

DUTCH AS THE LANGUAGE OF SCIENCE AND TECHNOLOGY IN JAPAN: THE *BANGOSEN* LEXICAL WORKS*

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Résumé

Le néerlandais a joué un rôle important mais variable au Japon au cours des deux siècles de la période de Sakoku (env. 1642-1863). Du fait de la politique isolationniste de l'archipel, les contacts avec l'Occident étaient réduits à un petit comptoir néerlandais à Nagasaki. Au début, une guilde d'interprètes fut chargée d'acquiescer la maîtrise de la langue orale afin de faciliter les échanges avec les Néerlandais, mais au fil du temps les Japonais prirent de plus en plus conscience de l'avance technologique et scientifique de l'Occident et cela fit émerger une demande plus générale pour des compétences linguistiques plus sophistiquées. Le présent article examine un manuel d'apprentissage qui parut sous deux formes successives: le *Bangosen*, publié à la fin du XVIII^e s., et le *Kaisei Zoho bangosen*, paru un demi-siècle plus tard, soit six ans avant l'arrivée des « bateaux noirs » de Perry dans la Baie de Tokyo. Ces ouvrages nous offrent donc deux « instantanés » pris à cinquante de distance et nous donnent une idée de l'évolution des compétences linguistiques en néerlandais au Japon, de même que de la perception des choses occidentales dans l'archipel à mesure de l'inexorable ouverture de ses frontières.

Mots-clés

Japon, Edo, rangaku, étude de l'Occident, néerlandais, Dejima, grammaire européenne, vocabulaire, katakana, Morishima Chūryō, Mitsukuri Genpo.

Abstract

The Dutch language played a significant but changing role in Japan over the two centuries of the Sakoku Period (ca. 1642-1863). Isolationist policies meant that contact with the West was virtually restricted to a tiny Dutch trading post in Nagasaki. Initially, a guild of interpreters was given the task to master the spoken language in order to facilitate communication with the Dutchmen, but as time passed, a growing awareness of the technological and scientific advances in the west created a broader demand for more sophisticated language skills. Discussed here is a learning manual in two incarnations: *Bangosen*, published at the end of the 18th century, and *Kaisei Zoho bangosen*, which appeared half a century later – six years before the arrival of Perry's 'black ships' in Tokyo Bay. As such they provide us with two 'snapshots' taken fifty years apart, giving us an idea of the evolution of Dutch language skills as well as of awareness of things Western, as Japan moved towards the inevitable opening of its borders.

Keywords

Japan, Edo, rangaku, Western learning, Dutch language, Dejima, European grammar, vocabulary, katakana, Morishima Chūryō, Mitsukuri Genpo.

* Typographical note: *Katakana* was sometimes used by the Japanese to represent Dutch words in their word lists and teaching manuals. Katakana, like hiragana, is a syllabic script that largely represents consonant-vowel combinations. It represents the Japanese language perfectly, but can often provide no more than approximations of Dutch words, much in the way that a picture with large pixels can only give an approximate representation of the original image. In this article, katakana representations of Dutch words as they appeared in the Japanese works are shown in SMALL CAPS as a demonstration of such distortions, to assist those who do not read Japanese script. All other non-English words are shown in italics.

The period from the middle of the seventeenth century until 1868 has traditionally been referred to in relation to Japan as the “Period of National Isolation”. Some have objected to this term, since Japan during this time was not entirely shut off from the outside world—a certain amount of coming and going took place, information about world events were formally and regularly transmitted to the Japanese authorities, and particularly during the first half of the 19th century concerted efforts were made at official levels to acquire knowledge of Western science and technology, in what by then was seen as an inevitable ending of the isolationist policies of the Japanese government, which indeed eventuated with the Meiji restoration in 1868.

Central to much of this activity was the tiny Dutch trading post in Nagasaki, which was allowed regular ship visits, and was supported by a guild of interpreters, the curiosity of some of whom led them beyond the basic language skills required for trading purposes to the translation of Dutch books and the study of, in particular, Western medicine.

An important element in this channelling of Western knowledge into Japan was therefore the Dutch language, which more or less became the language for science in Japan over the 250 years of virtual isolation. Guild members’ sons were introduced to the Dutch language as young teenagers, but once they reached adulthood, knowledge of the language was passed to them in classes with senior members of the guild, and via written materials. Although later on efforts were made to come to terms with the grammatical issues between the languages, initially these written materials consisted mainly of vocabulary lists, often in traditional formats that were of Chinese origin, in which words were listed under semantic categories.

Towards the end of the eighteenth century others, outside the Nagasaki interpreters guild, became interested in Western culture, science and technology, and although the guild’s members were by and large reluctant to share their Dutch language skills with outsiders, from time to time, respected visitors from Edo and other centres were allowed to travel to Nagasaki and received instruction and materials from high ranking interpreters. This brought about a more academic and shared approach to the compilation of lexical works in particular, and the beginning of the 19th century saw the emergence of the large-scale alphabetical dictionaries that were to give translation of Dutch works in Japan a great boost. However, this did not spell the end of the word list in a more traditional format. *Bangosen* 蛮語箋 (“A List of Barbarian Words”), a work that represented foreign (mainly Dutch) words under categories and in *katakana* only, did not appear until the late eighteenth century. Indeed, the last of the *Bangosen* versions, *Kaisei Bangosen* 改正蛮語箋 (“*Bangosen* Revised”), was published near the end of the period of national seclusion, in 1850. These works then, were not produced for the facilitation

of transactions between the Nagasaki interpreters and the Dutch traders. Rather their purpose was to make information about the Dutch language available to a wider public.

