

Kansas Working Papers in Linguistics

edited by

John Kyle

**Volume 23, Number 1
1998**

Partial funding for this journal is provided by the
Graduate and Professional Association of the University of Kansas

ISSN 1043-3805

© Linguistic Graduate Student Association
University of Kansas, 1992

Cover design by David Andrew Toshraah Nokose Skeeter

Kansas Working Papers in Linguistics
Volume 23, Number 1
1998

The English Middle and Inchoative Joong-Sun Sohn	1
Stress Patterns of Bedouin Hijazi Arabic: An OT Account Eunjin Oh	17
An Optimality Account of the Variability of the Third Tone Sandhi Domain in Mandarin Chuan-Chih Wang	27
Reanalysis of Evidence For/Against AgrP in Korean Hangyoo Khym	47
Why do Japanese <i>Hai</i> and <i>Iie</i> Not Behave Like English <i>Yes</i> and <i>No</i> All the Way?: Consequences of the Non-Sentential Operation of the Japanese Negative Morpheme <i>Nai</i> Katsuhiko Yabushita	59
Sociolinguistic Variation in the Acquisition of a Phonological Rule Hikyung Lee	75

Why Do Japanese *Hai* and *Iie* Not Behave Like English *Yes* and *No*
All the Way?: Consequences of the Non-Sentential Operation
of the Japanese Negative Morpheme *Nai* *

Katsuhiko Yabushita

Naruto University of Education and University of Texas at Austin

Abstract: Japanese Yes-No particles *Hai* and *Iie* are halfway equivalent to English *Yes* and *No*, respectively. As long as they are used to answer positive Yes-No questions, *Hai* is used in Japanese when *Yes* is, in English, and so are *Iie* and *No*. However, in the context of negative Yes-No questions, the correlation between *Hai* and *Yes* and *Iie* and *No* are lost. This paper demonstrates that the non-equivalence is a reflection of some semantic parametric difference in negative operators between the two languages: Japanese *-nai* is a predicate-level operator, while English *-not* is a sentence-level one.

1 Introduction

It has been long noticed that the Japanese Yes-No particles, *Hai* and *Iie* appear to correspond to the English particles, *Yes* and *No*, respectively, but the two pairs of expressions are not quite functionally equivalent to each other.¹ As long as they are used to answer affirmative questions, the two pairs of expressions seem to be equivalent in function; *Hai* and *Yes* are used when the declarative sentence corresponding to the question is true, while *Iie* and *No* when the sentence is false, as is exemplified in the following:

(1) Q. John wa hashitte imasu ka
 Top running is Q

‘Is John running?’

A1. **Hai** (, (John wa) hashitte imasu).
 Top running is

‘Yes, John is running.’

A2. **Iie** (, (John wa) hashitte imas-en).
 Top running is-not

‘No, John is not running.’

However, the correlation is reversed when those particles are used to answer negative questions. When the corresponding declarative sentence is true, *Hai* and *No* are used in Japanese and English, respectively, and *Iie* in Japanese and *Yes* in English when the sentence is false, as is shown in the following:

(2) Q. John wa hashitte imas-en ka.
 Top running is-not Q

‘Isn’t John running?’

A1. **Hai** (, (John wa) hashitte imas-en).
 Top running is-not

‘No, John is not running.’

A2. **Iie**, (, (John wa) hashitte imasu).
 Top running is

‘Yes, John is running.’

In the literature, e.g., the difference between English *Yes* and *No* and Japanese *Hai* and *Iie* has been usually explained this way.² The use of English *Yes* and *No* depends on the form of the answer independent of the form of the question; *Yes* and *No* are used if the answer is affirmative and negative in form, respectively (c.g. Swan 1980: Units 404 and 639, Quirk et al. 1985: 793). On the other hand, the use of Japanese *Hai* and *Iie* depends on the form of the question in such a way that if the proposition denoted by the form of the question is true, *Hai* is used, and *Iie* if the proposition is false (c.g. Martin 1962).³

As adequate as a description of the usage of the two pairs of Yes-No particles the above explanation is, it does not tell us why that is so. In fact, the fact that *Hai* and *Iie* do not behave like *Yes* and *No*, or the non-existence of Japanese expressions equivalent to *Yes* and *No* is not a contingency, but a necessity due to a certain semantic difference of the negation involved in English and Japanese.

