Are pronouns always zero in zero pronominal languages?: The case in Japanese

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Abstract

This paper presents the results of a comparative text analysis of English anaphoric pronouns & their Japanese counterparts.

It first demonstrates that although anaphoric pronouns in English are often compared to zero pronominals in Japanese, not all, but only some, of the English anaphoric pronouns have their counterparts in zero pronominals in the same context in Japanese, and then argues that discourse and perspective factors, which are both structurally prominent in Japanese, play a crucial role in anaphor resolution in the language.

1. Introduction

So-called zero pronominal (i.e., unexpressed pronoun) languages like Chinese, Japanese and Korean are known to be highly context-dependent languages, and pronouns (or any clausal arguments recoverable from the context, for that matter) in these languages are said to be freely dropped (e.g. Sells 1989, Hudson 1994, for Japanese). This seems to suggest the idea that overt pronouns in English, more or less, correspond to zero pronominals in these languages. In the Centering approach to pronoun resolution in discourse, for example, Kameyama (1986), after setting up the rule for pronouns in English, states that the basic rule in Japanese "can be obtained by changing the word *pronoun* to *zero pronominal*" in the English rule although she proposes an additional rule for Japanese discourse.

Some questions arise, however, at least on the simple, one-to-one matching between the anaphoric mechanisms of the two languages. First, if anaphoric pronouns in English always correspond to zero pronominals in the same context in Japanese, what is the function of the so-called pronouns in Japanese (e.g. *kare* 'he', *kanojo* 'she')? Similarly, how do those discourse functions expressed by the discourse particles like *wa* 'topic' in Japanese interact with zero pronominals of the language since such discourse functions take the form of [noun + particle], where the overt (pro)nominal form is required? Also, in terms of methodology, how do we know that the two relevant clausal arguments in English and Japanese are in the same discourse context?

These questions are particularly important because most previous analyses of this issue have based their conclusions on

constructed discourse fragments and informants' out-of-context interpretations and acceptability judgments of them.

The current research attempts to answer these questions, by using the method of text analysis for the collection of natural discourse data. To see the degree of correspondence between pronouns in English and zero pronominals in Japanese, I chose O. Henry's famous story, *The Last Leaf*, and its Japanese translation by Yasuo Ohkubo, to see what those pronouns in the English original are translated into in the corresponding Japanese translation.

Before starting the discussion, I would like to comment on the reasons for choosing the two texts for our data collection. *The last Leaf* by O. Henry was chosen for the English original because the story has been popular among Japanese people and there have been several translations available in Japanese. Also the story is conveniently short enough for us to take the whole story into the scope of our discourse analysis (rather than some excerpt from a longer story, which can hinder us from observing all the discourse factors). Furthermore, the story has multiple characters possible as referents of each pronoun; the characters in the story include "Sue" and "Johnsy" for *she*, and "the doctor" and "Old Behrman" for *he*.

Among the Japanese translations of *The Last Leaf*, Ohkubo's translation was chosen because his is most widely accepted; it was first published in 1969, and has been reprinted many times. The book used for the current analysis is in its 57th print and was printed in 1995. In other words, this translation seems to be written with rather natural language of Japanese. Incidentally, this translation has proved to be very close to the original in English in terms of sentence and paragraph divisions, which makes it easier to identify the correspondents between the two texts.

2. Pronouns & zero pronominals

In the current analysis of anaphoric pronouns, I focused on those anaphoric pronouns in the subject position in English to see if their counterparts in Japanese translation are zero pronominals, overt pronouns, or overt nouns, and whether the Japanese counterparts occupy the subject position or non-subject position. In other words, I examined those pronouns in the nominative (surface) case in the English original (e.g. *she*, but not *her*).

Also, I examined only those pronouns whose antecedents appeared in the previous discourse. Thus, I counted the third person pronouns (*he, she, it*, and *they*) but excluded the first and second person pronouns (*I, you*), which refer to discourse participants (the speaker and the hearer, respectively) rather than objects in the preceding discourse and cannot be considered to be anaphoric pronouns by our definition.   In the same way, non-anaphoric pronouns such as *it* for subject infinitives as in:

<u>It</u> made my head ache to count them.

and the so-called "situational" it for lightness, etc. as in:

I want to see the last one fall before <u>it</u> gets dark.

are excluded from our analysis.

