Historical Development of English-Japanese Dictionaries in Japan (4):
The Three Dictionaries in the 1880s

KAZUO DOHI  TAKASHI KANAZASHI
YURI KOMURO  RUMI TAKAHASHI

1. Introduction
This installment deals with the three dictionaries published in the 1880s. The last installment dealt with a technical-term dictionary 「哲學字典」 Tetsugaku-jì (A Dictionary of Philosophy), 1) because it has a large influence on translation equivalents, especially in the humanities. Concerning the mainstream English-Japanese dictionaries, the second installment examined 「音並英和字彙」 Fuon-Sozu-Eiwa-jì (EJ), 2) a greatly influential work in the early and middle Meiji era. It is considered to have been compiled based on a dictionary by J. Ogilvie (cf. Hayakawa 1997: 71-121), and also under the influence of a Webster’s dictionary (cf. section 9). As has been the case with the previous installments, this installment will deal with some specific aspects of the dictionaries and provide profiles of the authors and the educational background of the era. Their text is mainly dealt with: headwords and examples, pronunciation, grammar and usage, translation equivalents, and pictorial illustrations.

In examining the mainstream three dictionaries, the influence of EJ cannot be ignored, but they are by far closely connected with American dictionaries; that is, Webster’s dictionaries. The fact is mentioned in the prefaces or referred to in the English titles of the dictionaries. Webster’s dictionaries came to have much larger influence on English-Japanese dictionaries in the 1880s. In this respect American lexicography as well as Scottish and British lexicography (cf. Hayakawa 1997: 58-70) seems to have had a large influence on Japanese lexicography at that time.

Here are given some reasons why the three dictionaries are dealt with. As will be made clear, they are strongly and directly influenced by American dictionaries. Two of them seemed to have been popular and sold well as they were much cheaper than EJ (see below). They seem to have contributed to students studying English at the time. Much detailed analysis does not seem to have been made of their text, especially of the first edition, with few exceptions, including a general introduction about them (cf. Nagashima 1970, Hayakawa To appear). 3) One of them, 「ウェブスター氏英和新辞書 和訳英字彙」 Webster-shi-Shinkan-Daijisyo-Wayaku-jì (WWJ), is closely related to later dictionaries in the next Taisho era. Though EJ could be considered to be a highly sophisticated form of dictionary (Hayakawa 1997: 145), 4) just a few features can be found in the dictionaries, which are commonly found in contemporary English-Japanese (learners’) dictionaries.

「明治英和字典」 Meiji-Eiwa-jiten (MeEJ), the first innovative dictionary in that its compilation was completely based on a Webster’s dictionary, is edited by a scholar, teacher and translator who, typically, had a profound knowledge of classical Chinese at that time (cf. 3.1.1.). The other two dictionaries are also based on a Webster’s dictionary but differ somewhat: 「音並英和字彙」 Fuon-Sozu-Wayaku-Ei-jì (WEJ) is edited and translated by a scholar whose name is mentioned, but about whose life little is regrettably known, and WWJ is a dictionary practically edited and translated by editors whose names are not mentioned. To promote its sale, the names of well-known or big-name scholars, who were partly responsible for its supervision, were employed (Saito 1991: 45-46).

How many copies of the dictionaries were sold? Nothing is known about MeEJ, as it was never revised and reprinted. WEJ published in 1887 (cf. section 9) was reprinted and revised, and the latest edition this writer has seen is the 33rd edition (though titled the 32nd in English), issued in 1907 (the 40th year of Meiji). 5) (Note the expression ‘edition’ at that time does not always mean edition but printing in the strict sense of the word, so the two terms are not clearly distinguished. Here the same expression is used.) WWJ seems to have enjoyed more popularity, as it was issued in 1888 and continued to be reprinted. It is said that more than 100,000 copies were
sold by 1900 (the 33rd year of Meiji). The latest one is its 57th edition in 1910 (the 43rd year of Meiji). More editions might have been reprinted later, but this fact shows the great demand for the two dictionaries from the middle to the late Meiji era.

(Section 1 by Dohi)

2. Background

2.1. Educational Background

Nitobe notes (1970: 446-48) “In studying English, there are two methods... known as Seisoku (the Regular) and Hensoku (the Irregular). The Regular method... teaches the correct reading of English words with proper accents, emphasis, etc., and so leads a pupil to understand them without translating them into Japanese... Its [i.e., Irregular method’s] sole objective is to get the sense of a sentence and therefore it gives [sic.] no heed whatever [to] how a word sounds. If it is necessary to pronounce an English word... as little respect is paid to the pronunciation of the original... I am given a sentence... As long as I understand what each of these words means, and grasp the idea of the whole sentence, what should I care [about] how it sounds in my own or others' ears... in the early days of Modern Japan, the 'sixties and the 'seventies... when the study of the Western languages was most eagerly sought... the Irregular method was the only one possible. Pioneer students had to make some sense out [sic.] of Western books, with an exceedingly limited vocabulary; for... dictionaries were few in number, meagre in their contents, and inexact in their definition [sic.]...” He also notes (1970: 443-44), “... Ever since 1879 there has scarcely been a school of any pretentions which has not included English in its curriculum... students have flocked to them not so much to learn colloquial English as to get a reading knowledge of it. Because the study of foreign languages was pursued as a means to other studies, it was naturally relegated to secondary courses of education, and only lately has it found a place in the Universities and in special schools devoted to it. During a decade — or two — say, roughly, 1877–1885 — all higher instruction was imparted in English, French or German....”

Gakusei [the Education Order in 1872] established the first consoli-
Historical Development of English-Japanese Dictionaries in Japan (4)

Historical Development of English-Japanese Dictionaries in Japan (4)

Dictionaries available at that time were EJ2 (1882) and the reprinted edition of SJ2 (1871), which were very expensive (Matsumura 1984: 68-69, 1985: 52). Sanshodo (Sanseido after March in 1890), the publisher of WWJ and the reprinted EJ1 in 1887 (Sanseido 1981: 71, Hayakawa 1997: 19), for instance, tried to meet student demands by issuing a more reasonably priced and more user-friendly dictionary.

In connection with Webster's dictionaries, his revised edition of The Elementary Spelling Book was specified as a textbook in 1872. Only a few self-teaching or translated books were issued around that time. They seem to have been issued for those studying English to acquaint them with the pronunciation of English (Yanaike 1991: 45). After about ten years, more than 50 such books were issued between 1881 and 1887. Hayakawa (To appear: 49-50) points out that most of them were issued between 1885 and 1887, and that this corresponds to the fact that 1885 saw the appearance of the largest number of English-Japanese dictionaries with the Webesterian pronunciation shown. The popularity of these books as guide to the Spelling Book leads us to infer that an increasing number of students came to use English-Japanese dictionaries as well as the original Webster's dictionaries, and they had to study the guide books to understand better the Webesterian pronunciation (Ida 1968: 284).

2.2. The Influence of Webster's Dictionaries

Historically speaking, Webster's dictionaries have had a large influence on many kinds of English dictionaries and other dictionaries. There are various editions of Webster's dictionaries. It is very important to note that one edition had an influence on ECD. Rev. W. Lobscheid, ECD's editor, admits in the preface that in the selection of headwords a particular edition was referred to (Shin 1994: 142, 187). Needless to say, a Webster's dictionary motivated J. Ogilvie to compile ID, which is not only suggested by its title but admitted by the author in the preface. These facts taken into account, it is clear that a Webster's dictionary could be thought of as a source dictionary for ID and ECD, though the editions they referred to are thought to have been different (cf. notes 6 and 7). English-Japanese dictionaries in the Meiji era are directly or indirectly influenced by Webster's dictionaries as long as they imitated CED, ECD, or the original Webster's dictionaries imported from the US.

Nitobe (1970: 451-52) writes "The first educational work of the Americans in Japan was necessarily confined to imparting the English language. . . . the young McDonald, in 1848, improved the hours of his captivity by teaching the "American language." At the time Perry and Harris came, Dutch was the medium of diplomacy. There were scarcely any who could understand a dozen English words . . . Mr. Spalding says, that among the many presents Perry brought, Webster's Dictionary was perhaps the one most valued. The want of English interpreters was so severely felt, that anybody who could mutter a few English words or who could spell out A-S-I-A, was employed at a higher remuneration. Schools, private and public, arose for [sic.] instruction in English. . . ."

As is partly mentioned in the passage, Webster's dictionaries, abridged or not, were introduced to Japan around 1850. But it was not until the 1860s that many kinds of dictionaries derived from Webster gradually got to be known and used. It seems that Webster's dictionaries were favorably received by the Meiji government and Japanese intellectuals, as they enthusiastically tried to adopt or get acquainted with the systems and cultures of Western countries. Just some of what are or seem to be related to Webster's dictionaries are mentioned in chronological order. Before 1860 McDonald might not have had a dictionary (cf. Shigehisa 1982: 262). Manjiro Nakahama, a young fisherman who was saved while adrift went over to the United States and studied and lived there for about ten years, came back home in 1851 with an abridged dictionary (Nakahama 1936: 169). Commodore Perry is said to have brought a Webster's dictionary in 1854. But it is not clear whether they were really Webster's dictionaries. An interpretation over the definition of complaint shows that Gohachiro Namura, who had worked as an interpreter when Perry came to Japan and worked as a chief interpreter in the Hakodate Administrative Office in Hokkaido, seems to have used a Webster's dictionary in 1859 (Ishihara 1981: 203). In 1860, Yukichi Fukuzawa and Manjiro Nakahama as members of the mission to the US, imported abridged dictionaries. There is also a story from around the middle 1860s of a Webster's dictionary which
was highly valued by the Satsuma Clan in Kyusyu (Takemura 1933: 91). It is important to note from the lexicographical point of view that the appendix in the second edition of ETSJ (1862) seems to have had influence and to have incorporated some of the appendix from a Webster's dictionary (Sugimoto 1985: 721). The first idiom dictionary (1868) in Japan by the Obata brothers is said to have been based on a Webster's dictionary (Takenaka 1983, Hayakawa To appear: 172-84). It is pointed out that SJ (1869) seems to have taken some headwords from a Webster's dictionary (Hayakawa 1997: 47), and its second edition (1871) adopts the Websterian pronunciation (Takemura 1933: 91). In the middle 1870s 'Webster's Primary Dictionary' is listed as the title of the book with the second largest number of copies, which amounts to 185, in A classified list of the English books in the Tokio-Kaisei-Gakko (1873-77) (which soon developed into Tokyo Imperial University) (Kikuchi 1972: 157-58, cf. Iwasaki 1995: 219). In 1880s the name of Webster's dictionaries seemed to have been popular even among students. For example, Shoyo Tsubouchi, a former student of English and later a professor of English, wrote a novel titled 『当世学生成密』Tosei Syosei Katagi [The Character of Students Today], in which he describes the middle 1880s, and the dictionary is described as something special that they were eager to get (Ueno 1988d). In 1886 a scholar with the initials of K.M. (possibly Kakichi Mitsukuri, a scholar of science) gives a so-called review of Webster's Unabridged Dictionary in a learned journal Toyo Gakugei Zasshi, which is in fact not a review or criticism of it but its introduction. These facts clearly suggest that some kinds of Webster's dictionaries were imported into Japan and used not only in many departments of the government and schools or universities but also by many intellectuals and students. Under these circumstances, it was quite natural that the name of Webster became fairly well known in the 1880s and an endeavor was made to try to translate the dictionary to serve students as well as teachers. At the same time the editors or publishers did not seem to think of the importance of copyright or have a strong sense of guilt about plagiarism (cf. Kojima 1989: 253-56). This partly explains why a lot of English-Japanese dictionaries after EJ2 were planned and published, especially for a few years after 1885 (the 18th year of Meiji) (Hayakawa To appear: 173-76).

Moreover, MEJ can be said to qualify as the first dictionary to claim that it is based on a Webster's dictionary. There were also dictionaries such as those by P. Nuttall or those by J. Ogilvie, or ID revised by C. Annandale in the early 1880s (cf. Hayakawa 1997). But it seems that in the middle Meiji era and for some time to come, the mainstream English-Japanese dictionaries were those compiled under the strong influence of Webster's dictionaries. Their authors at this time probably thought that the name of Webster appealed to the public and so would promote the sale of their dictionaries. Japanese lexicography at this time cannot be discussed without acknowledging the large contribution from Webster's dictionaries, abridged or unabridged, even if in reality the material was not often taken from Webster's dictionaries (cf. Hayakawa To appear: 156-60).

