Japanese ONE-*demo*:
Negative Polarity Item Accepted with Certain Factive Predicates

Keiko YOSHIMURA

Abstract

This paper examines the distribution of a Japanese expression ONE-*demo*, which is composed of a minimum quantity expression and a particle -*demo*. This item is identified as a polarity sensitive item, whose distribution is limited to certain polarity sensitive contexts, namely it is not allowed in neither positive or negative contexts (identified as "bipolar element" in Yoshimura 2000, Yoshimura 2007, 2009). This paper attempts to identify its distribution in more extended environments in order to find out more precisely what kind of NPI it is. Following Giannakidou's (2011) framework on polarity items, this paper identifies ONE-*demo* as a broad NPI, whose distribution is limited due to its lexical semantic property of scalarity (Yoshimura 2007). However, unlike a "well-behaved" broad NPI, which is simply licensed in nonveridical environments, the distribution of ONE-*demo* turns out to be peculiar just like English *any* and minimizers. It is acceptable in some veridical contexts, namely under factive predicates. This Japanese data shows that English *any* is not the only peculiar polarity sensitive item with a strange distribution, but a similar pattern can be found in Japanese as well. In order to account for this "peculiar" distribution, this paper implements the idea of "rescuing" proposed for English *any* (Giannakidou 1998, 2011), and shows that an account given for *any* will also work for this Japanese item. Such varied distribution of ONE-*demo* shows that Japanese contains not only strict NPIs licensed in antiveridical context (i.e. negation), such as WH-*mo* "any-(body, thing)" and -*shika* "only", it also contains a broad NPI whose distribution is sensitive to semantic and pragmatic properties.

1. Introduction

A limited distribution of a certain lexical item under a certain context is something that any linguistic theory should account for. Negative Polarity Items (thereafter NPIs), such as English *any*, has been studied intensively since its distribution is limited to "negative" context. Many ross-linguistic works have followed this trend to identify the varieties of NPIs in languages and their licensing environments. Japanese has been recognized from early on to contain strict (or narrow) NPIs, such as *nani-mo* "anything" or -*shika* "only", which are acceptable only with a clause-mate negation (Oyakawa 1975, Muraki 1978, Kuno 1995, 1999). However, Japanese is also shown to contain other types of NPIs, whose distributions are not necessarily limited to negation. In particular, Yoshimura (2000) provides an expression, *i-tteki-demo* "even one drop", composed of "one" and a particle -*demo* (with meaning similar to *even* in English), which is not acceptable in neither positive nor negative contexts as illustrated in (1) and (2).

(1)　*Hanako-wa　　arukoru-wo　　i-tteki-demo　　non-da.　　　　　　　　　（positive）
　　　Hanako-TOP　alcohol-ACC　1-CL-demo　　drink-PAST
　　　"(intended) Hanako drank even one drop of water."

(2)　*Hanako-wa　　osake-wo　　i-tteki-demo　noma-naka-tta.[1]　　　　　　（negative）
　　　Hanako-TOP　alcohol-ACC　1-CL-demo　　drink-NEG-PAST
　　　"(intended) Hanako didn't drink even one drop of water."

Instead, they are acceptable in contexts such as questions, conditionals, and imperatives (Yoshimura 2007, 2009).

(3)　Hanako-wa　　osake-o　　　i-tteki-demo　　non-da no?　　　　　　（questions）
　　　Hanako-TOP　alcohol-ACC　1-CL-demo　　drink-PAST-Q
　　　"Did Hanako drink even one drop of alcohol?"

(4)　moshi　Hanako-ga　　osake-wo　　i-tteki-demo nom-eba　　　　　（conditionals）
　　　If　　　Hanako-TOP　alcohol-ACC　1-CL-demo　drink-if
　　　bounenkai-mo　tanoshiku-naru-darou　　　　　　　（Yoshimura 2000, (14c)）
　　　party-also　　　fun-become-probably
　　　"If Hanako drinks even one drop of alcohol, the end-of-the-year party will be fun."