2. 1. Text analysis results

Our text analysis finds 62 eligible anaphoric pronouns (*she* - 24, *he* - 19, *it* - 10, and *they* - 9) in the original text in English. The table below shows the numbers of the forms their counterparts take in its Japanese translation. (In the table, "retained" means those instances where overt pronouns are used in Japanese; "replaced" where overt nouns are used; and "unexpressed" where no overt forms are used.):

	retained	replaced	unexpressed	TOTAL
she	4	7	13	24
he	3	5	11	19
it	1	2	7	10
they	1	4	4	9
TOTAL	9 (14.5%)	18 (29.0%)	35 (56.5%)	62 (100%)

Table 1: E. pronouns and their J. counterparts

As we see in the table above, only about half (56.5%) of the anaphoric pronouns in English have their Japanese counterparts (un-)expressed with zero pronominals, which clearly demonstrates that we cannot make the one-to-one correspondence of English anaphoric pronouns to Japanese zero pronominals. 43.5% of the anaphoric pronouns in English have their overt equivalents in Japanese.

When we examine the "unexpressed" instances closely, however, the ratio (56.5%) of zero pronominals gets further lowered, because of some structural constraints on the Japanese language. Four out of the 35 instances that we have categorized as "unexpressed" above, cannot be considered as zero pronominals because they are non-existent from the first. The sentence in the English original and its Japanese translation in (1E) and (1J), respectively, illustrate the point well:

(1E)　..., he said, <u>as</u> he shook down the mercury in his clinical thermometer.

(1J)　..., to　kare　wa　taionkei no　suigin o　*hutte orosi*
　　　　QT　he　TOP　thermo GEN Hg　ACC　shake down
　　nagara　*itta*.
　　as　said

Japanese *nagara* corresponds to English *as* of the concurrent action subordinate clause marker as in the original. However, unlike *as*, *nagara* has the structural constraint by which its subordinate clause subject has to be the same as the main clause subject and cannot surface, as we see in (2), (3), and (4) [parentheses ( ) are used below to indicate the subordinate clause]:

Different subj.
(2J) *(*Kare$_i$ wa* *tabe* <u>*nagara*</u>*)* *kare$_j$ wa* *aruita.*
      he$_i$ eat   he$_j$ walked
      'He$_j$ walked (as he$_i$ ate).'

Same subj.
(3J) *(*Kare$_i$ wa* *tabe* <u>*nagara*</u>*)* *kare$_i$ wa* *aruita.*
      he$_i$ eat   he$_i$ walked
      'He$_i$ walked (as he$_i$ ate).'

Same subj.
(4J) (*Tabe* <u>*nagara*</u>) *kare wa* *aruita.*
      eat   he$_i$ walked
      'He$_i$ walked (as he$_i$ ate).'

Zero pronominals are those predicate arguments which can surface but are unexpressed because of certain discourse factors. However, the subject in a *nagara* clause cannot show up in any discourse context. Therefore, the four instances in such contexts as the *nagara* clause are not zero pronominals.

The topic of structural differences between the two languages brings us to the other, subjectivity-based structural difference between English and Japanese.

Iwasaki (1993), in his thesis on subjectivity and perspective, argues that unlike English, subjectivity plays a prominent role in the structural organization of the Japanese language. The relevant case here is what I call "discoverer subject" construction. Iwasaki (1993:80) points out that English can code the discoverer as the subject to describe a situation, while the discoverer of the same situation must be coded implicitly in Japanese. He gives the following examples in (5):

(5E) Then <u>I saw</u> a big lady standing there.
(5J) *Futotta obasan* *ga* *ita* *no.*
      fat   woman   SUB existed   SE
      'A big lady was standing there.'

English pronouns' (*I*, above) counterparts are not just unexpressed (i.e. zero pronominals), but totally non-existent in the event

denoted by the sentence in Japanese. We find four instances of this kind in our sample, one of which is shown in (6):

(6E)   When Sue awoke from an hour's sleep the next morning, <u>she found</u> Johnsy with dull wide-open eyes staring at the drawn green shade.

(6J)   *Yokuasa, Suu ga 1-zikan hodo nemutte kara me o samasu to, Zyonsii wa, seiki no nai me o ookiku mihiraite, orosareteiru midoriiro no syeedo o, zitto mitumeteita.*

(lit.) 'Next morning, when Sue awoke from an hour's sleep, Johnsy was staring at the drawn green shade with dull wide-open eyes.'

