

A Comparative Analysis of Noun Classification in English and Japanese

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Abstract

In this short squib, we argue that while English has both mass and count nouns, Japanese only has mass nouns, thereby forcing it to use measure words. We proceed to do this first by defining needed terminology, analyzing noun classification in English, and then by analyzing noun classification in Japanese. Finally, we discuss the native-Japanese number system.

1. Introduction

Both English and Japanese have what are called *measure words*. The use of measure words depends on whether a noun is classified as *mass* or *count*. Mass nouns use measure words and count nouns do not.

2. Terminology

Based upon the constraints given by Lobeck [1] we take the following definitions for *mass nouns* and *count nouns*.

- *Mass nouns* are nouns which can neither be pluralized nor be assigned a number.
- *Count nouns* are nouns which can be pluralized and/or assigned a number, which could possibly be assigned by the indefinite article *a* in its singular form.

As we will see shortly, an example of an English mass noun is *rice*, and example of a count noun in English is *cheeseburger*. More constraints are given in Lobeck [1] for mass noun and count noun identification involving quantifiers, but the above definitions will suffice for our analysis.

We now give a standard definition for measure words.

- *Measure words* are words used to “count” mass nouns.

On the assumption that *lettuce* is a mass noun, an example of a measure word is *heads* in the noun phrase *heads of lettuce*.

3. Noun Classification in English

In the English language, nouns can be classified into the groups *mass* and *count*.

Consider the following sentences in example (1).

- (1) a. I ate rice.
b. *I ate a rice.
c. *I ate rice_s.

Note that sentence (1a) is the only grammatical sentence in example (1).

From (1a) to (1b), the indefinite article *a* (which implies a countable number of one) was inserted before the noun *rice*. Based on the ungrammaticality of (1b), we conclude that the concept of *a rice* does not exist in the English language. Furthermore, we see that simply changing *rice* to *rices* to get from (1a) to (1c) results in an ungrammatical sentence. Thus, the noun *rice* can neither be pluralized nor be assigned a countable number. That is, *rice* is a mass noun.

Now consider example (2) where *cheeseburger* is something that has a meat patty, a bun, cheese, and whichever condiments and/or toppings you desire.

- (2) a. *I ate cheeseburger.
b. I ate a cheeseburger.
c. I ate cheeseburgers.

As we can see, *cheeseburger* can be assigned a countable number and can be pluralized. Also, the ungrammaticality of (2a) suggests that *cheeseburger* must either be plural or be given a countable number. Therefore, we conclude that *cheeseburger* is a count noun.

Next we will examine nouns which at first glance seem to be neither mass nor count.

Consider example (3) and the following analysis.

- (3) a. I have paper.
b. I have a paper.
c. I have papers.

By the grammaticality of (3b) and (3c), we rule out the possibility of *paper* being a mass noun. But in order for *paper* to be a count noun, (3a) would have to be ungrammatical, but since it is not, we rule out the possibility of *paper* being a count noun.

At this point we might conclude that a third type of noun exists in English that is neither mass nor count. However, upon closer examination, we see that *paper* in (3a) and *paper* in (3b) and (3c) are not lexically identical. That is, *paper* in (3a) refers to the material called *paper*, while *paper* in (3b) and (3c) refer to a specific type of paper (e.g. a newspaper).

Our concluding remark on noun classification in English is that English contains both mass nouns and count nouns, and upon further inspection, all nouns can be disjointly classified into one group or the other.

4. Noun Classification in Japanese

We will now show that since Japanese lacks articles and pluralizing morphemes, it is impossible for count nouns to exist in Japanese.

Consider the English sentences in example (4).

- (4) a. Tanaka bought an apple.

- b. Tanaka bought the apple.
- c. Tanaka bought apples.
- d. Tanaka bought the apples.

Every sentence in example (4) would be rendered as sentence (5) in Japanese.

- (5) Tanaka-ga ringo-o kat-ta.
 Tanaka-NOM apple-ACC buy [+pst].
 "Tanaka bought an/the apple(s)."