There are three publications in this series, two of which were compiled by reputable and influential scholars of Dutch language and culture (often referred to as *rangaku* 蘭学, “Dutch learning”). A period of almost fifty years elapsed between the publication of the first one, *Bangosen* 蛮語箋, and its revised and enlarged version, *Kaisei zōho Bangosen* 改正増甫蛮語箋. The period in question, from 1798 to 1847 represents a crucial period in the study of Dutch in Japan. At the time of *Bangosen*’s publication, influential Nagasaki interpreter Shizuki Tadao (1760–1806) was just beginning his investigations into Dutch grammar. By the time of the publication of *Kaisei zōho Bangosen*, understanding of Western grammar and its relation to the Japanese language had spread throughout *rangaku* circles, and the study of the Dutch language had reached its peak of popularity.

Bangosen and *Kaisei zōho Bangosen* thus provide us with two snapshots of the state of Dutch language studies at either end of this important period. Both works are examined here in some detail and compared as a measure of the considerable extent to which Dutch language studies evolved in the intervening fifty years. They also afford an interesting etymological window on the beginnings of many loanwords still in use in the Japanese language today.

The third work in this series, *Kaisei Bangosen* 改正蛮語箋 appeared in 1850, three years after the publication of *Kaisei zōho Bangosen*. It is a smaller work that was certainly not an improvement on its predecessors.

BANGOSEN 蛮語箋 (1798)

Although *Bangosen* was not the first work about Dutch to appear in print in Japan, it was the first work of reference to do so. It first appeared under the title *Ruiju orandago yaku* 類聚紅毛語訳 (“A Categorized Collection of Translated Dutch Words”)¹ in 1798, but its title was changed to *Bangosen* soon after². Its compiler, Morishima Chūryō (1754–1810), was a member of the distinguished Katsuragawa family of physicians and *rangaku* scholars in Edo, and was himself a physician as well as a prolific and influential writer of academic works and comic poetry.

Morishima was financially dependent on his elder brother Katsuragawa Kuniakira (1741–1809), himself an influential *rangaku* scholar who, as a personal

1 The Chinese characters 紅毛 in the title of this work literally mean ‘red hair’, and were commonly used to refer to Dutchmen, as distinct from the dark-haired ‘southern barbarians’, the Portuguese. The title is usually transcribed, conforming to the common readings of these characters, as *Ruiju kōmōgo yaku*. However, in the work itself, under the category Geographical Terms, the author makes it clear that 紅毛 is to be read as *Oranda*, which is a Japanese rendition of the name Holland, based in turn on its Portuguese version.

2 Sugimoto 1991, p. 267.

physician of the Shogun, had obtained permission to meet with the Dutch trade mission whenever it visited Edo. He also had contact with a number of Dutch scholars and doctors (among them Titsingh and Doeff), and had over the years been given a considerable number of Dutch books³. It is likely that Morishima also had occasional encounters with members of the Dutch trade missions, and based on these experiences and knowledge and books, Morishima wrote the widely-read and influential 紅和雜話 (*Oranda zatsuwa*⁴, “Miscellaneous stories about Holland”, 1787), a series of essays describing the world outside Japan. He was a prominent member of the small but enthusiastic group of *rangakusha* (scholars of Western learning) in Edo at the time, as his depiction as a guest of honour in a famous illustration of the 1795 Dutch New Year’s celebration at the Shirandō Academy attests.⁵

Bangosen, a pocket-sized volume measuring only 18 cm by 12 cm, was obviously intended for convenient use in a variety of situations. Its format is similar to that of the earlier word lists mentioned above, to the extent that Dutch words are represented in *katakana* only, and classified under various categories⁶. It is worth noting that the selection of categories here bears a resemblance to those of a Dutch–French glossary for schools, a fifteenth edition of which was published in 1832.⁷

The absence of a representation of the Dutch words in the alphabet is the major drawback of this work, for at least two reasons. In the first place it is impossible to produce more than an approximation of the accurate pronunciation of a Dutch word in *katakana*. Secondly, without the Roman spelling of the words this work would have been of little use as a reference work in conjunction with texts written in Dutch. It is likely that this little book was intended to be used not so much as a work of reference, but rather as an aid for memorisation of Dutch vocabulary.

Exploring the reasons for the use of *katakana* in what was clearly a work of ambitious scope in other aspect, Feenstra-Kuiper suggests that many Japanese would have been intimidated by the prospect of learning and using the Roman alphabet⁸. That, however, raises the question why Japanese scholars who did not balk at the memorisation of thousands of Chinese characters would be intimidated by the prospect of learning a mere twenty-six Roman letters. The answer, of

3 MacLean 1974, p. 39.

4 For reasons stated above, this work is commonly referred to as *Kōmō zatsuwa*.

5 Hesselink 1995, p. 208.

6 This classifying of words in glossaries was, however, not an invention of the *rangaku* scholars, but a Chinese tradition. Its application here does not necessarily indicate a connection between *Bangosen* and the earlier word lists.

7 Namely Cazelles, Charles, Van Bemmelen J. and Van Lingen W., *Nouvelle Méthode Familière*, J. Noman & Fils, Zaltbommel, 1832.

8 Feenstra-Kuiper 1921, p. 257.

course, lies in the fact that the nature of the letters in the Roman alphabet is quite different from the signs in the *hiragana* and *katakana* syllabaries, most of which each represent a consonant-vowel combination. Dividing these syllables into their constituent vowel and consonant was a practice which was foreign to the Japanese, and understandably provided one of the greatest hurdles in the study of the Dutch language.