As we see here, this group of "discoverer subjects" in the English original are unexpressed in the Japanese translation because the same discovery situations are construed differently in Japanese to the result that neither the discoverers nor their actions of discovery participate in the construal of the situation. (We will get back to this point later.) This subgroup of the "unexpressed" instances helps further lower the number of zero pronominals among the "unexpressed" instances.

Two instances of possessive expressions exhibit a pattern similar to "discovery" predicates and dissimilate themselves from regular zero pronominals. Like the "discovery" predicates above, the object of the possessive predicate is construed as the subject of the existential (or copulative) predicate, and makes it unnecessary to express the subject of possession. The example in (7) from the sample illustrates this:

(7E)   <u>She has</u> one chance in - let us say, ten.

(7J)   *Tasukaru mikomi wa - mazu   zyuu ni   hitotu ....*
        recovery   likelihood   10   in   1
        'One tenth chance of recovery exists (for her).'
        or '(her) chances for getting well are one to ten.'

2. 2. Zero pronominals

Our close examination of the 35 "unexpressed" instances in the previous section has shown that 10 instances are "non-existent" from the first and are different from zero pronominals. This leaves 25 instances as zero pronominals. In other words, of 62 English anaphoric pronouns in the original text, only 40.3% have their Japanese counterparts in zero pronominals in Japanese. The revised table for the English anaphoric pronouns and the numbers and forms of their Japanese counterparts is shown below:

	Overt		Unexpressed		
	retained	replaced	zero pron.	others	TOTAL
she	4	7	9	4	24
he	3	5	10	1	19
it	1	2	5	2	10
they	1	4	1	3	9
TOTAL	9 (14.5%)	18 (29.0%)	25 (40.3%)	10 (16.1%)	62

Table 2: E. pronouns and their J. counterparts (revised)

3. Zero anaphora resolution in Japanese

Now our next task is find out the mechanism for zero pronominal anaphora resolution in Japanese. Our examination of zero pronominals reveals the typical contexts for zero pronominals in Japanese. These contexts can be described mostly as ones in which the zero pronominal has a very close affinity with its antecedents. They can be structurally divided into two types. The first type of the typical contexts for zero pronominals in Japanese is the complex sentence where the zero pronominal is the subordinate clause subject and its antecedent the main clause subject. (In other words, the subordinate clause subject is unexpressed in the complex sentence where the main and the subordinate clause subjects are the same.) Let us look at the example in (8E):

(8E)   Your little lady has made up her mind that <u>she</u>'s not going to get well.

The underlined *she* is unexpressed in the Japanese translation. This type accounts for 4 instances.

The other type of typical contexts for zero pronominals in Japanese is where, although the zero pronominal and its antecedent are not in the same sentence, the two sentences are semantically very close to each other with no conjunction or with such coordinating conjunctions as *then* or *and then* in between. This type accounts for 14 instances in the 25 zero pronominals, one of which is shown in (9):

(9E)   Johnsy lay for a long time looking at it. And then <u>she</u> called to Sue,....
(9J)   *Zyonsii wa netamama nagai aida zitto sore o mitumeteita.*
        Johnsy TOP lying   long time fixedly it ACC was.staring
        'Johnsy was staring at it lying for a long time.'
        Sorekara ... Suu ni yobikaketa.
        and then   Sue to called
        'And then, called to Sue, ...'

Actually, in this typical context, multiple zero pronominals are possible as exemplified in (10E) from our sample:

(10E) Old Behrman was a painter who lived on the ground floor beneath them. <u>He</u> was past sixty and had a Michael Angelo's Moses beard curling down from the head of a satyr along the body of an imp. Behrman was a failure in art. Forty years <u>he</u> had wielded the brush without getting near enough to touch the hem of his Mistress's robe. <u>He</u> had been always about to paint a masterpiece, but had never yet begun it. For several years <u>he</u> had painted nothing except now and then a daub in the line of commerce or advertising. ....

In the excerpt in (10E), all the sentences have the same topic "Old Behrman"; each sentence continues the description of him from its previous sentence, and none of the underlined pronouns (*he*) have their counterparts expressed in the Japanese translation.