(5)　gohan-wo　hito-kuchi-demo　tabe-nasai.　　　　　　　　　　　（imperatives）
　　　food-ACC　1-bite-demo　　　eat-IMP
　　　"Eat at least one bite of food."

Provided with such data, it becomes evident that the semantic property of downward entailment, originally proposed by Ladusaw (1979), cannot explain the distribution of this item. Yoshimura (2007) adopts the notion of (non) veridicality proposed by Giannakidou (1998) and illustrates that this item is licensed under nonveridical contexts. She accounts for its unacceptability in anti-veridical (positive) contexts by attributing it to its scalar meaning in the given context.

This paper examines its distributional behavior in more extended environment in order to find out what kind of lexical properties it has as an NPI. In particular, this item is shown to be not only acceptable in nonveridical environments, but also in veridical contexts, namely under factive predicates, similar to English *any*. Both (6) and (7) are acceptable, in which ONE-*demo* appears in the complement clause of a factive predicate, *ureshika-tta* "I was glad that". Note that English *any* is also acceptable with similar types of factive verbs.

(6)　akachan-ga　miruku-wo　i-tteki-demo　　non-da　koto-ga　ureshika-tta.
　　　baby-NOM　milk-ACC　1-CL-demo　　drink-PAST thing-NOM　happy-PAST
　　　"I'm glad that the baby drank even a drop of milk (any milk at all)."

1　For a sentence equivalent to English, the particle -mo is attached to the minimum quantity expression to create a strict NPI, ONE-*mo*, and it will be acceptable in a negative sentence.

(7)　musuko-ga　ichi-do-demo　kekkon-shi-ta　　koto-ga　　ureshika-tta.
　　　son-NOM　　1-CL-demo　　marry-do-PAST　thing-NOM happy-PAST
　　　"I'm glad that my son got married even once (at all)."

This kind of data, in which an NPI is licensed under a factive verb such as *be glad*, has been problematic for theories of polarity items, and a number of analyses have been proposed (Linebarger's pragmatic approach 1980, von Fintel's Strawson DE 1999, Giannakidou's rescuing 2006). In this paper, it is suggested that an analysis provided for English *any* in similar environments can be implemented to account for the given data. For illustration, the idea of "rescuing" (Giannakidou 2006) is implemented in order to account for its distribution, which makes use of the pragmatic negative inference obtainable from the context.

As it has been clear from numerous cross-linguistic works on NPIs, there is a wide variety of NPIs available in natural languages (Lee and Horn 1994, van der Wouden 1997, Lahiri 1998, Giannakidou 1998). The general idea shared by many is that there are types of NPIs which are licensed only under negation (strong or strict NPIs), and other NPIs which are acceptable in a wide range of environments, yet with limited distribution (weark or broad NPIs). Especially for the latter type, it has been claimed that lexical semantic properties of each item are the cause of their limited distribution (Kadmon and Landman 1993, Israel 1996, Lee and Horn 1994, Lahiri 1998, and others). Following the framework on polarity items proposed by Giannakidou (2011), this paper identifies ONE-*demo* as a broad NPI, whose distribution is limited due to its lexical semantic property of scalarity.

The paper is organized as follows. Section 2 provides the previous analysis on ONE-*demo*, also clarifying the licensing properties of downward entailment and nonveridicality. Section 3 provides additional data of ONE-*demo* and shows that it is acceptable with some factive predicates, just like *any*. It implements an idea of "rescuing" to explain the data with ONE-*demo*. Section 4 introduces the varieties of negative polarity items proposed by Giannakidou (2011), and identifies ONE-*demo* as a broad NPI with scalarity, licensed in nonveridical environment, which can be also "rescued" in certain veridical context.

2．Theories of NPI licensing and Previous Analysis on ONE-*demo*

There have been a number of theories proposed to account for the distribution of NPIs (Ladusaw 1979, Giannakidou 1998, von Fintel 1999, Israel 1996, Kadmon and Landman 1993, Krifka 1995, Lahiri 1998). In this section, two semantic properties, downward entailment and nonveridicality, are introduced as a licensing property of NPIs, both of which became necessary to account for the kind of items that are acceptable without negation. These ideas been adopted to analyze ONE-*demo* (Yoshimura 2000, Yoshimura 2007), and it will be shown here that the downward entailment is not "broad" enough to capture the wide distribution of ONE-*demo*, similar to other NPIs cross-linguistically.