During the height of its popularity, *rangaku* studies saw large numbers of ambitious students dedicating themselves to the memorisation of Dutch words and phrases with the aid of *katakana* word lists, either because it was fashionable or perhaps in the vain hope that it would enable them eventually to decipher the spoken or written word in Dutch. Against this background, it is tempting to suggest that Morishima's objectives with respect to the production and publication of *Bangosen* may have been commercial rather than academic. If so, his aims appear to have been met. Although exact quantities are not known, the fact that copies of *Bangosen* can be found in several collections, both in Japan and in the Netherlands, suggests that a considerable number were printed. By far most of these would have been used for the purpose they were designed for, that is, as a learning aid for those in Japan who were interested in the West and wanted to know more about the Dutch language, either in an attempt to come to terms with the Dutch books on science and technology that gradually became more available, or in preparation for a possible future end of the isolation policies, after which it might become possible to have conversations (or even do business) with foreigners. Few copies found their way to the Netherlands. The rules regarding removing items from Japan were very strict, and at any rate most Dutchmen volunteered for a stint on Dejima for financial gain, and here was little interest in the Japanese language and culture among them.

The introduction to *Bangosen* is quite specific as to *kana* usage:

Where two letters represent a single sound,⁹ *kana* are combined as クワ (*kwa*), チャ (*cha*) and such. Lengthened vowels are indicated with a line, thus: ハー (*haa*), マー (*maa*). Assimilated sounds¹⁰ are written with a small *tsu*, as follows: ハツ, ヒツ and so on. Words in combinations are separated by a large circle. 'Gathered' *kana*¹¹ are written applying a small circle, thus: ハ^oウ, カ^oウ, and should not be confused with the pronunciation of ホヲ and コヲ.¹²

- 9 That is, when they occupy a single *mora*.
- 10 Where the vowel of a *kana* is silent and its remaining consonant forms a cluster with that of the following *kana*. Thus, the first /k/ in the word *hakken* is represented by a small *tsu*: ハツケン (*hatsuken*).
- 11 *Hiroigana*, 拾ヒ仮名 is the application of a vowel *kana* to determine and lengthen the vowel sound of a preceding *kana*. The examples in this sentence are pronounced as *hō* and *kō* respectively. This usage remained standard until the writing reform of 1946 (Seeley 1991, p. 154).
- 12 The distinction between these sounds no longer exists in Japanese.

Nevertheless, there are numerous inconsistencies in the work with regard to *kana* usage. While some inconsistencies may not have confused students, other infelicities range from confusing to unhelpful. For example, the double consonant in *winnen* ('to win') is expressed as a *mu+ne* combination: キム子ン (WIMUNEN), despite the availability of the consonant *n* in the *kana* syllabary. Yet, *dommekracht* is transcribed as ドンメ カラクト (DONME KURAKUTO), with the first /m/ represented by the *n* consonant. A rendition such as オントステルレン (ONTOSUTERUREN) for *ontstellen* shows how difficult it would have been for a student to reconstruct the original Dutch word in alphabet script.¹³

Thus, the *katakana*-only notation for the Dutch words made it difficult for Morishima to produce more than an approximation of their true pronunciation. In addition, inconsistencies in the representation of Dutch vowel combinations suggest that Morishima had an imperfect understanding of their pronunciation.

It is important to understand that while Morishima had access to Dutch books, he had little direct contact with Dutch native speakers. Much of what he understood to be correct pronunciation had been conveyed to him orally via interpreters or fellow *rangaku* scholars. One way in which the Edo *rangakusha* made efforts to develop linguistic and cultural knowledge was through regular gatherings of like-minded scholars, where they practiced conversations and kept Dutch traditions. The 1795 Dutch New Year's celebration mentioned above is an example of this. In the absence of native or expert speakers of the language at such occasions would have fossilized mispronunciations, or created new ones. Thus, many of the errors in *Bangosen* would have been the result of corruption that had entered the language through generations of Nagasaki interpreters passing Dutch language expertise on among themselves without moderation by native speaker moderation.

Such shortcomings would have rendered *Bangosen* all but useless for anyone wishing to achieve a useful level of proficiency in the written Dutch language or to consult Dutch books. It is nevertheless a work of considerably greater sophistication and accuracy than its predecessors and the work achieved considerable popularity and influence, as evidenced by the fact that it went through numerous printings. Copies can still be found in various collections all over Japan and even in Europe. It spawned two follow-ups. In 1847 Mitsukuri Genpo published a revised and enlarged version of the work under the title *Kaisei zōho Bangosen* 改正増補蛮語箋 ("Revised and Enlarged *Bangosen*"), while 1850 saw the appearance of a work called *Kaisei Bangosen* 改正蛮語箋 ("Revised *Bangosen*").

In common with certain early Chinese dictionaries, *Bangosen* presents its entries in semantic categories. This is not unexpected. The Japanese writing system is based on Chinese characters, which began to be used in a meaningful way in

13 In modern Japanese, the small *tsu* is only used to indicate pairs of unvoiced consonants.

Japan during the sixth century AD. Since Chinese characters are not simply phonetic representations (like the alphabet), and cannot easily be used for non-Chinese languages, initially all writing in Japan was done in Chinese. Gradually adaptations such as *katakana* and *hiragana* were introduced that enabled the Japanese to write in their own language, but Chinese formatting traditions continued to be used, and in some cases survive to the present day.

The semantic categories in *Bangosen* are as follows:

1. 天文 (*tenmon*) *Astronomical and meteorological names (79 entries)*.

Included here are the words for sun, moon and stars as well as the names of various meteorological phenomena, such as ‘rain’ and ‘frost’, and the twelve signs of the zodiac.

2. 地理 (*chiri*) *Geographical terms (78 entries)*.

This is a collection of general geographical terms loosely grouped according to associated meaning, such as ‘district’, ‘country’, ‘town’, ‘village’, etc., or ‘well’, ‘pond’, ‘fountain’, ‘spring’, ‘waterfall’ etc., as well as some place names.

