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Symbols, Abbreviations and Layout Issues in J-E Translation

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Working J-E translators face many problems which neither conventional language-learning environments nor published dictionaries provide solutions. The session focuses on such problems that are not necessarily related to the acquisition of vocabulary or field-specific knowledge. One area which is virtually ignored by conventional resources is that of symbols and their application within Japanese text. Most translators know about marubatsu and sankaku, *but some are troubled by the commonly seen right-pointing arrow, the mysterious and versatile slash (/), and the other such devices used in Japanese. Yet another area is that of abbreviations. Because of the content-specific nature of actual examples, the presenter will attempt to impart a feeling for the "possible" ways that abbreviations (kanji, kana, hybrid, and pseudo-English symbols taken, for example, from drafting abbreviations) are created and used in Japanese, and will make available a newly created compilation of abbreviated and other non-standard kanji forms. Yet another area presenting problems that are particularly of concern to a translator creating documents for publication, is that of layout, including the excessive use of tables and references to positions of items within a manuscript.*

1. Introduction

1.1 Purpose

The aim of the author is to provide the working translator with a look at the non-kanji symbolic devices and abbreviations of Japanese used in actual everyday technical writing. It is in no way intended to offer suggestions on how Japanese should be written, but rather intended as to provide examples of stylistic quirks that the J-E translators might encounter.

1.2 Scope

Although classification is sometimes problematical, and some phenomena probably fit into several categories, the following general areas will be covered.

- Symbols
  - Ranges of Values
  - Marubatsu Series
  - Arrows
  - Slashes and other connectives
  - In-line icons and other illustrations
- Abbreviations
  - English Abbreviations
  - Units

    - Kanji abbreviations
    - Katakana abbreviations
    - Drawing symbols and other aberrations
- Word breaks
- Layout problems
    - Tables
    - Drawings
    - References to earlier text

1.3 Intended Audience

Although my personal conviction is that translators would be wise to confine their translation work to translation into a language which they write as a native, and indeed most of the problems I will discuss are more of a problem to NEWTs (native-English-writing translators) who do not use the devices to be covered, Japanese readers might gain something from the information I will present, if only to prevent them from assuming that non-Japanese symbols and abbreviations used within a Japanese document, being ostensibly non-Japanese, will work equally well in English.

2. Symbols

A variety of symbols are used in Japan that either have no meaning in English or meanings that are different from their meanings in Japanese. The fact that the constituent elements of these symbols are neither kanji nor kana leads some to dare to use them as is in J-E translations. This is especially true when the translator does not have enough field-specific knowledge to know what works in English. This is risky at best, and extremely confusing or even humorous at worst.

2.1 Ranges of Values

Probably the most commonly seen special symbol in Japanese technical (and non-technical) material is the *namidashu*, which resembles a tilde centered vertically in the character space. It is almost universally used between limits of a range in Japanese, but is not used in normal English text in that way. It should be replaced with either a hyphen or, if there is a danger of the hyphen being mistaken for a minus sign, the word "to."

(Examples)

Japanese Notation	Acceptable English Notations
１０～１００００MHz	10 to 10,000 Hz 10-10,000 Hz
９０～１１０VAC	90 to 110 VAC 90-110 VAC

Note also that in (a) the unit need not be repeated, and that the unit is separated from the value, and that in (b) the leading AC is a relic from the Japanese word order, which should be corrected in the target text.

A related problem exists with the use of the namidashu with only one limit to the range. In this case, the translator should probably render the expression using some form of the word minimum or maximum.

(Examples)

Japanese Notation	Acceptable English Notations
１０Hz～	10 Hz min. 10 Hz or higher
～１００００Hz	10,000 Hz max. Up to 10,000 Hz

The rendering used in these cases will be somewhat more context-dependent than in the cases in which both ends of the range are given explicitly.