Downward entailment is a semantic property proposed by Ladusaw (1979) to account for the distribution of NPIs like English *any*, which is acceptable without negation. For example, *any* is acceptable with *refuse* as in (8), in a conditional clause as in (9), and in the restriction of *every* as in (10).

(8)　John refused to eat any food.
(9)　If you see anybody strange around the neighborhood, you should call the police.

(10)　Every child who saw anything called the police.

Even though there is no negation, *any* is acceptable in these environments. Ladusaw (1979) identified the semantic properties shared by these environments as downward entailing, and proposed that it is the licensing property of NPIs. The definition of downward entailment is provided below, adopted from Giannakidou (1998).

(11)　A function f is downward entailing iff every X, Y: if X f Y, then f(Y) f(X)

It means that a downward entailing function allows an entailment relation from a set to its subset. We can see how it works with the following example, in which *refuse* is shown to be downward entailing because it allows an inference from (12) with a set "alcohol" to (13) with its subset "beer".

(12)　John refused to drink alcohol.
(13)　John refused to drink beer.

The reverse entailment relation holds for a positive statement, which is characterized as upward entailing. You can see this with the following examples, in which (15) is entailed by (14).

(14)　John drank beer.
(15)　John drank alcohol.

Again, the main claim is that the semantic property of downward entailment is the licensing environment for NPI, and one can also state that NPIs are not licensed in upward entailing environments. There are subsequent works following this basic idea (Zwarts 1993, van der Wouden 1994, 1997), and Yoshimura (2000) adopts an analysis of van der Wouden (1997) to account for the distribution of ONE-*demo.*

The important observation from Yoshimura (2000) is that ONE-*demo* is not only acceptable in upward entailing context (i.e. positive statement), but also not acceptable with negation, which is downward entailing. Negation can also be identified as being antimorphic, another semantic property which shows a stronger negativity, creating a subset within downward entailing context. Using these semantic properties presenting degrees of negativity, Yoshimura (2000) identifies ONE-*demo* as a "bipolar element" (van der Wouden 1997), and characterizes the distribution of ONE-*demo* with semantic properties: it is not licensed in upward entailing (i.e. positive) and antimorphic (i.e. negative) contexts, while it is licensed in downward entailing contexts (e.g. *if*-clause, *refuse*). Within this framework, the licensing of ONE-*demo* can be illustrated as in the figure below where the gray area indicates the licensing environment.
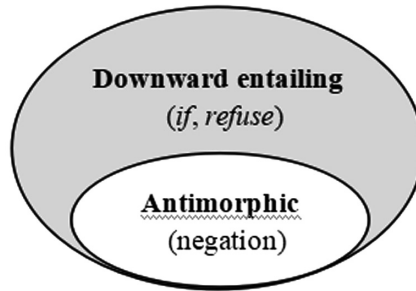
Figure 1.　The Distribution of ONE-*demo* shown in gray (downward entailing account)

　　The problem with downward entailment as an NPI licenser is that many polarity items cross-lin-guistically are also found to be acceptable in non-downward entailing contexts, such as questions, im-pratives, and modal verbs (Giannakidou 1998, 2011).　Japanese ONE-*demo* is no exception in that it is allowed in environments such as questions, imperatives, volitional propositional attitude, and modal, all of which are not downward entailing.　The earlier examples (3) and (4) for questions and imperatives are repeated here as (16) and (17), with additional data with volitional propositional attitude and modal contexts in (18) and (19)[2]

(16)　Hanako-wa　osake-o　　i-tteki-demo　non-da no?　　　　　　　　(questions)
　　　Hanako-TOP　alcohol-ACC　1-CL-demo　　drink-PAST-Q
　　　"Did Hanako drink even one drop of alcohol?"