According to Tsujimura [2], Japanese has neither articles nor a system of pluralizing nouns. Since sentence (5) is ambiguous in isolation, we conclude that there is no way to know whether or not *ringo-o* is plural or singular.

We now attempt to resolve the ambiguity first with a numeral in (6a), and then with a Sino-Japanese numeral/measure word combination as in example (6b).

- (6) a. *Tanaka-ga ringo-o ziyuusan kat-ta.
 Tanaka-NOM apple-ACC 13-NUM buy [+pst].
- b. Tanaka-ga ringo-o ziyuusan-ko kat-ta.
 Tanaka-NOM apple-ACC 13-NUM-((?pieces) buy [+pst].
 "Tanaka bought 13 apples."

Sentence (6a) is ungrammatical. Simply inserting a numeral does not suffice to indicate the number of apples Tanaka bought since it results in an ungrammatical sentence. In order to indicate the number, we must use both the numeral and the measure word *-ko* as in (6b). The ungrammaticality of (6a) and the grammaticality of (6b) suggest that not only are Japanese nouns not count nouns, but that they are mass nouns.

Thus, since Japanese requires the use of measure words to count nouns, we conclude that Japanese only contains mass nouns.

5. The Native-Japanese Number System

Japanese has what is called the *native-Japanese number system*. In the native-Japanese number system, numerals up to a value of ten can be used to count certain types of nouns – namely small, inanimate objects. Any other form of counting requires the use of a Sino-Japanese number with a measure word.

Consider example (7).

- (7) Tanaka-ga ringo-o huta-tu kat-ta.
 Tanaka-NOM apples-ACC two buy [+pst].
 "Tanaka bought two apples."

We see that we are only attempting to count two apples, and since two is less than 11, we are permitted to do this with the native-Japanese number system. If we were to count 11, we would be forced to use a Sino-Japanese number with a measure word.

According to Takasugi [3], in modern times the native-Japanese numbers are merely alternative vocabulary for the Sino-Japanese numbers. An analogy of this would be words in English like “couple” and “dozen”. The words “couple” and “dozen” are not part of the English number system, but they are still aliases to the numbers two and twelve respectively.

While the native-Japanese number system may not be a true number system in modern times, before the borrowing of the Chinese number system (now called the Sino-Japanese number system) it was widely used.

According to the data given in Takasugi [3], the native-Japanese number system is a base-ten number system which forms numbers by adding morphemes indicating place value. Any number with a nonzero ones-place is added with the conjunction *amari*.

For example, consider dataset (8).

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|-----|------------------------|---------------|
| (8) | a. yottu | “four” |
| | b. too amari yottu | “fourteen” |
| | c. hatachi amari yottu | “twenty-four” |
| | d. misoji amari yottu | “thirty-four” |
| | e. yosoji amari yottu | “forty-four” |

By analyzing the data in Takasugi [3], we can conclude that the *-soji* morpheme is an indicator for the tens place. For more data, please see Takasugi.

In short, the native-Japanese number system flourished in the past, but in modern times it has been almost entirely supplanted by the Sino-Japanese number system.

6. Conclusion

Based upon the various datasets and our analysis, we conclude that while English contains both mass and count nouns, Japanese only contains mass nouns since it lacks sufficient capability to singularize and pluralize nouns. Since Japanese lacks count nouns, it forces the use of measure words for counting nouns. In the past, the native-Japanese number system flourished before it underwent nearly complete supplantation by the Sino-Japanese number system.

References

- [1] Lobeck, Anne. *Discovering Grammar*, New York, NY: Oxford. pp. 82 – 100, 2000.
- [2] Natsuko, Tsujimura. *An Introduction to Japanese Linguistics*, Malden, MA: Blackwell, p. 127, 1996.
- [3] Takasugi, Shinji. *The Number System of Ancient Japanese*, http://www.sf.airnet.ne.jp/ts/language/number/ancient_japanese.html. Retrieved June 11, 2007.