2.2 Marubatsu Series

The Japanese language uses a fairly standard series of symbols to indicate degrees of positive and negative meanings, these being applied in a blinding variety of situations.

One immediate problem with the minimum set of *maru* and *batsu* is that it is that a cross is sometimes used in English instead of a check to indicate a positive meaning, which would be exactly opposite of the intention in Japanese.

Some possible sets of these symbols and possibly applicable means are as follows.

Symbol Set	Possible Application
○ ×	Good --> bad Available --> discontinued Usable --> not usable
◎ ○ ×	Very good --> good --> bad
○ △ ×	Good --> fair --> bad

◎○△×	Very good --> good --> fair --> bad Optimum --> good --> usable but with distortion --> unusable
○□△×	Best --> good --> fair --> poor
◎○□△×	Excellent --> good --> fair --> poor --> very poor

As you can see, the meanings of the symbols is quite context-dependent, and is for that reason often not explained using a legend. This fact can pose high risks for the translator given the words surrounding such graphic symbols without being told about the use of the symbols, or given a table using these symbols without the context to enable a usable rendering of the meanings.

2.3 Arrows

Most of the use of arrows, which seem to be more common in Japanese than in English are fairly straightforward. The main characteristic is that the usage is very often not related so much to direction as it is to sequence of conditions, cause and effect, or action to be taken based on some event or condition, as indicated by these examples.

Japanese	Meaning
V1>DC 2.3V→U1を交換	If V1 is greater than 2.3 VDC, replace U1.
STARTボタン→再分析	Analysis is performed again if you press the START button
初期不良→代理店に連絡	Contact the sales representative in cases of "infant mortality".

2.4 Slashes

The slash is a common "connective" used in Japanese technical texts, often as a very distant relative to its mathematical origins. The following examples illustrate some of the dangers of replicating this Japanese device.

Japanese Notation	Meaning
0.05 Ω /納入	0.05 Ω at the time of delivery
16 KB/2 CH	16 Kbytes per channel (total of 32 Kbytes for 2 channels)
6/E	End of June
7/中	Middle of July

2.5 In-line Icons and Other Illustrations

Japanese authors of instruction manuals are fond of using in-line icons and other illustrations indicating switches and the like in the middle of text. While some writers of English manuals assert that this makes the manual easier to read and use, there are some good reasons why J-E translators might want to avoid such style or advise clients against it, especially if the translator does not have control over the entire production process.

- Even if spaces are left in the text, there is a good chance of production personnel leaving out an icon.
- Even if obvious spaces are left, a change of sequence of the icons in a given sentence is another invitation to error when mechanicals are created by non-English-capable personnel (common in Japan).

3. Abbreviations

3.1 English Abbreviations

Several issues are presented by abbreviations composed of letter used within a Japanese text.

- Is the original expression something that would be abbreviated at all by a NEWA (native-English-writing author)?
- If so, would it be abbreviated in the same manner by a NEWA?
- If not, is there any justification for abbreviating the expression in the translation?

Often the answers to these questions will lead the translator away from abbreviation of the expression.

To gain some insight into why and how expressions are abbreviated in Japanese, consider the following abbreviated expressions, all taken from either day-to-day life or the author's manuscripts.

- I/F to mean interface
- T/M to mean transmission (in an vehicle)
- PF to mean perforation(as) (in a Kapton substrate)
- IC to mean interchange (on road maps)

Leaving aside the commonly seen use of the improper (in English) slash to separate elements of an abbreviated expression, I would direct the reader's attention to the fact that in every case at least one of abbreviated elements can be thought to stand alone as an independent word (face, mission, per, and change). More will be said about this in the section on word breaks.

3.2 Units

The best defense a translator can have against a Japanese author who does not know how to abbreviate units is to develop a good grounding in systems of units and how they are abbreviated. Although there are several countries still clinging to inches and pounds, most countries are metric, and a good place to start studying units is the SI system of units.

Some basic rules for representation of units.