(17)　moshi　Hanako-ga　　osake-wo　　i-tteki-demo nom-eba,　　　　　(conditionals)
　　　If　　　Hanako-TOP　alcohol-ACC　1-CL-demo　drink-if
　　　bounenkai-mo　tanoshiku-naru-darou　　　　　　　　(Yoshimura 2000, (14c))
　　　party-also　　　fun-become-probably
　　　"If Hanako drinks even one drop of alcohol, the end-of-the-year party will be fun."

(18)　biiru-wo　　i-tteki-demo nomi-tai　　　　　　(volitional propositional attitude: want)
　　　Beer-ACC　1-CL-demo　drink-want
　　　"(I) want to drink even one drop of beer."

(19)　gohan-wo　hito-kuchi-demo　taberu-bekida.　　　　　(modal: deontic necessity)
　　　food-ACC　1-bite-demo　　　eat-should
　　　"(You) should eat even (at least) one bite of food."

2　Note that ONE-*demo* is not necessarily acceptable in all kinds of modal contexts.　For example, under epistemic modal, ONE-*demo* results in oddity.　However, this is beyond the scope of this paper, and further research is required to account for these examples.　One thing to note, however, is that the judgment of these unacceptable cases is not a sharp ungrammaticality.　It could be argued that the modal environment is a licensing environment for this particular item, however, it is infelicitous due to other reasons (such as prag-matic incompatibility with its lexical semantic content and the given context), an account compatible with Giannakidou's (1998, 2011) proposal on polarity licensing.

In all of these environments, it is extremely difficult (if not impossible) to determine if there is any entailment relation that could hold, which is a problem for the account with downward entailment. In both (20) and (21), one cannot claim that the sentences in (a) entail the sentences in (b) respectively. For example, we cannot say that a question "did you drink any alcohol?" in (20a) entails "did you drink beer?" in (20b).

(20)　a.　arukoru-wo　　non-da no?　　　　　　　　　　　　　　　　　　　　(questions)
　　　　　　alcohol-ACC　　drink-PAST Q
　　　　　　"Did you drink any alcohol?"
　　　　b. biiru-wo　　non-da no?
　　　　　　beer-ACC　　drink-PAST Q
　　　　　　"Did you drink any beer?"

(21)　a.　arukoru-wo　　no-me　　　　　　　　　　　　　　　　　　　　　　(imperatives)
　　　　　　alcohol-ACC　　drink-IMP
　　　　　　"Drink alcohol!"
　　　　b.　biiru-wo　　　no-me
　　　　　　beer-ACC　　drink-IMP
　　　　　　"Drink beer!"

(22)　a.　arukoru-wo　　nomi-tai　　　　　　　　　　(volitional propositional attitude: want)
　　　　　　alcohol-ACC　　drink-want
　　　　　　I want to drink alcohol.
　　　　b.　biiru-wo　　　nomi-tai
　　　　　　beer-ACC　　drink-want
　　　　　　I want to drink alcohol.

(23)　a.　arukoru-wo　　nomu-bekida.　　　　　　　　　　　　(modal: deontic necessity)
　　　　　　alcohol-ACC　　drink-should
　　　　　　You should drink alcohol.
　　　　b.　birru-wo　　　nomu-bekida.
　　　　　　beer-ACC　　drink-should
　　　　　　You should drink beer.

It is clear from these data that ONE-*demo* is licensed under non-downward entailing contexts.

Considering this broad distribution of ONE-*demo*, Yoshimura (2007) adopts the idea of nonveridicality proposed by Zwarts (1993) and Giannakidou (1998), which can correctly capture the semantic property common to all the environments illustrated in (16) − (19). The main idea of nonveridicality can be easily explained with its contrast to veridicality. A rough definition of verdiciality and nonveridicality is provided below, followed by a definition of antiveridicality, which is a subclass within nonveridicality.

(24)　A propositional operator F is veridical iff $F(p)$ entails or presupposes the truth of a proposition, p.

(25)　If such an inference is not possible in $F(p)$, F is nonveridical.

(26)　A nonveridical operator F is antiveridical iff F(p) entails *not p* (the falsity of a proposition, p).