Webster's dictionaries not only made a great contribution to the compilation of English-Japanese dictionaries, but also to the translation of literature such as those works by W. Shakespeare (Takemura 1933: 230) and to motivating the compilation of a modern Japanese language dictionary (Nagashima 1970: 147-70, Hayakawa To appear: 186-208).

Which Webster's dictionaries did the editors refer to? The editor of MEJ says clearly in the preface that it is mainly based on 'Webster's National Pictorial Dictionary' and the 1883 edition of 'Webster's Unabridged Dictionary' for its appendix. WEJ and WWJ seem to have been based on 'Webster's Unabridged Dictionary'. Sanseido (1982), the publisher of WWJ and one of the major publishers in later years, tells us that WWJ was going to be issued much sooner, but when they were informed that WEJ would be issued by Okura Shoten, a better known and more prestigious publisher at that time, they made the compiler make a fresh start (cf. 3.2.3.). That was in 1887 (cf. 3.1.5.). This leads us to speculate that WEJ was being compiled around 1886 and 1887, which makes it impossible for the editor of WEJ to refer to a Webster's dictionary published later than 1886. This leads us to consider it more reasonable to assume that the WEJ editor refers to the 'Webster's Unabridged Dictionary' of 1885 as the most recent edition at the time. A comparison is made between WEJ and WWJ, and the 1885 edition of the 'Webster's Un-
abridged Dictionary’, although it might be possible for the editors to refer
to its earlier editions, as the text of the dictionary itself does not seem to
have been fundamentally changed since the 1864 edition.

(Section 2 by Dohi)

3. The Authors and the Dictionaries

3.1. The Authors

It is stated on the front pages of the dictionaries that Shimpachi Seki is
the translator of MeEJ, that Yutaka Shimada is the editor and translator of
WEJ, and that F. Warrington Eastlake and Ichiro Tanahashi are the joint
translators of WWJ. WEJ and WWJ even claim in their Japanese titles that
they are dictionaries “translated into Japanese.” Like those in the previous
dictionaries analyzed, however, the compilers of the dictionaries might
better be called authors rather than translators, since more than a mere
translation from Webster’s dictionaries accounted for much of the compi-
lation of the dictionaries.

3.1.1. Shimpachi Seki (1839–86)

Shimpachi Seki was born a doctor’s son to become a representative
English scholar, interpreter, and educator in the late Yedo period and early
Meiji era. Although he had a delicate constitution, he was gifted from
childhood. With a view to learning Chinese studies and Confucianism, he
entered a private school, Tanabe Juku, in the early 1850s. A few years later
he was admitted to Shoheiko, a top educational institution of Confucian-
ism in Japan at that time. But he was soon obliged to leave it because of his
illness.

It was Taichi Tanabe, a son of Seki’s former teacher, who opened his
eyes to Western studies. After taking lessons in Dutch, Seki started study-
ing English under Manjiro Nakahama in 1860, who had issued 『英米對話
捷徑』Eibei Taiwa Shokei [A Shortcut to English Conversation] (1859).
His experience as an interpreter at the American Embassy and contact
with the American ambassadors R. Pruyn and A. Portman from 1861 gave
him an even better command of English. He also worked as an interpreter
in two missions for the Tokugawa Shogunate: one to France in 1863–64,

and the other to America in 1867. Soon after his return from America, the
Shogunate collapsed.

In 1870 he opened his private school, Kyoritsu Gakusha in Tokyo to
teach practical English using original textbooks. It acquired a reputation
equal to Keio Gijuku’s (what is now Keio University), founded by Yukichi
Fukuzawa, one of his best friends. He also worked for the translation
section of the government. In 1876 Seki began to translate Education:
Intellectual, Moral, Physical by Herbert Spencer, one of the most influen-
tial philosophers. It was published in 1880 by the Ministry of Education
under the title of 『斯氏教育論』Su-shi Kyoikuron [Mr. S’s Thoughts on
Education].

After closing his school, he set himself to the compilation of MeEJ.
Unfortunately tuberculosis prevented him from accomplishing his last
work. It was about two and a half years after his death in 1886 that the
translator Hideki Nagamine completed the unfinished work.

3.1.2. Yutaka Shimada (1851–99)

Little is known about Shimada’s life. All that has been found is that he
was born in Shizuoka Prefecture and died on August 10 in 1899. He lived
in Tokyo, which is shown in the back matter of the dictionaries and his
books. He deserves to be mentioned as he was the editor of some diction-
aries as well as some books. Before he was engaged in the work of WEJ, he
had already published a few books, such as 『英文手引草』Eibun Tebikigusa
(A Guide to English Grammar) (1886) in seven parts, based on works by W.
Swinton, G. Quackenbos and so on, followed by its retitled edition 『英文
規範』Eibun Kihan (Rules of English Grammar Explained in Japanese)
(1888). He also translated 『正則ニューナショナル最優リード貸業内』
Barnes’s [sic.] New National Reader No.1. (1886) and a few others. More
than 30 works of his in the Diet Library in Tokyo, including dictionaries
as well as translations, show that he was an energetic figure who contrib-
uted through his works to the English education of the 1880s and 1890s.

3.1.3. Frank Warrington Eastlake (1858–1905)

F.W. Eastlake was born in New Jersey, USA. His father, who came to
Japan in 1860, introduced Western dentistry. His mother had taken a Bachelor of Arts degree at Wilmington University, Delaware. Influenced by educated parents, he studied Latin, classical Greek, and some other foreign languages while young. At the University of Berlin he studied medicine, linguistics, philosophy and so on and received a Ph.D in linguistics. In 1884, because of his illness, he returned to live with his parents, who had again come back to Japan. With Yaichiro Isobe, a scholar of English studies, he founded in 1886 a weekly English newspaper The Tokyo Independent (『東京独立新聞』 Tokyo Dokuritsu Shim bun) (Fujii 1953: 100), a journal for studying English (Ebihara 1934: 136), only to discontinue it the following year. In 1888 he and Isobe established Kokumin Eigaku Kwai (National English Language Association) in Tokyo, which successfully taught practical English and English literature. Not only was his contribution to English education through Kokumin Eigaku Shinshi (Journal of The Kokumin Eigaku Kwai) published by Sanseido in 1888-90 as well as The Tokyo Spectator, a weekly newspaper for studying English, but also through a large number of works that he left, which are listed in the catalogue of the Diet Library. No other native English teacher seems to have left so many works. He suffered from influenza complicated by pneumonia and died in February 1905. Because he was versed in many languages, he was known as Hakugen Gakushi [Doctor of Languages].

3.1.4. Ichiro Tanahashi (1862-1942)

Ichiro Tanahashi was born in what is now Gifu Prefecture. His father was a scholar of Chinese studies, and his mother taught at a women’s school. In 1875 when his mother arrived in her new post at a women’s school in Tokyo, his family moved there. He studied English at schools in Nagoya and Tokyo, and entered Tokyo Imperial University in 1880. After his graduation in 1884, he was involved in compiling several English-Japanese dictionaries, such as 『英和雙解字典』 Eiwa-Sokai-jiten (An English and Japanese Dictionary of the English Language, by P. Austin Nuttall LL.D, Translated) (1885). He founded a private junior high school, Ikubunkan Gakuen, in 1889 with the intention of “contributing to the society by giving wholesome mental education at a high level, free from perfunctory education or much constraint from the outside.” (Ikubunkan Gakuen Hyakunenshi Hensan Inkai 1989: 13-14).

3.1.5. Seisuke Saito (1868–1937)

Seisuke Saito was born in the first year of Meiji in what is now Yamaguchi Prefecture. While a teenager, he left home and went to Tokyo alone to study English. Suffering from a serious gastrointestinal disorder owing to his extreme temperance, he returned home, but came up to Tokyo again in 1886. Earning his living as a private tutor to Prince Mori’s son, he was asked by Tadakazu Kamei, the founder of Sanshodo (or Sanseido), to help compile a new English-Japanese dictionary, WWJ.3) Saito deserves to be mentioned, as for all practical purposes he worked for WWJ as an unnamed editor. After that he was engaged in compiling dictionaries, textbooks, and an encyclopedia published by Sanseido, working for the company all his life. In his autobiography (1991: 56–58) he gives his ideas for compiling English-Japanese dictionaries, which can be summarized as follows.

Not only should dictionaries clarify the meaning of words but they should also provide appropriate equivalents. This requires of lexicographers a profound knowledge of Japanese and Chinese as well as English. In order to provide equivalents for technical terms, it is necessary to request experts in the field.

His ideas surely matched the encyclopedic feature of the English-Japanese dictionaries in those days, and moved the Ministry of Education to introduce to him experts in medicine, law, and technology.

3.2. The Dictionaries

3.2.1. Meiji-Eiwa-jiten (MeEJ)

This dictionary was issued in eight parts. The first was issued by Riku-Go-Kuwan in 1884 and the last in 1889.6) The copies were bound together in one volume in 1889. It is sometimes said that this is why MeEJ did not sell well and become popular (Nagashima 1970: 130). The size of the body of the bound edition of the dictionary is the largest of the three, measuring
Its English title is *An English and Japanese Dictionary, for the Use of Junior Students*, by Sekey [sic.] Shimpachi. With the Addition of New Words and their Definitions, Together with a Biographical Dictionary. The preface by the author, the explanatory notes, and the list of abbreviations, each taking up a page, are printed before the 1,155-page dictionary text. The preface states that the source book was 'Webster's National Pictorial Dictionary,' and that for the sake of lucidity, it need be of no concern if some Japanese equivalents are elevated in style while others are not. The page for the list of abbreviations is divided into two. The upper half carries as many as 61 subject labels such as [農] for 農事 (agriculture) and [解] for 解剖学 (anatomy). This large number is indicative of the encyclopedic feature of the dictionary, clearly influenced by a Webster's dictionary. On the lower half of the page are 10 abbreviations for parts of speech, 8 for grammatical terms such as the present and past participle, and 6 for foreign languages (cf. section 7).

Every page of the dictionary text consists of two columns. In each column are English headwords with their initials capitalized, their inflexions, parts of speech, and in the case of words of foreign origin, the label of the original language is shown. On the right are the Japanese equivalents and subject labels where applicable. Like *ETSJ*, *EJ*, and *TJ1,2*, every Japanese letter is printed at right angles to the horizontal page layout so that they can be read vertically.

After the dictionary text there are three appendices: Quotations, Words, Phrases, Proverbs, and Colloquial Expressions, from the Greek, the Latin, and Modern Foreign Languages, Frequently Occurring in English Books, in Periodicals, and in Conversations (pp. 1157–98), Abbreviations and Contractions Used in Writing and Printing (pp. 1199–1229), and A Biographical Dictionary (pp. 1230–70), which is an abridged version of the original dictionary.

3.2.2. **Fuon-Sozu-Wayaku-Ei-Jii (WEJ)**

*WEJ* was compiled by Yutaka Shimada, revised by S. Sugiura, J. Inoue, and A. Manase and issued by M. Okura in 1887 (cf. section 10). Its English title is *An English and Japanese Lexicon, Explanatory, Pronouncing, and Etymological, Containing All English Words in Present Use, with an Appendix*, which reminds us of the English title of *EJ*(Kokawa et al., 1996: 86). The three dictionaries examined here as well as *EJ* contain no etymological information, as the authors did not know that Webster's Unabridged Dictionaries issued later than 1864 include etymology revised by W. Mahn or they did not think that etymology was important for studying English. A. Lloyd's preface claims that *WEJ* is characterized by 'the care which has been given to the accurate rendering into Japanese of scientific terms,' that 'old and inaccurate translations have been amended,' and that 'The price ... is so low that it will bring it within reach of the poorest student,' followed by Shimada's preface in Chinese. In 'A Guide to the Spelling' and 'A Guide to the Pronunciation' morphological and phonetic information are provided respectively. Morphological information was considered necessary because without it users might have abandoned their search for a word even if they found a similar word with a slight difference. 'Abbreviations Used in This Work' on the next page is quite similar to the list of abbreviations in *MeEJ*. The list in *WEJ* gives 10 abbreviations for parts of speech, 8 for grammatical terms (cf. 3.2.1.), 9 for foreign languages, and 61 subject labels. About six out of seven subject labels of the same type in *MeEJ* are used in *WEJ* (and in *WWJ* as well). *WEJI* is a handy dictionary, measuring 15.3 cm × 10.6 cm × 3.7 cm (6.0 in × 4.2 in × 1.5 in).