- Abbreviations of SI units use no periods.
- Abbreviations of units are separated from the value with which they are associated by a space or half space. It appears that some styles call for the abbreviation smashed up against the value, but I (and most publications seem to) prefer a space or half space between the value and the unit. Naturally, when used adjectivally, the unit will be connected to the value with a hyphen (e.g., a 2-mm gap), a construction to which the Japanese style will almost never lead the translator; he or she must pull this out without help.
- The capitalization of unit and prefixes is significant and must be correctly observed. This is one major area where Japanese authors throw tree trunks in the path of well-meaning translators.

A modest guide to the system of SI units can be found at the JAT website, at <http://www.jat.org/jtt/siunits.html>.

3.3 Kanji Abbreviations

While I could list dozens of kanji abbreviations that I have encountered, any attempt to be comprehensive is doomed to failure by the very magnitude of the problem. That said, here are a few abbreviations to indicate the mechanism of *kanji* abbreviation.

Abbreviation	Original Expression	Meaning
設変	設計変更	design change
現調	現地調達	local procurement
現合	現物合わせ	machine/process/tap/ trim/etc. to fit

The key to not drowning in a sea of such abbreviations, which are seldom graced by dictionary entries, is experience in reading Japanese as it is written in real life. Japanese newspapers, which make heavy use of such abbreviations, are a good place to practice swimming in that sea.

3.4 Katakana Abbreviations

The spectrum of katakana abbreviations the translator is likely to encounter is far beyond the scope of a single paper, and probably much too volatile to allow coverage in any written medium that purports to retain much of its value more than a year or so. Probably the best method of becoming familiar with this device is to have contact with the Japanese "shop floor," where they are used not only in writing, but in everyday speech. Translators working from published works will have less need to worry about this device, which can be extremely nasty if you do not have access to the author or other Japanese familiar with the field.

(Examples)

インパネ	instrument panel
エバチップ	evaluation chip
オペアンプ	operational amplifier; op-amp
オリフラ	orientation flat
カメリハ	camera rehearsal
グライコ	graphic equalizer (audio term)
クロジェ	clock generator
コングラ	computer graphics (now generally replaced by CG)
コンスト	control strip
シグラ	signal ground

スパコン	supercomputer
スピコン	speed control; speed controller
スペアナ	spectrum analyzer
ディジボル	digital voltmeter
トルコン	torque converter
トレペ	tracing paper
ニス	varnish
パスコン	bypass capacitor
パトライト	rotating alarm light

3.5 Drawing Symbols and Other Aberrations

Even if a particular manuscript includes no drawings, the author could very well make use of drawing abbreviations in a way that could cause severe translator stress. Most times the symbols are completely useless in the English target text and must be spelled out or explained. Some common examples are as follows.

3.5.1 Mechanical Drawings

Japanese authors routinely use mechanical drawing abbreviations in places in which a NEWT should use the full form of the word or concept being represented.

Symbol	Meaning
R	Radius; should not be used in text with the except when referring to values of a variable called r (e.g., when r=1.5, the distance to ...).
t	Thickness; should never be used in text when a NEWA would have used the word thickness.
ASSY	Assembly; this is purely a drawing abbreviation and should not be used in text.

3.5.2 Schematic Diagram Symbols

A Japanese author can sometimes fool an unwary translator into thinking that the circuit diagram symbols they use in text are actually usable in English in the sense of the property possessed by the components to which they refer. They are, in fact, almost never usable in English to replace the words for which the Japanese are using them as replacements.

- R and C used to replace the words resistance/resistor and capacitance/capacitor, respectively. These are often seen in Japanese sentences where their use in English would not be allowable.
- SW used to replace switch in text.
- Tr used to replace transistor in text.

(Unallowable usages influenced by Japanese style)

> Add an external R to the circuit.
>
> Set the power SW to off.
>
> Increase the C until the output current peaks.