Section 2 will argue with some evidence that the scope of the semantic operation associated with the Japanese negative morpheme *-nai* is not sentence- or proposition-level, but predicate-level, unlike the case of the English negative morpheme. Section 3 is a preparatory review of the standard analysis of the semantics of questions developed as in Hamblin (1973) and a framework for focus phenomena, called the structured-meaning approach to focus, used as a background for the discussion of the semantics and pragmatics of the English and Japanese Yes-No Question. Section 4 presents analyses of the semantics and pragmatics of the English and Japanese Yes-No Questions, reflecting the semantic difference in negation between the two languages and accordingly, can account for the difference in behavior between *Yes* and *No* on the one hand and *Hai* and *Iie* on the other.

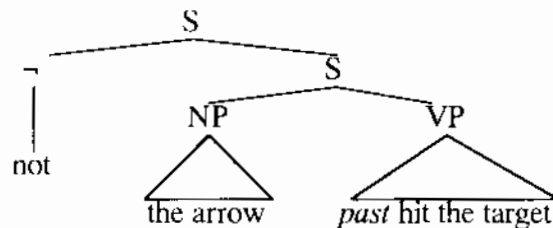
2 Predicate-Level Interpretation of the Japanese Negative Morpheme *-nai*

In general the English negative morpheme *-not*, which characteristically appears with an auxiliary verb like a modal, *have*, *be*, or *do* has been assumed to semantically correspond to a logical sentential operator \neg . The operator is attached to a sentence, or formula, say ϕ to form another sentence $\neg\phi$. The interpretation of \neg can be phrased as ‘it is not the case that,’ or ‘it is not true that’; therefore, $\neg\phi$ can

be paraphrased as 'it is not the case that ϕ .' What the exact meaning of the operator \neg is is not important, here. What is to be noted here is that the English negative morpheme *-not* is analyzed as an operator working on a sentential level, or propositional level. For example, sentence (3) is assumed to have a logical form like (4):

(3) The arrow did not hit the target.

(4)



Thus, the interpretation of (3) is considered to be something like the following: It is not the case, or not true that the arrow hit the target.

The case is different with the Japanese negative morpheme *-nai*, which occurs with a verb, as in the following:

(5) ya ga mato ni atara-naka-ita.⁴
 arrow Nom target Loc hit-Neg-Past

'The arrow did not hit the target.'⁵

As in the case of the English negative morpheme *-not*, the Japanese morpheme *-nai* has commonly been taken to be semantically analyzed as the sentential negative operator \neg , presumably because of the apparent synonymy between the English negative sentences like (3) and the corresponding Japanese negative sentences like (5). That is, (5) has been assumed to have the same structure of logical form (4).

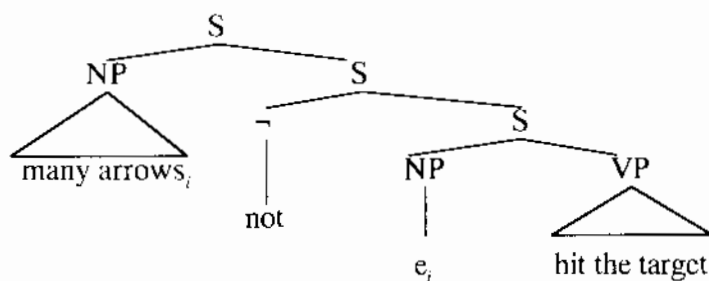
However, the synonymy breaks down if we widen the data of negative sentences to include the following type of sentence, which is characterized by the subject noun phrase being quantificational.

(6) Many arrows did not hit the target.

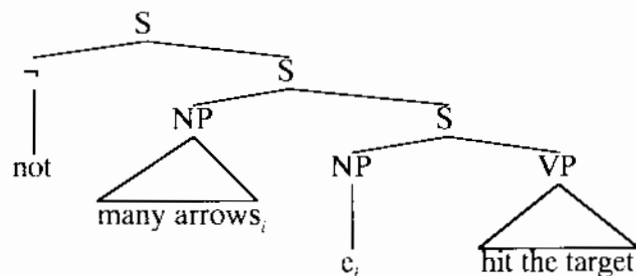
In having two readings, this sentence is ambiguous: (i) Many arrows missed the target, and (ii) It is not the case that many arrows hit the target. If we use the term 'scope,' the (i) reading can be characterized as the one where the quantifier has wide scope over the negative operator *not*, while the (ii) reading is the one where the negative operator has wide scope over the quantifier. For the readings, (i) and (ii), sentence (6) is associated with the following two logical forms (7a) and (7b), respectively.