Holland is written here as HORURANDO ホルランド, with the first “l” of the double consonant represented as *ru* ル. Its Japanese equivalent is given as 紅毛, (‘red hair’), an indication that Morishima intended this combination of characters (which also appears in this work’s original title; see above) to be read as the Japanese name for Holland, that is, *Oranda*, a Portuguese loanword that is still in use today.

3. 時令 (*jirei*) *Expressions of time (53 entries)*.

This briefest of categories presents the names of the seasons, months and days of the week, as well as various times of day.

4. 人輪 (*jinrin*) *Human relations (166 entries)*.

Here we find the words which describe humans in terms of age, gender and their position in society and the family. Thus, entries such as man, woman, son-in-law, niece and concubine can be found here, but also poverty and wealth, as well as a list of positions in society ranging from emperor to prostitute. Although the Dutch traders in their diaries and letters generally used the word *keizer* (‘emperor’) when referring to the Shogun, here *keizer* is shown to mean *mikado* 帝, that is, not the Shogun, but the emperor of Japan. The word *shōgun* does not appear among the various Japanese official rankings listed.

5. 身體 (*shintai*) *Anatomy (109 entries)*.

While Morishima did not include entries for ‘arm’ and ‘leg’, he considered the lines in the palm important enough to be included, as 手文, *streep van de hand* (‘stripe of the hand’).

The Dutch word *pols*, which can mean both ‘wrist’ and ‘pulse’, is translated with the character 脉, indicating that the meaning of ‘pulse’ is intended here.

6. 疾病 (*shitsubyō*) *Diseases (80 entries)*.

Since medical studies were a major motive for Dutch studies in Japan, and considering Morishima's own medical background, this list is surprisingly short.

Several Dutch words in this category are unidentifiable. Fifty years later, when Mitsukuri Genpo compiled his improved version of this work, he appears to have had difficulty with these entries as well, and supplied his own versions.¹⁴

7. 神佛 (*shinbutsu*) *Gods and Buddhas*.

This category appears in the table of contents only, with the added remark that it has been 'omitted for the time being'. It has been suggested that there may have been political reasons for this, since the appearance of Western religious terms and names might have been seen as prohibited Christian propaganda.¹⁵

8. 宮室 (*kyūshitsu*) *Palaces (81 entries)*.

Though the heading of this category is 'Palaces', included here are the names of various kinds of buildings (house, temple, prison, etc.), spaces within buildings (guestroom, kitchen, treasure room, etc.), parts of buildings (wall, beam, stairs, window, etc.) and a variety of shops and markets. Of interest here is the word *garderie* to represent 'barred window'.

9. 服飾 (*fukushoku*) *Attire (80 entries)*.

This section includes not only items of clothing, but also jewellery, several kinds of cloth, and a selection of colours.

The presence in the list of some seventeen different kinds of cloth as well as an extensive array of colours including such delicate hues as 'royal green', 'apple blossom' and 'olive' may be explained by the lively trade in textiles that regularly erupted in Nagasaki.

10. 飲食 (*inshoku*) *Food and drink (50 entries)*.

This is a relatively short list of foodstuffs, alcoholic beverages, ingredients, flavours and cooking methods. Most items in this listing were known in both cultures ('tea', 'sugar' etc.), and were matched without difficulty. In other cases, some creativity is evident. For *Spaanse wijn* ('Spanish wine'), *budōshu* 葡萄酒¹⁶ ('alcoholic drink made from grapes') was used, while the word *koekje* ('biscuit' or 'cookie') was approximated with the term *anmochi* 餡餅, which is in fact a kind of rice bun with a soft sweet filling made from beans.

11. 器部 (*utsuwa-bu*) *Tools and instruments (276 entries)*.

Looking over this rather extensive category, one can envisage the compiler listing literally what he saw around him. The word 'clock' eventually leads to 'sundial', whereupon the compiler finds himself out of doors, noting objects relating

¹⁴ See below.

¹⁵ Numata et al. 1984, p. 766.

¹⁶ Morishima has in fact mistakenly used the character 蒲 here.

to horse riding and warfare. In the latter category the Dutch word for the Japanese term *chōjū* 鳥銃 (‘fowling piece’) is given as SUNAPPAN スナッパン, which is a representation of the Indonesian word for rifle, *senapang*, which is in turn a derivation of the Dutch *snaphaan* (‘flintlock’).

In a more technological area, we find items such as ‘marine map’, ‘telescope’, ‘thermometer’, and ‘magic lantern’. Of particular interest here are the more advanced products of Western technology. Thus we find here *donker kamer* (lit. ‘dark room’), which is translated as *shashinkyō* 寫真鏡 (lit. ‘optical instrument that projects reality’). The term *shashin* is used today for ‘photograph’; however, since the publication of *Bangosen* preceded the invention of photography by more than twenty years, it is clear that this ‘dark room’ is a *camera obscura*, a box with a lens which projects an image of the outside world on a pane of frosted glass¹⁷. Under the entry *brandsteenkracht* (an obsolete Dutch word for electricity), we find the Chinese characters 野禮畿天爾, applied phonetically to represent EREKITERU エレキテル. This is an abbreviation of EREKITERISHITEETO エレキテリシテート, from the Dutch *electriciteit*. The final listing in this category is the word *paternoster* for ‘rosary’. Rosary beads were of course a common object in Buddhist Japan at the time, but the use of such a Catholic term here is a little surprising, and could be the result of the compiler’s being unaware of its etymology.

12. 金部 (*kanebu*) *Metals* (22 entries).

This list is surprisingly short, given the considerable amount of trade between the Dutch and the Japanese during the Edo period. The Dutch word for tin (*blik*) is given as BURIKI ブリキ. This is likely the first recorded use of this word, which is the common term for tin in Japanese today.

13. 寶石 (*hōseki*) *Precious stones* (26 entries).