932 pages are allotted for the dictionary text, each page consisting of two columns. In each column are provided headwords with their initials capitalized and auxiliary phonetic symbols added to the letters of the headwords themselves, their inflexions, parts of speech, and Japanese equivalents. Many entries have examples, and run-on derivatives (cf. 4.2.1). Unlike *MeEJ*, Japanese letters are typeset horizontally. Illustrations are occasionally given between entries (cf. section 9). At the bottom of every page are printed key words for pronunciation (cf. 5.2.).

At the end of the volume is an appendix (cf. Ida 1980: 11): Table of Irregular Verbs (pp. 1–12), Abbreviations Explained (pp. 13–26), List of Familiar Phrases, Proverbs, Maxims, Quotations, and Mottoes, from the
Latin, French, and Italian Languages (pp. 27–47), Arbitrary Signs (pp. 48–50), Explanations of Abbreviations (p. 51), Tables of Measures and Weights of the Different Countries (pp. 52–54), and Arbitrary Signs for proofreading (p. 54), with a Specimen of a Corrected Proof-sheet (p. 55). Some pieces of information in the appendix for abbreviations overlap, and are therefore redundant. This variety of information seems to characterize the dictionary in the age of civilization and enlightenment. See section 10 for its revision.

3.2.3. *Webster-shi-Shinkan-Daijisho-Wayaku-Jii (WWJ)*

Around 1886 Kamei (see 3.1.5.) requested Tatsusaburo Tanaka, who later took a doctorate in medicine, to compile a concise English-Japanese dictionary. About a year later when the work was almost finished, they received the information that Okura Shoten intended to issue an English-Japanese dictionary at roughly the same time as Sanshodo. Considering that it was no use competing with it, they decided to make a new start by calling on Seisuke Saito as compiler. After WWJ was completed, it was checked by F.W. Eastlake and I. Tanahashi, and issued in 1888, with the two being the nominal joint translators. WWJ could be said to be the first dictionary that claims to be supervised by a native speaker of English, even though it is not at all clear how and to what extent he was involved. It sold well partly because it was the first time Sanshodo utilized newspaper advertisements with which other publishers were out of contact, asking the newspaper company to deal with the subscription for the dictionary at a lower price.

The English title is *Webster’s Unabridged Dictionary of the English Language, Translated into Japanese by a Committee*. Prefaces were written by F. Eastlake and Shigetaka Shiga, a scholar of agriculture. Its contents are similar to those of *WEJ*. 'Key to the Pronunciation' and 'Abbreviations Used in This Work' precede the 1,277-page dictionary text, except that derivatives are not run on but treated in separate entries. Its Appendix contains: Table of Irregular Verbs (pp. 3–12), A Vocabulary of Prefixes and Suffixes (pp. 13–23), Abbreviations and Contractions Used in Writing and Printing (pp. 24–49), Quotations, Words, Phrases, Proverbs, and Colloquial Expressions from the Greek, the Latin, and Modern Foreign Languages (pp. 50–84), Tables of Money, Weight and Measure of the Different Countries (pp. 85–95), Arbitrary Signs Used in Writing and Printing (pp. 96–99). The size is more bulky than *WEJ*, measuring 15 cm × 11 cm × 5.5 cm (4.3 in × 5.9 in × 2.2 in). See section 10 for its revision.

(Section 3 by Kanazashi)

4. Headwords and Examples

4.1. On Sampling

In order to make a comparison between Webster’s dictionaries and the three dictionaries, some sampling was done. Here the same five parts of the dictionaries were investigated, based on *Fuon-Sozu-Wayaku-Ei-Jii (WEJ): A-Acanthus, D-Debauchment, J-Jointure, O-Off, T-Tarnish.* It is rather doubtful whether the authors at this time had a clear notion of examples in the dictionaries. *MeEJ* has some complete sentence examples. *WEJ* seems to have no such examples. They made no clear distinction between idioms, phrases, phrasal verbs, quotations or examples (cf. Hayakawa 1997: 103). Here examples include all of them. *WWJ* also has some complete sentence examples, some of which are directly taken from *ADEL. WEJ* does not seem to have had much interest in examples for clarifying meaning and usage. The number of examples in *WEJ* is far fewer than those in its contemporary competitor *WWJ* (cf. 4.3.2., 4.4.2.).

4.2. *Meiji-Eiwa-Jiten (MeEJ)*

4.2.1. Headwords

Based on a survey of five parts, about 36 pages out of 1,155, it is estimated that *MeEJ* should include around 48,000 headwords (see Table 1 below).

The same method of comparison cannot be applied to *MeEJ*. The reason is simple: the dictionary *MeEJ* is based on is different from the one on which the other two dictionaries are based. The preface clearly says that it is compiled with reference to ‘Webster’s National Pictorial Dictionary.’ The title is usually placed on the cover of the dictionary. Its title page shows its real name: *A Dictionary of the English Language (DEL)*, dating
back to the one issued in 1807 (Sugawara 1989). This dictionary was often revised and reprinted, and the author probably referred to the edition most recently published in his day around 1883. The most recent one available was revised and enlarged by W.A. Wheeler. The comparison is made between MeEJ and the 1877 edition of DEL, as it was impossible to look into later editions.

The method of presentation in MeEJ follows that of DEL in principle, though it is true in a few cases that two headwords in DEL, especially where intransitive and transitive uses are separately shown, are combined into one. DEL lists headwords without the system of run-on entries, and users look up the entry they want alphabetically.

The five parts in MeEJ contain the number of headwords in the second column in Table 1. The number of the third column shows that of the headwords not found in DEL. The fourth column shows the number of headwords found in Supplements of Additional Words and Definitions or in the text of the 1883 edition of Webster’s Unabridged Dictionary, which is in fact titled An American Dictionary of the English Language (ADEL), to which the author admits he referred for the new words and meanings as well as for ‘A Biographical Dictionary.’ The right column shows the number of words not found in MeEJ but found in DEL.

TABLE 1

<table>
<thead>
<tr>
<th></th>
<th>246</th>
<th>16</th>
<th>16</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>270</td>
<td>14</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>214</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>J</td>
<td>340</td>
<td>75</td>
<td>63</td>
<td>2</td>
</tr>
<tr>
<td>O</td>
<td>49</td>
<td>16</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>T</td>
<td>135</td>
<td>44</td>
<td>77</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 1 clearly shows that the dictionary depends on DEL including its appendix for its headwords. But it also takes in part of headwords from a larger dictionary, ADEL. This tendency is surprisingly more prominent among the latter half of the entries, such as O and T. This is partly explained by the fact that the dictionary is not only compiled by the author himself but also in fact by another author Hideki Nagamine, who is only mentioned in the preface of the fourth part (1886), but had much more experience of translation, including An English and Chinese Dictionary (1881) (Seki 1996: 291–95). It is quite conceivable that the new editor took more headwords from a larger dictionary, such as ADEL (cf. Hosaka 1990: 80).

4.2.2. Examples

As in EJ, MeEJ tries to give examples shown in DEL as well as in ADEL. Unlike EJ, as is mentioned above, the dictionary sometimes gives examples in full sentences. The author was a school teacher in a private school, and he seems to have thought highly of examples as well as meanings, which led him to give some examples based on a Webster’s dictionary. To achieve his purpose, ADEL seems to serve better as it shows far more examples than DEL, which is partly supported by Table 2 below.

Table 2 shows the number of examples in MeEJ. Examples in five sections were checked against several dictionaries. The number of the second column shows that of examples in the text. The third column shows the number found in DEL, while the fourth column shows that found in ADEL. The fifth column shows the number in ECD. The right column shows the number of similar examples or those not found in the dictionaries mentioned.

TABLE 2

<table>
<thead>
<tr>
<th></th>
<th>74</th>
<th>8</th>
<th>8</th>
<th>17</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>104</td>
<td>26</td>
<td>39</td>
<td>31</td>
<td>8</td>
</tr>
<tr>
<td>D</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>J</td>
<td>49</td>
<td>16</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>O</td>
<td>135</td>
<td>44</td>
<td>77</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

It is clear that the number of examples found in ADEL is the largest, while the total number found in DEL comes the second. They are taken from definitions or explanations, or from the synonym column. (Note that the three dictionaries include no description of synonym.) The total number of examples found in either ADEL or DEL amounts to 70 percent of all. It is also interesting to note that the number of examples from ECD is the second largest in D, as in those days learned authors studied classical Chinese, which is also the case in TJ referred to in the last installment (cf. 3.1.5.). The examples not found in MeEJ are mainly limited to technical
terms, some of which are already shown in other dictionaries, such as SPD or DSL.6)

The facts in 4.2.1. and here make it clear that MeEJ could be called the first dictionary mainly compiled from Webster's dictionaries. MeEJ claims that it is based on DEL, but the survey has made us realize that a larger ADEL also benefits the dictionary.

4.3. Fuon-Sozu-Wayaku-Ei-Jii (WEJ1)

4.3.1. Headwords

Both the titles of the dictionary in Japanese and in English clearly imitate those of EJ (see Cited Dictionaries). This fact suggests that EJ is the model for, or followed by, later issued dictionaries (cf. 3.2.2.). But unlike EJ, the dictionary is compiled under the strong influence of ADEL.

Here some features of headwords in WEJ1 are mentioned. The most remarkable is the system of run-on entries, which leads us to say safely that it is the first English-Japanese dictionary that employed the system. There is no such system employed in the Websterian tradition, or in the Scottish tradition of ID or CED, or in the British SPD. Regrettably no consistency is found in WEJ1. Unlike ADEL, WEJ1 has the run-on system in many cases, where the original entries are independent in ADEL. All of this seems to have been done for the purpose of saving space. As is also the case with ADEL, WEJ1 sometimes ignores an alphabetical order of words in part of the entries, where some headwords are paired off or in a triplet, which probably only causes users' misunderstanding. This means that at that time they only followed Webster's alphabetical order. Users had no idea where to look when they could not find some words they wanted. The worst of all was that the system of run-on entries was not often correctly put into practice, for example Obliquely or Obliqueness being run under the entry of Obliqueangled. If the system had been more systematically and carefully employed, it might have been more helpful. (Note that the run-on system was largely abandoned in the revised edition WEJ2, as no other dictionary at that time seems to have used such an innovative but complex system; the later issued competitor WWJ did not.)

The same five sections were looked into. In Table 3 below the left number shows that of headwords in ADEL. The second shows the number of those not found in WEJ1, while the third shows the number of those not in WWJ. The right number shows those found in neither WEJ1 nor WWJ, when the entries are checked against ADEL.

<table>
<thead>
<tr>
<th></th>
<th>WEJ1</th>
<th>WWJ</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>475</td>
<td>29</td>
<td>109</td>
</tr>
<tr>
<td>D</td>
<td>536</td>
<td>45</td>
<td>107</td>
</tr>
<tr>
<td>J</td>
<td>473</td>
<td>43</td>
<td>104</td>
</tr>
<tr>
<td>O</td>
<td>541</td>
<td>50</td>
<td>162</td>
</tr>
<tr>
<td>T</td>
<td>472</td>
<td>129</td>
<td>87</td>
</tr>
</tbody>
</table>

First the total number of headwords will be estimated based on the table. About 25 pages in WEJ1 and about 39 pages in WWJ were examined. Taking the total number of pages of each dictionary into account (WEJ1 has 932, and WWJ has 1,277 pages), both of them are considered to contain approximately 50,000 headwords (cf. Ishii 1961: 83, Hayakawa To appear: 168).

Table 3 shows more than 40 percent of the entries in ADEL seem to have been omitted in WEJ1, and that the number of deleted words in WEJ1 seems to be much larger than that in WWJ. But it is not necessarily so, as is clear in D or J. What kind of words in ADEL are left out in WEJ1 will be looked into for reference. They could be put into several categories. The largest number of words are not labeled or categorized, followed by the second largest number of deleted words labeled as obsolete or rare (cf. ECD). The third largest group is found in technical words, such as those labeled as chemistry or botany. In D and T, the number of hyphenated words comes fourth. Other categories of small number include 'empty' entries where users make an effort to refer to other entries, entries of expressions of foreign origin such as Latin, those of dialectal expressions, those with the suffixes of -ly and -ment, those not directly related to the US or Great Britain. This small survey could suggest that the author tried, reasonably, to leave out obsolete or rare words, or technical words for the most part.