(7)

a.



b.



Note that because of its sententiality, the negative operator \neg can be adjoined to a place where either it has a scope over the quantifier or it is under the scope of the quantifier.

Now consider the following apparent Japanese counterpart of (6).

(8) ooku no ya ga mato ni atara-naka-tta.
 many of arrows Nom target Loc hit-Neg-Past

‘Many arrows did not hit the target.’

If the Japanese negative morpheme *-nai* were to be semantically analyzed as the sentential negative operator \neg as the English negative morpheme *-not*, it is expected that (8) would be associated with two logical forms just like (7a) and (7b), and (8) would be ambiguous as (6) is. However, the fact is that (8) is NOT ambiguous; the only reading available to (8) is the (i) reading for (6), paraphrased as ‘Many arrows

missed the target', in which *ooku no ya* 'many arrows' has wide scope over the negative operator.

What is the significance of the difference in interpretation between the English and Japanese negative sentences? The difference indicates that the Japanese negative morpheme *-nai* should not be analyzed semantically as the sentential negative operator \neg , but as a predicate-level operator, i.e., an operator taking a predicate as its operand. In morphological and syntactic terms the Japanese negative morpheme in question-*nai* is proposed to be considered on a par with the English negative prefixes like *un-* and *in-* as in *unfair* and *inconsistent*. In semantic terms a sentence of the form 'NP Predicate+*nai*' should be interpreted not as 'It is not the case that the object denoted by NP has the property denoted by Predicate,' but rather 'The object denoted by NP has the negative counterpart property of the property denoted by Predicate.' In other words, the Japanese negative sentences are not to be interpreted as the negation of the corresponding affirmative sentences, but rather they are to be taken as bona fide affirmative sentences such that the predicated properties happen to be negative. For example, the interpretation of the following sentence, (9) should be construed as 'Taro had the property of not running', instead of 'It is not the case that Taro was running.'

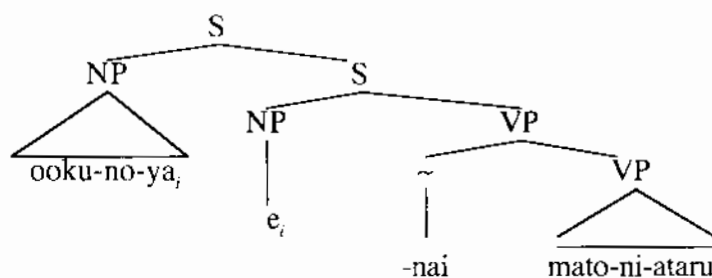
- (9) Taro wa hashitte-i-nai.
 Top running-be-Neg

'Taro was not running.'

Whatever the exact semantic nature of the predicate-level negation is, what is important about it is that its scope is sub-sentential. Then, let us provisionally suppose that the negative operator denoted by *-nai* should take VP as its scope and be denoted \sim to distinguish it from the sentential negative operator \neg .

According to the hypothesis that the Japanese negative morpheme *-nai* should semantically be analyzed as the verb-phrase operator \sim , (8) is now assumed to have a logical form.

- (10)



Unlike the case of \neg , no logical form exists in which the negative operator, in this case, \sim has a scope over the quantifier subject noun phrase. In this case, *ooku no ya* 'many arrows', for \sim as a verb-phrase operator cannot be adjoined to an S node so that it can have a wide scope over the quantifier subject noun phrase. This accounts for the lack of the (ii) reading of (6), i.e., 'It is not the case that many arrows hit the target' for (5).

These examples prove that there is a semantic difference between the English negative morpheme *-not* and the Japanese one *-nai*; *-not* and *-nai* being a sentential operator and a sub-sentential operator, respectively. An analysis of the semantics and pragmatics of English and Japanese Yes-No Questions⁶, reflecting the semantic difference will be presented in Section 4. Before that some background for the analysis is reviewed in the next section.

3 Semantics of Questions

The following discussion adopts a view of the semantics of questions; whereby, an interrogative sentence denotes the set of possible answers to the question. (cf. Hamblin 1973, Karttunen 1977) The current analysis is implemented within the so-called structured-meaning framework to focus (cf. Jacobs 1983, von Stechow 1989, Krifka 1991, 1992)⁷

3.1 Brief Review of the Standard Analysis of the Semantics of Questions For

example, let us take the following WH-Question sentence.

(11) Who kissed Mary?