This section also includes not-so-precious materials such as coral, chalk, sulphur and fossilised shells. ‘Glass’ is represented by the Chinese characters 玻璃, but it is given the reading ビイドロ *biidoro*, a loan word based on the Portuguese word for glass, *vidro*.

14. 鳥部 (*toribu*) *Birds* (54 entries).

Entries in this category include indigenous and exotic birds. The inclusion of ‘bat’ here shows that the term 鳥 to Morishima did not indicate merely birds so much as ‘small flying creatures’.

15. 獸部 (*kemonobu*) *Mammals* (52 entries).

All animals listed here were already known to the Japanese through contact with the Chinese, and there is no confusion as to which animal is which. Of interest is the Dutch entry for ‘giraffe’ which is listed as KĀMERO PARUDARYUSU

17 Two of these objects are listed among the items sent to Japan in 1747 (MacLean 1974, p. 13).

カーメロ・パルダリユス. An obsolete Dutch expression for giraffe is *camelo pardalis*, a pseudo-scientific name derived from the words *kameel* ('camel') and *paard* ('horse').¹⁸

16. 魚介虫 (*gyokaichū*) *Marine creatures (52 entries)*.

Besides fish, many other aquatic creatures are included here. In spite of the importance of seafood in the Japanese diet, this section is riddled with errors, and is perhaps the least reliable in the entire work.

Funa 鮒 ('carp') is mistranslated as *baars* ('perch'), *saigyo* 豺魚 ('shad') as 'herring', *kamasu* 梭魚 ('barracuda') as 'pike', *kisu* 櫛魚 ('sillaginoid') as 'smelt' and *rogyo* 鱸魚 ('sea bass') as 'cod'. Since there are certain visual similarities between some of the original species and those they became in translation, it is possible that Morishima worked from a book with illustrations.

17. 虫部 (*mushibu*) *Worms, insects and reptiles (28 entries)*.

Although the heading for this category is 虫 *mushi*, a character usually understood to represent insects, worms and small reptiles, the inclusion here of dragons, snakes and lizards makes it clear that larger reptiles were also thought to belong to this class.¹⁹

Interesting is the entry *KŌSHIN NIIRU* コーシン ニール, which is paraphrased as *shōjōhi o someru mushi* 猩々緋ヲ染ル虫 ('a bug that is imbued with scarlet'), and is no doubt a version of the French word *cochenille*, a Mexican insect that was used for the manufacture of a scarlet dye (viz. Engl. 'cochineal').

18. 草部 (*kusabu*) *Plants (138 entries)*.

This is a large list, which reveals a number of interesting linguistic sources and influences. A considerable proportion of the Dutch names in this list cannot be traced, possibly because they are obsolete, corruptions or local variants.

For example, the Dutch entry for 'carrot' is *NINJINGU* ニンジンヅ. It is possible that this variant of the Japanese word for carrot, *ninjin*, had achieved common usage among the Dutchmen in Nagasaki, giving the Japanese the mistaken impression that it was also a Dutch word.

Peterselie ('parsley') is shown in Japanese as 芹菜 with the reading セリ *SERI*. Thus the modern Japanese word for parsley, パセリ *paseri*, may be a hybrid loan word derived from English and Dutch origins.

19. 木部 (*kibu*) *Trees and fruits (82 entries)*.

Trees from the tropics, such as cinnamon, nutmeg, date, fig, and clove, figure prominently here. Although the list features a variety of fruit trees, the apple does not make an appearance.

18 *Woordenboek der Nederlandsche Taal*.

19 That is, with the exception of turtles and crocodiles, which are classified under 'fish'.

20. 数量 (*sūryō*) *Numbers and quantities* (49 entries).

This very short list features numbers and measurements. Morishima takes his ‘no foreign script’ policy to extremes here by showing the Dutch entries of the numbers in *katakana* only, without supplying arabic numerals.

The entry for the measure 一撮る (‘a pinch’) is given the reading ミツユビ (*mitsuyubi*, lit.: ‘three fingers’), which in modern Japanese means the term for a respectful bow executed with three fingers of each hand touching the floor.

21. 言語 (*genɡo*) *Language* (303 entries).

This, the largest category of the work, would have been more appropriately headed as ‘Abstract’, since it consists of over three hundred words arranged in loose groups of associated abstract meanings. Many are paired with their antonyms, such as ‘large’ and ‘small’, ‘front’ and ‘back’, ‘float’ and ‘sink’. Although adjectives make up the bulk of the list, little consideration has been given to word classes, and examples such as the adjective *waar* (‘true’) being paired with *lieg* (the first person form of the verb *liegen*, ‘to lie’), and the verb *stilstaan* (‘to stop’) as a partner to the noun *beweging* (‘movement’) may be an indication that Morishima either had little or no knowledge of such classes, or considered them irrelevant here.

Although personal pronouns were not widely used in premodern Japanese, they are scattered throughout this category, and are represented in Japanese by terms one would use in conversation. Thus, the first pronoun ‘I’ is translated as a self-deprecatory *funei* 不佞 (lit. ‘sincere’) and ‘you’ is *sokka* 足下 (lit. ‘at your feet’). *Hem* (‘him’) and *haar* (‘her’) are both represented by the character *kano* 彼 (‘that person’), but in smaller characters the entries are followed by the explanatory notes *otoko ni iu* 男ニ云 and *onna ni iu* 女ニ云 (‘said of a man/woman’) respectively.

The Dutch definite article *de* is translated as 此 (‘this’), accompanied by *kore* コレ and *kono* コノ readings to indicate both the pronoun and the determiner. The second case of the definite article (incorrectly given as *den/des*; should be *der/des*) is represented by the possessive particle *no* 之, reflecting the practice to equate Japanese particles with case.

