ideas, it is not possible to confine ourselves to one language, be it Chinese or Japanese, and this makes possible the comparative study of the history of the formation of ideas. Nishi Amane (1829–1897) in Japan and Yan Fu in China both played important roles in the introduction and absorption of the concept of science. Despite their different linguistic environments, these two men occupied surprisingly similar circumstances. It is not surprising that these two men, dealing with Western sources, would share some features. What would be surprising is whether the concept of science coming from the West underwent the same process of ideation in China and Japan, and why it underwent the same process is an important topic for research in the history of thought. Second, what sort of effect can enlighteners and social luminaries have on keywords? The formation of terms in a language reflect individual characteristics of the creator and social characteristics of users who identify with the language. Keywords and the modern core concepts that they express, in contrast to ordinary concepts, are often introduced by visionaries and notable figures, and after public discussion, they are accepted by the society as a whole. In my view, the historical influence of visionaries and notable figures lies mainly in getting society to accept the concept, and thus not at the level of lexical history. A basic principle of lexical research is that whether a new compound word or translation term will spread and be accepted by the linguistic community depends not on the term itself (an internal factor), but on the values of the linguistic community (an external factor). In any age, users, for what-

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26) For details, see Shen Guowei, "Yan Fu yu yici 'kexue' " (Yan Fu and the Translation Term *Kexue* [Science]), *Fanyi-shi yanjiu* (Chinese University of Hong Kong), inaugural issue, December 2010.

27) Shen Guowei, "Guanhua (1916) ji qi yici: Yi 'xinci,' 'Bu-ding ci' wei zhongxin" (Mandarin [1916] and Its Translation Terms, with a Focus on New Words and Ministry-Approved Words), *Ajia bunka kōryū kenkyū* 2008, no. 3: 113–129.

ever reason, discard obsolete terms like rubbish.

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