Also mentioned is how many headwords in the five sections of WEJ1 are
not found in *ADEL*. The total number of words is only 47. 21 are included in the appendix of *ADEL*, while 13 are found in another dictionary *CED*. One is found in *ECD*, and 12 are not found in either of them.7

The small survey suggests that the headwords in *WEJ1* are taken from *ADEL* including its appendix, mainly excluding words designated obsolete or rare, and parts of technical words as well as parts of hyphenated compounds.

4.3.2. Examples

Table 4 shows the number of examples in *WEJ1*. The left number shows the total. The second shows the number of those which are the same as those in *MeEJ*. The number in parentheses shows the number found in *ADEL*. The third shows the number found in *ECD*. The fourth shows those found in *EJ2*. The fifth shows the number found in *ADEL* or *DEL*. The right shows those not found in the dictionaries referred to, some of which are found in DSL, for instance.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>32</th>
<th>17 (12)</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>36</td>
<td>34 (30)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>23</td>
<td>9 (9)</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>45</td>
<td>27 (18)</td>
<td>4</td>
<td>12</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>50</td>
<td>0</td>
<td>3</td>
<td>42</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Less than half (87 out of 186) of the examples correspond with those in *MeEJ*. But more than 70 percent (138 out of 186) could be considered to have been directly taken from *ADEL* (see note 4 in section 3). The facts derived from the figures suggest that *WEJ1* owes a few examples to *MeEJ* and far more examples to *ADEL*.

4.4. *Webster-Shi-Shinkan-Daijisyo-Wayaku-Jii* (*WWJ*)

4.4.1. Headwords

Like *MeEJ* but unlike *WEJ1*, the way of presenting headwords without the complex system of run-on entries in *WWJ* follows that in *ADEL*. It is much easier for users to consult *WWJ* than *WEJ1*. The same kind of problem still exists in some entries though. More than one or two headwords are sometimes listed one after another, which only sometimes causes users a little confusion when they do not know variants. The fact that *WEJ2* largely did away with the run-on presentation and followed the same way as Webster's dictionaries (or *WWJ*) seems to suggest that the run-on system was not favorably received among users, as it takes some time for learners without the basic knowledge of English grammar and morphology to get used to the system, though it is more economical of space. Headwords with different parts of speech are listed under different entries. For example, transitive and intransitive uses of the same verbs are in most cases distinguished by different entries. Part of the headwords include present participle forms and past participle forms, which cannot be found in *ADEL* (see below). Most of these facts show that *WWJ* largely imitates or copies *ADEL* much more consistently, which results in an easier-to-look-up dictionary.

The estimated number of headwords is mentioned above (4.3.1). The ratio of deleted words from Webster in five sections is not consistent. But the striking feature is that 109 words deleted in section T are the same as those in *WEJ1*. As is clear in Table 3, the headwords deleted in *WWJ* might be considered to be quite similar to those in *WEJ1*, except those in D (cf. 6.2.2.2.).

On the other hand, *WWJ* includes a larger number of words which are not found in *ADEL*. The total number is 118, only three of which are in the appendix of *ADEL*. No same headword is found in *ECD*. The source for those words not found in *ADEL* seems to be another dictionary *CED*, because 109 words can be found. The largest number of those words in *CED* is found in section J. Some of them are present participle forms and past participle forms (cf. Hayakawa 1997: 76). The headwords in *WWJ* are mainly based on *ADEL* and partly on *CED*, which suggests that *CED* also had an influence on the dictionaries in the middle Meiji era.9

4.4.2. Examples

Look at Table 5 below with the number of the examples in five sections in *WWJ*.
Influence of the examples, as most of them are given as examples (cf. technical term dictionary). Not all of the examples have been incorporated. 24 randomly selected examples in ADEL, while the fourth is the number of examples that are the same in both MeEJ and WEJ1. The number in parentheses shows that of examples found in ADEL. The fifth number indicates the number of the same examples as in ECD. The sixth shows the number as in EJ2. The seventh is the number of the same examples as in ADEL. The right number is that of examples that are not the same or not found in the dictionaries mentioned. Table 5 shows that a number of examples seem to have been taken from MeEJ and/or WEJ1, many of which are taken from ADEL. The largest number of examples taken from ADEL, which amounts to more than half of the total, proves that the dictionary could be considered to be based on ADEL, while the examples from ECD constitute the second largest. WWJ gives a number of examples about three times larger than WEJ1. Particularly noticeable is that most of the examples in T are in fact from ADEL (see note 4 in section 3). It could be generally said that the editors tried to imitate the text of MeEJ and WEJ1, and that of the original dictionary ADEL, when the additional fact is taken into account that the same quotations as in ADEL are sometimes given. As a result, more examples in ADEL than those in the two dictionaries are directly taken into the text.

<table>
<thead>
<tr>
<th>A</th>
<th>106</th>
<th>10 (7)</th>
<th>11 (2)</th>
<th>10 (7)</th>
<th>20</th>
<th>2</th>
<th>30</th>
<th>23</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>113</td>
<td>12 (6)</td>
<td>0</td>
<td>25 (21)</td>
<td>42</td>
<td>0</td>
<td>21</td>
<td>13</td>
</tr>
<tr>
<td>J</td>
<td>74</td>
<td>0</td>
<td>11 (11)</td>
<td>9 (7)</td>
<td>18</td>
<td>0</td>
<td>5</td>
<td>31</td>
</tr>
<tr>
<td>O</td>
<td>140</td>
<td>4 (4)</td>
<td>16 (11)</td>
<td>26 (20)</td>
<td>49</td>
<td>3</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td>T</td>
<td>106</td>
<td>0</td>
<td>38 (38)</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>62</td>
<td>3</td>
</tr>
</tbody>
</table>

The left number shows the total. The second gives the number of the same examples as in MeEJ. The third gives that of the same examples as in WEJ1, while the fourth is the number of examples that are the same in both MeEJ and WEJ1. The number in parentheses shows that of examples found in ADEL. The fifth number indicates the number of the same examples as in ECD. The sixth shows the number as in EJ2. The seventh is the number of the same examples as in ADEL. The right number is that of examples that are not the same or not found in the dictionaries mentioned. Table 5 shows that a number of examples seem to have been taken from MeEJ and/or WEJ1, many of which are taken from ADEL. The largest number of examples taken from ADEL, which amounts to more than half of the total, proves that the dictionary could be considered to be based on ADEL, while the examples from ECD constitute the second largest. WWJ gives a number of examples about three times larger than WEJ1. Particularly noticeable is that most of the examples in T are in fact from ADEL (see note 4 in section 3). It could be generally said that the editors tried to imitate the text of MeEJ and WEJ1, and that of the original dictionary ADEL, when the additional fact is taken into account that the same quotations as in ADEL are sometimes given. As a result, more examples in ADEL than those in the two dictionaries are directly taken into the text.

4.5. Influence of TJ2 on MeEJ, WEJ and WWJ

In the last installment, a detailed analysis was made of the influential technical term dictionary TJ2. Here it must be considered whether it also had some influence on the three dictionaries. A small survey was made of the examples, as most of them are given as examples (cf. Abscissio-infiniti). Not all of the examples have been incorporated. 24 randomly selected headwords in TJ2 with more than four examples shown are checked against the three dictionaries. WWJ, WEJ1 and MeEJ are clearly influenced in this descending order: WWJ 16, WEJ1 13 and MeEJ 7 entries. At least one example is shown: WWJ 20, WEJ1 15 and MeEJ 11 entries. Some of the headwords clearly contain those examples in TJ2, which are not given in ADEL: Action, Cognition, Conception, Fallacy, Judgment, Knowledge, Method, Notion, Proposition and Right, for example. WWJ is explicitly and particularly influenced, because more headwords include the same examples of TJ2, such as Law and Power as well as Knowledge and Proposition mentioned above. The conclusion, based on a small survey, is that the three dictionaries have been partially influenced by TJ2 (cf. 6.2.3.), and that WWJ more enthusiastically, though not comprehensively, takes examples from TJ2 (cf. Principle).

4.6. The Overall Result

As is shown above, MeEJ takes nearly all the headwords from DEL, while WEJ1 and WWJ take a large number of words from ADEL. MeEJ also partially tries to take more words from ADEL, especially in the latter part of the dictionary. The other two dictionaries can be said to have taken the headwords from ADEL. Part of the principle of WEJ1 deleting words in ADEL has been mentioned above: it deletes mainly obsolete or rare words, and technical words. The similar principle seems to have been adopted in WWJ, as the number of words left out is more or less the same. But WWJ can be said to have taken more headwords from CED. In this respect, all of the three dictionaries are compiled in combination with more than one dictionary in headwords as well as examples, in spite of the claim that they are based on Webster's dictionaries (cf. Kikuchi 1992). The explanation seems to hold true of other dictionaries at that time (Hayakawa 1997: 143–45).

The small survey of the portions of the three dictionaries suggests that they are compiled mainly based on ADEL or DEL. The three dictionaries owe the choice of headwords and examples largely to Webster's dictionaries. American lexicography, especially the tradition of Webster's dictionaries, could be said to have made a large contribution to the mainstream
English-Japanese dictionaries in the 1880s. (Section 4 by Dohi)

5. Pronunciation

5.1. A Short Historical Review since the Early Meiji Era.

Toyoda (1948: 135-36) says that the history of the treatment of pronunciation in English-Japanese dictionaries could be divided into six stages. His fourth stage was done in the 1880s, when the first textbook of phonetics was published. 「音韻論」 Oninron (The Sounds Employed in the English Language) by Charles Dallas was issued in 1872, showing 44 sounds, which was edited as a guide to The Elementary Spelling Book. The first major textbook 「英語発音略説」 Eigo Hatsun Hikatsu (How To Pronounce English) was published in 1887, by Takenobu Kikuchy [sic.] under the supervision by G. Verbeck, who was involved in SJ II (1869). It shows the picture of the mouth as the organ of speech. There arose little by little an interest in pronunciation. Under the circumstances it gradually became quite natural for editors to include some guide to pronunciation in the body of dictionaries. In 1887 the Ministry of Education also issued a guidebook of about a dozen pages (Directions for the Pronunciation of English), which has the notation of the Websterian system. As is clear, the 1880s (and in fact through the Meiji era) is the time when the Websterian notation was in its heyday not only in dictionaries but also in textbooks (cf. Takebayashi 1968: 253).

5.2. Webster's Pronunciation

The second installment already mentioned that SJ II (1871) was the first dictionary in Japan to adopt the notation of a form of what was generally called the Websterian system. Other dictionaries in the early and middle Meiji era followed suit.

MeEJ introduces no notation of pronunciation. It indicates, strangely, that it shows no concern for it, so that it could be considered as a dictionary aimed at those students taking irregular courses, though the editor seemed to be eager to teach practical English (Takeemura 1933: 78).

The other two dictionaries, WEJ I and WWJ, adopt and show the system of Websterian pronunciation. The notation in the two dictionaries is almost the same. But unlike EJ, they do not give their notation of pronunciation in brackets; that is, they do not adopt the system of respelling notation but the Websterian system of diacritical marks. It could be conceivable that the system was too difficult for Japanese users to understand. The complicated presentation of headwords with diacritical marks shows both their spelling and their pronunciation as well as their accent and syllabication. Some similar and confusing presentations, such as Child, Epoch, Chaise, made it very difficult to tell one from the other. Both in WEJ I and WWJ some phonically irregular headwords are further followed by rewritten phonetic symbols in parentheses. Comparing the A section of WWJ and WEJ I with ADEL shows that not all of the rewritten notations are given in the texts, and that WWJ has three times more notations than WEJ I in the text. Not much use of the Websterian system seems to have been made, which urged users to study translations or guidebooks for the spelling books (cf. 2.1.). It is also doubtful whether the system of placing key words at the bottom of each page proved to be successful. It should be added that those key words there are the same in WEJ I and WWJ, but quite different from those in ADEL or DEL.

5.3. WEJ I and WWJ

WWJ follows the example of ADEL published later than 1864, and only shows 'Key to the Pronunciation', which does not mean that it shows much interest in pronunciation. Comparing the key to the pronunciation of WEJ I and that of WWJ, and that of ADEL shows that both of them follow ADEL, though the fact is that WWJ only fails to show g as in gem or engine, while WEJ I fails to give the presentations y as in style, y as in nymph. The explanation in italicized letters of e, i, o, as in fallen or basin, is in fact given in the front matter of A Guide to the Pronunciation (p. xiii). All of them are used in the text. This leads us to conclude that they follow in principle the presentations of ADEL.