The category closes with eleven short phrases for everyday communication, such as:

爰へ来レ (*koko e kore*)

コムト ヒール (KOMUTO HIIRU, ‘*Komt hier.*’)

‘Come here’

是ハ不思議ナコト (*korewa fushigina koto*)

ダアツ ウワンデルレイキ (DAATSU UONDERUREIKI, ‘*Dat is wonderlijk.*’)

‘That is miraculous.’

此名ハ何ト申ス (*kakuno na wa nanto mōsu*)

ウイス ナーム (UIISU NAAMU, ‘*Uwes naam?*’)

‘Your name?’

and so on.

Several of the phrases relate to the buying of goods, and their Japanese versions are colloquial. Their likely source is a Nagasaki interpreter.

Appendix 萬國地名箋 (*bankoku chimeisen*) Geographical names (233 entries).

This appendix contains representations in both Chinese characters and *katakana*-Dutch of the names of countries and cities around the world.

KAISEI ZŌHO BANGOSEN 改正增補蛮語箋 (1847)

Mitsukuri Genpo 箕作阮甫 (1799–1863) was a well-known and influential physician and *rangaku* scholar of the late Edo period. He was engaged by the government as an interpreter for international negotiations, and his translation of a Western work on steam engines was used to build Japan's first steamboat²⁰. He published a woodblock version of *Grammatica* by the *Maatschappij tot Nut van 't Algemeen* in 1842, under the title *Oranda bunten zenpen* 和蘭文典前編.²¹

Mitsukuri produced 'Revised and Enlarged *Bangosen*' half a century after Morishima's original, in 1847. In the Foreword he explains that it had been necessary to revise *Bangosen* because Western studies had become more sophisticated since its publication, and also to correct errors, particularly in the section for geographical names.

Kaisei zōho Bangosen contains improvements in almost every aspect: its two volumes number almost twice as many entries as the original one-volume *Bangosen*. Many of the Japanese entries have been corrected or updated. It also presents three versions of the Roman alphabet as well as 72 syllables shown both in *katakana* and in Roman alphabet. Most significant, however, is the appearance of the Dutch words of the main text in the Roman alphabet, although their *katakana* renditions are retained. Mitsukuri's use of *katakana* for Dutch words remains inconsistent.

Mitsukuri uses all of Morishima's original categories, with the exception of the latter's 'empty' category of religious terms, probably because, like Morishima, he decided not to risk controversy, particularly at a stage when the study of things Western had gained considerably more profile, both in official circles and among the general population. The growing awareness among the authorities of the need for modernization of defence capabilities is reflected in a new category under the heading of 火器 (*kaki*, 'firearms') and the addition of a list of nautical terms. The final category, language, is so enlarged that it occupies almost an entire second volume.²²

20 Kodansha 5, p. 213.

21 Described in more detail in De Groot 2000.

22 Although Feenstra Kuiper purports to describe Morishima's *Bangosen* (Feenstra-Kuiper 1921, p. 256–257), his listing and description reveals that, in fact, he was examining a copy of Mitsukuri's 'expanded and improved' 1847 work.

1. 天文 (*tenmon*) *Astronomical and meteorological names (84 entries)*.

Although *Bangosen* already lists the words for the seven planets that were known at the time as well as the entry *hoshi* 星 *sterren* ('stars'), Mitsukuri indicates the contrast between planets and stars by adding *wakusei* 惑星 *planeet* (lit. 'wandering star') and *kōsei* 恒星 *vaste ster* ('fixed star').

2. 地理 (*chiri*) *Geographical terms (74 entries)*.

Mitsukuri adds no extra entries of significance in this category, but does make a few changes. Morishima's brief list of place names in this category is deleted.

3. 時令 (*jirei*) *Expressions of time (54 entries)*.

This section is virtually identical to that in *Bangosen*. Of interest is the entry *ima* 今 ('now'), which in *Bangosen* had been given the simple Dutch equivalent *nyū* (nu, 'now'), but is translated here as *tegenwoordig tijd*, a term that can be interpreted as meaning both 'the present time' and 'present tense'. It is the first indication in this work of the influence of the Dutch grammatical books that were circulating in *rangaku* circles at the time.

4. 人輪 (*jinrin*) *Human relations (180 entries)*.

Although he has rearranged the listings of a large number of entries, Mitsukuri has not changed or added many words in this category.

5. 身體 (*shintai*) *Anatomy (113 entries)*.

Mitsukuri adds eleven new entries to this category, such as Morishima's glaring omissions 'arm' and 'leg'.

6. 疾病 (*shitsubyō*) *Medicines and diseases (96 entries)*.

Three of *Bangosen*'s entries are deleted in this category, but seventeen new ones are added. The Japanese term for 'diarrhoea' is replaced by something called 泄瀉 with a reading provided of *kudarihara* クダリハラ, even though Morishima's earlier 下利 had been closer to the modern term *geri* 下痢.

7. *Gods and Buddhas*.

As noted above, this category is omitted here.

8. 宮室 (*kyūshitsu*) *Palaces (86 entries)*.

Mitsukuri only adds a small number of entries, and makes a few minor adjustments in this category. His addition of the words *slot* ('castle'), *vesting* ('fortress') and *geschutpoorten* ('turret holes') are perhaps an indication that during the half century since the publication of *Bangosen* there had been a considerable growth in interest in Western military strategy.

9. 服飾 (*fukushoku*) *Attire (88 entries)*.

The additions here are mostly items which were perhaps too Western at Morishima's time to have Japanese equivalents as yet, such as 'pocket', 'lining', 'glove' and 'boots'.

10. 飲食 (*inshoku*) *Food and drink* (61 entries).