Let us observe each type of operator with example. An example of a veridical sentence is a positive statement in the past tense. For example, from the sentence "John saw Mary yesterday", we can see that the speaker is committed to the truth of a statement that John saw Mary. Similarly, a factive predicate is also veridical: "It is good that John saw Mary yesterday" presupposes that John saw Mary yesterday. As mentioned before, questions, imperatives, volitional propositional attitude and modals are nonveridical. None of the following examples entail or presuppose the truth of a proposition, John is a doctor.

(27)　Is John a doctor?

(28)　Become a doctor! (said to John)

(29)　John wants to be a doctor.

(30)　John must become a doctor.

Negation is an antiveridical operator because a negation applied to a proposition ensures its falsity, and entails *not p*. Given these semantic properties, we can apply this idea to identify the distribution of ONE-*demo*: it is not acceptable in veridical and antiveridical contexts, but licensed in nonveridical environment. With this proposal, we can extend its licensing environment from downward entailing to nonveridiccality, and seems to successfully predict the distribution of ONE-*demo*. Since nonveridical contexts includes downward entailing contexts, the licensing environment of ONE-*demo* can be shown in the figure 2, modified from figure 1.
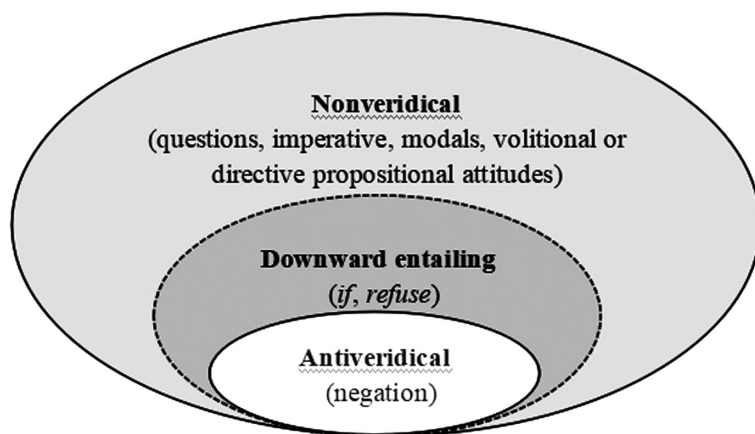

Figure 2. The Distribution of ONE-*demo* shown in gray (nonveridicality account)

The fact that it is not licensed in antiveridical context is a distinct feature of ONE-*demo*, unlike other NPIs. The notion of antiveridicality is commonly used to identify a group of NPIs whose distribution is limited to antiveridical context, often referred to as strong or strict NPIs. It is not usually excluded from a licensing context. An explanation for this peculiar distribution has been given by Yoshimura (2007) in which she claims that its unacceptable status in negative context is due to its particular scalar meaning and the unsatisfied requirement on the use of the focus particle to make a stronger statement than its alternatives (Krifka 1995, Giannakidou 2007). Due to its limited space, this part will not be

discussed this proposal in any more detail here. However, it is important to note that the unacceptable status of ONE-*demo* with negation requires a separate explanation and analysis.

3．Factive predicates

We have seen so far that the distribution of ONE-*demo* can be identified rather nicely with the semantic property of (non)veridicality. However, there are cases in which it seems acceptable in some veridical contexts in a very similar manner as English *any*: it is acceptable with some factive predicates. The previous data (6) and (7) are repeated here as (31a) and (31c). (31) show the cases with a factive predicate *ureshika-tta* "(I) was glad that" and (m) with *yoka-tta* "It was good that".

(31) a. akachan-ga　miruku-wo　i-tteki-demo non-da　koto-ga　ureshika-tta.
　　　　 baby-NOM　　milk-ACC　　1-CL-demo　drink-PAST thing-NOM　happy-PAST
　　　　 "I'm glad that the baby drank even a drop of milk (any milk at all)."
　　　b. musuko-ga　ichi-do-demo　kekkon-shi-ta　　koto-ga　　　ureshika-tta.
　　　　 son-NOM　　1-CL-demo　　　marry-do-PAST　thing-NOM　happy-PAST
　　　　 "I'm glad that my son got married even once (at all)."
　　　c. dareka-ga　chiketto-wo ichi-mai-demo ka-tta koto-ga　ureshika-tta.
　　　　 somebody-N ticket-ACC 1-CL-demo buy-PAST thing-NOM happy-PAST
　　　　 "I'm glad that somebody bought even one ticket."