WEJ I could be said to be partly innovative in that it has a ten-page Phonotypy, which explains how to pronounce various vowels and consonants. Particularly noticeable is that it shows the way of pronunciation
using more than a dozen pictures of the mouth, or the organs of speech. Hayakawa (To appear: 46) points out that spelling books published in 1885 and 1886 already used the system, and this is not the first attempt (cf. 5.1.). But WEJ1 can be said to be the first dictionary to adopt the similar system. The dictionary is meant as a dictionary and a pronunciation guide. (Examples with katakana are sometimes given, which is a method already found in guidebooks in the early Meiji era.) WEJ1 seems to have given more importance to pronunciation than the other two dictionaries. But the problem is that it adopts the Websterian diacritical presentation, which makes it doubtful whether its pronunciation guide really proves so useful for users.

(Section 5 by Dohi)

6. Translation

The dictionaries mainly examined in this section are WEJ1 and WWJ. After brief description of their formats, influence of predecessors' works revealed by our research will be dealt with in terms of lexicographical features (in 6.2.) and the Japanese translation (in 6.3.).

6.1. Format of Presentation

We can see at a glance that they, especially WWJ, look quite similar to Webster’s ADEL with many of the same pictorial illustrations and diacritical marks (cf. 5.2.). Both WEJ1 and WWJ set two columns on each page, but only the latter subdivides one column into two, the English headwords on the left and Japanese translations on the right. As a result, some blanks are left in WWJ and it is easy to run our eyes over the page, whereas WEJ1 looks much denser because it economizes on space. English headwords and Japanese translations are both printed horizontally like EJ2. (cf. 3.2.2.) In terms of equivalent presentation the combination of kanji (Chinese character) and katakana is adopted, while hiragana is used in place of katakana in the current English-Japanese dictionary.

6.2. Dictionaries as Main Sources

This section will introduce the three main dictionaries, MeEJ, ADEL and T/J2, which WEJ1 and/or WWJ seemed to refer to, and the features which were, as a result, incorporated in them.

6.2.1. Meiji-Eiwa-Jiten (MeEJ)

MeEJ (1884–89) is considered a landmark in the history of English-Japanese dictionaries. In the page layout and typesetting it resembles EJ1: the Japanese translations are printed vertically, the way the Japanese language is traditionally written (see Kokawa et al. 1996) (cf. 3.2.1.). What distinguishes this dictionary from the predecessors is its reference to the source dictionary, ‘Webster’s National Pictorial Dictionary’, in the preface and actual utilization of it. It is MeEJ that introduced the semantic features of Webster’s dictionary into English-Japanese dictionaries for the first time (Hayakawa 1994: 23).

The most innovative feature is that word senses are demarcated and grouped together in MeEJ. This is something which we will treat in detail in the next section. Another contribution to the progress of Japanese lexicography is that technical terms/senses are consistently labelled for the first time. Labels of as many as 61 kinds are in the list of abbreviations (cf. 3.2.1.). These lexicographical innovations as well as translation equivalents were a great influence on its successors, including WEJ1 and WWJ.

6.2.1.1. The presentation of different senses

It is a remarkable lexicographical development that different senses of a headword are separated and grouped together by a circle (○) in MeEJ. Take the example of Calf.

Calf, (名) 靴 (a young cow) ○駄子 軍 (an idiot) ○蹄 (the back part of the leg below the knee)

The sense demarcation is, in many cases, also based on DEL. Here three different meanings of Calf are recognized: 1. The young of the cow. 2. An ignorant, stupid person. 3. The thick, fleshy part of the leg behind, below the knee. Obviously, both the meanings and the order correspond to those in MeEJ.

This is great progress over EJ, and WEJ1 followed the good example of
MeEJ using semicolons to separate different senses.

Imagine, ... v.t. 想像する, 想ふ; 謀る, 始計する, 意訳ヲ立てる; 倪へル.

On the other hand, WWJ adopts no policy in this regard, although the inconsistent use of the semicolon can be observed. Comparison of WEJI and WWJ has led us to a reasonable inference that WWJ copied without much care the way WEJI presented the different senses.

6.2.2. An American Dictionary of the English Language (ADEL)

The most influential source dictionary was changing from ECD to Webster's ADEL. Including the preface of WEJI by Shimada, a number of studies have pointed out that ECD had a great influence over English-Japanese dictionaries of the early Meiji era (Nagashima 1970; Ishiwata 1971: 364; Kokawa et al. 1996, etc.). After Chinese words were borrowed in large numbers from ECD, unnatural ones were being naturally eliminated (Morioka 1982: 26), so that we do not find many identical translations in WEJI and WWJ.

As the Preface by F.W. Eastlake in WWJ, for instance, reads “Webster's great Dictionary is one of the world's standard works of reference. Wherever the English Language is spoken this book is known, and esteemed as the highest orthographical authority.” The reputation of Webster's dictionaries was already established at that time. MeEJ, WEJI and WWJ are greatly influenced by them, as we have already seen in section 4.

6.2.2.1. Sense discrimination and arrangement

The last explanation in 'A Guide to the Spelling' (xiii) in WEJI claims that the sense discrimination and arrangement are based on those in Webster's ADEL, which can be supported by the example below.

Garreteer, n.

ADEL: An inhabitant of a garret; a poor author; a literary hack.
WEJI: 始上ノ階ニ住ム人; 貧学生; 筆耕者.

MEEJ: 最上ノ階ニ住ム人. 貧学生; 筆耕者.

The numbered six senses in ADEL correspond to the groups of translations separated by semicolons in WEJI. The underlined part is specific information shared by both ADEL and WEJI, but not by MeEJ. Moreover, the last sense listed in MeEJ appears neither in ADEL nor in WEJI.
As a consequence of the comparison, it is probably safe to assume that WEJ1 referred directly to ADEL, using MeEJ, as source for Japanese translations.

It should be also noted that obsolete meanings included in DEL and ADEL are omitted in MeEJ and WEJ1, respectively. For example, the first sense of Abandon, which is obsolete, "To outlaw; to banish; to exile; to drive out or away" is not in WEJ1. Since WWJ is partly dependent on WEJ1 (cf. 6.5.2.) and Eastlake states in the preface that "obsolete and very rare words were to have been altogether avoided", it is also true of WWJ.

6.2.2.2. Treatment of technical or encyclopedic items

Compared with EJ, more encyclopedic information is given in WEJ1 and in WWJ. Lloyd also emphasizes its quality in the preface of WEJ1:

...The special feature which characterizes this Dictionary is the care which has been given to the accurate rendering into Japanese of scientific terms. ... Not only however have new scientific terms been supplied but old and inaccurate translations have been amended, so that many of the imperfections of older English Japanese Dictionaries have been removed. For example, see under Badger, Reindeer, Medlar, Olive, and Ryde.

Nagashima (1970: 137-38) examined the corrections that WEJ1 claims to have made regarding three out of five, Medlar, Olive and Reindeer. It was proved that WEJ1 gives more precise and detailed information than its predecessors, but the corrections are not based on ADEL.

Some of the cultural/encyclopedic information in WWJ are translations of ADEL's definitions (see further in 8.2.). We can see, for instance, the explanation in square brackets in WWJ is a direct translation of the definition of Ice-plant in ADEL. 0 (see 8.2. for more discussion and examples)

Ice-plant, n.

ADEL: A plant (.), sprinkled with pellucid, glittering, watery vesicles, which make the plant appear as if covered with ice. It is a native of South Africa. Its juice has been used in medicine, and its ashes are used in Spain as an alkali in the manufacture of glass.

WWJ: [相樹名「葉色恰モ霜ヲ蔽ヘルガ如シ南部亜弗利加産ニシテ其液汁ヲリ薬ヲ製ス又其樹ノ灰ハ「アルカリ」ノ如ク西蔵ハテ硝子製造ニ用ユ]

Thus it was getting popular to translate Western dictionaries as a method of compilation of English-Japanese dictionaries (Kojima 1989: 259), which explains why both WEJ1 and WWJ have 和訳 wayaku meaning "translation into Japanese" in their titles.

6.2.3. Kaitei-Zoho-Tetsugaku-jii (TJ2)

TJ "exerted an influence upon other subsequent dictionaries, including EJ2, ..." (Kokawa et al. 1997: 128) in terms of translations, and MeEJ, WEJ1 and WWJ are no exception to this. It is, however, unique to WWJ that supplementary Chinese explanations in TJ were adapted in Japanese, (simplified, when necessary) and copied in some entries (Nagashima 1970: 145). We must hasten to add that EJ2 also copied the Chinese explanations as well as translation equivalents from TJ1 at some entries (see Kokawa et al. 1997: 112-13), so that it is not totally unique to WWJ. The example below, the entry for 唯心論 in TJ2 was simplified and adapted in Japanese in WWJ.

Idea TJ2: 唯心論

WWJ: [哲] 唯心論 [哲学] 唯心論 で本文十八世紀を以て用語とし、近世に於ては唯心論の意義を拓いて用いる 

TJ's influence is also prominent in the treatment of technical terms. Translations of technical terms labelled [哲] (philosophy), [論] (logic) or the like in WEJ1 and WWJ are usually identical with those in TJ2. When there is more than one sense listed, a label is given immediately before the equivalent in question. (The corresponding parts are underlined by the writer.)

Idea TJ2: 観念、理想
It seems that WWJ made more use of TJ, as it is often the case that identical translations are found only in WWJ, not in WEJI (cf. 4.5.). For example:

Candidate TJ2: 候補(政)
WEJI: 候補者，仕官ヲ望ム人，志願人; 被撰者.
WWJ: 仕官ヲ望ム人，候補; [政] 候補

6.3. Characteristics of Japanese Translations

6.3.1. Kango-oriented translations in WEJI and WWJ

Translations given in WEJI and WWJ are generally kango-oriented, showing the trend at that time which had been set since the publication of EJ1. Most of the translations both in WEJI and in WWJ were borrowed from their predecessors, in many of which the influence of ECD and/or EJ is evident (Ishii 1961: 85; Preface of WEJI) (cf. 6.5.2.).

In addition, dictionaries were usually compiled by intellectuals with much knowledge of kango (Ishiwata 1971:360) and the tremendous amount of translation of Western books increased the proportion of kango in the Japanese language dramatically in the early years of the Meiji era (Ishiwata 1971: 353-58). According to Ishiwata (1971: 360-61) the use of kango terms in daily conversation prevailed even among the ordinary people in the early Meiji era. In EJ2R published in the same year as WEJI, kango translations account for 60% of the Japanese equivalents. The percentage is fairly high compared with 20% in ETSJ2 (1866) (Kashiwadani 1982: 67).

6.3.2. Systematic use of wago terms

Difficult kango terms are accompanied by corresponding wago terms, which are much more comprehensible, in WEJI and WWJ as well as in MeEJ. As in the examples below, immediately after a kango translation there follows an explanatory wago term put in the square brackets in WEJI, and in round brackets in WWJ. Two types of usage of wago terms can be observed there: to explain the meaning of kango (Example (a)); to show the pronunciation of kango (Example (b)). The latter is widely used in contemporary English-Japanese (learner’s) dictionaries.

Example (a) Babble v.i. 乱語 [ワカラヌコトヲイ] フ, ... [WEJI] Babble v.i. 乱語 [ワカラヌコトヲイ] フ, ... [WWJ]
Example (b) Canker n. ... 銅 [サビ] ツ生ズル. [WEJI] Canker n. ... 銅 (サビ), ... [WWJ]

WWJ provides more wago explanations than WEJI, and therefore, can be considered more user-friendly in this respect. We picked up 133 entries which are included both in WEJI and WWJ (from C to Camomile) and compared the common senses that have the same Japanese translations. 13 wago explanatory terms are shared in both and 21 more are only in WWJ, whereas there is only one found in WEJI.

This efficient method was originally devised by the authors of EJ1. (In the following quotation, FSEJ means the same as EJI in this paper, and, similarly, FSEJ2 as EJ2, FSEJ2R as EJ2R)

In fact, we may say that the dual presentation of mainstream kango plus interlinear wago is one of the most remarkable features of equivalent presentation in FSEJ, ... However, presumably with a view to economizing space, this practice was virtually abolished in FSEJ2 except for a few instances per page that may present particular difficulties. It is apparent that this discontinuance led to inconvenience and dissatisfaction among the users of the day. Many of the translations in FSEJ2, being presented only in kango, must have been incomprehensible to ordinary users, however extensively revised and improved from the first edition they may have been. In the revised edition of FSEJ2 (FSEJ2R, 1887) the use of furigana was justly revived. (In FSEJ2R, incidentally, furigana was given not above the kango translations but after them using quater-sized type.)