The small collection of words about alcoholic drinks is amended and coarse and old-fashioned designations such as ‘sweet wine’, ‘Spanish wine’ or *zopie*²³ are deleted. Instead, we find such fine distinctions as red, white, and Rhine wine. Other additions here include cheese and cream, white and brown sugar, *beuring* for *chōkan* 腸干 (‘dried intestines’) and phrases for ‘rich and tasty food’ and ‘simple food’. Cheese and cream did not play an important enough role to have brought about the adoption of loan words until after the arrival of English language and the birth of the English-based loan words that are in use today, and they are paraphrased here rather than translated. ‘Cheese’ is translated as ‘dried whey’, but is accompanied in *furigana* by the phrase *ushi no chi no katakarimono* ウシノチノカタマリモノ, lit.: ‘a solidified substance made from milk’.

11. 器財 (*kizai*) *Tools and instruments* (294 entries).

This category has been amended considerably. Several terms relating to fire-arms have been moved to the new category *Mistukuri* added on this subject. Perhaps as a reflection of growing official awareness of an impending end to isolationist policies, a number of nautical terms have been added. New entries *galvanismus* and *dageurotijpen* also show that attempts were made to keep abreast with the latest overseas technological developments. The German word *galvanismus* (‘galvanism’, chemically generated electric current), is shown in its truncated Japanese form by means of a phonetic equivalent in Chinese characters and *furigana*, as *garuha* 瓦爾華. *Dageurotijpen* is, of course, a corrupted rendition of the French word *daguerrotype*. The reversal of the e and u vowels suggests that Mitsukuri was unaware of the word’s French origin and mistakenly thought that they represented the Dutch *eu* diphthong. This is the earliest record of this word appearing in print in Japan.²⁴ Its Japanese translation is given as *inshōkyō* 印象鏡 (‘optical instrument for images’).

11a. 火器 (*kaki*) *Firearms* (385 entries).

This is a new category that represents one of the major additions to *Kaisei zōhō Bangosen*. This extensive listing of various types of small arms and artillery as well as their constituent parts and related paraphernalia using sophisticated and accurate technical terminology shows that considerable knowledge had been acquired in this field well before the end of the period of national seclusion. MacLean notes that the importation of books on artillery began in 1835.

12. 金 (*kane*) *Metals* (26 entries).

Mitsukuri has added six new entries here. *Kalomel* (‘mercury chloride’) is represented in a phonetic Chinese character equivalent as *karomeru* 加呂蔑兒, but

23 An archaic Dutch sailors’ term for alcoholic beverages.

24 Arakawa 1967, p. 716.

is also given another entry as *zoete kwik* and translated by its literal meaning of ‘sweet mercury’ as *kankō* 甘汞, which is the modern Japanese term for mercury chloride.

13. 宝石 (*hōseki*) *Precious stones.*

Mitsukuri has added seven new entries to this category. In an amusing juxtaposition, he translates *yakōkyū* 夜光球, a luminous gem of Chinese legend whose name means ‘evening light jewel’, into the rather less poetic Dutch *karbonkelsteen* (‘garnet’).

14. 鳥 (*tori*) *Birds.*

Few changes have been made to this section.

15. 獸 (*kemono*) *Mammals.*

Mitsukuri has added ‘polar bear’, ‘lamb’, ‘bull’ and ‘ox’. For the Japanese rendition of ‘polar bear’ he uses the Chinese characters *kōriguma* 冰熊 (lit. ‘ice bear’), which is a literal translation of the Dutch *ijsbeer*. He deleted ‘giraffe’ (possibly because he couldn’t come to terms with the by then obsolete *camelo-pardalis*), and, inexplicably, ‘fox’.

16. 魚介 (*gyokai*) *Marine creatures (47 entries).*

In contrast to the care that was taken with the correction of errors in other sections, Morishima’s mistranslations in this category were simply copied uncorrected. Furthermore, although throughout this work Mitsukuri has shown a propensity for transposing the letters *l* and *r*, he really outdid himself with this remarkable little sequence: *steenblassem, kalper, haaling, spieling, seldijn, galnaar and nalwar*.²⁵

17. 虫 (*mushi*) *Insects (29 entries).*

Only ‘dragonfly’ was deleted here, and ‘sow-bug’ and ‘mite’ were added.

18. 草 (*kusa*) *Plants (151 entries).*

A considerable number of changes have been made in this category. The incidence of both Latin and common names among these indicates that Mitsukuri probably used a variety of sources for his information.

19. 木 (*ki*) *Trees and fruits (88 entries).*

Compared to the previous section, Mitsukuri has made relatively few changes here.

20. 數量 (*sūryō*) *Numbers and quantities (50 entries).*

This category is virtually identical to that in *Bangosen*, apart from a few minor changes.

Here the first volume of the work finishes. Volume Two contains the sections ‘Language’ and ‘Geographical names’.

25 Properly *steenbrasem, karper, haaring, spiering, sardijn, garnaal, narwal* respectively.

21. 言語 (*genko*) Language.

Mitsukuri completely rewrote this category, incorporating to some extent the advances that had been made in grammatical knowledge during the intervening fifty years or so. There are three sections to this category, *genko* 言語 (‘grammar’), *nichiyōgohō* 日用語法 (‘language for everyday use’), and *kaiwa* 會話 (‘conversations’).

In the first category, single words are presented in separate word categories, adjectives and adverbs, verbs, pronouns, prepositions, conjunctions and interjections. The adjectives and adverbs are mostly listed in pairs of opposite meaning. The Japanese terms for these categories are given as *irai meiji* 依頼名字 (lit. ‘dependent name word’) and *tenji* 添字 (lit. ‘accompanying word’), which are more or less translations of the original Dutch terms *bijvoegelijk naamwoord* and *bijwoord* respectively.