(32) a. akachan-ga　miruku-wo　itteki-demo　　nonde-kure-te yoka-tta.
　　　　 baby-NOM　　milk-ACC　　1-CL-demo　　drink-for-to good-PAST
　　　　 "It was good that the baby drank even a drop of milk (for me)."
　　　b. ?musuko-ga ichi-do-demo　kekkon-shi-te　yoka-tta.
　　　　 son-NOM　　1-CL-demo　　　marry-do-to　　goody-PAST
　　　　 "It was good that my son got married even once (at all)."
　　　c. ? dareka-ga　chiketto-wo　ichi-mai-demo　ka-tte yoka-tta.
　　　　 somebody-N　ticket-ACC　　1-CL-demo　　　buy-to good-PAST
　　　　 "It was good that somebody bought even one ticket."

Its acceptability status may be marginal depending on the choice of factive predicate as well as the kind of propositions involved, however, it seems unquestionably acceptable in the complement of *ureshi-ka-tta* "be glad". This is not predicted from the nonvericiality account since factive predicates are ve-ridical: we can conclude that John saw that movie from both (33) and (34), i.e. they both presuppose that John saw that movie (the speaker is committed to the truth of the proposition by uttering (33) or (34)).

(33)　John-ga　　　ano-eiga-wo　　　mi-ta koto-ga ureshika-tta.
　　　 John-NOM　　that-movie-ACC see-PAST thing-NOM happy-PAST
　　　 "I was glad that John saw that movie."
(34)　John-ga　　　ano-eiga-wo　　　mi-te yoka-tta.
　　　 John-NOM　　that-movie-ACC see-to good-PAST
　　　 "It was good that John saw that movie."

English *any* and some minimizers show a similar distribution in factive predicates, which are veridical.

(35)　I'm glad that we got any ticket.　　　　　　　　　　(from Kadmon & Landman 1993)

(36)　I'm glad that he gives a damn about me.

Note that these data with factives are also problematic to both ideas of downward entailment and nonveridicality because they are veridical and not downward entailing. In order to account for English data, a number of proposals have been provided (Linebarger 1980, von Fintel 1999, Giannakidou 2006). This paper implements the idea of "rescuing" (Giannakidou 2006), which makes use of the pragmatic negative inference obtainable from the context.[3]

The idea of rescuing proposed by Giannkidou's (2006, 2011) is that a certain class of NPIs are not only licensed, but can be tolerated in a veridical context (thus rescued from it), in case that particular context C can conventionally provide a nonveridical inference. The definition is provided taken from Giannakidou (2006, 2011).

(37)　*Rescuring by nonveridicality*
　　　　A PI α can be rescued in the scope of a veridical expression β in a sentence S, if
　　(a)　the global context C of S makes a proposition S' available which contains a nonveridical expression β; and
　　(b)　α can be associated with β in S'.

Let us examine how it is supposed to work with the original problem with English *any*, being acceptable with veridical expression *only*.

(38)　Only John heard any sound.

Only is veridical because *only John saw the movie* entails that John saw the movie. Yet, *any* is acceptable. This is because there is a proposition available from a sentence like (38) that *nobody else other than John heard any sound*. This proposition contains a nonveridical expression *nobody*, and *any* can be tolerated in the veridical context, and rescued by this proposition made available in the global context. If we were to apply this idea to the factive predicates, *ureshika-tta* "be glad that p", what kind of proposition can be obtained, which contains nonveridical expression? In an example like (31b), repeated here as (39), there is a very strong expectation that my son would not be able to get married at all.

3　Note that this paper does not necessarily argue for one particular proposal over the others, but it shows that this particular analysis, which successfully accounts for English *any*, can be extended to explain the Japanese data.

(39)　musuko-ga　ichi-do-demo　kekkon-shi-ta　koto-ga　ureshika-tta.
　　　son-NOM　1-CL-demo　marry-do-PAST　thing-NOM　happy-PAST
　　　"I'm glad that my son got married even once (at all)."