According to the standard view, the denotation of the question is the set of propositions of the form 'X kissed Mary', where X is a variable for a person who was possible to kiss Mary. In terms of set notation, the set of propositions can be represented as follows:

(12) $\{p : \exists x[p = \text{KISSED}(x, m) \ \& \ \text{it is possible that KISSED}(x, m)]\}$

We assume that exactly the same type of denotation is applicable to Japanese WH-Questions.

3.2 Brief Review of the Structured-Meaning Approach to the Semantics of Focus

The following sentence involves a so-called focus-sensitive expression, in this case, *only*, where the square-bracketed constituent, *coffee* is focused, or in focus, as is indicated by the subscript F.

(13) John only drank [coffee]_F.

The truth conditions of (13) are roughly something like this: Of all the types of beverage which were possible for John to drink, he drank coffee and nothing else.

In the structured-meaning approach to focus, the above interpretation of (13) is obtained this way: First, *only* is associated with the following interpretation rule:

(14) **only**($\langle \mathbf{B}, \mathbf{F} \rangle$) is true iff $\mathbf{B}(\mathbf{F}) \ \& \ \forall X[[X \in \mathbf{ALT}(\mathbf{F}) \ \& \ \mathbf{B}(X)] \rightarrow X = \mathbf{B}]$

To understand the above formula some explanation is in order about these logical representations, $\langle \mathbf{B}, \mathbf{F} \rangle$, $\mathbf{B}(\mathbf{F})$, and $\mathbf{ALT}(\mathbf{F})$. In the structured-meaning approach to focus, the semantic representation of an expression in general is a structure of ordered pair $\langle \mathbf{B}, \mathbf{F} \rangle$ whose first and second parts are called *background* and *focus*, respectively; thus, the ordered-pair semantic representation of a given expression is also referred to as the background-focus structure of the expression. Here the relation between the structured-meaning semantic representation and the usual one can roughly be understood like this. The focus part is a usual semantic representation of the focused constituent, and the background part is the result of replacing the usual semantic representation of the focused constituent in the semantic representation of the whole expression with an variable of an appropriate type and λ -abstracting the variable. For example, the semantic representation for (13) excluding *only* is something like the following.

(15) $\langle \lambda X.DRANK(j, X), COFFEE \rangle$

Conversely, given a background-focus structure $\langle \mathbf{B}, \mathbf{F} \rangle$ for a sentence, $\mathbf{B}(\mathbf{F})$, the function application of \mathbf{B} to \mathbf{F} or vice versa, whichever is possible, reduces to the usual semantic representation for the sentence. Given (15) as an example, the function application of the background part, i.e.,

$\lambda X.DRANK(j, X)$ to the focus part, i.e., 'COFFEE' results in (16), which is the usual semantic representation for *John drank coffee*.

(16) DRANK(j, COFFEE)

$\mathbf{ALT}(\mathbf{F})$ represents the set of alternatives to \mathbf{F} and \mathbf{F} itself; more specifically, it is the set of semantic entities which are comparable to and are 'in contrast' to the denotation of \mathbf{F} plus the denotation itself. The exact value of $\mathbf{ALT}(\mathbf{F})$ is usually determined contextually. For example, $\mathbf{ALT}(\mathbf{F})$ for (15) is the set of types of beverage which John could drink at the situation in question, say {COFFEE, TEA, ORANGE JUICE, BEER, ...}.

Given the interpretation rule for *only*, i.e., (14) and the above explication for $\langle \mathbf{B}, \mathbf{F} \rangle$, $\mathbf{B}(\mathbf{F})$, and $\mathbf{ALT}(\mathbf{F})$, the truth conditions for (13) are rendered as follows:

$$(17) \text{ DRANK}(j, \text{COFFEE}) \ \& \ \forall X[[X \in \{\text{COFFEE, TEA, ORANGE} \\ \text{JUICE, BEER, ...}\} \ \& \ \text{DRANK}(j, X)] \rightarrow X = \text{COFFEE}]$$

The above formula indeed represents the intuitively correct truth conditions for (13), which we agreed (13) to have at the beginning of this section.

3.3 Analysis of the Semantics of Questions in Structured-Meaning Approach to Focus Here an analysis of the semantics of questions within the framework of structured-meaning approach to focus is proposed. WH-Question sentence (11), which is repeated here will be used as an illustration of the analysis to be proposed.

(11) Who kissed Mary?