(Kokawa et al. 1996: 101-02)

Having seen the practice was welcomed by users, lexicographers of the succeeding dictionaries probably decided to incorporate it in their works.

(Section 6. -6.3.2. by Komuro)

6.4. Types of Japanese Translations

There are three types of Japanese translation in MeEJ, WEJI and WWJ:
translations still used today, translations no longer used today, and paraphrasal or explanatory translations. The word Naturalization provides an example. The translations in the three dictionaries are as follows:

MeEJ: 他国人ニ本国人ト同様ノ特許ヲ与フル事。

WEJJ: 他国人ニ本国人ト同様ノ特許ヲ与フルコ,

WWJ: 外国人ヲ戸籍ニ入レ本邦人ト同一ノ権利ヲ与アルコ。

Each dictionary presents two or three translations for the word. The translation 帰化 kika is the word commonly used in present-day Japanese, while the term 異邦入籍 iho型useki is no longer adopted as a translation in current Japanese.

The paraphrasal translation in WEJJ is 他国人ニ本国人ト同様ノ特許ヲ与フルコ, and it is the translation of the definition given in ADEL: the act of investing an alien with the rights and privileges of a native subject or citizen. This translation is exactly the same as that of MeEJ. It may be possible to assume that the translation of WEJJ was copied from that of MeEJ. The explanatory translation in WWJ is 外国人ヲ戸籍ニ入レ本邦人ト同一ノ権利ヲ与フルコ。The expression is a little different from that of the paraphrasal translations in MeEJ and WEJJ. It seems to be a blend of WEJJ's translation and EJ's translation. WWJ's translation can be divided into two parts: 外国人ヲ戸籍ニ入レ (to make a new family register for a foreigner) and 本邦人ト同一ノ権利ヲ与フルコ (to bestow the same right as that of the natives). It may be reasonable to presume that the former part was adopted from EJ, for its expression is exactly the same as that of the EJ translation. The latter part may have been adopted from the translation in WEJJ. The translations in both dictionaries are quite similar.

6.5. The Source of Japanese Translations
6.5.1. Translations for neologisms
Translators for neologisms were often adopted from ECD. Thus translations in English-Japanese dictionaries compiled in the mid-Meiji era were mostly kango-oriented. For example, as to the word Agent, MeEJ adopted the kango translations 代理者 dairisha, 管理者 tairisha and 替弁者 taibensha from ECD.

TJ2 also played an important role in establishing Japanese translations for new words. In fact it provided the word 帰化 kika as the translation for the word Naturalization.

The paraphrasal translations were, as can be seen in the case of the entry word Naturalization, generally the translation of word definitions or notes in the American dictionaries on which the Japanese dictionaries were based. They may have been considered indispensable, since the kongo translations were not accepted as established translations by ordinary dictionary users at that time.

6.5.2. Borrowed translations
Kikuchi (1996: 264) points out that a number of translations in WWJ are the same as those in EJ2 and WEJJ.

However, according to its back matter, WEJJ was apparently published in January of 1888; that is only 8 months before the publication of WWJ. Therefore, the compilers of WWJ, even if they had managed to do so, would not have had much time to refer to WEJJ for information. Thus it is probable that WEJJ was actually published earlier than the date stated in the back matter (cf. section 10). That may have enabled the compilers of WWJ to use WEJJ as reference material.

The translations in MeEJ, WEJJ and WWJ are mostly the same. As to polysemic words, different senses are ordered and grouped in the same way. Since MeEJ was published in 8 parts from 1884 to 89, it must have been impossible for the compiler of WEJJ to refer to all of the entries in MeEJ (see note 4 in section 3). However, the similarity between the two suggests that WEJJ may have copied the translations in MeEJ for earlier entries.

As mentioned above, WWJ may also have copied its translations from those of WEJJ. However, Kikuchi (1996:263) points out that some of the translations in WWJ may have its source in EJ1 or ECD.

The word Napkin serves as an example. The entry of Napkin in ADEL is as follows: 1 A little towel; a cloth used for wiping (or drying) the mouth, especially at the table. 2 A handkerchief [obs]. The translations each dictio-
nary provides for the word are as follows:

ECD: 巾, 手巾, 茶巾, 布仔, 振, 播;
Eji: 手巾（食事ノ時ニ用フル）
MeEJ: 巾, 手巾。
WEJI: 巾, 手巾。
WWJ: 手巾（テヌグヒ）[食事ノ時ニ用フル]

MeEJ must have turned to ECD for an appropriate translation of the word, since it was something foreign to the Japanese culture. It adopted two translations from the six translations provided in ECD: 巾 and 手巾. WEJ1 followed suit and adopted the same translations from MeEJ. However, WWJ adopts only one translation for the word 食事ノ時ニ用フル；that is 手巾. Since it is a kango term, WWJ provides the wago translation テヌグヒ next to it. Finally a brief explanation 食事ノ時ニ用フル (used at meal time) is added beside the wago translation. It is evident that WWJ did not just copy Eji's translation for the word. In fact the entry in WWJ for the word is exactly the same as that in EJI. This may endorse the possibility that WWJ referred not only to EJI but also to EJ1 for information and appropriate translations.

6.6. Selection Restriction

WWJ provides information concerning selection restriction for the users. The information is often inherited from its predecessors MeEJ and WEJ1, as the following example shows:

Roast, v.
MeEJ: 料ル。燻ク、焼ク（肉類ヲ）
WEJI: 料ル、燻ク、焼きク（肉類ナドヲ）
WWJ: 焼ク（肉類ヲ）

All three dictionaries state that the verb takes meat as its object in almost the same expressions.

As to the verb Radiate, WEJI and WWJ have five translations in common: 四出スル, 支出スル, 旁出スル, 射出スル, 光線ヲ放ツ. However, WWJ adds three new translations to the word and two of them accompany appropriate objects in square brackets: 発散スル【熱ヲ】(to send out heat), 発スル【光又熱ヲ】(to emit light or heat).

6.6. by Takahashi

7. Label

It is common in the three dictionaries, MeEJ, WEJ1 and WWJ, that a number of subject labels are used which make the dictionary encyclopedic (cf. 3.2.3.). This section will take a closer look at the treatment of labels in WEJ1 and WWJ, both of which seem to be based on ADEL in labeling, too.

Like MeEJ, both WEJ1 and WWJ tabulate 'Abbreviations Used in This Work' (cf. 3.2.2., 3.2.3.) just before the main text. The tables include two region labels, Am. and Eng., seven abbreviations to indicate original foreign languages, quite a few subject labels (61 in WEJ1 and 70 in WWJ) and one style label, [俗] (Vulgar). Not all the labels listed seem to be actually used and there are some labels included not in the list, but in the main text.1) The labels which really appear in the entries are basically copied from ADEL.

The following lists the headwords (from Cam to Campanula) any sense(s) of which are labeled in any of the three, ADEL, WEJ1 and WWJ, and shows how they are treated in each dictionary. The dash (—) stands for the absence of any label. The labels are placed in square brackets, usually before the Japanese translations.

<table>
<thead>
<tr>
<th>ADEL</th>
<th>WEJ1</th>
<th>WWJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cam, n.</td>
<td>Mach.</td>
<td><a href="Mach.">機</a> <a href="Mach.">機</a></td>
</tr>
<tr>
<td>Camber, n.</td>
<td>Arch.</td>
<td><a href="Arch.">建</a> <a href="Arch.">建</a></td>
</tr>
<tr>
<td>Camel, n.</td>
<td>Zoöl, Naut.</td>
<td>[動](Zoöl, Naut.)</td>
</tr>
<tr>
<td>Camellia, n.</td>
<td>Bot.</td>
<td><a href="Bot.">植</a> <a href="Bot.">植</a></td>
</tr>
<tr>
<td>Camera, n.</td>
<td>Arch.</td>
<td><a href="Bot.">寫</a> <a href="Bot.">寫</a></td>
</tr>
<tr>
<td>Camerated, p.a.</td>
<td>Conch.</td>
<td>no entry</td>
</tr>
<tr>
<td>Cameration, n.</td>
<td>Arch.</td>
<td><a href="Arch.">建</a> <a href="Arch.">建</a></td>
</tr>
<tr>
<td>Camion, n.</td>
<td>Mil.</td>
<td><a href="Mil.">軍</a></td>
</tr>
<tr>
<td>Camisade, n.</td>
<td>Mil.</td>
<td>—</td>
</tr>
<tr>
<td>Camomile, n.</td>
<td>Bot.</td>
<td>—</td>
</tr>
<tr>
<td>Camp, n.</td>
<td>Agric.</td>
<td>no sense</td>
</tr>
<tr>
<td>Campaign, n.</td>
<td>Mil.</td>
<td><a href="Mil.">軍</a></td>
</tr>
<tr>
<td>Campaniform, a.</td>
<td>Bot.</td>
<td><a href="Bot.">植</a> no entry</td>
</tr>
<tr>
<td>Campanula, n.</td>
<td>Bot.</td>
<td><a href="Bot.">植</a></td>
</tr>
</tbody>
</table>

Some labels in WWJ are taken from TJ2 together with translations (cf.
6.2.3). For instance:

Illation 推断、推度、手積; 【論】(logic) 推講法

The encyclopedic information is fairly well provided with labels. As for region labels, Am. and Eng. are not used, but translated into Japanese and put after the Japanese translations.

Calico 白洋布[カナキン] (英国ニテ). 印花布[サラサ] (米国ニテ) [WEJ] 白洋布(カナキン) [英国]. 印花布(サラサ) [米国] [WWJ]

(Section 7. by Komuro)

8. Encyclopedic Information in WWJ

It has already been mentioned in 6.2.2.3. that encyclopedic information is given in WWJ and some of the encyclopedic information is translated from the word definitions and notes of ADEL. In fact WWJ has more encyclopedic or cultural information compared with the other two dictionaries: MeFJ and WEJ1.

In this section we will examine the encyclopedic features of WWJ in more detail by quoting some examples.

8.1. The Use of Icons

The encyclopedic information is placed after the icon in WWJ. For example, in the case of the word Raid (n.), additional information concerning its origin follows the icon: 風害ノ語ナリシガ数年ニ合衆国ニテ多ク用ヒラルニ至レリ. It is the exact translation of the information given in ADEL: A Scottish word, which within a few years has come to be much used in the United States.

Usage notes sometimes come after the icon as in the case of the word Pea. Its note is as follows:

【本詞ハ豆類ノ定限数ヲ示ス複数ニ用フ例令バ Two peas (二粒ノ豆等) 又其不定限ナル量ヲ示ス複数ニハ Pease ハ用フ例令バ Thrice pease (三種ノ豆等)】

It is also the translation of the usage note given in ADEL: when a definite number is referred to, the plural is written peas; as two peas, five peas; but when an indefinite quantity or bulk is spoken of, it is written pease.

As to the word Reverend, MeFJ and WEJ1 explain that the word is used as a title for clergymen: 往々僧侶ノ尊称トシテ用フ. WWJ gives the same explanation after the icon, and gives three titles as examples:

Reverend, a. 尊キ、昭敬スペキ、敬事ス

Very reverend 太尊[副牧師ノ尊称] Right reverend 正尊[監牧師ノ尊称] Most reverend 至尊[総領牧師ノ尊称]

The explanation is originally the translation of the note in ADEL. The titles are also explained in the note in ADEL, and the kango translations are adopted from ECD. This case shows that WWJ referred to the notes of MeFJ and WEJ1 when giving additional information for an entry word. However, the notes in WWJ are richer in information compared with those of MeFJ and WEJ1. In fact, most of the notes given in WWJ do not exist in MeFJ or WEJ1.

8.2. Explanations in Square Brackets

When a single-word translation was considered not enough, extra information in square brackets was added after the translation in order to help the user's comprehension. These explanations were usually provided for words that were unfamiliar to the Japanese in those days. The following is an example:

Raccoon, n. [うち 熊 「北米亜米利加産又 racoon, rackoon トモ書ス」]

The explanation in the brackets says that the animal lives in North America and that the word is spelt either racoon or rackoon. This explanation is actually based on the information given in ADEL.