Mitsukuri divides the verbs into three categories: transitive (*bedrijvende*), intransitive (*onzijdige*) and passive (*lijdende*). This corresponds with the categories and terminology specified in the primary school textbook *Grammatica* published by the *Maatschappij Tot Nut Van 't Algemeen*, of which Mitsukuri published a woodblock reproduction in 1842.²⁶ Intransitive verbs are identified by the character 自, which is the first character of the modern Japanese term for intransitive verbs, *jidōshi* 自動詞. For transitive and passive verbs he applies the characters 能 and 所 respectively. These two characters represent the Buddhist idea of duality, where 能 represents the subject and 所 the object of an action. In Chinese and in *kanbun* style Japanese, the character 所 is used to denote passive voice. The character 能 is still used in modern Japanese to denote the active voice of verbs: *nōdōtai* 能動態.

The presentation of the pronouns is identical to the sequence and spelling used in *Grammatica*. However, while the heading informs us that the list contains personal, demonstrative, relative and interrogative pronouns, the list provides no information as to which is which, and the words are listed without further instruction or explanation other than their Japanese translations.

The prepositions are presented within the context of short model phrases, in much the same way as Nagasaki interpreter and grammar pioneer Shizuki Tadao (1760-1806) used in his work *Joshikō* 助詞考. Thirteen prepositions are presented, each with a small number of examples of their use. Each phrase is provided with a *katakana* guide to its Dutch pronunciation and two translations. The main translation is in *kanbun*, while alongside the Dutch phrase is also a translation of each word, its place in Japanese phrases indicated with reverse order reading marks. The sequence of the conjunctions again has the appearance of having been

selected from *Grammatica*.

The second section, *gemeenzame spreekwijzen* ('language for everyday use'), contains 124 brief expressions which might be used in spoken exchanges. Here again, each Dutch phrase is accompanied by a *katakana* pronunciation guide as well as two translations, complete with reverse order reading marks, indicating word order. Pairs such as *treed op, ga op* ('step up, go up', here presented in Japanese as *agarikitare* 上リ来レ) and *treed af, kom af* ('step down, come down', *orisare* 下リ去レ) have very much the appearance of commands used to instruct Dutch traders during audiences with persons of high rank, while a command such as *spreek geen nederduitsch* ('Do not speak Dutch') clearly belongs in a situation where another language is available, or the use of a foreign language made those present uncomfortable.

The model conversations in the third section have been taken in part from the work *Bijdrage tot de kennis van het Japansche Rijk* by Van Overmeer Fisscher.²⁷

Appendix 改正増補萬國地名箋 (*kaisei zōho bankoku chimeisen*) Revised and Enlarged List of Geographical Names (388 entries).

This final category is considerably more extensive than the original.

The 19th century collector of Japanese books Johann Joseph Hoffmann (1805-1878) has little to say about Mitsukuri's work that is positive. Despite the fact that the copy in the Leiden collection was a personal gift to him from Mitsukuri, he scathingly, and somewhat unfairly, calls it a "reheated edition" of *Bangosen*. His sarcastic comment that the compiler is "one who still belongs to the ranks of those who cannot distinguish l from r" is certainly more justified.²⁸ Although Mitsukuri appears to have consulted appropriate technical books and atlases or maps for the firearms and place names sections, for the remaining vocabulary his main source for many of the Dutch words appears to have been Morishima's *katakana* rendition. This presents us with something of a puzzle. As an employee of the *Bansho wage goyo* translation office, Mitsukuri would have been able to consult the library of the *Tenmongata* astronomical bureau, which possessed copies of both the Edo and *Dūfu haruma* dictionaries. Yet, the many errors of the l-versus-r variety suggest that Mitsukuri availed himself of neither of these for the production of his revised *Bangosen*.

It is tempting to be derisive, as Hoffmann was, about the many flaws that these two works show. However, Morishima's original *Bangosen* must be placed within the context in which it was compiled. It is the product of a scholar who lived and worked in Edo, far from the Dutch trading post in Nagasaki. Both Morishima and Mitsukuri may have had some direct contact with Dutchmen, but there would

27 Hoffmann 1882, p. 31.

28 Hoffmann 1882, p. 31.

have been precious little time for such details as going over the correct spelling of hundreds of words. At any rate, the topic of conversation during such meetings is more likely to have been the same as the objective of learning Dutch in the first place: medicine, technology and cultural differences.

Many of the errors found here most likely had their origin at an earlier time in a different place, and had been handed down over generations, with each passing on from father to son, or from teacher to student, gaining a little more credibility, until they assumed a correctness that was quite irrelevant to the language as it was used in Holland. In this context, since both Morishima and Mitsukuri were recognised *rangaku* scholars who were at the centre of Western studies as they were conducted in Edo, these works give us interesting insights into the standards and methods of Dutch language learning at the time.

Although the *Bangosen* works represent a considerable step forward in the sophistication of Dutch vocabulary dissemination in Japan, they should be seen not as reference works for translation purposes, but rather as aids for vocabulary and dialogue memorisation. The interpreters in Nagasaki would have been well served with this kind of listing, and no doubt this approach was influenced by their ‘expertise’. Elsewhere, however, the emphasis was on reading, comprehension and translation of Dutch texts, and for this, comprehensive and accurate Dutch to Japanese reference works were needed. These arrived in the early years of the 19th century in the form of the monumental *Dūfu* and *Edo haruma* dictionaries. The former was the result of cooperation between Nagasaki interpreters and Hendrik Doeff (1764-1837), while the latter was the work of a small group of retired interpreters under the leadership of prominent Edo *rangaku* scholar Ōtsuki Gentaku (1757-1827).

The *Bangosen* works, therefore, played only a minor role in the development of Dutch language studies and the dissipation of knowledge of Western culture and technology in Japan. Today, their interest lies mainly in the impression they give of the state of Western learning in Japan at their respective moments of publication.

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