There are a couple of assumptions about WH expressions like *who*, *which book*, and *how* in English and their counterparts in other languages. First, they are inherently focused expressions (See Horvath (1986) for some evidence of the claim based on Hungarian data); second, the semantic representation for a WH expression is a variable of an appropriate type (See Ginzburg (1991) arguing for the placeholder nature of WH expressions); and third, the alternative set involved is a set of expressions of things which can have the property denoted by the background. According to the above assumptions, the background-focus structure for (11) will be like this:

$$(18) \langle \lambda x. \text{KISSED}(x, m), y \rangle$$

The alternative set is a set of representations of people who could kiss Mary, say John, Bill, Tom, . . . , denoted $\{j, b, t, \dots\}$.

It is proposed that given a WH-Question sentence ω and its background-focus structure $\langle \mathbf{B}_\omega, \mathbf{F}_\omega \rangle$ with the alternative set $\text{ALT}(\mathbf{F}_\omega)$, the denotation of ω , $\|\omega\|$ would be calculated this way:

$$(19) \|\omega\| = \{p : \exists x[x \in \text{ALT}(\mathbf{F}_\omega) \ \& \ p = \mathbf{B}_\omega(x)]\}$$

It is the set of propositions resulting from function-applying the background \mathbf{B}_ω to some element of the alternative set $\text{ALT}(\mathbf{F}_\omega)$. In general, the denotation of a WH-Question sentence in the above formulation coincides with that in Hamblin's (1973) standard analysis of questions. (See Rooth (1992) for a focus-based analysis of the semantics of questions within a framework different from the structured-meaning approach to focus.) For example, the denotation assigned by (19) to the question sentence under consideration (11) is the following set $\{p : \exists x[x \in \{j, b, t, \dots\} \ \& \ p = \text{KISSED}(x, m)]\}$. Assuming that $\{j, b, t, \dots\}$ is the set of people who could kiss

Mary, the denotation is identical with what Hamblin (1973) would assign to (11) as its denotation.

4 Semantics and Pragmatics of Yes-No Questions: English vs. Japanese

This section discusses the semantics of Yes-No Questions along the line of the case of WH-Questions in the previous section to see what kind of implications the semantic difference between the English and Japanese negative morphemes hypothesized in Section 2 will have for the semantics and pragmatics of English and Japanese Yes-No Questions.

We have posited the semantic rule (19) for the derivation of the denotation of a WH-Question sentence. That same rule should be applicable to the case of the English Yes-No Question sentences as well. To illustrate the point, let us consider the following sentence as an example:

(20) Is John running?

To apply the rule to a Yes-No Question sentence, say μ , we first have to know what its background-focus structure $\langle \mathbf{B}_\mu, \mathbf{F}_\mu \rangle$ and the alternative set $\mathbf{ALT}(\mathbf{F}_\mu)$ are like. Since there is no apparent focused constituent present, it is not so obvious what kind of background-focus structure is involved as in the case of the WH-Question sentences. It is proposed that it should be the sentence-level polarity that is being focused in the English Yes-No question sentences. What is meant by the sentence-level polarity is the property of a sentence with respect to whether it is a positive (affirmative) or a negative sentence. In English, specifically, the negative polarity is manifested as the negative morpheme *-not*, while the positive polarity does not seem to have a lexical or morphological manifestation. This is probably because the positivity is the unmarked polarity. However, when the positive polarity of a sentence is focused, in other words, the truthfulness of a positive sentence is emphasized, the positive polarity is realized as a phonological prominence on an auxiliary verb:

- (21) a. John IS a genius.
b. John DOES like spaghetti.

Semantically, the positive and negative polarities are represented as $\lambda p.p$ and $\lambda p.\neg p$, respectively, where p is a proposition-type variable.

According to the hypothesis that it be the polarity that is focused in an English Yes-No question sentence, the background-focus structure of (20) is something like the following.

(22) $\langle \text{RUNNING}(j), \lambda p.p \rangle$

Since the negative polarity is the only alternative to the positive polarity, it is reasonable to suppose that $\mathbf{ALT}(\lambda p.p)$ is $\{\lambda p.p, \lambda p.\neg p\}$. Analogously, $\mathbf{ALT}(\lambda p.\neg p)$ is also supposed to be $\{\lambda p.p, \lambda p.\neg p\}$. Given the above background-focus structure and the alternative set, semantic rule (19) will elicit the following as the denotation of Yes-No Question sentence (20):

(23) $\{\mathbf{RUNNING}(j), \neg\mathbf{RUNNING}(j)\}$

In fact, with the above set-up of the assumptions of English Yes-No Questions, the denotation of a negative Yes-No question sentence will be identical to that of the affirmative counterpart.