(40)　Proposition available from (x): I did not expect that my son would be able to get married. / I expected that my son would not be able to get married.

These propositions in (40) made available from (39) in the global context is nonveridical because it does not commit the speaker to the truth of *my son gets married*. We can conclude that this nonveridical context made available globally allows ONE-*demo* to be rescued in otherwise veridical environment.

The idea of rescuing accounts for the otherwise problematic data of ONE-*demo* in veridical contexts. As Giannkidou (2011) notes, this option of rescuing is necessary in the grammar, allowing for analysis on various types of NPIs across languages. It is illustrated here that Japanese definitely contains a type of NPI, ONE-*demo*, that requires this option.

4．ONE-*demo* as a broad NPI with scalarity with an option of being rescued

We have observed that ONE-*demo* is generally allowed in nonveridical environments (excluding the antiveridical context), and also acceptable in some veridical context which can make a nonveridical environment readily available. This section introduces the nonveridicality theory on polarity detailed in Giannakidou (2011), with the goal of identifying ONE-*demo* in terms of the types of polarity items predicted across languages. When relevant, a reference is also made to other well-known NPIs in Japanese. The conclusion reached is that ONE-*demo* can be classified as a broad NPI which are defined as acceptable in nonveridical contexts, with a lexical semantic property of scalarity, which then further limits its distribution. It is also identified as a type of NPI which can be rescued in certain veridical context.

The nonveridicality theory of polarity is a flexible framework in which a variety of NPIs (including free choice items not discussed in this paper) can be understood with the following three main parts: (i) licensing property, (ii) varied distribution due to lexical composition, and (iii) two modes of sanctioning (namely, being licensed or rescued) (Giannakidou 2011). We have discussed in depth the aspect of the first part of licensing property in this paper. Within this framework, two main types of NPIs are introduced in terms of its licensing property: strict NPIs which are licensed only in antiveridical environments (i.e. negation), and broad NPIs which are licensed in nonveridical environments. Japanese has been well-known with strict NPIs such as *nani-mo* "anything" and *-shika* "only" which require a negation marker, and such items without negation are found to be ungrammatical (Oyakawa 1975, Muraki 1978, Kuno 1995, 1999).

(41)　John-wa　nani-mo　tabe-naka-tta.
　　　John-TOP　anything　eat-NEG-PAST
　　　"John didn't eat anything."

(42)　*John-wa　nani-mo　tabe-ta.
　　　John-TOP　anything　eat-PAST
　　　"(intended) #John ate anything."

Now, it is evident that Japanese also contains a broad NPI like ONE-*demo*, which is licensed under a variety of nonveridical environments (question, imperatives, propositional attitude such as *want*, and some modals).

On the second part on the lexical content of a polarity item, Giannakidou (2011) identifies two lexical semantic sources for polarity: scalarity and referential deficiency. These lexical semantic properties are claimed to determine the precise distribution of a given item. ONE-*demo* can be identified as the type with scalarity, whose meaning includes EVEN-like component (Yoshimura 2007). This type of NPIs with scalar meaning can be found in other languages (e.g. Korean and Hindi), and a number of studies have claimed that its scalar meaning can explain the limited and varied distribution of a given item (Lee and Horn 1994, Lahiri 1998, Yoon 2008). ONE-*demo* can be analyzed in a similar way, and Yoshimura (2007) provides its semantics with scalar component, which then explains its incompatibility in both negative and positive contexts (see Yoshimura (2007) for a detailed analysis).

For the last component on two modes of sanctioning, Giannakidou (2011) claims that NPIs can be licensed or rescued. ONE-*demo* is the type that can also be rescued. It was shown in Section 3 that ONE-*demo* was accepted in certain veridical contexts (i.e. factive predicates), and it was shown how the globally available nonveridical context allowed ONE-*demo* to be acceptable in such environments.