3. 1. Zero pronominals and topic

The two types of contexts for zero pronominals discussed in the previous section are rather "easy" cases in terms of zero pronominal resolution in Japanese. (In other words, one can easily find the antecedents for zero pronominals where the zero pronominals and their antecedents are very close to each other in terms of structure and/or discourse flow.) Now we would like to move on to our examination of tough cases. Here I argue that we need to resort to the notions of topic and perspective.

The notion of topic, the first notion crucial for zero anaphora resolution in Japanese, is relatively easy to identify in Japanese discourse because it is often marked with the so-called topic particle *wa*. Let us introduce Yamashita's approach for this.

Yamashita (1995: 124) proposes to "tailgate" a theme-subject designated by the topic particle *wa* to identify the subject of a subject-less clause. In other words, to find the unexpressed subject of a clause, one can go back the passage to find the first *wa*-marked subject noun. In fact, Iwasaki (1987) also argues that *wa*'s main function is "scope-setting" and that one of its derivative functions is "indicating multiple predications". (1987:107) This tailgating of *wa* works very nicely, and to see one good example of how it works, let us go back to the excerpt in (10E) above where multiple zero pronominals are used in a row after the first noun phrase *Old Behrman* is introduced with the topic particle *wa*. In this way, a *wa*-marked subject noun phrase continues to function as the subject of the following subject-less clauses until a new topic is introduced with *wa*. This also explains the predominant use of the topic marker *wa* for the overt counterparts in Japanese of the pronouns in the English original.

We have to be careful, however, using this structural test to identify the unexpressed subjects, because, unfortunately, topic is

not always marked with *wa*. Other discourse devices can mark the topic of the passage. One such device is a preface to a passage topic, such as *I have something to tell you* in the following paragraph in (14E) [unexpressed subject pronouns in Japanese are underlined and *ga*-marked nouns in Japanese are indicated with (*ga*)]:

(14E) "I have something to tell you, white mouse," she said. "Mr. Behrman (*ga*) died of pneumonia today in the hospital. He was ill only two days. The janitor (*ga*) found him on the morning of the first day in his room downstairs helpless with pain. His shoes and clothing were wet through and icy cold. They couldn't imagine where he had been on such a dreadful night. ...."

The two zero pronominals in Japanese (*he*, in (14E) above) finds no *wa*-marked nouns in the preceding sentences. In the example above, after the speaker (*she* = Sue) prefaces her story with 'There is something to tell you' (lit. 'Something (*ga*) exists that I want to tell you' in the J. translation), *Mr. Behrman* is the first thing that shows up as the topic of the passage, i.e., the topic of "something" the speaker wants to say. And we know that the two zero pronominals both refer to *Mr. Behrman*, marked with *ga*, not *wa*.

3. 2. Zero pronominals and perspective
        Now, the other notion crucial for zero pronominal anaphora resolution in Japanese is the speaker's (or writer's) perspective. Uehara (forthcoming) demonstrates that unlike 3rd person pronouns, 1st person pronouns are zero in even non-anaphoric contexts when their predicates are people's inner state/mental process predicates, such as *omou* 'think/believe', and argues that 1st person zero pronominals in Japanese can be accounted for mostly by the perspective principle (Iwasaki 1993).
        Iwasaki developed the concept of S(elf)-perspective (first person) in contrast to O(ther)-perspective in his theory of subjectivity in language. The speaker taking S-perspective has more direct access to the information about the situation in a sentence and, therefore, is able to make a subjective assessment or judgment about the situation. And he argues that Japanese employs S-perspective more often than other languages like English. Interestingly, most difficult cases for zero anaphora resolution are when the zero pronominals co-occur with the mental process predicates such as *omou* 'think/believe' and/or the above-mentioned language-specific patterns such as 'discovery predicates'. The example in (11E) from our texts illustrates this point well:

        [After Sue and Johnsy saw the last leaf.]
(11E) "It is the last one," said Johnsy. "I thought it would surely fall during the night. I heard the wind. It will fall today, ..."

In (11E) above, the underlined pronouns (*it*) are unexpressed, the subject of the mental process verb *thought* is also zero, and the discovery predicate *I heard the wind* is not construed in the description in the Japanese translation and corresponds to/translates into the sentence in (12J):

(12J) *Kaze no   oto   ga   kikoeteita   wa.*
     wind GEN   sound NOM   was-heard   SF
     'The sound of the wind was audible/was heard.'