The information is sometimes enriched in WWJ compared with that in MeFJ or WEJ1. The following is the comparison of the translation of the verb Pay in the three dictionaries:

MeFJ: 塗塗スル(油脂等ヲ以テ)
WEJ1: 【航】塗塗[スリウメ]ル、塗(脂等ニテ)
WWJ: 【航】塗塗(船内ノ龍骨、桅桿、帆桁等ノ牛羊等ノ脂肪ヲ塗塗[スリウメ]ル)
According to *MeEJ*, to pay means to rub grease into something. *WEJ1* gives almost the same definition, but we can tell from the label [航] that the verb has something to do with ships. *WWJ* gives the full information; the verb, when used in the nautical field, means to rub the grease of cows or sheep into a keel, a mast or a yard of a ship. The information in *WWJ* is based on the entry for the verb *Pay* in *ADEL*.

Translations of technical terms are also sometimes followed by explanations in square brackets as the following example shows:

*Radiometer, n.* 射力計 [往時天体ノ高度ヲ測ルニ用ヒタリ]

The explanation says that the device was formerly used to measure the altitude of a celestial body. This explanation is the translation of the definition given in *ADEL*. It must have been added considering the possibility that many users of the dictionary had never seen such a tool before.

As for the word *Rabbit*, the difference between a rabbit and a hare is explained in the brackets: [hare 野兎＝似テ体小サク且ツ脚及ヒ耳モ亦短シ]. The explanation says that a rabbit resembles a hare, but is smaller in size and its legs and ears are shorter. This explanation is also the translation of the definition given in *ADEL* and *DEL*.

*MeEJ* gives a similar explanation for the entry word while *WEJ1* does not. Therefore it endorses the possibility that the compilers of *WWJ* referred to *MeEJ* while compiling their dictionary.

8.3. The Difference between Explanations after the Icons and Those in Square Brackets

It does not seem that the compilers of *WWJ* made a clear distinction between the explanation put after the icon [*] and that put in square brackets. The only apparent difference is that explanations after the icon [*] are usually longer than those in square brackets. For example, the word *Rabbit* has the explanation led by an icon as follows:

[* 本詞ノ隠語ハ最モ不利ナル買物ヲ為シタル時ニ之ヲ称シテ “Hare brought the rabbit” ト云フ此語ハ或ハ外国名ニ兔ナリト偽リテ猫ヲ売リタル音語ヨリ来タリタルナリト

This is an explanation of the phrase “Hare brought the rabbit.” It says that it is a slang expression used when someone suffered the most loss when doing some shopping. It is said that the expression originates from an old tale of a man who deceived a customer into buying a cat, telling him that it was a rabbit. This explanation is neither in *ADEL* nor in *DEL*. It is not clear where it came from.

The attempt to provide extra information for an entry word can already be seen in *MeEJ* and *WEJ1*. However the compilers of the dictionary seem to have been uncertain about how to provide such information for the user's convenience.

(Section 8 by Takahashi)

9. Illustration

The second installment mentioned that *EJ* makes use of the illustrations in *ADEL* (Kokawa et al. 1996: 111–15). Among the three dictionaries, *MeEJ* gives no pictorial illustrations, though it claims that it is based on ‘Webster's National Pictorial Dictionary' (*DEL*). One reason is that the main dictionary of *DEL* the editor referred to does not have so many illustrations as *ADEL* (see Table 6 below). The editor also seemed to feel that they were not important or necessary in either practical English or reading foreign literature and the like.

The other two dictionaries *WEJ1* and *WWJ* include some illustrations in the text. Table 6 shows how many of them are taken by each dictionary from *ADEL*. All the illustrations in A, D, J, O and T are looked into.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>D</th>
<th>J</th>
<th>O</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>42</td>
<td>29</td>
<td>(24)</td>
<td>151</td>
<td>(33)</td>
</tr>
<tr>
<td>D</td>
<td>21</td>
<td>14</td>
<td>(12)</td>
<td>105</td>
<td>(23)</td>
</tr>
<tr>
<td>J</td>
<td>10</td>
<td>12</td>
<td>(10)</td>
<td>27</td>
<td>(10)</td>
</tr>
<tr>
<td>O</td>
<td>23</td>
<td>20</td>
<td>(20)</td>
<td>53</td>
<td>(22)</td>
</tr>
<tr>
<td>T</td>
<td>64</td>
<td>58</td>
<td>(45)</td>
<td>176</td>
<td>(39)</td>
</tr>
</tbody>
</table>

The left number shows that of illustrations in *WEJ1*, while the second shows that of *WWJ*. The third in the parentheses shows the number of the same illustrations that are both in *WEJ1* and in *WWJ*. The fourth shows those in *ADEL*, while the right number in parentheses shows that of *DEL* only for reference. The survey suggests that *ADEL* offers the two dic-
tionaries some illustrations. WWJ has a large number of the same illustrations as those in WEJI. Or it could be argued that WWJ imitates or copies WEJI. The interesting fact is that the only exception where they differ in the illustrations is Tide. The others are the same or almost the same in the two. WEJI devotes more space to illustrations. Comparing the 1859 edition of ADEL with the illustrations under 22 classifications, we see that the 1885 edition gives a larger number of illustrations under more than 50 headings. The groups with a larger number of illustrations consist of Architecture, Botany, Ichthyology, Mechanics • Machinery, Ornithology and Quadrupeds. This seems to have some influence on the illustrations in WEJI as well as in WWJ.

Some illustrations in WEJI are not taken from ADEL but from DEL or some other dictionaries. Four illustrations in section A are taken from DEL, while one is taken from CED or ID. Two in section D, three in O, and three in T are all taken from DEL. The source of Almond and Olive has not yet been ascertained. Such is the case of Tamarind and Tide. Trunk is not properly placed in the entry. It could be asserted that not all the illustrations are directly taken from ADEL.

In WWJ a similar trend is seen. In some illustrations, not ADEL but DEL is referred to. For example, Angle, Jay, Oat and Top. The illustration of Acerose-leaves is the same as that in ID. In the entry Telescope, only the same illustration as that in WEJI is used, although a few others are given in ADEL, which clearly confirms the fact that WWJ undoubtedly imitates WEJI. Or it might be argued that the editors in WWJ considered the quality of illustrations in WEJI superior, as the publisher of WEJI had the experience of exporting Nishikie (modern prints of Ukiyo-e) to foreign countries (cf. Suzuki 1985: 107).

From the lexicographical point of view, no consistency is found, as the illustrations mainly follow those in ADEL or DEL, which also cannot be considered to have shown a consistent principle in presenting illustrations. It is conceivable that WEJI and WWJ only follow the examples of their great predecessor EJ in this area.

(Section 9 by Dohi)

10. Supplement and Appendix in Later Editions

The last section briefly mentions the revised editions. MEJ is one of the first dictionaries in which most of the materials are taken from Webster’s dictionaries. But regrettably, it was never revised or enlarged, which caused it to become forgotten, even among students of English studies.

WEJ1 in its title page claims it was published in 1887, but the publication date in the back matter tells us it was issued in 1888. The back matter in later editions shows that the first edition seems to have been issued in November 1887. The second edition entitled 『訂正増補和英英字典』 Teisei-Zoho-Wayaku-Ei-Jii (WEJ2) was issued about a year later in 1888. Its striking feature is that the text of the dictionary is enlarged by about 90 pages, and the appendix is also greatly expanded by about 350 pages, clearly because of the direct inclusion of the appendix in ADEL. The following added in the appendix is particularly characteristic of the appendix of ADEL: A Vocabulary of Prefixes and Suffixes, A Pronouncing Gazetteer of the World, A Pronouncing Biographical Dictionary, Geographical Terms, of which the second and the third are taken from the editions issued later than 1884 (Hayakawa To appear: 162-64). The fourth edition (1890) newly includes about 75 pages of A Classified Selection of Pictorial Illustrations in This Work. The sixth edition (1891) is the next one which undergoes a major revision, as it contains, in over 240 pages, a Supplement of New Words and Phrases. The major revision is also found in its 19th edition (1899), where A Classified Selection of Pictorial Illustrations is replaced by A Handbook for All the Technical Terms and Phrases in Commerce. This seems to sum up its revision. This fact shows that WEJ is issued under the strong influence of Webster’s dictionaries, often trying to revise or enlarge itself.

WWJ, on the other hand, cannot be said to have been revised or enlarged as often as WEJ. WWJ1 was issued several months later than WEJ1. A larger number of pages in WWJ do not necessarily ensure a larger number of headwords (cf.4.3.1.). Its 14th edition (1891), revised by a Sanskrit scholar Fumio Nanjo, includes A Pronouncing Biographical Dictionary of about 180 pages, while its 16th edition (1891), issued only a few months later and revised by the same scholar, is greatly revised and extended. It is
interesting to note that the 16th edition has, in over 270 pages, a Supplement of headwords. A detailed study of \textit{WEJ} and \textit{WWJ} might show Webster’s influence and also to what extent the two differ.\textsuperscript{3}

The two competing dictionaries were so often reprinted and issued that they could be reasonably considered to have had a larger influence on English education than original Webster’s dictionaries. \textit{WWJ} survived, thanks to the editor’s recognition that the dictionary was weak in the coverage and translation of technical and scientific terms. This led him to recruit a lot of scholars to improve the content and translation equivalents (cf. 3.1.5.) and to produce two other dictionaries: \textit{Shinyaku-Eiwa-Jiten} (1902) and \textit{Mohan-Eiwa-Jiten} (1911), which will be referred to in the next installment.

(Section 10 by Dohi)

11. Conclusion

As has been made clear, regarding many facets of the information given, the three dictionaries in the 1880s are heavily indebted to Webster’s dictionaries, and utilize resources from them.

As to headwords, \textit{MeEJ} almost completely takes words from \textit{DEL}, and in the latter part also takes words from \textit{ADEL}. \textit{WEJ} takes the headwords from \textit{ADEL}, deleting mainly the words labeled obsolete or rare, and also some technical words. \textit{WWJ} is not so straightforward in that it takes a large number of words from \textit{ADEL} as well as from \textit{CED}.

As for examples, \textit{MeEJ} is indebted more to \textit{ADEL} rather than to \textit{DEL}. \textit{WEJ} could be said to be a dictionary that imitates \textit{MeEJ}, as so many of its examples are just the same as those given in \textit{MeEJ}, compared with the number of those that are not. \textit{WWJ} is more complex in that it is indebted to the former two dictionaries, \textit{MeEJ} and \textit{WEJ}, but also tries to be a dictionary with more examples, including quotations from \textit{ADEL}.

\textit{MeEJ} is the first English-Japanese dictionary that separated different word senses into groups. The sense demarcation is based on \textit{DEL} in many cases. \textit{WEJ} also adopted this principle of separating the senses in different sense groups.

\textit{ADEL} and \textit{ECD} both had great influence over English-Japanese dictionaries that were compiled and published in 1880s. In fact, it was mainly from \textit{ADEL} that \textit{WEJ} and \textit{WWJ} inherited the encyclopedic information. \textit{MeEJ}, \textit{WEJ} and \textit{WWJ} all include encyclopedic information in their entries, but \textit{WWJ} is the most encyclopedic of the three.

The translations in \textit{MeEJ}, \textit{WEJ} and \textit{WWJ} are mostly the same. \textit{WEJ} may have copied the translations from \textit{MeEJ} in earlier entries. \textit{WWJ} may also have copied its translations from those of \textit{WEJ}. However, some of the translations in \textit{WWJ} may have their source in \textit{EJ} or \textit{ECD}.

Translations in \textit{WEJ} and \textit{WWJ} are generally kango-oriented, for most of their translations were borrowed from their predecessors, in many of which the influence of \textit{ECD} and \textit{EJ} is evident. \textit{TJ} was also used to supplement the description of technical words in \textit{WWJ}.

Difficult kango terms were accompanied by corresponding wago terms to help the users’ comprehension. Wago terms were added either to paraphrase the meaning of kango or to show the pronunciation of kango. \textit{WWJ} provides more wago explanations than \textit{WEJ}.

\textit{WEJ} and \textit{WWJ} include illustrations mainly from \textit{ADEL}, and \textit{WEJ} has a larger number of them. \textit{WWJ} seems to have imitated \textit{WEJ}, as most of the illustrations in \textit{WWJ} are just the same as those in \textit{WEJ}.