(24) Isn't John running?

(25) $\langle\mathbf{RUNNING}(j), \lambda p.\neg p\rangle$

For example, in (24), which is the negative counterpart of (20), with the background-focus structure being something like (25), and $\mathbf{ALT}(\lambda p.\neg p)$ being $\{\lambda p.p, \lambda p.\neg p\}$, as we assumed above, the denotation of (24) derived by semantic rule (19) will be (23), as was the case of the affirmative counterpart (20).

In general, the denotations of an affirmative English Yes-No Question sentence and its negative counterpart will be identical, which is a two-element set of the proposition denoted by the affirmative sentence and the negative counterpart denoted by the negative sentence. This conforms to Hamblin's (1973) analysis of the semantics of Yes-No questions and the English native speakers' intuition that both an affirmative Yes-No Question sentence and its negative counterpart basically "mean the same thing."

Now that the denotation of an English Yes-No Question sentence, whether it is affirmative or negative in form, has been determined to be a two-element set of a proposition, say p and its negative counterpart $\neg p$, i.e., $\{p, \neg p\}$, the pragmatics of the Yes-No Question, specifically, the illocutionary and perlocutionary forces of an English Yes-No Question sentence needs to be considered. In other words, what kind of speech act is to be performed with a Yes-No Question sentence? The following schema of the speech act is proposed to be performed by the utterance of an English Yes-No Question sentence, which might be too simplistic, but is sufficient for the purpose of this paper.

(26) By the utterance of an English Yes-No Question sentence μ with its denotation $\|\mu\|$, i.e., a set containing an affirmative-form of proposition p and its negative counterpart $\neg p$, the speaker S wants the hearer H to answer which is the case, p or $\neg p$. H will respond with *Yes* if the proposition of the positive polarity, p is the case and *No* if the proposition of the negative polarity, $\neg p$ is the case.

In short, *Yes* and *No* correspond to the polarities of the two propositions given as the denotation of an English Yes-No Question sentence, the positive polarity and the negative polarity, respectively. Since the two propositions of the opposite polarities in question are available for an affirmative-form of a Yes-No question and its correspondent negative-form one alike, the use of *Yes* and *No*, in principle, is not sensitive to whether the uttered Yes-No Question sentence is affirmative or negative in form. For instance, this will account for the fact that when whether John is running or not is a question, the answerer responds with *Yes* if it is the case that John is running and *No* if it is not the case, no matter whether the question is asked with an affirmative interrogative sentence, 'Is John running?' or a negative one, 'Isn't John running?', as we observed in Section 1.

At this point, the question whether the analysis proposed for the English case is applicable to the Japanese Yes-No Question comes into play. In the above analysis we hypothesized that it should be the proposition-level polarity that is focused in an English Yes-No Question sentence. Is the same hypothesis tenable to the Japanese Yes-No Question? Remember that we have argued in Section 2 that the Japanese negative morpheme *-nai* is not a sentence-level operator, but a predicate-level one; semantically, this means that *-nai* cannot be interpreted as a proposition-level polarity. Of course, the lack of a morpheme for the proposition-level negative polarity logically does not mean the absence of the semantic category of the proposition-level polarity in Japanese; nonetheless, it is hypothesized so. The immediate consequence of the hypothesis to the present discussion is that the semantic rule for English Yes-No Questions is not applicable to the case of Japanese Yes-No Questions, for there is no proposition-level polarity to be focused in a Japanese Yes-No Question sentence. Furthermore, no focusing of any semantic category is involved in a Japanese Yes-No Question sentence. As such, the following semantic rule is proposed, saying in effect, that a Japanese Yes-No Question sentence denotes the same proposition as denoted by the corresponding declarative sentence.

- (27) The denotation of a Japanese Yes-No Question sentence of the form ϕka , $\|\phi ka\|$ is the same as that of ϕ , $\|\phi\|$.

For example, the denotation of (1Q) is the proposition represented as 'RUNNING(j)' and that of (2Q) is the proposition represented as '~RUNNING(j)', where tense is ignored, and ~ signifies the predicate-level negative operator.