5．Conclusion

This paper illustrates the wide distribution of ONE-*demo*, and identifies it as a broad NPI whose general distribution can be captured by the semantic property of nonveridicality (Zwarts xxxx, Giannakidou 1998). It also contributes a novel data that ONE-*demo* can be acceptable in certain veridical environments similar to English *any*. It has a theoretical and empirical significance that English *any* is not alone and "peculiar" in displaying such property of being rescued, accessing a nonveridical operator which is available in a more global context. Rather, this type of process may be more common in the polarity phenomena across languages. Following the types of NPIs proposed by Giannakidou (2011), the paper also suggests that ONE-*demo* is a type of NPI with a scalar meaning, which then determines the precise distribution of the item.

One of the theoretical contribution of the paper is that the downward entailing property alone cannot possibly account for the varied distribution of ONE-*demo*, while the noveridicality theory can account for the general distribution pattern of ONE-*demo*. More extended environments such as other types of modals may attest the nonveridicality thoery, and more thorough investigation with other factive predicates may lead to a better understanding of its semantic component.

References

von Fintel, Kai. 1999. NPI Licensing, Strawson Entailment, and Context Dependency. *Journal of Semantics*, 16(2): 97–148.

Giannakidou, Anastasia. 1998. *Polarity Sensitivity as (Non)Veridical Dependency*. Amsterdam: John Benjamins.

Giannakidou, Anastasia. 2006. Only, emotive factive verbs, and the dual nature of polarity dependency. *Language* 82(3): 575–603.

Giannakidou, Anastasia. 2007. The landscape of EVEN. *Natural Language and Linguistic Theory* 25: 39–81.

Giannakidou, Anastasia. 2011. Negative and Positive Polarity Items. In *Semantics: An International Handbook of Natural Language Meaning*. 2nd ed. Edited by C. Maienborn, K. von Heusinger, and P. Portner. Berlin: Mouton de Gruyter.

Israel, Michael. 1996. Polarity sensitivity as lexical semantics. *Linguistics and Philosophy* 19: 619–666.

Kadmon, Nirit and Fred Landman. 1993. Any. *Linguistics and Philosophy* 16: 353–422.

Krifka, Manfred. 1995. The semantics and pragmatics of polarity items. *Linguistics Analysis* 25: 209–257.

Kuno, Susumu. 1995. Negative Polarity Items in Japanese and English. *Harvard Working Papers in Linguistics* 5: 165–197.

Kuno, Susumu. 1999. The Syntax and semantics of the *dake* and *sika* constructions. *Harvard Working Papers in Linguistics* 7: 144–172.

Ladusaw, William. 1979. *Polarity sensitivity as inherent scope relations*. PhD thesis, University of Texas, Austin. Published in 1980 with the same title, New York: Garland.

Lahiri, Utpal. 1998. Focus and negative polarity in Hindi. *Natural Language Semantics 6*: 57–123.

Lee, Young Suk, and Laurence Horn. 1994 (revised 1995). *Any as indefinite plus even*. Manuscript. Yale University.

Linebarger, Marcia. 1980. The Grammar of Negative Polarity. Ph.D. dissertation, MIT. Published in 1981 with the same title, Bloomington: Indiana University Linguistics Club.

Muraki, Masatake. 1978. The shika-nai construction and predicate restructuring. In John Hinds & Irwin Howard (eds.), *Problems in Japanese syntax and semantics*, 155–177.

Oyakawa, Takatsugu. 1975. On the Japanese *shika-nai* Construction. *Gengo Kenkyuu* 67: 1–20.

van der Wouden, Ton. 1997. *Negative Context*. London: Routledge.

Yoshimura, Akiko. 2000. Itteki-demo noma-naka-tta/*nonda. *Gengo* 29 (11): 52–58.

Yoshimura, Keiko. 2007. *Focus and Polarity in Japanese*. Ph. D. Dissertation. University of Chicago, Chicago, IL.

Yoshimura, Keiko. 2009. Complexity of Polarity Sensitivity: Japanese-demo. *The Annals of Gifu Shotoku Gakuen University* 48: 49–59.

Zwarts, Frans. 1993. Three types of polarity. In F. Hamm and E. Hinrichs (eds.), *Plural Quantification*. Dordrecht: Kluwer.