The Japanese translation of (11E) above would be very much like (11E') [ø is used for those unexpressed subject pronouns]:

(11E') "ø is the last one," said Johnsy. "ø thought ø would surely fall during the night. The wind was audible/heard. ø will fall today, ..."

This rather weird passage of perceiver/experiencer-less description is possible in Japanese because both the subject of the mental process verb *thought* and the hearer of *the wind* are assumed to be the speaker (*Johnsy*, in this case).

The sentence *The (sound of the) wind was heard* is possible and the perceiver (i.e., hearer) of the sound of the wind can be identified correctly, because the whole passage is consistently in the perspective of the speaker, *I* (*Johnsy* in this case). In other words, the whole passage in (11E') is *Johnsy*'s report of what is happening in her own perceptual space; a thinking has occurred that *the last one* (= leaf, appearing as the topic) *would surely fall during the night* since *the wind was heard*, and *will fall today*. The native readers can identify the unexpressed experiencer pronouns of mental processes (thinking and hearing) by looking at whose perspective the passage is in, and know that the other unexpressed pronouns (i.e., zero pronominals) refer back to their antecedents, "filtering through" the mental process predicates.

The speaker's perspective factor is thus fundamental, and in terms of zero pronominal resolution in Japanese, it operates in a different level from the discourse level of topic. The topic factor operates inside the scope of the speaker's perspective, and can be characterized as follows:
Topic = the participant in the events perceived from the speaker's perspective and about which the speaker describes and continues to describe something

As a formal grammar theory, Fauconnier's (1985) Mental Space theory seems to capture the phenomena in question. Detailed discussion of application of his theory to the zero pronominals in

Japanese is not undertaken here, but it can capture the bi-level structure of the language by having the speaker's perspective space constituting the highest level space, which encompasses other mental spaces such as discourse ones and controls over mental space builders (i.e., mental process verbs, here).

4. Conclusion

Although this is only a preliminary work, I hope this paper has successfully shown that pronouns are not always zero in zero pronominal languages (in Japanese, at least), and that we need to take into account the discourse function of topic and the cognitive notion of perspective, both of which are structurally prominent in Japanese, for zero pronominal anaphora resolution in the language.

REFERENCES

Fauconnier, Gilles. 1985. *Mental Spaces: Aspects of Meaning Construction in Natural Language*. Cambridge: MIT Press.

Hudson, Mutsuko Endo. 1994. *English Grammar for Students of Japanese*. Ann Arbor: Olivia and Hill Press.

Iwasaki, Shoichi. 1987. Identifiability, scope-setting, and the particle *wa*: a study of Japanese spoken expository discourse. In *Perspectives on Topicalization The Case of Japanese 'Wa'*, Philadelphia: John Benjamins.

Iwasaki, Shoichi. 1993. *Subjectivity in Grammar and Discourse: Theoretical considerations and a case study of Japanese spoken discourse*. Philadelphia: John Benjamins.

Kameyama, Megumi. 1986. A property-sharing constraint in centering. In *Proceedings of the 24th Annual Meeting of the ACL* 200-206. Association of Computational Linguistics. New York:

Kuno, Susumu. 1987. *Functional syntax: Anaphora, discourse, and empathy*. Chicago: University of Chicago Press.

Ohkubo, Yasuo. 1969. Saigo no hito-ha. In *O Henry Tanpensyû (3)*, 8-18. Tokyo: Shinchôsha.

Porter, Sydney (known as O. Henry). 1948 (first copyrighted in 1905) The Last Leaf. In *The Pocket Book of O. Henry Stories*, 198-204. New York: Washington Square Press.

Sells, Peter. 1986. *Lectures on contemporary syntactic theories*. Stanford: CSLI.

Uehara, Satoshi. Forthcoming. Pronoun drop and perspective in Japanese. In Japanese/Korean Linguistics 7. Stanford: CSLI.

Yamashita, Kikuko. 1995. 'Kitchin' (SOV) to 'kitchen' (SVO): shift of perspective observed in translations of Japanese fiction to English. In Makino ed., *3rd Princeton Japanese Pedagogy Workshop Proceedings*, 116-127. Princeton: Princeton University.