We cannot expect the pragmatics of the English Yes-No Question as suggested in (26) to be applicable to the Japanese case, for the denotation of a Japanese Yes-No Question sentence is just a proposition, not a set comprised of two propositions of the opposite polarities; therefore, such an operation to check which of the given two propositions is the case as involved in (26) cannot be utilized in the pragmatics of the Japanese Yes-No Question. Here, then, is a proposed analysis of the pragmatics of Japanese Yes-No Questions.

- (28) By the utterance of a Japanese Yes-No Question sentence of the form ϕka with its denotation $\|\phi ka\|$ identical to $\|\phi\|$, i.e., the proposition denoted by the declarative sentence ϕ , say p , the speaker S wants the hearer H to answer whether p is the case or not. H will respond by *Hai* if p is the case, and by *Iie* if p is not the case.

The crucial operation involved in the above formulation is to check whether the given proposition denoted by the question sentence is the case or not. Suppose that there are an affirmative Yes-No Question sentence and its corresponding negative one like (1Q) and (2Q). Their denotations are two propositions, p and $\sim p$, respectively. When there are two propositions to choose from, H 's response will be different depending on which proposition S chooses to ask H to see if it is the case or not. In other words, which of the Yes-No Question particles, in this case, *Hai* or *Iie* is chosen depends on which form of a Yes-No Question sentence, affirmative or negative is used in the case of Japanese, unlike the case of English. With this new perspective on the difference between Japanese and English Yes-No Questions in mind, a new account can be given to the previous examples, (1) and (2).

First, in the case of (1), the proposition denoted by (1Q) is 'RUNNING(j)'. When John indeed is running, the hearer will respond by *Hai* in Japanese because the proposition in question is true, and by *Yes* in English because the proposition of the positive polarity is true. On the other hand, when John is NOT running, *Iie* is picked in Japanese because the denoted proposition is not the case, and *No* in English because the proposition of the negative polarity '–RUNNING(j)' is the case. This is an illustration why the use of *Hai* and *Iie* correlates with that of *Yes* and *No* when the Yes-No Question sentences are of the affirmative form.

Next, in the case of (2), the proposition denoted by (2Q) is '–RUNNING(j)'. When John is NOT running, the hearer will reply with *Hai* in Japanese for the proposition in question is the case, while with *No* in English because the proposition of the negative polarity, '–RUNNING(j)' is the case. When John indeed is running, *Iie* is adopted because the denoted proposition is not the case, while *Yes* in English because the proposition of the positive polarity, 'RUNNING(j)' is the case. This explains why *Hai* and *Iie* do not correspond to *Yes* and *No*, respectively when the Yes-No Question sentences are of the negative form.

5 Concluding Remarks

It has been argued here that the scope of negation involved in the Japanese negative morpheme *-nai* is of predicate-level, not sentence-level, unlike the case of the English negative morpheme *-not*; and it has been shown that this is accountable for the fact the Japanese Yes-No particles *Hai* and *Iie* do not behave like English *Yes* and *No* all the way, or there is no pair of expressions in Japanese that perfectly corresponds to the English pair of *Yes* and *No* in functionality.

Whatever the exact semantic significance of the predicate-level negation operation is, however, the notion of the predicate-level negation is with us now. With that notion at hand, it is possible to suppose a pair of theoretical Japanese Yes-No particles, say *Yes*, and *No*, which would be correlated with the predicate-level positive and negative polarities, just as English *Yes* and *No* correspond to the

proposition-level positive and negative polarities. However, such theoretical particles have not actually been observed. This situation does not seem to be unique to Japanese. Remember that English negative prefixes like *non-*, *in-*, and *un-* were mentioned as examples of predicate-level negative morphemes in Section 2. We can, then, suppose hypothetical Yes-No particles which would be tied to the predicate-level positive and negative polarities, say Yes_{pred} and No_{pred}. The two hypothetical particles would be expected to be used in the following way. Suppose that some decision has been made and whether the decision is fair or unfair is a question to be asked now. Of the two hypothetical particles, one would answer with Yes_{pred} when the decision is fair, and with No_{pred} when it is unfair, no matter which form, 'Is(n't) the decision fair?' or 'Is(n't) the decision unfair?' is adopted to ask the question. However, no pair of actual particles of the hypothetical usage occurs in English. From the above Japanese and English facts it is speculated that the predicate-level polarity in general is not subject to focusing. Certainly, the speculation needs further crosslinguistic investigation.