(Allowable usage examples)

> Short R23 and measure the voltage between test point TP2 and ground. (Note that this refers to a *specific* resistor.)

4. Word Breaks

While knowing where one English word ends and the next begins would appear to be obvious to NEWTs, it is not so obvious to Japanese authors who use English-like words in their Japanese manuscripts. Aside from ending lines midword, a phenomenon which is still seen in English materials typeset in Japan, another axiom is at work.

> If an English word used in a Japanese-language context has a constituent element that can stand alone as an independent word in English, even if it has a meaning unrelated to the meaning of the entire word, some Japanese authors will wish to isolate it from the remaining part of the word by an intervening space. The probability of this phenomenon occurring is proportional to the simplicity of the constituent element word or the probability that the Japanese author would have encountered it in the past during English education in Japan.

Anybody male who has had his hair cut in Japan a few times will probably recognize this phenomenon, for there are still many men's haircutting establishments bearing signs that read "BAR BER," many a translator has run into an "inter face," and drivers might recall signs indicating an "inter change."

The above are silly examples, of course, which should not trouble a translator. Other applications of the above axiom are not so straightforward, and require the translator to have a firm grounding in the conventions of style. Some examples are:

> micro computer
> pseudo random

soft ware
trans mission

A good source for information regarding the treatment of such prefixes as "micro" or "pseudo" is style manual. In the US, the *Chicago Manual of Style* is a commonly cited reference. Few Japanese authors can cite a Japanese language equivalent, so I suppose we J-E translators should consider ourselves fortunate to have a source to which to refer in a time of confusion.

5. Layout Problems

5.1 Tables

Tables are used more in Japanese technical texts than in English. In fact, they are overused, as is numbering of lists. The first question to be asked by the translator facing even an easy-to-produce table is "do we need this table?" Often the answer is no.

If a table is really needed, the next step is to translate not only the content, but the form of the table, into acceptable style. One troublesome device seen in tables is the ditto mark, which can be used horizontally as well as vertically to repeat content in a table. Another is the arrow, which serves much the same purpose as the ditto mark.

5.2 Drawings

Text will often refer to drawings with some of the following expressions.

下図　上図　右図　左図

They sound harmless, but once when translating for publication the editor or layout people could make a liar of the author, who might refer to the drawing "below" which is in fact on the previous page. Naturally, in producing writer-driven translations for publication this is of more concern than in for-information translation.

5.3 References to Earlier Text

In the Peruvian hostage situation several months ago, a Japanese official read to the press a note from the guerrillas, in which they made demands. The note was written in Japanese, and was presumably translated from Spanish. After the list of demands, the note included the following expression.

右要求は決して交渉の対象ではなく、...

I am fairly certain the original note was written horizontally and in Spanish, but the Japanese bureaucrat or the translator, so accustomed to using officialese, chose to refer to the demands made at the "right," perhaps giving the note the desired officialese sound, but leaving the reader wondering whether the note was not composed originally in Japanese. The possibility of confusion, even on the part of Japanese viewers, was perceived

by one Japanese TV station, which rendered the subtitle of the orally read statement as follows, with an added parenthetical comment.

右（上記の）要求は決して交渉の対象ではなく、...

6. Concluding Remarks

This presentation has in no way been an attempt to provide solutions to any group of specific problems. Instead, it was intended to demonstrate some examples of a number of classes of translation problems that can arise in Japanese manuscripts. Ultimately, field-specific knowledge is the best tool to use in solving the problems. Additionally, translators who come to J-E translation from a non-Japanese-native culture should remember that the reason why Japanese natives have so much less trouble with many of the problems I have cited is that they use the devices I have cited themselves. Thus, just as speaking Japanese re-inforces learning of the written language, writing Japanese--including use of many "improper" devices--could be an aid in wading through the mire of stylistic problems facing the J-E translator working with "poorly behaved" manuscripts, and particularly manuscripts that have never been published in Japanese.