Pronunciation notations in \textit{WEJ} and \textit{WWJ} are clearly influenced by \textit{ADEL} or \textit{DEL}, as they employ the same pronunciation and the same presentation.

Both \textit{WEJ} and \textit{WWJ} make use of subject labels. Their labeling also seems to be based on \textit{ADEL}. The encyclopedic information is often provided with subject labels.

\textit{MeEJ}, \textit{WEJ} and \textit{WWJ} were all innovative in terms of including encyclopedic information in their entries. The information was usually the translation of word definitions or notes of \textit{ADEL}. Actually this seems to be the reason why \textit{WEJ} and \textit{WWJ} carry the word 和訳 wayaku (Japanese translation) in their titles.
NOTES

Section 1
1) The original title is shown in parentheses, and the translated title in square brackets.
2) On abbreviations of the dictionaries referred to in this installment, see the Cited Dictionaries And Their Abbreviations at the end of the article.
3) This writer would like to express special gratitude to Dr. Isamu Hayakawa for kindly letting him know about his forthcoming book.
4) EF includes the following: headwords, syllabication, parts of speech, accent, pronunciation, translation equivalents, examples and idioms, grammar and usage, register or style, illustrations, appendix with a table of irregular verbs.
5) The preface by Shimada in the second edition says that approximately 8,000 copies of the first edition were sold. Ida (1980: 11) writes that WEJ had its 34th edition issued in 1909 (the 42nd year of Meiji). Suzuki (1985: 108) writes that WEJ was issued until 1923 (the 12th year of Taisho). The numbers of some editions in Japanese title pages do not correspond with those in English titles, which is also the case of WWJ.
6) Sansciedo (1982: 32) says that more than two million copies of WWJ were printed by the end of 1900, but the number is quite doubtful, when the preface of the 41st edition (1900) is taken into account, as Iwasaki quotes (1935: 86): "...more than ONE HUNDRED THOUSAND copies having found their way to all parts of the Empire of Japan..."
7) We would like to express our special gratitude to Prof. Shigeru Takebayashi and Prof. Keisuke Nakao for their encouragement, and also to Prof. Robert H. Thornton for the final draft.

Section 2
1) This section is largely based on Matsumura (1983, 1984, 1985) as well as Sakurai (1933).
2) The terms Seisoku (regular) and Hensoku (irregular) were originally applied to the courses of education. Later they came to be used in teaching and learning English, which is clear in this quoted passage.
4) Hayakawa (To appear: 22, 49-50) points out that the Elementary Spelling Book of 1866 revised by W.G. Webster, son of N.Webster, and L.Webster, daughter of N. Webster, was widely used in Japan. (cf. Ikeda 1967: 15-16.)
5) See Shin (1994) on W. Lobscheid and his English and Chinese Dictionary (1866-69). After this writer found the ECD in the National Archive that contains not only a preface but also dedications, he happened to know the articles by Nasu (1995, 1997).
6) This is found in the second page of the preface dated on April 28th 1866 by W. Lobscheid, as quoted here: Great difficulty has been experienced in the selection and rejection of the English words. Though all those words marked as obsolete and "little used" in Webster have been omitted, there are still some, which a missionary, and others which a merchant may not require. "According to the publisher's notice, the work was begun in 1864, so the selection of headwords in ECD seems to have been based on the 1859 edition of the dictionary by Webster, or its 1847 edition, as the editor Lobscheid had a contact with Commodore Perry (Nasu 1997: 226). The expression "little used" is not found in Webster, and it seems to be used for "rare." (cf. Shin 1994, Nasu 1995.) This idea might have given a hint on the selection of headwords in WEJ and WWJ. (cf. 6.2.2.2.)
7) The title page says The Imperial Dictionary, English, Technological, and Scientific, on the Basis of Webster's English Dictionary, with the... The preface on page iv dated on October 1860 for the 1863 edition says "... it appeared advisable to select some appropriate existing Dictionary as a basis, without, of course, interfering with copyright. Fortunately, on this point no difficulty was experienced. The American Dictionary of Dr. Webster presented itself as being by far the most suitable for the purpose. In its etymologies, its copious vocabulary of English words, and its clear and accurate definitions, it stood unrivalled. Its high claims were universally recognized throughout the United States; and in this country too, where it had obtained a pretty wide circulation, it was acknowledged to be superior to all other English Dictionaries." (cf. Hayakawa 1997: 76.) Ida (1980: 10) says that the English dictionary by Webster which ID mentions is the 1828 edition. There might be a possibility of Ogilvie referring to the 1840 edition (cf. Kashiwabara 1984: 213.)
8) It does not distinguish two kinds of dictionaries: A Primary School Pronouncing Dictionary of the English Language (1867), and A Primary School Dictionary of the English Language (1849), and it is not clear which dictionary is meant. (cf. Sugawara 1989.)
9) Ikeda (1967: 18) points out that there is Webster's Unabridged Dictionary (i.e., An American Dictionary of the English Language Revised edition. 1744p. New Haven, 1847) in a high school of Too Gijuku in Aomori Prefecture in Northern Japan. But now it does not exist. The 1847 edition seems to have been the oldest that used to exist.
10) Last but not least, the National Archive in Tokyo now has some kinds of Webster's dictionaries. The oldest edition of Webster's Unabridged Dictionary is its 1863 printing of the 1859 edition, and the institution has a series of, but not successive, Unabridged dictionaries (Hayakawa To appear: 132-43.)

Section 3
1) This section, except 3.1, 3.1.2, 3.2.1, and 3.2.2, is largely based on the following works: Seki (1996), Takeuchi (1995), Ikubunkan Gakuen Hyakunenshi Hensan linkai (1989), Saito (1991) and Sansciedo (1982).
2) Hosaka (1990: 80) says that H. Nagamine used an 1864 edition of the Webster's Unabridged Dictionary. Nagamine is said to have been involved in the translation from the section of F (Seki 1996: 292).
3) It is considered from Saito (1991: 45) that Saito, as an assistant editor, helped T. Tanaka with compiling WWJ, as it was only about half a year after he was involved in the compilation that WWJ was finished.
4) MEJ was issued in eight parts. Here is given their respective date of publication. The numbers in the parentheses show the numbers of text pages. Part 1 (1-100) June 1884; Part 2 (101-204) December 1884; Part 3 (205-316) September 1885; Part 4 (317-489) March 1886; Part 5 (485-688) October 1887; Part 6 (689-872) Part 7 (873-984) and Part 8 (985-1270) March 1889. J and O are included in part 5, and T in part 8. The original eight-part dictionary is larger than the bound edition, measuring 28.4 cm high × 19.6 cm wide (11.2 in × 7.7 in). The bound edition was also issued in
March 1889. This writer would like to express special gratitude to Jiro Seki for showing him part of the original MeEJ. Jiro Seki is a descendant of the author of the dictionary.

5) S. Sugiyama majored in chemistry, and J. Inoue majored in mine engineering after he did in chemistry, and A. Manase in agriculture. Some scholars in the early and middle Meiji era, who did not major in (English) linguistics or literature, were involved in compiling dictionaries, which was quite different from what it is now. Inoue was only involved in WEJ. Inoue's monumental English-Japanese Dictionary will be dealt with in the future installment.

6) It is not at all clear whether A. Lloyd was involved in supervising WEJ. It could be safely asserted that the dictionaries in the 1880s such as WEJ and WWJ began to try to make themselves more authoritative by including a native speaker's preface.

Section 4
1) Sampling was done of the reprinted editions of the three dictionaries. There is a curious fact in WWJ, the Japanese title page shows that it is the second edition, while the English title page does not. The back matter shows that it was issued on the same day as that of the first edition (cf. Section 10 note 3). It seems that the reprinted edition is not in fact the first, as there are a few differences in the English title page between the reprinted edition and the microfiche of the first edition in the Diet Library. Here a comparison had to be made of headwords, examples and translation equivalents between the two. As far as the five parts examined are concerned, there is no telling the difference, with a few small changes in the explanatory notes, which enabled this writer to use the reprinted edition in sampling.


4) Each number includes one shown as an example, not as a headword.

5) An increasing number of headwords that are not listed in DEL but are in ADEL, seem to be found in the sections after Q and R, which roughly corresponds to the description that the original author, Shimpachi Seki, seems to have been involved in A to R sections (cf. Seki 1996: 296).

6) SPD includes 7 words, while DSL does 4 words.

7) One out of 12 is found in TJ2, one is in EJ2, and two are in MeEJ.

8) The number is shown on condition that the editor of WEJ referred to MeEJ. But this writer considers it to be quite unlikely.

9) A comparison of headwords between WWJ and EJ1 or EJ2 might have made a close relation between them more explicit.

Section 5

Section 6
1) Candlemas and Calvinism are other examples.

2) Some examples that only WWJ attaches waso terms are: Cab, Caboose, Cage, Cake, Calabash, Caleographieal, Calerey, Calends, Calipers.

Section 7
1) Examples from WEJ are [簿記] (bookkeeping) at Balance-sheet and [美術] (fine arts) at Background.

Section 9
1) The number shown in the table would be different according to the way of counting. Here all the pictures except those shown as a set are counted as one.

Section 10
1) Personal communication from Dr. Hayakawa.

2) Philologically speaking, WEJ seems to have two versions of the seventh edition. One version does not give the same date of publication as other later editions, and it is titled '秀江增補 第七版 Saitei-Zho-Dai-Nanshan [The seventh edition, revised and enlarged]. This might not be the regular revised edition. It should also be noted that there exists another kind of WEJ revised by Kojiro Tatsumi (cf. Hayakawa To appear: 160–69). There might be some other versions, as the whole picture of each edition has not yet been completely ascertained. The back matter of WEJ2 (1888) shows that it had already been printed before WWJ was issued but issued a few months later. This curious and interesting fact seems to imply that WEJ1 was issued as a test dictionary and WEJ2 was the real competitor of WWJ.

3) Philologically speaking, WWJ has several versions of the first edition. The main difference seems to be whether or not there is a preface by K. Shiga, whether no page is missing, or whether part of the text is wrongly placed in the appendix and the like. Some versions have their date of publication changed with a pen for calligraphy, when the date is not set on September 19.

CITED DICTIONARIES AND THEIR ABBREVIATIONS
(The number in parentheses at the end shows the year the work referred to was issued.)


An American Dictionary of the English Language, Revised by C. A. Goodrich and N. Porter. Springfield: Merriam, 1864. (1883, 1885)


117
**REFERENCES**

(The original title is shown in parentheses, and the translated title is shown in square brackets.)


Sanseido. 1982. Sanseido no Hyakunen [A Hundred Year History of Sanseido]. Tokyo:
APPENDIX: Photographic reproductions of MeEF, WEJ and WWJ

Reproduced here are a few pages from MeEF, WEJ and WWJ, by courtesy of Jiro Seki (尺次館), a descendant of the original author, for MeEF, of Keio Gijuku University Library (慶應義塾大学図書館, Mit, Tokyo) for WEJ, and of Waseda University Library (早稲田大学図書館, Waseda, Tokyo) for WWJ.


Photograph 4. Japanese title page, WE/J.

Photograph 8. English title page, *WWJ*. 
What is ‘reference science’?

TOM MCARTHUR

It was born at a one-day conference at the University of Exeter in England in the spring of 1996. The birth was on time, the baby was small but in excellent health, and hardly made any noise. As a result, very few people knew that it had arrived. At the same time, however, there has been a steadily increasing interest in the new arrival, and in September this year (i.e. 1997 — Ed.) I talked to the Iwasaki Linguistic Circle about it in Tokyo. I believe it is a subject whose time has come, but it will take a little more time before the precise nature and relevance of ‘reference science’ become clear.

Before I go on I’d like to look at a rather basic issue — the actual matter of inventing a science. Can one just invent a science when one feels like it? And if you do, how does it stay invented? Does a new science occupy new semantic or conceptual space, does it ‘steal’ space from other sciences, or does it overlap, flowing in and out of them? Or are these the wrong metaphors? And if you do invent a science, when and how do you know if you’ve succeeded — ten, twenty, a hundred years later? I would argue that these questions are not just interesting in general terms; they are questions for which reference science could itself provide a framework for answers — and further questions. Looking back over the year since we launched our fledgling science, four things particularly stand out for me:

- Reinhard Hartmann creating the Dictionary Research Centre, which has proved successful in getting lexicographers and other interested people to talk to each other.
- Study programmes at Exeter, from the doctoral level to the one-week InterLex course, that allow open-ended consideration of ev-