NOTES

* I would like to thank an anonymous KWPL reviewer for reading the manuscript carefully and giving me some suggestions and comments, which resulted in an improvement on the current state of the paper. Of course, all the remaining shortcomings and inadequacies are my own. Following is a list of the abbreviated symbols to be used in this paper: Loc = locative marker, Nom = nominative marker, Neg = negative morpheme, Past = past tense, Q = question marker, and Top = topic marker. Correspondence address: Dept. of Eng., Naruto University of Education, Takashima, Naruto-cho, Naruto-shi 772-8502, Japan. E-mail: yabuchan@naruto-u.ac.jp

¹ The use of the term 'Japanese Yes-No particles' to refer to Japanese *Hai* and *Iie* should by no means be taken to imply that they are functionally equivalent to English *Yes* and *No*, as is obvious from the text. In fact, it is the point of the current work to present a formal analysis of their differences. That is, the terms are simply adopted to designate the Japanese particles, which are being analyzed in comparison with English *Yes* and *No*.

² There are other languages besides Japanese whose Yes-No particles behave like Japanese *Hai* and *Iie*, for example, Korean. The halfway correspondence between their Yes-No particles and English *Yes* and *No* has caused a lot of confusion to English learners whose native languages are one of those languages and vice versa.

³ Actually, there are varieties of English in which *Yes* and *No* are used in the same way as *Hai* and *lie*, respectively, as reported in Quirk et al. (1985: 28):

For example, in African English, and to some extent in South Asian English, *yes* is commonly used in a negative reply that confirms the speaker's assumption in a negative question:

A: Isn't she in bed?

B: Yes (, she isn't).

⁴ *nai+ta* → *nakatta*. For the morphological status of the negative morpheme -*nai*, see, e.g., Shibatani (1990) and the references therein.

⁵ The gloss provided should not be judged to mean that the Japanese sentence in question is synonymous with the English sentence, to the extent that they have the same logical form. In fact, it will be claimed later that they have distinct logical forms, especially with respect to semantic function of the two negative morphemes involved.

⁶ An analogous caution as the one in note 1 is in order about the term 'Japanese Yes-No Questions.'

⁷ The reader is referred to the above references for the details of the semantics of questions and the semantics of focus.

REFERENCES

- Ginzburg, Jonathan (1991) "Questions without Answers, Wh-Phrases without Scope: A Semantics for Direct Wh-Questions and their Responses," in Jon Barwise et al. (eds.) *Situation Theory and Its Applications vol.2*, CSLI, Stanford University, Stanford, pp. 363-404.
- Hamblin, C. L. (1973) "Questions in Montague English," *Foundations of Language* 10, 41-53.
- Horvath, J. (1986) *FOCUS in the Theory of Grammar and the Syntax of Hungarian*, Foris, Dordrecht.

- Jacobs, Joachim (1983) *Fokus und Skalen: Zur Syntax und Semantik der Gradpartikeln im Deutschen*, Neimeyer, Tübingen.
- Karttunen, L. (1977) "The Syntax and Semantics of Questions," *Linguistics and Philosophy* 1, 1-44.
- Krifka, Manfred (1991) "A Compositional Semantics for Multiple Focus Constructions," in S. Moore and A. Z. Wyner (eds.) *Proceedings of the First Semantics and Linguistics Theory Conference (SALT I) [Cornell Working Papers in Linguistics 10]*, Cornell University, Ithaca, pp. 127-59.
- Krifka, Manfred (1992) "A Framework for Focus-Sensitive Quantification," in C. Barker and D. Dowty (eds.) *Proceedings of the Second Semantics and Linguistic Theory Conference (SALT II) [Ohio State University Working Papers in Linguistics 40]*, Department of Linguistics, Ohio State University, Columbus, Ohio, pp. 215-236.
- Martin, S. E. (1962) *Essential Japanese--An Introduction to the Standard Colloquial Language*, Charles E. Tuttle Co., Rutland, Vt., and Tokyo, Japan.
- Swan, Michael (1980) *Practical English Usage*, Oxford University Press.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik (1985), *A Comprehensive Grammar of the English Language*, Longman, London and New York.
- Rooth, Mats (1992) "A Theory of Focus Interpretation," *Natural Language Semantics* 1, 75-116.
- Shibatani, Masayoshi (1990) *The Languages of Japan*, Cambridge University Press, Cambridge.
- Stechow, Arnim von (1989) "Focusing and Backgrounding Operators," in *Fachgruppe Sprachwissenschaft der Universität Konstanz, Arbeitspapier Nr. 6*.